PART-I
Settlement being the basic unit of an organised human colony over territorial space leading to the evolution of a cultural landscape is the central point of all human activities. Settlement serves as the base point for which all other geographical, social and economic studies are basically meant for and various planning proposals are formulated and intended too. Settlement Geography or Ekistics – the science of human settlement – is comprised of all forms of human occupation, permanent or temporary, rural or urban. It plays equal importance from the temporary huts of herders or hunters to permanent houses and buildings of hamlets, villages, towns and cities. The concept of human habitat as a substitute to human settlement is a concept, which came

into usage very recently. This term became popular after the United Nations Conference on Human Settlements held in Vancouver, Canada in 1976, generally called Habitat'76. Settlement geography is directed towards the complex problems of human groupings in relation to space and their temporal changes. It investigates the factors and causes controlling distribution, structure, morphology and diffusion of human occupancy. The basic ecological requirement of shelter is the primary cause of the origin of settlements. During the process of evolution, various socio-cultural attributes - social rites, aesthetic senses, economic concepts, innovative and technological skill and ideas of the inhabitants impart dynamic character both to the morphology and structure of settlements.

Increasing problems of human habitation and the changing socio-economic activities of the human communities with growing interaction among settlements of different rank and size, the human occupancy units undergo morphological and structural changes as well as reflect changing settlement pattern. Such spatial transformation of the habitational units attract growing attention of the

geographer, social scientists, economists and planners towards the study and planning of human settlements. Geographers study settlements mainly under regional and micro regional framework giving the rural and urban settlements, their individual identity, the role of the rural central places in the socio-economic upliftment of the rural communities as well as the interaction among settlements and their growth potentials. Planning prospects are derived out of the physical, economic and cultural constraints on their growth, distribution and morphology. All the above aspects are the product of the multiple and subtle relationships among a large number of variates and covariates that impart dynamism to the very process of evolution. During the last few decades some substantial works have been done by the Indian geographers in the field of settlement geography. The recent trend of settlement study in India is directed towards micro-regions in order to derive meaningful socio-economic planning strategy for creating equity in the flow of resources, ideas and technology from the highest to the lowest units of the hierarchy with a socialistic outlook.

1.1 THE PROBLEM.

The basic term settlement geography is derived from the German "Siedlungs Geographile"^3, which involves

the cultural landscape created by man in the process of occupancy of land. Settlement geography is concerned mainly with the spatial and temporal variations, in the process of settling in order to know the cultural advancement of the people and the man-land relationship of the environment. Settlement refers to the characteristic groupings of population into occupancy units together with the facilities in the form of houses and streets which serves the inhabitants. Such facilities are also influenced by economic activities and technological knowhow of the people.

Rural settlements are gradually modified and transformed into rural central places, rurban centres or urban centres, depending on their growing economic and cultural activities. Under the broad organisational system of settlements econopolis, megalopolis, megalopolis, cities, towns, rurban centres, rural service and market centres, villages and hamlets are the hierarchical orders. Their interdependence increases and abundance decreases with the ascending order of the hierarchy. The growth potential of a settlement of any hierarchical order is related to the resource base and resource mobilization.

in the settlement. The relative importance of a rural occupation unit and its capability to centralise economic and welfare activities to emerge as a rural central place is indicated by the extent to which such activities serve the people of the neighbourhood. A study of spatial organization of settlements of different order, also reflects the economic activities and location of the centralised services in a region. Such impact is significantly visible particularly in a society with higher proportion of rural population. In a country like India, where vast humanity is living in rural areas, the rural settlement studies bear considerable importance. The highly agro-based rural communities of India are facing constraints in their socio-economic growth and development under the limitations of their resource base. Such constraints are apparent in the location, growth, distribution and morphological characters of the rural settlements.

The totality of human community in rural areas includes the social, material, organizational, spiritual and cultural elements. The scope of rural settlement study, thus, extends to all those elements required for sustaining human living in rural areas. The functional growth of the rural central places and the urban centres, whose services are highly required by the rural communities for their economic upliftment is related to resource
base of the rural communities and their functional and commercial link with higher order central places. In synthesizing and evaluating the socio-economic landscape of a region all such aspects need careful and intensive investigation.

Although a little work has been done in the field of rural settlement study in the highly urbanized western world, the works of J.C. Hudson, C.F. Kohn, R.O. Whyte, M. Chisholm and V.P. Miller are some other outstanding contribution in


the field. In India with vastness of rural community both as regards space and dimension maintain wider scope for the study of rural settlements and rural-urban inter-relations; considerable works have been done in this field. The major contribution towards settlement study in the country is made by the school formed by Professor R. L. Singh of Varanasi. Recent references in the field of rural settlement study in India are the works of R. L. Singh, K.N. Singh, Rana P.B. Singh, Dinesh K. Singh.


Idem: The Chamars of Uttar Pradesh - A Study in Social Geography. (Inter India Publications, Delhi), 1980


In Assam, the study of settlement is in a quite younger stage and very little efforts have, so far, been made to explore the nutshell of rural settlement geography. Reference may be made of the work of N.N. Bhattacharyya, S. Barthakur.


The location and the nature of distribution of urban settlements along with the rural central places have considerable bearing on the organization and distribution of rural settlements. Urban centres grow mainly to provide goods and services to the people outside their municipal limits and rural central places grow mainly to render services outside their cadastral boundary. The functional character, the volume of services, the degree of connectivity, etc., of such settlements are some of the deterent elements for its socio-cultural and economic impact on the neighbouring rural settlements. Some of the noted references, dealing with rural urban relations and rural central places are of R.E. Dickinson, V.P. Miller, Lewies Mumford, A. Smailes.


The above mentioned works serve as a conceptual base for the study of rural settlements in an agrarian society with lowly diversified functional growth of settlements. As there is a wide variation in the spatial growth of settlements over any geographical space, such works may provide simply a conceptual framework for searching out the individual identity of a region as regards settlement organization. Such investigation necessitates systematic spatial analysis and examination of variates and co-variates, contributing towards individual identity. Thus, all the above references are inadequate to explain or establish any common theoretical model to fit into all the existing settlement systems distributed over the global surface.

Keeping this view, the present work has been taken up. The rationale behind selecting Sipajhar Region (Figure-A) of Darrang District of the State of Assam as a

special region for settlement study is that it is considered to be a representative unit of the physiographically homogenous, purely agro-based and very poorly urbanized in the Assam Valley. The study area is also treated as a specimen of unurbanised micro-regional unit with predominant indigenous population. Further, Darrang District being the home district of the investigator, he is well acquainted with the rural and urban landscape of the district and well informed of the socio-cultural and economic situation of the area. Like many other parts of the Brahmaputra Valley, the considered study area does not possess a single urban centre. Therefore, it does not maintain any scope for the study of urban settlements as a major controlling factor for spatial organization of rural settlements. The present work is, thus, a modest attempt towards a micro-regional settlement study based solely on primary investigation. The areal extent of the study area and the accessibility of the individual settlement units maintain direct scope to the investigator for such a micro-regional study based on first hand information.

1.2 AIMS AND OBJECTIVES OF THE STUDY.

Human occupancy of various order in a settlement system are functionally and socio-culturally interdependent to each other. The socio-economic stability and the functional growth of the individual settlements of a region.
basically depend upon a planned economic growth of the spatial organizational system to which the individual settlements are the constituent units. An organizational study of settlement, in fact, requires the study of various organizational aspects such as distributional pattern, spatial dimension, size, casual factors affecting distribution and interaction of settlements like transport system, service facilities, economic situation etc. and the hierarchies of settlements. All these aspects are viewed as components of an integrated spatial organizational system. Any functional and socio-economic gap among the occupance units of similar rank or order create regional disparities and socio-cultural problems. In medieval India, environmental and cultural considerations played vital role in the spatial organization of settlements. In colonial India, such organization was influenced by the politico-economic considerations of the British administration. With the changing socio-cultural traits and advancement of science and technology in the present day India, settlement planning serves as an axiom to balance the gap created in the sphere of socio-cultural and economic development. The reorientation of the revenue administration during the Britishers leaves considerable impact on the distributional pattern of settlements, resulting in regional disparities in the levels of socio-economic
development. A systematic study of the spatial organisation of settlements is, thus, felt necessary for creating a basis for socio-cultural and economic planning. Such academic considerations attracted the interest of the investigator for taking up a micro-regional unit for study in the above context.

The principal objectives of the present work are

(i) to examine the nature of the areal distribution of settlements and the influence of physiographic situation over it

(ii) the resource base and land use pattern with their impact on settlement organization

(iii) the growth of central places, their functional status and their impact on the growth, and distribution of rural settlements

(iv) interaction among settlements of various ranks and orders; and

(v) the factors controlling the location and growth of settlements of population with varying cultural identity along with the levels of socio-economic development over various spatial units.

More specifically, the study attempts to examine the validity of the following assumptions:
1. The physiographic situation has dominant control over the evolution and distribution of settlements.

2. The land use pattern of the study area reflects a purely agrarian economy and resource limitation maintains little scope for well developed industrial growth.

3. The growth and distribution of rural service centres and rural market centres maintain significant relation with population concentration and distribution of settlements.

4. The level of interaction between rural central places and rural settlements is highly based on the functional diversity and the volume of public utility and economic services rendered by the rural central places.

5. The location and distribution pattern of settlements are determined to a great extent by habitational behaviour of different social groups of people and their cast segregation.

6. The immigrant settlements exhibit a socio-cultural landscape reflecting habitational behaviour clearly different from indigenous population groups.
The areal difference in the level of socio-economic development in the region maintain close relationship with the distribution pattern of settlements.

In many respects, these hypothetical assumptions came up during a local study of area under consideration. The study draws a conclusion as to whether the existing organizational pattern of settlements in the Sipajhar Region maintains co-relations with the usual attributes of a organizational system or it is deviated from the usual course under any casual impact.

It is quite likely, that an economically background, densely populated and unurbanised area like the Sipajhar Region cannot exhibit all the mature characteristics of an orderly organizational pattern of settlements. No claim is, therefore, sought to be made to establish a fulfledged and matured organizational character for the study area. It is expected to establish the validity of certain casual relations and concepts regarding settlement organization applicable for relatively homogeneous rest parts of the Assam Valley.

1.3 METHODS OF STUDY:

The spatial organization of settlements are closely related to physical environment, socio-cultural
advancement and economic situation of a region. The analysis of growth and location, size and spacing, degree of concentration and dispersion of settlements, degree of land dependency of man, population pressure over arable land, interaction among settlements, level of socio-economic growth and behavioural aspects of the demographic units, thus, constitute the major aspects of spatial organizational study of settlements. In the present work, necessary field observations and primary data collection were carried out during the year 1989, with the aid of village level cadastral maps, block level maps and one inch to a mile thana level maps prepared by the Government authorities. Field surveys were carried out in each individual settlement unit to collect all authentic and relevant data and informations required for computation and presentation in the work. All basic data including population figure embodied in the work are collected through personal survey. In collecting such data, enumeration work was carried out from house to house. Only the informations relating to location of past settlements, earlier revenue administration etc., have been collected from secondary sources or through personal interview.

In the present work, the Mouzas (Figure B) are considered as the standard spatial units for necessary

46. A mouza is the smallest Revenue Unit, Consisting a number of Villages, in the State of Assam. It is equivalent to a tahsil in North India.
BASE MAP OF THE STUDY AREA
SIPAJHAR REGION

Fig B
analysis and investigation. The boundaries of the individual rural settlements are identified for the purpose of data collection and for examining the land use pattern; from 1 inch to a mile Mouza level cadastral maps prepared by the revenue department of Government of Assam. In addition to above maps, toposheets covering the study area prepared in 1930 A.D. are used to examine the earlier distributional pattern of settlement in the region. Moreover, personal interview with the elderly people of the area made it possible to know few things in this respect.

The village level cadastral maps are used mainly for (i) presentation of all locational aspects (ii) computation of area included in each individual village and (iii) computing land under residential and non-residential use.

All the data and informations so collected are computed and analysed following different useful techniques to derive required interpretation. The body of the thesis contains the source of data, maps and informations used in the study. Maps, diagrams, data tables, etc., are used in the present work for illustration as well as to draw the desired conclusion.

1.4 ORGANIZATION OF THE STUDY:

This work attempts to examine the spatial organizational pattern of settlements in the Sipajhar region of
Darrang District of Assam, on the above principles consisting of eight chapters, arranged in two parts. The first part comprised of the first three chapters is treated as the introductory part. The second part consisting of the last five chapters is treated as the analysis and finding on the central theme of the work. The ordering of the chapters reflect the settlement organization of the study area. The chapters cannote the broad themes employed in organizing the materials.

Chapter II deals with the historical background of the study area in the context of early spatial developments of settlements. The present organizational pattern is the spatio-temporal manifestation of the early settlements. This chapter is aimed at throwing some light on the settlement pattern during the Koch and Ashom rules and subsequently under the British rule, which acquires considerable importance in the growth and distribution of present settlements.

In the Chapter III, the geographical personality of the study area has been depicted. The geographical informations considered to be relevant to the present work are arranged under two sub-chapters - physical setting and cultural setting. This chapter provides a basis for qualitative and quantitative interpretation of the organizational aspects of settlements.
In chapter IV, underlies the evolution and growth of settlements in the study area. This chapter is comprised of three different sub-chapters dealing with the considered aspects related to the central theme of the work. Each of these sub-chapters present settlement patterns at different periods, which is felt necessary to draw desired inferences as to the evolution of settlements.

Chapter V, presents land use pattern in settlements of various population groups. This chapter consists of four sub-chapters - each dealing with the land use pattern in settlement dominated by non-tribal indigenous, tribal, scheduled caste and immigrant population. Such arrangement on the theme of the chapter reflects the variations in the cultural landscape of the study area with difference in demographic identity.

Chapter VI, deals with the rural service centres and their interaction with rural settlements. This chapter includes two sub-chapters. These sub-chapters are arranged to present the central theme of the chapter in the light of the functional and physical link among the settlements.

Chapter VII, examines the levels of socio-economic development and their manifestation on settlement
organisation of the study area. This chapter is comprised of two sub-chapters dealing with the prevailing socio-economic conditions in the area. These sub-chapters are arranged in such a way that the whole organisational systems of settlements can be viewed in the light of the prevailing socio-economic situation in different spatial units of the area.

Chapter VIII, the concluding chapter attempts to synthesis the findings and suggests the possibilities of future work in the above line that would be of both academic and practical value. It also re-emphasises the socio-cultural and economic problems associated with the organization of settlements, which may provide a basis for future settlement and socio-economic planning in the study area.