The Ecology and its Implications for the Economy of Toto Area, North Central Nigeria, 1800-2000

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ABSTRACT
Human beings from time immemorial are tied to nature for basic raw materials, food, and resources for survival. Natural phenomena of climatic elements such as rainfall, sunshine, relative humidity and precipitation determine the extent to which man enjoys sustainable and stable ecosystem for agricultural activities, sufficient food supply and healthy living in general. The role of ecology and economy in shaping history cannot be over-emphasised. Recourse to it would place historical developments in their natural contexts. In the context of this study, we focus on such features as the soil, highlands, the plains and valleys, the rivers, climate, the fauna and flora. All these ecological features are discussed in relation to human activities, sustainability and development. Using both written and oral evidence, the paper notes that the relationship between man and the environment is a dynamic one. The physical environment provided both opportunities and challenges for man.
Keywords: Ecology, Economy, Toto Area, North Central Nigeria

INTRODUCTION

The area in between the southern fringes of the old Northern Region and the northern fringes of the old Western and Eastern Regions is known as Central Nigeria. This region has metamorphosed severally both in name and geographical expanse. Until 1999, it was popularly called Middle Belt, covering most of the areas majority of the ethnic minorities of the old Northern Region lived. Thereafter, the geographical scope of the area was reduced and the region acquired the new name North Central Nigeria. Its geographical space became limited to the following states: Benue, Kaduna (southern Kaduna), Kogi, Kwara, Nasarawa, Niger and Plateau as well as the Federal Capital Territory (FCT)-where the Bassa and their neighbours are found, North Central Nigeria, for centuries, was a melting pot of peoples and cultures. Its strategic location, being sandwiched between the forest in the south and the open savannah to the north, is significant in several respects. The region lies mid-way between two geographical zones, being a transition from the forest to the wide open grassland vegetation. This gave it the advantage of being in

contact with both zones-societies of the forest in the south and those of the open savannah to the north. The ethnic diversity in this region is unlike elsewhere in the country. It was rich in custom, culture and religious practices. Migration into this region took many forms and happened at various times in our history. The complexity and perplexity of the different societies that exist in the area may provide some hints into the antiquity of these societies. The Bassa, Gbagyi, Egbura, and Gade are the dominant groups in Toto area of Nasarawa State.

Geographical Setting

North Central Nigeria which covers the confluence area is located between latitudes 7°30″ North and 11°15″ North and longitudes 4° and 12° East of Meridian. It covers an area of approximately 342,390 square km or 37 per cent of the total land area of Nigeria.[1] The Bassa and their neighbours: Egbura, Gbagyi, Gade, Ganagana, Hausa, Nupawa, Kabawa, Alago, Doma, parts of Idoma etc, are all located in close proximity to one another in the North Central Nigeria. The Rivers Niger and Benue have in the past served as corridors of transmitting ideas and different cultures. These groups are speakers of the proto-Benue Congo ethno-linguistic clusters and the proto-kwa ethno-linguistic clusters.[2]

The bulk of the territory of Toto, which lies within the lower Benue basin, is bounded by Nasarawa Local Government Area in the North-East along the Benue from Katakpa, a few kilometres west of Doma Local Government Area and continues up to Umaisha, Igwa Patti, Dausu and Gbokunu close to Lokoja and Kogi Local Government Areas of Kogi State in the west. The northern boundary extends from Abaji and Kuje Area Councils of the Federal Capital Territory (FCT). An obvious significance of Toto area's location on the Benue and around the confluence is that it brought the area into contact with a great variety of peoples and cultures.

Climate and Vegetation

The role of ecology and economy in shaping history cannot be over-emphasised. Recourse to it would place historical developments in their natural contexts. In the case of the pre-colonial history of Toto area, we focus on such features as the soil, highlands, the plains and valleys, the rivers, climate, the fauna and flora. All these ecological features are discussed in relation to the economy of the area.

There are five types of soil in Toto area: the sandy soil, alluvial soil, loamy soil, granite soil, and clay soil. The sandy soil is found on the banks of the river Benue and her tributaries around Umaisha, Katakwa, Shege, Dausu, Gbokunu and Igwa Pati village areas. It is so poor that it is not suitable for crop. It is only fishermen who occupy the area with their temporary huts.

The alluvial soil lay within the flood plains, is particularly suitable for cultivation of yams. The area covered by this soil is largest in Ugya and its environs, southern parts of Toto and Karmo, Tudu-Uku and their surroundings in the north-east of Toto area. The existence of this soil attracted a large number of farmers in the area. This in turn has given rise to markets such as Ugya and Tudu-Uku attended by traders on their four-day circle markets. The loamy soil contained more sand than clay. Legumes such as cow-peas, local variety of beans, soya-beans found in Kolo, Kuwa and Gadabuke thrive best in these areas. Sorghum, maize, and millet are also grown in areas covered by this type of soil. The granite soil supports yams and grain crops on the plateau and the piedmont, around Ayiwawa, Panda, and Ahula. The clay soil which retains more water makes it the best soil for the local species of rice. This is grown around Kokoto, Kokulo, Risagu, Shakaraku, Shege, Gaura and Katakwa villages. Besides, another important aspect of this thick and fine clay called *yumbu* in Hausa language is that it has a very sticky texture which is extremely useful in the production of local clay pots. As common to most communities, the production of pots appears to have been one of the earliest crafts developed in the area. These pots served as storage for both water and grains. Scattered here and there are many potsherds found especially on the ancient settlement sites of Ugbonoh, Ugo-gbaje and Ruddu among others. Pots of different sizes and styles were produced and are still being produce by only the Bassa and Gbagyi women, which according to them they inherited the art from their forebears.[3] These were manufactured to meet domestic requirements such as cooking, drying, and for storage as well as ritual purposes.

An important feature of the topography of Toto area is the range of hilly uplands such as Isheme Ugbonoh, Ayiwawa, Yegbe, Ruddu, Akparah and Suretu in Toto area and Huni, Muroa, Warkata in Gadabuke area. These hills have been found out to contain substantial solid minerals such as tantalite, marble, and precious stones like aquamarine. The discovery of these mineral potentials of Toto area has led to the influx of more peoples and cultures especially in Ugya area. A distinctive feature of the uplands of Bassaland forming part of the east extension of Ayiwawa and Ahula hills are the thickly forested areas of Umwe, Katakpa, Risagu, Shege, Okokoto, down to Umaisha, within which the early hunting communities in the area developed, exploiting their enormous hunting resource.

An important characteristic of the plains of Toto which might have made them early centres of population concentration and eventually provided the conditions for the development of political communities that became the Bassa Kingdom of Ikereku and the Egbura Kingdom of Opanda was the unique defence facilities. The Bassa for instance used these to a great advantage during the slave-raiding of the Fulani and exploration activities of the Europeans. Taylor and

Crowther noted, "The Bassa who inhabits the fastness of Mount Soracte and the Ikere mountains...have opposed Dasaba's ambitions, and with their poisoned arrows expelled his soldiers from their rocky defences".[4] These mount Soracte (Suretu) and Ikere (Ikereku) forest inhabited wild and dangerous animals such as leopard (*neofelis nebulosa*), the African elephant (*laxodonta Africana*), the hyaena (*hyaenidae*) the hippo (*hipopotamidae*), and the wolf (*canis wolf*).

Another unique feature of the plains of Toto which provided the area with some coherence and made it a place of refuge in pre-colonial era was the worship of some features of the environment as tutelary spirits, or protective agencies, by the various communities. Some of these features among the Bassa include *Isheme umawa, utayi ubawa,* and river *ndasokwo* in Ugya area. These were believed to be responsible for watching over the destinies of their worshippers. At Okudu shrines for example, people who are affected by disasters or accused of witchcraft or wizardry migrated to the place to either take refuge or appeal to the shrines.

The lowlands of Toto were also of unique importance to the people. The three most important rivers which influence the historical development of the area are rivers Kunama, Uke-Nasarawa (tributaries of the Gurara River) and the Benue. Other smaller rivers are Ruddu, Anda, Dingere to the west and Ugbonoh, Katakpa, and Shege to the east. The importance of these rivers in the history of Toto can also be seen in the way they have affected settlement patterns, occupation and world-view. The earliest settlements were located within the vicinity of the rivers, ponds and streams. The world-view can be seen in the role or activities of the Bassa called *aguma wappa,* the king of the water and the *igile wappa,* the water spirit. In Shege for example, the *aguma wappa* from Aringi clan, is the chief priest of the god of the river, the main source of water for the area. Under the guidance of the *aguma wappa,* the river is worshipped in order to ward off war, smallpox, people of bad intentions within and outside the community and early or premature death. Before a fishing expedition is organised the water deity is consulted and libations offered.[5]

The climate and vegetation of Toto area like other parts of Confluence area, has been influence by a number of factors that determined the nature and type of climate and vegetation. Coupled with these has been the seasonal migration of the two tropical continental and tropical marine air masses. While the continental mass is a dry and dusty air coming from the Sahara Desert, the marine air mass is warm and humid originating from the Atlantic Ocean. The dry and dusty air blows over the area between the months of November and March, with December and January as the coldest season, called *uwana uvo* and *ugboforoh* respectively by the Bassa people. It is a period of hunting, *ujala,* and mending and building of more huts. The hunting festivals were held towards the end of the dry season. The festivals do not, however, bring hunting to an end, it continues throughout the year. Individuals,

especially professional hunters continue to hunt. Another important feature of the dry season in Bassaland is the frequency to which feasts and festivals were organised. The Bassa *Ugunu* Festival is organised during this period. *Ihikeh* and *Ukusa-uye* feasts (remembrance ceremonies for the departed souls) were also common features during this period among the Bassa society.[6]

Coming from the ocean, the warm and humid air is wet and thus brings rain, over the area between April and October, with a peak period in July and August. The rainy season is always preceded by the hottest period, *bazarar* in Hausa language, between March and May. Describing the general feature of Keffi and her environs, J. G. Nengel noted that:

> The noon temperature often rises to between 35° and 37° centigrade. Because of the severe heat at noon, the people prefer to work on their fields either during the morning hours or in the evening. They engage in a wide variety of activities. While in the past the men were involved in carving, iron smelting and smithing, the women did embark on pot making and basket and mat weaving. The men also spent their time building or repairing their houses as well as clearing the farms in anticipation of the rainy season.[7]

Owing to its long period, the dry season has sometimes caused water shortage as a result of the drying up of some streams and rivers. This often compelled those who may not be so lucky to be by the source of spring water to travel long distances to fetch it. This a common feature among communities in Suretu Sheayi and Suretu Kwakwa, who have to come to Ugya, a distance of about five kilometres, and people from Shishigeneshi and Sofiyo (Shafa Abakpa) trek to Nyezi (Shafa Kwotto) to get water during such periods. This shortage of water has also sometimes affected wild game and domestic livestock. Because of this, the coming of the rainy season has always been a welcome change. The early rains have sometimes been accompanied by strong winds and thunderstorms, *ataoh*, (*haradu*, in Hausa).

The rainy or wet season, called *ushoh* by the Bassa, is the period for planting most of the crops such as guinea corn, (*sorghum*), millet, maize, melon, groundnuts, beans, and root crops such as yams, cassava, potatoes and host of others. Vegetable crops such as okro, spinach, pumpkin, sorrel, spices like pepper are also grown. The farming and sowing times of crops depended as much on their varieties just as the period of harvest depended on the type of crops but the earliest to be reaped have been millet and yams. Traditionally, as it shall be noted later, the planting and harvesting of some of these crops were preceded by the performance of rituals in which the priest always led the rest of the people. Though some crops were harvested in the rainy season, the peak of period of harvesting major crops such as yams, guinea corn, millet and cassava has always been in the dry season.

As regards the vegetation, oral accounts refer to a period in the past when the area was covered by dense undergrowth of tall trees and thick forest. But the interactions of climatic elements, man's activities, overgrazing and bush fires have greatly affected the original vegetation cover. By the early colonial period the records show that the plains consisted largely of deciduous forest interspersed with savannah woodland and tall grasses. But some of the trees of the area belong to the rain forest type. In the narrow rain forest belt settlements found in Katakwa, Risagu, Shege, Okudu and Umwe villages down to Lokoja along the Benue river, mangrove (*rhizophora racemosa*) the raphia palm (*raphia vinefera*) and the oil palm (*elaesis guineansis*) were common. The cumulative effects of these development and other factors have led to severe encroachment of man on the vegetation. These have so profoundly affected the original vegetation that the area is now left with secondary re-growth. Except for places which have been preserved for religious purposes, such as sacred groves, river banks and government forest reserves, as well as certain inaccessible localities in the remote hills where vegetation is still very dense and may possible represent the original one, the rest of the localities are now mere open guinea savannah with tall grasses and trees scattered here and there.

In this relatively dense vegetation a wide variety of economic trees abound with different kinds of wide game. Among the most important economic trees are the shea butter tree, *buúmwu* (*kadaya* or butrospermum parkii), the locust bean tree, *bidenshi* (*dorowa* or *parlia filicodia*) a plum (dinya or vitex denkowskii), the deleb palm (*giginya* or *borassus flabellife*) and soap berry tree (*adu'a* or *balamite aegyptiaca*). Where these trees are found naturally growing on individual farms they are automatically the property of the owner of the farm with the exception of the fruits of the *dinya, kadanya,* and *adu'a,* which are free to members of the society. Other important trees found in the bush are the *gamji (ficul platyphilla), gabaruwa* (*aecia Arabia*), *iroko* tree, (*loko* or *chloropher excels*), African mahogany tree, (*madaci*), *malmo* (*Eugenia owariensis*), the silk cotton tree (*rimi* or *diospyros mospiliformis*), the *baushe* (*terminalia spp*), the *doka* (*isoberlinia*) and *kargo (bauchinia reticulate*). Other varieties of large plants which grow in colonies such as bamboo (*gora*) and *raphia* palm (*gwangwala*) are found on the hills and along the river banks.[8]

Implications of the Ecology and Development in Toto Area

Intimate knowledge of these plants and trees by the inhabitants has increasingly led to the exploitation of the resources of its flora to serve the needs of the societies. The fruits, roots, leaves, barks, stems, nectars and fibres of the different trees and shrubs have been important sources of food and medicine. The mangrove tree is important for building canoes, the most important means of

transport for fishermen along the Benue and her navigable tributaries. The *raphia* palm is important to the communities as a source of local wine. The *raphia* palm branches are also used as rafters for houses while the fronds served as thatches. A type of rope used in making special baskets and fishing nets is also obtained from the *raphia* palm. The young and tender part of the frond is processed as mat, farm bag and the local fan. The oil palm is as useful as the *raphia* palm.

The medicinal value of some of the trees in the area is invaluable. A number of ailments which afflict people such as food poison, malaria, measles Chicken pox, *diaharea,* stomach-ache and a host of other ailments are cure with preparations involving some leaves, barks, branches and even latex of these trees[9]. Apart from their food and medicinal values, trees such as *iroko* and *udubo* are regarded as abodes of spirits whose activities could have good or bad effects.[10]

Some fruits trees form the major items of dishes in Bassaland. These fruits trees include, among others, *kpekpere* (*ogbono* tree), *bu'unmwa, dinya* in Hausa language (*vitex doniana*), mango, guava, cashew, baobab (*adansonia digita*). They are common edible fruits and leaves in the area. The baobab tree is belief to have the capacity for absorbing and neutralising the effects of the thunderbolt, thus protecting the vicinity. This has made it one of the most respected and protected trees in Bassaland.[11]

Apart from these trees whose edible fruits, barks, leaves and branches supported the population in terms of their food and medicinal needs, the role played by domesticated crops such as yams is worthy of attention. Our investigations have shown that there are about thirty different species of cultivated yams (*dioscorea*) and about four wild species in Bassaland, from very early times. Some of these belong to either the species of *dioscorea cayenensis* or *dioscorea* rotunda. The cultivated varieties of *dioscorea aloita,* the water yam are *ikelegbe* and *ukwachiyanu.* The cultivated varieties of dioscorea rotunda and cayenensis among the Bassa include *agwagwa, apepa, aderere, amara, andori, adidiyama, asekpe, atodobe, benibiyigo, ngazeni ayikwo, agumaga, amala, akwuchi, asule, agwanyagwaya, ameh, anogi. The dankaduna, danonitsha and makha kusa* are recently introduced species in the area.[12] The wild varieties include *aririga, akuro, akerebishi, abudu'u* and *adaya'n.*[13] Information from the field is unanimous about their food value during the periods of food shortages. In fact wild variety such as *aririga* is even cooked and sold in the markets during such period.[14] Although, no scientific archaeological investigation carried out yet, the great diversity in the species of yams in their distribution all over Bassaland points to the antiquity of yams in the area. Also, pointing to the antiquity of the crop is the fact that yam culture has penetrated certain important facets of Bassa traditions.

In Bassa society, many taboos surround the cultivation and harvesting of yams. For examples, it was a taboo for a woman to plant or harvest yams. It was also forbidden for both sexes to jump or walk across a tuber of yam. A menstruating woman was not allowed to enter a yam farm, just as it was a taboo to enter with an axe. Besides, yam was harvested, especially at its early stage of maturity by squatting, because according to tradition, the yam is the king of all crops.[15] Deities such as *Igile, Ishekpeh, Akpakashie* and *Adegurebe,* were believed to be givers of good harvest. By this, libations, by the elders and the priests were performed as rites to usher in the beginning of the eating of the new yams. In pre-colonial period, to eat the new yams before these offerings was an abomination.[16]

The antiquity of yam cultivation in the confluence area cannot be doubted, considering the cultural base, the variety and consistency of its production and distribution. According to Joseph Ukwedeh, the yam might have been domesticated in this region independent of Asia.[17] A yam expert, D.G. Coursey, also came to the same conclusion.[18]

These environments of broad plains and hills, grassland and forests have been the resort of both small and large game as well as different kinds of birds. The fauna of Toto, like other parts of the confluence area, has been identified as consisting of buffaloes, leopards, civets, warthogs and hyenas.[19] Though this list is by no means exhaustive, it corroborates the tradition that one of the reasons why early inhabitants migrated to Toto area was hunting. Hunting has continued to be pursued as par-time occupation and most of these animals have been killed off or driven to the remote parts of the hills and particularly into the forest banks of the rivers. In these remote places a certain number of game can still be found such as the red-fronted gazelle (*barewa*), hartebeest (*kanki*), leopard (*damisa*), elephants, buffaloes (now almost extinct in the area), the hippopotamus, the crocodile and manatees. Other animals were the wolf and the antelopes. The birds included the wild ostrich, the quiver birds and the weaver bird and black plumage, highly valued for sacrificial and other ritual activities.[20] Many different types of birds exist, the commonest being the guinea fowls, francolins, woodpeckers, Abyssinian rollers, storks, plantain eaters, falcons, eagles, vultures, hawks, kites, cattle egrets, king fishers, coucals, hornbills weavers and waxbills.

Different kinds of animals were hunted, killed, smoked and the meat stored specially for cultural festivals. One of the main features of the hunting season was bush fires. In order to chase out the animals from their hide-outs, fire was set on the forest. Bush fires have had severe effects on the fauna and flora. Most of the large wild game such as elephants, buffaloes, roan antelopes, bush buck, lions etc have all been hunted down and the original thick vegetation reduced to secondary forest.

The domesticated animals among the communities of Toto area are the goats, sheep, dogs and pigs, while the birds are the chickens, ducks and pigeons. These animals and birds provide an explanation for the great hunting tradition of the Bassa and their neighbours such as the Gbagyi, and Gade. Apart from hunting, certain animals were specifically important for other aspects of Bassa history and culture. For example, the leopard is a totem animal of *Ambirechi* clan. This clan linked the leopard functions as a royal totem.[21]

The significance of totems for historical studies relates to the fact that some writers have associated their presence among any community with the issue of common migrations and origins of such peoples.[22] Some of the animals are considered very dangerous and ferocious and their killing by hunters is associated with personal bravery and valour, which carry specific titles and ranks such as *ugborofu* among the Bassa and *kalada* (*kala*-strong, *da* holder), among the Gbagyi.[23] For example, any hunter who kills the leopard, lion, elephant, python, crocodile or buffalo takes the *ugborofu* title and automatically becomes a member of the *Azhigba Aguma*, the highest ruling body in the Bassa society. On official and important festivals, the *ugborofu* title holder(s) appear distinct from the rest in the society. They put on their special regalia which include a staff of office, *ekwute ti-ugborofu* and the skin or emblem of the animal killed, to serve as his mat at such occasion. In Ugya for instance, the *Ambirechi* clan besides the title of *Madachi*-Prime Minister, has distinguished itself and now holds the *ugborofu* title. Pa Moore is the first member of *Ambirechi* clan to be so honoured in Ugya.[24]

With rich fauna and flora, it is not at all surprising that hunting developed very early in Bassaland. The early Bassa were very conversant with the terrain in which they carried out their hunting activities. They used different types of traps called *uguru and uhwehweh* to catch or trap animals for consumption.

On the basis of the above discourse, it is safely concluded here that the relationship between man and the environment is a dynamic one. The physical environment as noted above provided both opportunities and challenges for man.

Nature and Pattern of Agricultural Activities of Toto

Based on the ecology described above, the pre-colonial economic activities of the area Toto area were predominantly agrarian. In the pre-colonial era, land was readily available and all members of the community had access to it. The rulers held the land in trust for the community. Studies have shown that:

> It was through membership of a family that individual in the community had right of access to a piece of land, which could be used for any legitimate economic undertakings. The family being the basic economic unit which produced goods together, its products were not

appropriated by the individual adult males but by the head of the house hold stored in a single granary, *Urhuvu* and drawn upon as required.[25]

Cooperative labour was also another method of achieving surplus in pre-colonial Bassa society. This was aimed at mutual assistance that helped to speed up each other's farm work. Cooperative labour provided an occasion for young men to prove themselves as potential and resourceful future husbands. The physical ability of young men was demonstrated in a contest to outclass each other at work. Just as praise and honour were duly bestowed on the strong and more capable men the lazy ones were ridiculed. Cooperative labour usually led to a faster and more productive output. Thus, it was employed to enable individuals to produce more food surplus. More importantly cooperative labour had a political undertone because it brought the people together irrespective of ethnic, gender or clan affiliation. This again prepared the people for defence against external aggressors. From the above cooperative labour was advantageous because it provided an avenue for mobilising the entire ethnic groups in a given village community for socio-economic and political activities.[26] Table 1 below showed the staple crops of Toto society.

Table 1: Principal Food Crops

Polity	Yam	Guinea corn	Millet	Maize	Cassava	Beans	Groundnut	Milon
Bassa	Ngana	Ohiu	Ashena	Akaraba	Arogu	Ikepe	Ugwezhe	Ezegwu
Egbura	Ennu	Akuh	Ahuayi	Akpa	Orogo	Akapa	Guziya	Omanpara
Gade	Juzheeh	Ituh	En-chwe	Tun-pwa	Rogo	Ikeze	Kakpeh	E-gwune
Gbagyi	Shnama	Ewyi	Sawyi	Yawyi	Logo	Akapa/ozo	Gbegbe	Ashii

SOURCE: Field Study, 2010

Besides family labour, the communal cooperative labour is another way of enhancing surplus amongst the Bassa. This collective cultivation of the family farms by all able-bodied males in the household, and by all the able bodied men of the entire village is called *en-annu.*[27] This was aimed at mutual assistance to speed up each other's work. There was no payment for the work done except the bountiful supply of local beer called *uluka* by the host, who is also expected in turn to participate in other

peoples' *en-annu*. *En-annu* is not limited to intra-village participation but also extended to inter-community participation. The collective cultivation of individuals' farms was primarily aimed at achieving surplus for exchange and also to enhance community affinity. Moreover males of the same age group organised themselves according to their proximity to one another for the purposes of cooperation, *edinde*.[18] They worked on each other farms in turn and the individual whose turn it was, provided food for the group that day. These systems of *en-annu* and *edinde* are still regular features in the Bassa and indeed most farming communities of Nasarawa State. There is no doubt that surplus for exchange is achieved through these methods. All the polities under study have various names for the kind of labour being adopted. This is shown in Table Two while Table Three showed the agricultural calendar.

Table 2: Types of Cooperative Labour

Polity	Rotational Labour	Moderately Large Group	Very Large Group	Others
Bassa	Edinde	E'annu	Uyara	Ufwafwa, in-law labour, hired labour
Egbura	Osoboyiga	Ukoro na bayeni	Isa na kyenwu	-
Gade	Ezhi	Gaya	Daibo	Regoh, Ikpo
Gbagyi	Gowyife	Gaiya	Gaiyan-sa	Yeyifa(engagement labour); nyago-fa (loan)

SOURCE: Field Study, 2010

Table 3: Toto Agricultural Calendar

Month (Crop)	Activity	Crop
January-March	Planting	Yam
April-May	Planting	Ground nut. maize, small beans, melon, cassava, potatoes, okro
June-July	Planting	Millet, guinea corn, rice
August-September	Harvesting	Ground nuts (after 3-4 months depending on the variety), maize, melon, small beans.
October-December	Harvesting	Yams, guinea corn, potatoes, rice

Source: Field Study, 2010

Underlining all agricultural activities was the ownership of land and labour, and the organisation of both for production by the Toto area households. Land was communally owned; it was the cohesive force which united all the members of a community. Every family or descent group in the community was entitled to a portion of land. Irrespective of the political control exercised by a ruler, no family or descent group could be denied its share of land. In most of Bassa communities for

instance, rulers were just trustees without power over the ownership of land. According to oral sources, it would be illegal for them (the rulers) to tamper with or trespass on the land of any family besides that of their own, and it was through the membership of a family that every individual in the community had a right to a piece of land which could be used for any legitimate economic undertaking.[29] To dispossess a person of land was therefore synonymous with excommunicating him from the society; but this was rarely done. In fact written or oral sources do not testify to any such cases occurring in Bassaland. Besides, land was not a negotiable commodity and any commercial consideration whatsoever was ruled out by the communal ownership of land and the rule of non-alienability in pre-colonial times.[30]

From the foregoing discussion, it can rightly be concluded that the Toto indigenous economy was reasonably developed, well organised and efficient. In the sphere of production, the community, for example, was able to produce agricultural and handicraft products sufficient to provide a surplus of goods to meet the needs of the community. The economy was not static. Production went on beyond subsistence level as surpluses were produced for exchange.

However, the contemporary Toto society entered the world market as bearers of local products, which were mainly agricultural produce and local handicrafts in exchange for products they either did not produce at all or did not produce in sufficient quantities to meet their needs. This was because possible developments in the fields of handicrafts and exchange were brought to a halt by colonial rule. Thus, profound changes were brought to the pre-capitalist economy of Toto society by the coming of colonial rule and the impact of capitalism. Claude Ake noted that, "This sort of changes led to disequilibrium, for instance changes in the supply of traditional food crops, changes in the land use creating changes in land tenure...,the dependence of the economy on few crops and... profoundly imbalanced economic growth."[31]

CONCLUSION

This pre-colonial ecological and economic interaction provided one of the strongest bases for inter-ethnic relationship between the various ethnic groups in Toto. On the whole, law and order transcend throughout the entire society. The different societies engaged in cooperative labour. This was employed to assist individuals to produce food surplus. This again promoted the spirit of unity among the people against external aggressors. This served as bases for inter-ethnic harmonious relationship. On the basis of the above discourse, it is safely concluded here that the relationship between man and the environment is a dynamic one. The physical environment as noted above provided both opportunities and challenges for man.

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7. J. G. Nengel, "The Ecology and Cultural Setting of Keffi Emirate", *Keffi Book Chapter,* PJSI/14/144, Arewa House, Kaduna, 3.
8. For exhaustive details see J. G. Nengel, "The Ecology and .....
9. For details see,Maiyaki M.M., "The Bassa Mythical Powers: An Exploration into African Indigenous Science", in R.A. Olaoye, ed. *History of Indigenous Science and Technology in Nigeria,* (Cresthill Publishers Limited,2009),176-189; Filaba, M. A., "Gbagyi Traditional Medicine and Treatment: Problems and Prospects", in Olayemi Akinwumi, Okpeh O. Okpeh Jr, C. B. N. Ogbogbo and Adoyi Onoja, eds. *African Indigenous Science and Knowledge Systems: Triumphs and Tribulations, Essays in Honour of Professor Gloria Thomas Emeagwali,* (Root Books and Journals, Abuja), 378-397.
10. For details see John G. Nengel, "The Ecological and Cultural Setting of Keffi Emirate", Keffi Book Chapter, PJSI/14/144, Arewa House, Kaduna.
11. Oral interview with: Daudu Guma C.60 years, Shikwakwa, 26/2/09.
12. Oral interview with, Umar Gunu, Ugya, Benjamin Tashilani Gwatana, Aganji and Audu Isah Umaisha, Ibrahim Gwatana Ugya, and Dallah Ibrahim, Ugya.2/3/09.
13. Oral interview with Umar Gunu, etal...
14. Oral interview with Umar Gunu, etal...
15. Oral interview with Umar Gunu, etal...
16. Oral interview with Umar Ggunu, etal...
17. Joseph N. Ukwedeh, *History of the Igala Kingdom C 1534-1854: A Study of Political and Cultural Integration in the Niger-Benue Confluence Area of Nigeria,* (Arewa House Study Series, 2003), 60.

18. Quoted in Joseph N. Ukwedeh, *History of the Igala Kingdom....*
19. C. L. Temple, ed. Nasarawa Province, Monthly Report NO.5, for May, 1904; NAK, SNP 15/1/Acc 59, 1965: 34-35.
20. John G. Nengel, "The Ecological and Cultural.....
21. Maiyaki M. Mejida: "British Colonial Rule and Its Impact on the Bassa People of Nasarawa Local Government of Plateau State,1900-1960", M.A. Dissertation, (Department of History, University of Jos, 1990) 20
22. See details in E. O. Erim, *The Idoma Nationality C1600-1900: Problems of Studying the Origins and Development of Ethnicity,* (Enugu, 1981) 14-18.
23. Oral Interview with Dr. Mailafiya A. Filaba, 26/8/09
24. Oral Interview with Aliyu Wana Kure and Zakari Nyizo Kure, Ugya-Mbirechi, Ugya, 4/2/09.
25. For details see M. M. Maiyaki, "British Colonial Rule and Its Impact on the Bassa People of Nasarawa Local Government Area of Plateau State, 1900—1960," 10—16.
26. For details see Maiyaki M. M., "British Colonial Rule and Its Impact on the Bassa of Nasarawa..." 10-16.
27. This means cooperative labour in Bassa dialect; where the entire able-bodied men in a given village community come out to work in a particular man's farm for the day.
28. Edinde is a group formed by youths, normally, of between two to four in number, for the purposes of speeding up each other's farm work. This is done on rotational basis.
29. Oral Interview with: Ibrahim Kure, Ugya-mbiriki, Ugya, Farmer, 92 year, 9/4/91.
30. Oral interview with Ibrahim Kure...
31. Claude Ake, African Political Economy, (Longman Nigeria Plc, 1981) 45.