



RURAL BASE ACTIVITIES AND THEIR EFFECTS ON THE NATURAL ENVIRONMENT

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Abstract

The survival of the rural inhabitants depends wholly on various economic activities engaged upon by the rural dwellers. The major economic activity in the rural area is agriculture and it is supported by other activities of the rural life. This paper addresses various rural activities, their impacts on the natural environment and the sustainability measures in the face of the exploitation of natural resources. The study utilises desk study as a source of data. Conclusively the paper observes that the survival of the rural inhabitant depends wholly on various economic activities engaged upon by the rural dwellers and that the major economic activity in the rural area is agriculture and it is supported by other activities of the rural life. Finally, the study recommends that: Issuance of Cease order in the Case of Oil spillage can be controlled by ensuring adequate Environmental Audit Report of companies engaged in oil exploitation. Fines, withdrawal of licence, and legal punishments for defaulting mineral exploiters, also the use of Environmental Friendly farming Practices will ensure that the land and its resource which farming depends on are maintained for future benefits etc.

Keywords: *Rural base, environment, inhabitants, agriculture, mining, lumbering, fishing.*

INTRODUCTION

The history of human settlement is traced from the establishment of small settlements that grew into major cities we see today. The process of

transformation of rural settlements to urban settlements is called urbanization. Despite the level of urbanization today, rural areas still occupy the larger space in the world today. The term "Rural" is applicable to areas of low population density, with settlements of small absolute size located in relative isolation to their surroundings. Farming formed the major economic base in such localities, where the way of life is reasonably homogeneous and different from that of other sectors of society namely the "City" (Clout, H. D. 1972).

The Natural ecological setting of rural area cannot be tied to one geographical setting as there are rural settlements in every part of the world today. The factors responsible for the location of rural settlements, characteristics and types of rural areas best describes the nature of rural areas..

FACTORS RESPONSIBLE FOR THE LOCATION OF RURAL SETTLEMENTS

The factors that determine the location and siting of rural settlements are economic; environmental; and social.

1. Economic Factors

Water is one factor responsible for siting of rural settlements possibly for irrigation, fishing, livestock rearing, and for domestic use are the economic factors that attract people to a certain area to settle. Water supply is thus a critical factor to the formation of settlements in the arid region The availability of fertile land for cultivation, of crops and animal grazing are reasons to the location of settlements.

2. Environmental Factors

Settlements in arid regions or drought regions are found in the valley or oases. For example, settlements along the Nile valley in the Sahara desert Slopes that are exposed to adequate sunshine chosen in polar regions for example the Ruhr valley in Germany. High wind velocity, typhoon and tornado are very hazardous for settlements hence making the path of these violent winds inappropriate for the location of settlements.

Another factor is disease, some diseases are peculiar to some regions The Mosquito and Tsetsefly in the tropical region discourage people from settling in such areas

3. Social Factors

Defence is one major social factor responsible for siting of settlements, for example the Koma people in Adamawa State jive top of a mountain in order to protect themselves from the aggression of the enemies. Government policy is

another important factor for siting of settlements. Some settlements came into being as a result of resettlement scheme.

CHARACTERISTICS OF RURAL AREAS

P. Sorokin and Zimmarmatm (1929) in (Clout, H.D. 1972) spelled out eight groups of variables which they considered would distinguish rural from urban conditions to include: occupation, environment, community size, population density, homogeneity of the population, social differentiation, mobility and systems of interaction. The characteristics of each variable will be described in the sentences below.

1. Occupation

Rural localities contained a high proportion of workers and their families directly occupied with managing and for fanning and forestry. Nevertheless, such localities also included craftsmen and workers in essential local services.

2. Environment

The rural environment is considered to be predominantly natural rather than manmade, with the landscape being made up of fields and woodland rather than buildings, factories and streets.

3. Community Size

Rural settlements are normally smaller in size than towns. This general statement is acceptable, but it is not possible to offer precise limits that have universal applicability to distinguish rural localities.

4. Population Density

Population densities are lower in rural areas than in town

5. Homogeneity of the Population

Compared to urban dwellers, the population of rural areas are more homogeneous in their social traits, such as linked to language, beliefs, opinions, mores and pattern of behaviour tend to be uniform.

6. Social Differentiation

Social differentiation and stratification are less evident in the rural area than in towns. Class differences are less pronounced.

7. Mobility

Mobility in both spatial and social sense, is less intense in rural areas than in towns.

8. System of Interaction

By virtue of living in small settlements with a relative lack of transportation to permit than to move easily and frequently to other settlements, rural dwellers in the past had fewer human contact than had urban dwellers.

TYPES OF RUIRAL SETTLEMENTS

The typology of rural settlements is best described by the pattern and forms, and size of rural settlements.

Pattern and Form of Rural Settlements

This refers to the arrangement of buildings over space. By this no one village is likely to look the same as another The pattern and form of rural settlements are:

(1) Dispersed Settlements

These are isolated household that are scattered all over space. They are separated from one another by open country in topographical barrier.

(2) Nucleated Settlements

These are settlement that consist a group of houses which have been build close together or no open space. They are physically compacted to a dense population of few households. They are further subdivided into:

- i. Linear nucleated settlements
- ii. Compact nucleated settlements
- iii. Stella nucleated settlements
- iv. Circular villages

Hierarchical Classification of Rural Settlements

(1) Isolated:- These are settlements that have no relation with the neighbouring settlement. The settlements are separated from other settlements by vast land.

(2) Farmstead:- These are settlements usually limited to one family built within farmland in order to have access to them. It consists of a dwelling place, silos and animal shed.

(3) Hamlet:- These are cluster of houses forming a small rural centre usually not exceeding 250 peoples with few basic facilities.

(4) Village:- This is a settlement larger than a hamlet but smaller than a town. It contains more functional and basic facilities like school, dispensary, periodic markets that are used by both the village and the surrounding hamlets and farmstead. This is the most important form of rural settlement because the majority of settlement type all over the world are the villages.

HUMAN ACTIVITIES IN RURAL AREAS

Rural areas in most countries of the world have unique features that are common to them. The human activities are largely Agriculture, Mining, Lumbering, Construction, Fishing and Hunting activities. The problems emanating from these

activities will be ex-rayed in order to itemize the impacts (positive and negative) they have on the rural and general environmental setting.

AGRICULTURE ACTIVITIES

Rural dwellers engage in agricultural activities of all kinds pending on the soil and climate conditions favouring their locations. These activities is discussed under the following headings.

a). Crop production (cash and food crops)

b). Animal Husbandry

a. Crop Production

Crop production developed in ancient times as hunters and gatherers of the Stone Age turned to the cultivation of favoured species. Modern crops were gradually derived from their wild ancestors through continual selection for larger seed size, improved fruit and other desired traits. This is the extensive cultivation of plants to yield food, feed or fibre, to provide medical ingredients, or to grow ornamental products.

The rural populace have maintained the practice of crop production to sustain their economy over time. These crops species vary from one climatic region to the other. Some food crops (Maize, Sorghum, yam, potatoes etc) and cash crops (Cocoa, tea, wheat, sugarcane, ginger etc). The agricultural mainstay of the rural economy has provided food both to the rural and urban centres. Revenue generated from cash crops and sales of surplus food crops have also contributed to meeting family financial needs and financing community projects. For example, about 80% of rural settlements in Southern Kaduna state are into ginger production as a cash crop. Most rural areas of Benue State engage in yam production in commercial quantity.

b. Animal Husbandry
This connotes the breeding, feeding and management of animals or livestock; for the production of food, fibre, work and pleasure. Modern methods concentrate on one type of animal in large, efficient farming units that generate animal products (hides and skins, milk, animal waste etc) at the highest rate of return for investment. Large scale husbandry conditions include large number of animals in small lots, enriched feed, and growth stimulation by various means of vaccination against disease. Most of the worlds domestic animals, however are raised in small units under less efficient condition and at lower rates of return, this is largely found in rural areas and are best described as extensive husbandry. This system allows the animals to graze on pasture grounds to fend for themselves. Most common domestic animals include; swine, cattle, poultry, sheep, goats, etc.

PROBLEMS ARISING FROM AGRICULTURAL ACTIVITIES

(a) Loss of Vegetation Cover: - Vegetation refers to the plant cover in a geographical space.

Agricultural or farming activities involve land clearing or preparation. This process ensures the removal of trees, shrubs and weeds with the use of either traditional farming tools or heavy machinery such as bulldozers. Other

traditional practices include bush burning as an easy means of land clearing for cultivation.

These practices affect the vegetation coverage of a given area as trees and shrubs are felled to pave way for crop cultivation. These practices contribute negatively to depletion of the ecosystem, which also has adverse effects on the climate.

(b) Bush Burning

Fire has long been used as a tool in hunting, to improve grazing, and to clear land for cultivation. Primitive hunters often used fire in the belief that tender, green forage would be more readily available to wildlife in areas cleared of the coarse, largely inedible vegetation remaining from the previous season. The same rationale is often applied by modern herders. Unfortunately, while fire can serve as an important management tool, burning volatilizes organic nitrogen compounds, and the excessive leaching of tropical soils during the rainy season results in the loss of salts from the ashes of the burned grass and burned animal manure (Doso,2014). It has been estimated that bush fires in the African grasslands burn more than 80 million tons of forage per year-an amount sufficient to maintain 25 million cattle for a period of 9 months.

In general, the results of bush fires are a reduction and simplification of vegetation, soil depletion through losses of nitrogen, reduced nutrient cycling through deeprooted trees and shrubs, and critical breakdowns in soil ecology. (Doso,2014).

(c) Over Grazing: This has to do with grazing pressure which leads to deteriorating pasturelands

(d) Deforestation: This is an act of cutting down of trees which leads to erosion and soil degradation resulting from human activities on land.

SIJSTAINABILITY MEASURES ON AGRICULTURAL ACTIVITIES

(a). The use of Environmental Friendly farming Practices:- This will ensure that the land and its resource which farming depends on are maintained for future benefit. The following farming practices will help reduce the impact of agricultural activity on the environment.

(b). Shifting Cultivation:- Shifting cultivation is a term used to describe common agricultural practice which ensures that fields (farmlands) are left fallow usually for longer periods than they are used for growing crops. During this fallow period, Wild vegetation is allowed to grow (Grandstaff, T.G. 1981).

(c). Reduction of Grazing pressure and Good Legislation:- The reduce grazing pressure to permit deteriorating pasturelands to have a regenerative phase. Although a good number of African countries have introduced legislation intended to control rangeland stocking rates, but implementation of the law has rarely proved easy. For example, the Ethiopian Government puts a legislation on the reduction of livestock as a key strategy to overcome overgrazing.

(d) Afforestation:- This is an act of tree planting to control erosion and soil degradation resulting from human activities on land. It has been proven that

trees have the ability of controlling erosion, provide shade, shelter and serve as wind breakers. So tree planting will help reduce the impact of Agriculture on the environment.

MINING ACTIVITIES

Mining in its broad sense, is the process of obtaining useful minerals from the earth crust. The process includes excavation in underground mines and surface excavations in open pit or open cut

(strip) mines. Mining normally means an operation that involves the physical removal of rocks and earth. A number of substances, notably natural gas, petroleum and some sulphur, are produced by other methods such as drilling.

A mineral is generally defined as- any natural occurring substance of definite chemical composition and consistent-physical properties. An iron ore is a mineral or combination of minerals from which are used for substances, such as metals can be extracted and marketed at a price that will recover the cost of mining and processing and yield profit.

Mining operations generally progress through four stages;

- (a). prospecting
- (b). exploration
- (c). development or preparing access to the deposit-extraction
- (d). exploitation

PROBLEMS ARISING FROM MINING ACTIVITIES

1. Erosion:- Mining activities involves the extraction or excavation of the surface soil in order to access the mineral deposits under the earth crust. This act creates gullies as the excavated soils are mostly not replaced back to their original state after the deposits have been taken. The tin mining activities around Jos of Plateau State remain a threat to both human and wild life resident in the area. The ecological destruction has resulted to large gullies, waste land and subsequently erosion. In a nutshell, manmade ponds were formed, hence, making the area desolate and unfit for human habitation and agricultural practices.
2. Destruction of wild life:- environmental contaminants associated with mining activities may affect wild life species in many ways and at many levels within the ecosystem. Some contaminants associated with mines include; lead, arsenic, cyanide etc may cause acute or chronic effects on resident wild life. For example, at Whitewood creek near Deadwood, South Dakota, United States of America, more than 100 million tons of gold mine tailings were discharged into the creek from 1876 until 1977. Because of tailing and associated heavy metal contamination, whitewood creek down stream of the discharge points was considered a lifeless stream during those years. Another mine-related problem involves Joachim creek near Herculaneum, Missouri United States. A lead smelter near this site that has been active since the late 1880s contributes heavy metals to the local environment through

waste water discharge, erosion of tailing piles (coarse grain sediments) and air emission fallout

Furthermore, the unsound exploitation of mineral resources in Guyana have affected the way of life of the Amerindian people in various ways. Principally, the area has witnessed environmental degradation which includes damages to the rivers, streams and lakes which are the sources of fresh water and food. There have been a lot of studies which shows that the Amerindian communities have been affected by mercury pollution which is a direct consequence of mining activities

3. Oil spillage: This is an act of pipeline. spillage and the outflow of petroleum resources at the point of exploitation. This activity has been a major contributor to the environmental degradation of the Niger Delta villages in Nigeria.

SUSTAIBILITY MEASURES FOR MINING ACTLVITEES

a. Enforcement of Mining Laws:- The inability of the authorities to effectively embrace existing laws designed to guard against harmful mining practices has been the problem in Guyana. Although, the affected communities have initiated legal action to protect their rights, this mean That they would have full ownership of the resources and better control of those resources to the benefit of the environment and the communities. Good enforcement of the law will ensure that miners have a way of giving back to the community what they get from the environment.

b. Issuance of Cease order in the Case of Oil spillage:- This can be controlled by ensuring adequate Environmental Audit Report of companies engage in oil exploitation. Fines, withdrawal of licence, and legal punishments for defaulting mineral exploiters

c. Treatment of Mine sites:- Because of the high cost of manual mine-clearance, and of the dangers posed, automated mine-clearance appears as a better solution. Although expensive, machines could in fact reduce the amount of risks facing the operators.

LUMBERING ACTIVITIES

This refers to the felling of trees for the purpose of timber production, firewood, house furniture, paper making and other uses. Rural dwellers that engage in this activity generate revenue for self sustenance and community projects. Lumbering activities are mostly associated with the forest region where large availability of trees supports this activity.

Lumbering activities attracts large firms and industries as this provides raw materials for furniture firms paper industries and construction firms. The excessive and unbalanced lumbering activities have great impact on the vegetation cover.

PROBLEMS ARISING FROM LUMBERING ACTIVITIES

1. Deforestation — this is the indiscriminate cutting or over harvesting of trees for various purposes.
2. Loss of endangered species e.g. mahogany trees, cycad plants etc.
3. Distortion of the terrestrial habitat.

MEASURES FOR LUMBERING ACTIVITIES

- 1). Promoting participation of the private sector, labour unions, rural cooperatives, local communities, non-governmental organizations in forest-related activities, and access to information and training programmes within the national context.
- 2). There should be reviewing and if necessary, revising measures and programmes relevant to all types of forest and vegetation, in relation to other related lands and forest based resources, and relating them to other land uses and development policies and legislations; promoting adequate legislation and other measures as a basis against uncontrolled conversion to other types of land uses
- 3). Government should establish, develop and sustain an effective system of forest extension and public education to ensure better awareness, appreciation and management of forest with regards to the multiple role and values of trees, forest and forest land.
- 4). Establishing and strengthening capabilities for research related to the different aspects of forest and forest products, for example, on the sustainable management of forests, research on biodiversity, on the effects of airborne pollutants, on traditional uses of forest by local population and indigenous people, and on improving market returns and non-market values from the management of forest.

FISHING ACTIVITIES

Fishing is an activity related to the riverside areas, creeks and coastal regions. This form of activity pre-occupies the people of Niger Delta region of Nigeria, areas around Chad basin rural areas adjoining the river Benue and Niger respectively. For example, the people of Argungu in Kebbi State Nigeria are known to be engaged in fishing activities as they further show case this through their cultural festival popularly known as the “Argungu Fishing Festival”, a similar festival to this is the “Ogani Fishing Festival and Boat Regatta” in Umaisha community in Nasarawa State. While this activity generate employment and revenue to the community, the need for quick and fast catch of fish and other aquatic animals for monetary gains has exposed the aquatic life to dangerous and unholy practices.

PROBLEMS ARISING FROM FISHING ACTIVITIES

1. Destruction of the aquatic life: - excessive exploitation of the aquamarine life with little or no regard for the sustainability is very harmful to the aquatic life. Harmful practices such a given radius in a water body seriously destroys the aquamarine life. The sole aim is quick and easy means of fishing as the fishes dies and eventually float on the water surface. This practice annihilates most living organism living in such. water.
2. Water pollution: - the use of harmful chemical in fishing activities is very dangerous not only to the marine environment but has direct consequence to the humans as well. These chemicals if taken by humans either direct drinking of such water or eating fish from such water that is not properly cooked can lead to food poisoning.

SUSTAINAIBILITY MEASURES ON FISHING ACTIVITIES

- 1). Enforcement of fishing regulations stating where and when fishing can take place, what type of lures can be used, and the size and number of fish that may be taken.
- 2). Use of crude fishing methods using chemicals should be discouraged and be stringent discipline methods be enforced.

HUNTING ACTIVITIES

Hunting activities are largely associated with rural lifestyle in Africa. Gaming as some may call it is the act of catching wild animals for meat, hides/skin and traditional medicinal practices. This activities are usually carried out during the dry seasons in most parts of Africa Hunting in some communities in Nigeria is epitomized by traditional celebration or cultural festivals. In such occasions hunters go into the forest/bush to catch wildlife such as the antelopes, rabbits, squirrels, etc for display, sales and dancing in order to display their cultural might and traits. For example, the Elewha Cultural Festival” in Ashafa Abakpa community in Local Government Area of Nasarawa State is a yearly cultural event which is largely a hunting fiesta. Hunters display their prowess by the kind of wild animals they are able to catch during the three days intensive and extensive hunting in the forest. Their spoils will then be displayed on the festival ground on the third day to mark the end of the festival.

PROBLEMS ARISING FROM HUNTING ACTIVITIES

- 1) Bush Burning: This is one harmful resultant effect of hunting to terrestrial habitat. Hunters in order to scare wild animals away from their habitation, set bush on fire to create panic so as to chase animals away from their habitat in search of safety falling into the traps already set by hunters and others that are very wild are killed with the use of dome guns. This practice is exemplified in the constant practice of the Tiv community in Benue State, where in search of ‘bush rat’ always set bushes on fire.

2). Loss of Rare Wildlife Species:- This practice does not only distort the terrestrial habitat but endangered rare animal species. It is also believed that we have lost some specie of animals absolutely to hunting activities.

SUSTAINAIBILITY MEASURES IN HUNTING ACTIVITIES

1). Enactment and enforcement of legislations to limit the daily allowable kill of game per hunter and clearly stating disciplinary measures appropriate to defaulters.

2). Outlawing unfair and inhumane hunting methods, and making it illegal to hunt species in danger of becoming extinct.

3). Establishing a damper on commercial hunting by regulating the interstate movement of game.

4). Intensify public enlightenment campaigns on the dangers of bush burning on the ecosystem. This would ensure public appreciation and management of wildlife

5). Government should refocus and re-engineer strict adherence to bush burning act through the establishment of tribunal or Federal Commission on preventing bush burning.

CONSTRUCTION ACTIVITIES

Rural areas land suffers degradation resulting from various construction activities taking place in their vicinity or even in the urban areas.

(1). Dam Construction:- This is a large scale civil engineering project associated with water supply for irrigation, fishing, consumption, and hydroelectric power generation. The process is that of vegetation clearance, soil excavation, and river diversion. Building a dam changes the ecology of the surrounding area. Among the most affected animals are fish that depend on free-flowing water to live; Some kinds of salmon, trout, and other fish species migrate downstream to spend part of their lives in the open ocean. As adults, they return upstream to lay their eggs in the gravel bottoms of the rivers where they were born. Large dams block the passage of such migratory fish.

(2). Road and Bridge Construction:- Although rural areas in most developing countries are characterised with feeder roads, and footpaths, there exists a considerable level of road construction of both tarred and untarred roads. The resultant effect is that of vegetation clearance, excavation, extraction of building materials (laterite, gravels etc) from the natural environment without replacement.

(3). Building of Residential Homes:- Shelter is the Human second most important need after food. The process of residential building in rural area depends mostly on the natural environment for building materials. From the clay used in mud houses, to struts, thatch and straws used for roofing, to palm trees used in place of timber (wood) without replacement.

(4). Quarrying and extraction of Raw Materials:- This is the open excavation from which any useful stone is extracted for building and engineering purposes, and the operations required to obtain rock in useful form from a quarry. The two principal branches of the industry are the so-called dimension-stone and crushed-stone quarrying. In the former, blocks of stone, such as marble, are extracted in different shapes and sizes for different purposes. In the crushed-stone industry, granite, limestone, sandstone, or basaltic rock are crushed for use principally as concrete aggregate or road-stone. This activity is a major contributor to a great distortion and loss of many rocks in the ecosystem today

PROBLEMS ARISING FROM CONSTRUCTION ACTIVITIES

(1). Impact on Forest Resources:- Forests are important natural resource-base in any country, which play a crucial role in the conservation of watersheds, prevention of soil erosion and balancing the eco-system. Forests are sources of rural domestic energy supply, such as wood for cooking and heating and also wood-fuel for brick and lime production in rural areas. Timber, as a major forest product; is not only a very crucial building material but is also very vital to the economies of a number of developing countries. Therefore, any loss of forests, for any reason, may provoke potential human, economic and environmental disasters.

(2). Consumption of Natural Non-renewable Resources:- Non-renewable resources, in contrast, are finite. Hence the frequently expressed concern over high-levels of consumption which will lead to resource depletion and that might limit growth or development opportunity. However, with current rate of consumption of nonrenewable resources such as fossil fuels and certain metallic minerals, it leaves no doubt that the sustainability of future growth will be faced with severe challenges and barriers. Construction industry is a major consumer of several metals such as iron, aluminium, zinc, copper etc. According to various geological studies, metals - in terms of their existing exploitable reserves - are different. For example, aluminium (bauxite) and iron have a base-life-index of about 250 years, whereas lead, zinc and copper have a base-life-index of between 30 to 60 years at current rate of extraction.

Extensive use of some metallic minerals such as copper, lead and zinc which have limited remaining exploitable reserves, results in disappearance of these metals. Fossil fuel as source of energy, which is the most vital input to construction and construction-related industries, is also used in a manner that threatens the existing reserves of this key non-renewable source.

(3). Loss of Agricultural Land:- The loss of agricultural land has serious environmental effects on coastal areas and water resources. Loss of agricultural land is not caused merely by encroachment of settlements, roads and other facilities, but also by the impact of these facilities on the hinterland, from which raw materials for construction are quarried.

(4). The Distortion of Marine Habitat:- The extraction of sand and gravel from riverbeds and coastal areas has very serious environmental consequences. The removal of coral and shell from the coasts for the production of lime, for example, degrades the marine environment, as do also some large civil engineering projects such as dams and irrigation schemes.

(5). Pollution:- Construction -related activities worldwide are major generators of solid and liquid wastes, which not only pollute land, water and air, but are also hazardous to human health.

SUSTAINABILITY MEASURES ON CONSTRUCTION ACTIVITIES

(a). Recycling: use of organic and inorganic wastes in building materials:-In the context of cleaner technology in construction, recycling and re-use of waste provides an excellent opportunity to reduce the consumption: of natural resources and to contribute to the conservation of the environment; Recycling is a principle of material and energy conservation and employment generation that has proved effective in most developing countries. For example, concrete can be broken up to be used as aggregate in new construction; glass-bonded ceramics can be crushed to produce a pozzolanic material timbre beams can be reused; metals can be re melted. Similarly, doors, windows and similar building components could be suitable for re-use or recycling.

(b). Promotion of Environment Friendly Technologies and the creation of policy climate which would stimulate construction to implement. innovative initiative

(c). Promoting locally available, appropriate, affordable, safe, efficient, and environmentally sound construction methods and technologies in all countries, particularly the developing countries (UN-HABITAT, 1999).

(d). Promote research and development efforts to find substitute for optimize use of non-renewable resources and to reduce their polluting effects, pay special attention to recycling, reuse of waste materials.

(e). Careful selection of land for human settlements development and for quarrying purposes;

(f). Reducing construction activities in eco-sensitive zones;

(g). Reducing indiscriminate extraction of aggregates from river beds and coastal areas and looking for alternative sources;

CONCLUSION

The survival of the rural inhabitant depends wholly on varies economic activities engage upon by the rural dwellers and that the major economic activity in the rural area is agriculture and it is supported by other activities of the rural life.

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