

Rural - Urban Interaction of Agro-Forest Produces in Nagaland: An Overview Study of Districts Headquarter and its Rural C D Blocks

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Abstract: *After man has started to live a sedentary life, rural and urban settlement emerges as two entities of institutions which are independent to each other. Yet either one of it cannot survive of its own. So the interdependence between these two became inevitable. So in the process, for the study of interaction the flow of people, flow of goods and services, flow of culture, flow of ideas and information and flow of funds are considered as the components of the interfaces. However in the present research work one aspect is executed in which the flow of goods of agro-forest produces has been emphasized during which the phenomenal heterogeneities on the eastern part and the western part of the study area have been clearly revealed. And these conditions are due to the influences from entire geographical factors that prevailed within the mechanism of interaction on rural and urban areas which are considered as the determinants. Each and every districts of Nagaland are divided into 3 zones of interaction as the passive, the moderate and the active interactive zones and the clubbed villages represents a rural CD block where the status of interdependence based on the distances covered between the district headquarter and the rural settlements have been analyzed. The study also reveals that there is further scope for pursuing research work and consequently to adopt various appropriate means of a sustainable livelihood for the rural populace in the study area based on various physical and cultural factors of environment.*

Keywords: settlement, interaction, agro-forest, flow of goods, rural, urban, headquarter, CD blocks, socio-cultural

1. Introduction

In exception to nomadic life of mankind, the settlement aspect is inevitable in the human society. Beginning from agrarian sedentary life at the advent of agriculture in around 8000 BC to Greek and Roman city state and finally the modern cluster city life, emerges the study of human settlement phenomenon to be important. The approach from service centers to transformation helps in switching to human settlement. And this approach sees man-in totality-in work, in play at home and in relationship with nature and the environment, (Singh 1994). With the relationship of man and nature, he attained a settled life on two entities as rural and urban settlements. Consequently, in regard to the dichotomy on the definition of rural and urban areas, every sovereign nation has its own sets of parameter to define it and as such, in case of India the, (Census of India 2011) defines an urban settlement as (a) all places within municipality, corporation or cantonment on notified town area. (b) All other places which satisfies the following criteria:(a) a minimum population of 5000,(b) at least 75% of male working population are non-agricultural,(c) a density of population of at least 400/sq Km. And to say, all areas which are not recognized as urban area are considered as rural area. And it is believed that these two areas are independent to each other with definite boundaries in social, political and economic aspects where constant interaction and interdependence is inevitable as one cannot survive or fulfill all needs of the people without depending on other. So in this regard the interaction is executed by means of flow of people, flow of goods and services, flow of ideas and information, flow of culture and flow of funds as spatial interdependence. Besides, with the advancement of man's civilization, activities are not unique or confined in rural and urban areas only. But in many a cases, the rural activities of agro-forest and urban activities of non-farm are found in

urban and rural places respectively which is known as sectoral interdependence, (Imti 2014). The interaction started within the village and finally with the urban areas as the people in the villages joins together in many places from dawn to dusk. They meet in the tea stall in the morning, in the paddy field or in the farm house, in the market and in a number of places. They interact with each other and exchange ideas on a variety of matters from family issues to international affairs, (Palanithurai 2004). The present research work is a bit detail study of inter linkages of the flow of goods and services between rural and urban areas which is mostly governed by both physical and cultural environment that react with man.

2. Objectives, Data base and methodology

The specific objectives are:

1. To highlight the types and extend of interdependence between rural and urban areas in Nagaland.
2. To obtain and understand the potentiality of rural - urban interaction in Nagaland.
3. To examine whether the volumes of flow of goods and services is due to demographic or socio-cultural or economic factors that influence the rural – urban linkages.
4. To recognize if the participation of people in the interaction between rural and urban as socio- cultural and ecological factors.

Intensive field coverage have been used in this study and also based on both primary and secondary data as its source. The secondary information has been mainly obtained from different research report, journals, books, census publications and statistical handbooks. However, the present study is mainly based on the above mentioned secondary sources. Informal interviews were conducted to

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the villagers and also to the one who sells agro-forest products in urban market of district headquarters. And also to quote further that the present research works is empirical in nature as extensive observations, informal interviews and discussions are the means of obtaining data and information. Various cartographic representations, statistical calculations and representations have also been used which are based on the available data. The villages within a CD Block are collectively clubbed together and so represented as rural CD block. Therefore, in the present study, each and every district are divided into 3 zones as the passive, the moderate and the active zones of interaction using population data and the distance between the rural CD blocks and the urban district headquarter. The zones are so demarcated based on a gravity model given by Garrosthers 1956,

$$As, I_{ij} = km_i m_j / d_{ij}$$

(Where I_{ij} is the interaction of i^{th} and j^{th} places, and m_i and m_j is the population of the i^{th} and j^{th} places and d_{ij} is the distance between i and j places), (Imti 2014).

3. Geographical setting of study area

The study area of the present research work is the state of Nagaland, the 16th state of Indian union, which was inaugurated on 1st December 1963. Nagaland lies between 25°60' and 27°40' north latitude and 93°20' and 95°15' East longitude with an area of 16579 sq km. She is bounded by Assam in the west, Arunachal Pradesh in the north, Myanmar in the east and Manipur in the south. The topography of the state is hilly terrain with an altitude ranging from 194 to 3840 meters above main sea level being Saramati, the highest peak is about 3840 meters above main sea level in Kiphire district. Nagaland has 11 districts as Kohima, Phek, Zunheboto, Wokha, Mokokchung, Tuensang, Mon, Dimapur, Peren, Kiphire, and Longleng with number of tribes as the entire state is a tribal state. Tribes like Angami, Ao, Sema, Lotha, Phom, Konyak, Chang, Sangtam, Kiamnungam, Yimchunger, Chakhesang, Zeliangrong, Rengma, etc inhabit the state. Both the district headquarters and the rural CD blocks are also considered as study area, (Imti 2014).

4. Flow of agro-forest Goods as interaction

As a component of spatial linkages between rural and urban areas the agro-forest products is considered here as flow of goods. The agricultural products of progressive farmers are disposed off in the urban areas where they have surplus but at present the condition it is no more subsistence because earlier the farmers used to get all necessary food items and vegetables from the land. He used to do the necessary process and keep a portion for his consumption. Dhal, gram, grains, gingerly oil, and groundnut oil were available all the time in their house. Now a day they are selling everything after harvest, (Palanithurai 2004). In the present study area also the villagers interact with their district urban centers by means selling their agro-forest produces. Besides, the villagers, specially the womenfolk, even sell their vegetables and

wild collections in wayside rural markets before they bring it to the weekly urban market of district headquarter. On the other hand, the men folk also interact with its urban center by selling forest products like building materials such as bamboo, pale post, logs, timber and even fuel woods.

Table 1: Showing district wise percentage of production for principal agricultural crops in Nagaland

District	Cereal	Pulses	Oilseeds	Commercial crops
Kohima	7.40	8.10	8.40	9.50
Phek	9.30	8.30	10.10	8.90
Zunheboto	7.90	7.10	18.70	5.00
Wokha	8.40	7.10	4.30	9.30
Mokokchung	6.90	7.90	8.80	10.30
Tuensang	8.70	22.80	8.50	9.90
Mon	14.30	9.20	12.50	11.00
Dimapur	21.30	5.80	13.00	18.00
Peren	6.80	4.20	7.30	7.00
Kiphire	5.80	11.80	4.40	3.90
Longleng	3.20	7.70	4.00	7.20

Source: Statistical Handbook of Nagaland, 2013

The above mentioned table indicates that in case of the production of cereals Dimapur district leads as 21.30% followed by Mon 14.30% and also stands same position in the production of oilseeds and commercial crops as Dimapur 13% and 18% respectively followed by Mon 12.5% and 11% respectively. The reason responsible for the above quoted phenomenon may be because the larger segment of the population practice farming in the lowland of terrain foothills bordering Assam in the western tract of the state. Besides in regard to the production of pulses, Tuensang district is leading in production which accounts 22.8% of the total state's production and then Kiphire district stands second as 11.80% for which the factor may be due to the highland dry cultivation suits its growth. Apart from this the pulses is also a part of daily diet for the inhabitants of eastern tract of the state which tend them to go for the cultivation of the same. The productions of these crops are determined by both the physical and cultural drivers of geographical environment. So it is being detected that the participation of rural populace in the interaction of rural and urban is high in those districts where the production of agricultural crops are more. Besides, referring to the below fig. (1), it is being depicted that the districts like Zunheboto, Tuensang, Mon and Dimapur excels in the productions by means of leading at least in one item of the agricultural crops. Dimapur districts grow all the crops well except low production in pulses because it suits better growth in hilly cold climate. The factors that Dimapur leads in agricultural practices are that geographically it has the plain topography, warmer climate and the availability of fertile alluvial soil. These agricultural products are marketed to all the respective district headquarter from rural CD blocks depending on the zones of interaction of the concerned district except the blocks which interact with other alternate nearer urban center. This practice of marketing is done through AMPC depots wherever available.

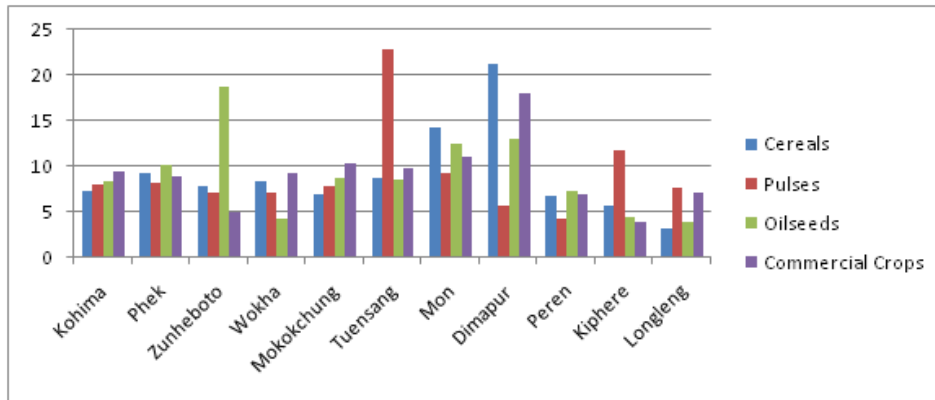


Figure 1: The Bar showing the percentage of district wise production of agricultural crops in Nagaland

The table 2 below shows the marketing picture and also depicts the pattern of interaction between the rural CD blocks and the urban district headquarters. Dimapur district indicates that the entire CD block sells their agricultural produces in Dimapur markets fulfilling the nature of the commercial urban center of Nagaland. This mechanism shows that there is total active interaction between Dimapur and its rural areas. Another notable feature of the similar aspect for the districts bordering Myanmar is that though the blocks and its villages are located at far flung distant from the district urban headquarter in the less interactive zones, these villages dispose off their produces in the markets of respective district headquarters due to non accessibility of further eastward settlements crossing international boundary. This indicates that there is seldom or nil interaction with Myanmar settlements rather strengthened its relationship

with their respective urban districts headquarter as active rural-urban linkages. This pattern of interdependence is being revealed by the expression in which the percentage of the number of rural CD blocks having active interaction with their urban center are Phek 45%, Tuensang 50%, Mon 71%, Kiphire 57%. However, in the districts located within the western tract of foothills bordering Assam the villages of the Rural CD blocks sells their agro-forest products in the alternate urban centers of Assam operating a nature of active interaction. But experiences a passive interaction with their urban district headquarters as a disadvantage of being located in the less interactive zones. This aspect is supported by the following as the percentages of the number of rural CD blocks interact actively rather than their districts headquarter are as Wokha 72%, Mokokchung 50% and Zunheboto 64%.

Table 2: Sale of Agricultural produces by number of rural C D blocks of Nagaland in%

Districts	Sale by the rural C D Blocks In %		
	In District HQ	In other Towns	Both
Kohima	17	33	50
Phek	45	25	30
Zunheboto	9	64	27
Wokha	10	72	18
Mokokchung	13	50	37
Tuensang	50	30	20
Mon	71	21	8
Dimapur	100	0	0
Peren	50	33	17
Kiphire	57	14	29
Longleng	35	32	33

Source: Field Survey 2014-19

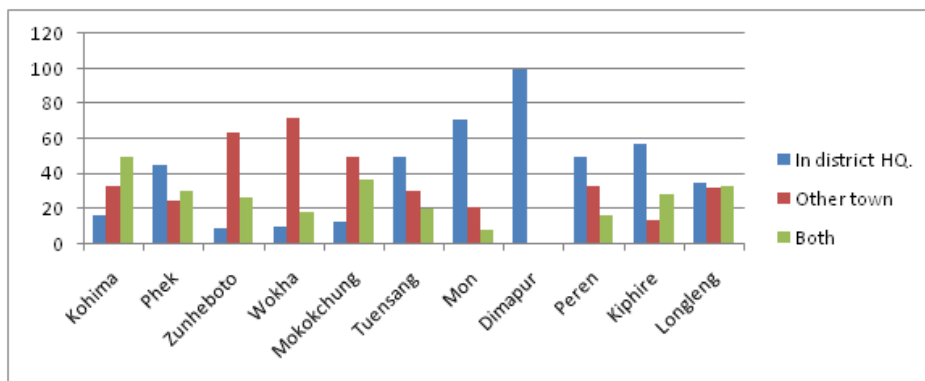


Figure 2: Diagram showing sale of agricultural product by rural CD blocks in their respective district headquarter and other town

As far as the forest products of the villagers are concerned they make it available in the urban markets and wayside market sheds. Now a day the villagers get employment by means of interaction with urban centers as they earn from selling of forest produces, the collected, in urban markets. Minor forest products like honey, sikakai, amla, kalpasam, kurgilagun, bamboo, gum, kalpasan, herbal grass and fruits are being harvested from the forest and the hills and sold in the nearby towns. It provides employment opportunity, (Palanithurai 2004). The similar status happens in the present study area also because the villagers sells the forest products like wild fruits, mushroom of varieties, wild vegetables and herbs, honey, bamboo shoots, crabs and frogs from streams. A particular interesting nature of this aspect that experience in Nagaland is that the availability of these products is directly influenced by physical environmental determinants. Towards the western tract that terrain ranging from foothill up to an approximate altitude of 1000 meters above mean seal level has particular wild fruits, vegetables and herbs which are not found in eastern part of the state. An interesting example is that bamboo shoots is a part of food items for the people natively living within the western districts of Wokha, Dimapur, Peren, Mokokchung and Mon. So consequently food items derived from these items are indigenous to Lotha, Ao, Konyak, Rengma and Zeliang tribes of Nagaland. Locally named Wild vegetables such as *mongmong*, *umrem*, *aojising*, *jurang* are not grown in the eastern districts of Tuensang, Kiphire, Phek. A particular eatable wild vegetable locally called *Chie* which is abundantly found in Zunheboto district is not seen in the districts of western tract bordering Assam. Even the crabs that found in the stream of eastern and western part are varied as red and black colored respectively. So it revealed from the study that depending on the availability of forest a product which is determined by the prevailing environment are selling in the local markets of respective district towns.



Plate: Disposal and sale of Agro-Forest product vegetables at Roadside market sheds



Plate: Forest products ready to dispose and sell at urban centers

5. Findings, Conclusions and Suggestions

In the present study of rural and urban interaction it is being revealed that this concept emerges due to establishment of rural and urban settlements and these two institutions are interdependent to each other though they remain as two separate entities. The concept of the dichotomy rural and urban is varied with different sovereign nations of the world. However, in case of India the definition given by the Census of India is still valid which has been used in this study. The interactions start

with the rural populace both intra and inter of the village territory.

It is being found that the dynamics of flow of people, flow of goods and services, flow of funds, flow of cultures, and flow of information and ideas are considered as the components of rural and urban interdependence. Besides, the agrarian activities in urban areas and non-farm activities in rural areas are particularly a sectoral interdependence.

Though there are different types of interdependence that extended throughout the state, the flow goods as the interaction of agro-forest products between rural and urban Nagaland is considered and found that there is enormous scope of potentiality in this aspect by emphasizing deeper micro level study. All the factors of demographic and socio-culturo-economic factors determined the flow of agro-forest goods between the rural areas that are clustered as rural CD blocks and the urban districts headquarter of the state of Nagaland. Besides, these factors have so determined the aspects in the study because the calculation of the zones of interaction is based on population and the distance between rural and urban places.

The participation of both the rural and urban populace in the process of interaction is due to socio-cultural and ecological factors. It is socio-cultural because there is demand for particular agro-forest items which is required by the recipient as a fulfillment of lifestyle in one hand. And on the other hand these items are consumed based on the availability within a particular region that is determined and supplied by a set of factors of geographical environment.

As far as the production of agricultural goods is concerned a variation is identified between western tract and eastern zone of the state in all aspects of the rural and urban inter linkages. This is being supported by a status that western part of climatically warmer and low lying region which produces more of cereals and oilseeds than the eastern zone of cooler highlands which suits for production of pulses of varied beans.

In regard to the zones of interactions, within the western foothills, the districts headquarter does not interact at all with the blocks that are located in the less interactive zones causing a passive interdependence but these blocks are active with other urban centers of Assam. However, exceptionally in Dimapur district the rural areas and smaller neighboring urban centers of Assam rather interface with urban Dimapur headquarter. On the other hand, within the eastern zone bordering Myanmar, the western blocks of the districts which are located in less interactive zone are passive with its headquarter but the easternmost blocks of the districts that are situated within the less interactive zones are rather active with its headquarters because there are no alternate options of urban centers crossing international boundary. Besides, in regard to the aspects of developmental status, it revealed that the western part of the state is more advanced than the eastern part of the study area.

Besides, as far as forest products are concerned, the components of wild items are depending on the natural availability determined by physical environmental factors. Therefore there is variation between the western and the eastern tract of the state which composed the items of the market in the process of interaction. And consequently their food habits and lifestyle are being determined.

Both the eastern and western part of the study area need further development on technological based innovative way means so as to acquire sustainable livelihood strategies among the rural populace depending on the permission of physical settings of environment. One example is that recently state horticulture department tested the plantation of apple in cold highland Thanamaire village of Kiphire district which was found to be success. So, similar in-depth research activities are further needed in the study area.

Besides, there is scope for further research in the field for multiple micro spaced areas with modern technological knowhow methodologies so as to benefit the society largely in respect of socio-culturo-economic aspects and to attain sustainable livelihood.

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