

HILL AREA DEVELOPMENT

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PREFACE

North Eastern Region of India consisting of seven States of Assam, Arunachal Pradesh, Meghalaya, Manipur, Mizoram, Nagland and Tripura is a geographic microcosm of the Indian macrocosm. With a geographical area of 255,000 Sq. Km. (constituting 7.7 per cent of the land area of the country) and 26.6 million population (1981) constituting 4 per cent of the national population, the region manifests unity in many a diversity. Both its physiography (representing all the three macro-regions of India) and social mosaic are widely diverse (specially, the ethnic diversity possibly unparalleled anywhere in the world) yet it presents the romanticism of that dew-drenched, quiet morning, full of potentialities, hopes and aspirations of a brighter and happy day ahead. Compared to India's 30 per cent areal coverage of hills and mountains, N.E. Region presents 70 per cent of the geographical area under mountains, hills and plateaus, idyllic but often, highly inaccessible. Except the valley regions of Brahmaputra and Barak (with addition of some plains of Tripura adjacent to Bangladesh) the population density is thin and widely scattered. The economy and the society in these hill areas are still in the womb of traditional ethos struggling to emerge to the vibrance of modernity. The pre-capitalist societal and economic relations are giving way to unimaginative and distorted capitalist relations on the basis of a century old history of colonial exploitation and its contemporary continuance in various forms.

102 While in the hill areas of the North East Region, ethnic diversity is one of the main features, at a general socio-economic level it presents the commonality of concentration of scheduled tribe population and Christianity. Therefore, while on the sociological sphere this region presents fascinating possibilities, on the economic front it represents one of the most neglected areas of the country needing urgent and adequate attention. Not that it is possible to formulate a development policy for the hilly areas of the region in isolation, it is more of an attempt to keep the focus on the problem area while analysing the issues in a larger regional scale.

It is with this ambition that this Seminar on "Problems of Hill Area Development" was specifically planned, initially in the summer of 1987, but due to prevailing uncertainties in Shillong

was given final billing for March 26-27, 1988. The co-sponsors of the Seminar were the Geographical Society of the North Eastern Hill Region (India), the ICSSR-NERC, Shillong, and the North-Eastern Hill University, the host institution. It may not be out of place to mention that without the ready support of the ICSSR-NERC and the NEHU, Shillong, organisation of the Seminar would have been rather difficult.

As it happens, often high expectations are generated out of seminars. While agreeing that seminars ideally need to be purposeful coming out with clear cut recommendations, the allied interests of interaction between academicians working at different institutions on a common problem, dialogue between the academia and the bureaucracy (the main instrument of policy implementation) and finally, the inspirations, encouragements and exposure received by younger researchers are of the greatest value.

The seminar was organised with the specific objectives of

- (a) discussing a framework of 'development' in the context of the North Eastern Region of India;
- (b) analysing the environmental system of the region which is extremely fragile;
- (c) looking at the hill agricultural system which happens to be the chief mode of livelihood of the people; and
- (d) finally, discussing issues on industrialisation, transport and communication and other modern sectors of the economy which are increasingly crying for attention.

The present proceedings volume is an attempt not only to present the technical papers discussed in the seminar in a succinct, presentable and readable form, but also to bring out the opinions and recommendations to the larger academic and governmental attention for appropriate policy formulations and their implementation. On the other hand, this volume may prove worthwhile to students of social and environmental sciences in an otherwise scanty literature base of the N.E. Region.

The book is organised principally in four sections, i.e. Section - I, dealing with the general theoretical context of the 'development' issue and its applicability in the specific regional context. It contains five technical papers, the first four prepared by A.C. Mohapatra, B.S. Butola, P. Nayak, and D.K. Nayak largely dealing with theoretical issues related to political economy of

development, the development paradigm, social and political development of peripheral regions with specific suggestions in preparing strategies of development for the region. The last paper by C.R. Pathak, deals specifically with development strategies for the region as a whole.

Section II deals with the "Environmental Basis of Development in the Hills" and includes four technical papers. The first paper by M.C. Pandey on "Control of Environmental Degradation in the North Eastern Region", highlights the degradation of the hill ecology due to deforestation and shifting cultivation practices (Jhumming) and presents a blue print of hill agriculture management in the region. The second paper by J. Diddie and P.R. Karmarkar analyses the management of culturable wasteland in the Western Ghat hills. The third paper by L. Pachhuau and R.K. Rai deals with the geomorphological constraints on agricultural development in the State of Mizoram. The last paper by M. Konwar discusses the land utilization and cropping practices in the West Khasi Hills district of Meghalaya, one of the most vulnerable hill ecologies of the region.

Section - III of the book emphasises on the position of agricultural development in the hills, which forms the backbone of the economy. It contains five full papers and one short paper. The first paper by Shri Prakash and Taru Jyoti provides a detailed analysis of agricultural growth in the region through a decomposition algorithm. The second paper by S.K. Mishra measures the system efficiency in agriculture sector by introducing a new measure based on the assumptions of weak rationality and incomplete information. The third paper by S.K. Mishra and B. Howbora that deals with the problem as to how social and cultural practices affect agricultural productivity, is a village level comparative study between the tribal and non-tribal farmers. The fourth paper by H. Saikia and R.K. Rai deals with the farm size and productivity in a village level study of Nowgong district of Assam. The fifth paper by S. Sarma deals with the shifting cultivation in Meghalaya. The sixth paper by H.J. Syiemlieh deals with rice cultivation and associated problems in Meghalaya.

Section - IV dealing with infrastructural factors in development of hill areas is by far the largest section containing six full papers and four abridged ones. The first paper by Ali Ahamad analyses the linguistic diversity in the region and how in certain cases it is linked with political and economic development in the region. The second paper by N.P. Goel and S.K. Mishra deals with an inter-community comparison of Manipur in terms of disparities in educational achievements. The third paper by R. Gopalakrishnan deals with the process of state formation in the region. The fourth

paper by J. Khan and B.N. Mishra deals with a study of slums of Shillong. The fifth paper by N. Srivastav and E.D. Thomas is a detailed evaluation study of the IRDP in Meghalaya. The sixth by S.J. George deals with rail transport development in the region. The short papers by B.S. Mipun, N.N. Bhattacharjee, P.K. Guha and G. Bardhan deal with varied topics, literacy in Meghalaya, development of Arunachal Pradesh, road development in Meghalaya and small scale industries.

The technical papers are preceded by the Inaugural Address by Mr. P.A. Sangma, Chief Minister of Meghalaya and the keynote address to the seminar by Professor M. Taher, Department of Geography, Gauhati University. Both these papers provide a worthy beginning to the proceedings of the seminar and set the tune for discussion. At the end of the technical papers printed is the report and recommendations of the seminar by Shri D.K. Nayak, Organising Secretary.

We must acknowledge our gratitude to the contributors to the seminar, who while finalising the proceedings cooperated unflinchingly in giving shape to the volume. We must thank the ICSSR-NERC, Shillong, for whatever small contribution they have promised in publishing this proceedings volume. Finally, our heartfelt gratitude to our printers, M/S Ri Khasi Offset Press, Shillong, who very readily offered to print this volume in record time despite pressing problem. We will be very happy if this effort is well appreciated by our readers.

EDITORS

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INAUGURAL ADDRESS
BY
SHRI P.A. SANGMA
HON'BLE CHIEF MINISTER
GOVERNMENT OF MEGHALAYA

Friends,

I am glad to be associated with this Seminar on "Problems of Hill Areas Development with special reference to the North-Eastern Region" organized by the Geographical Society of the North-Eastern Hill Region and the Department of Geography, NEHU, Shillong, and thank the organisers for inviting me to inaugurate it.

The hill areas in our country fall broadly into two categories, namely, (i) those that are co-extensive with boundaries of States, and (ii) those which form part of a State. In the first category are the States of Arunachal Pradesh, Manipur, Nagaland, Mizoram, Meghalaya, and Tripura in the North-Eastern Region, Himachal Pradesh, Jammu and Kashmir, and Sikkim. In the second category of hill areas which form part of larger composite States are in Assam, Uttar Pradesh, West Bengal and Tamil Nadu as also Western ghat areas falling in the States of Kerala, Maharashtra, Tamil Nadu, Karnataka and Goa.

The hill areas of the country are faced with certain problems different from other areas inhibiting the process of development. Difficult terrain, variable agro-climatic conditions, distinct socio-cultural features have led to the backwardness of these areas and their slow pace of development. These areas, therefore, draw the special attention of the planners right from the inception of the plan era after Independence. The emphasis on hill area development emerged from the growing concern over inter-regional disparities and the disadvantaged hill people. The hill areas have therefore been receiving attention since the Second Five Year Plan. It was realised that these areas in the country cannot be developed in isolation from the adjoining plains with which their economy is closely inter-linked. The experience of development planning prior to the Fifth Plan underlined the realisation of the need for an integrated strategy of development of the hill areas based on sound principles of ecology and economics. It was in consideration of

this need that special hill areas development programme was initiated during the Fifth Plan. The Fifth Plan document had a separate chapter on "Backward and special Areas including Hill Areas and Tribal Areas". It noted that the "Realisation of the growth potentials of the backward areas should be taken up on a priority basis in order to give practical shape to the ideals to egalitarianism and social justice".

In order to look into the problems, potential and strategy for development of the hill areas, various committees and task forces were set up by the Central Government. As a result of the findings of these committees, task forces and high-power groups, the Sixth and Seventh Plan Five Year Plan documents highlighted the problems of hill areas of the country and highlighted the special strategies covering linkages, infrastructural and organisational support, harmonisation of socio-economic growth with eco-restoration, eco-preservation, and eco-development, integrated watershed management with people's participation as the basis of hill areas development.

Among the hill areas in the country, North-Eastern Region occupies an important position. A substantial geographical area of this region constitute hill states which are self-contained politico-administrative units. However, Assam has a larger plains area with two autonomous hill districts.

The hill areas of the North-Eastern Region are characterised by:

- a) difficult mountainous terrain,
- b) thin population dispersal,
- c) low level of infrastructure development,
- d) difficulties in the movement of inputs for development and their high cost of providing them to the beneficiaries,
- e) limited resource raising ability for developmental purpose,
- f) shortage of skilled man-power,
- g) land tenure system which has, over the years, pushed up the cost of schemes involving use of land through land acquisition.

In recognition of the special characteristics and problems of these areas, the hill States of the North-Eastern Region alongwith some other States have been treated as special category States by the Government of India. Consequently, in determining the size of the Plans of these States, the Planning Commission gives emphasis on the actual developmental needs rather than the resource raising ability. Central assistance provided for the development of these States comes in the form of 90 per cent grant and 10 per cent loan.

The main emphasis in the Plans of these areas so far has been on the development of infrastructure, and on the social and community services. Thrust in these sectors was considered necessary not only to make the areas accessible, not only to make available some of the essential requirements of development, but also to ensure that developmental inputs are provided at a cheaper cost. One of the consequences has been that the productive sectors have received over the years less attention than they deserve. However, even the pace of development of infrastructure has not been satisfactory. The various indicators of development of the hill areas of the North East show that they are lagging behind in the matter of construction of roads, provision of drinking water, rural electrification and literacy (with the exception of Mizoram). It has been our experience that schemes for rural development, particularly poverty alleviation programmes, have been drawn up for this region on the basis of an All India Pattern. We need to look into local situations and local constraints and adapt these schemes to suit the requirements of individual States.

Agriculture is another area where we need to look at the pattern of development, entirely different from pattern fixed for the rest of the country. Successive Plans should not lay emphasis on increasing foodgrains production, or for that matter agricultural production as a whole, on a percentage basis. In the hill areas of the North-East alone, we practice jhum cultivation in an area of over 27,000 Sq. Kilometres. There is a limit to the increase in the productivity of the area under jhum cultivation. Further, this practice very severely affects the eco-system of not only the hill areas but also the adjacent valleys. The thrust in agricultural production to my mind has to be in the area of horticulture which will, among other things, be less damaging to the ecology of the region. We must also simultaneously have an integrated approach for the development of land that could be brought under food grains, making use of irrigation, improved varieties of seeds, fertilisers and other inputs.

One of the disincentives for the farmers in the remote areas in raising agricultural production is the absence of adequate marketing facilities. A large number of agricultural produce are perishable commodities and need to be consumed or processed and preserved. With the population structure in the hill areas, the market for direct and immediate consumption of the produce is not often available. This brings in the need for evolving a strategy for the setting up of widely dispersed small processing units for the agricultural produce. Any serious plan for the development of agriculture in the hill areas has to have a significant component of storage, processing and preservation of agro-horticultural produce.

The hill areas have the advantage of suitable pollution free atmosphere for setting up electronics and other related industries. The people also display considerable dexterity with their hands. Our policy for industrialisation of the hill areas using technology from outside has to take into consideration the suitable climatic conditions, the traditional skill of the hills people and the long distances to the consumer market.

The chronic shortage of skilled manpower in the North-Eastern Region as a whole, and in the hill areas in particular, is well recognised. Setting up of the proposed universities will certainly help in improving the quality of manpower, but I am not sure if they would help in producing the right type of manpower needed for the development of hill areas. Emphasis has to shift from general education to vocationalisation of education. The Government of India have already proposed to the various States that they may set up district manpower planning and employment generation councils. It should be possible for us to make use of these councils to study the employment in the districts and to identify the requirements of different categories of manpower. Greater stress could then be laid on setting up technical institutions which are more relevant to the hill areas.

The North-Eastern Council has helped to evolve a common understanding of the developmental problems and needs of the hill areas of the North Eastern Region. It has played an important role in bringing out co-ordinated development of the region. The regional plans of the North-Eastern Council have had an impact on the development of the hill areas in the fields of agriculture, animal husbandry and allied activities with emphasis on watershed management and control of shifting agriculture, flood control, transport and communication, manpower development and mining.

/// The problems of socio-economic development of the hill areas of the country and, in particular, of the North-East are multifarious. The process of development has just started and much remains to be done to bring the economy of this area nearer to the national level. Constraint of time does not permit me to deal with all the various aspects of the problems in details. I would only like to emphasise that the development strategy for the hill areas has to take into account the principle of integration of the ecological, economic and sociological co-ordinates. I am confident that the deliberations of this seminar will help in focussing on the problems of this region and in particular the Hill areas and suggest measures to overcome them.

With these few words, I have great pleasure in inaugurating the seminar. I wish it all success.

KEY-NOTE PAPER

Dr. Mohammed Taher
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We are extremely happy and enthused by the presence of such a large number of luminaries in this seminar, intended to deliberate on the problems of hill area development in this region of the country. One of the prime objectives of this Geographical Society is to hold such seminars, symposia and discussions from time to time and thus assess the problems and prospects of socio-economic development of this region and contribute our mite, however humble, towards the overall welfare of this region.

The process of socio-economic development, as you all know, is never homogeneous over a large geographical space. The areas that have physical constraints, historical isolation and socio-cultural heterogeneity within themselves, are bound to lag behind, compared to others, if conscious and concerted efforts are not made to develop them. The North-East India in general and its hills in particular present such a case in hand.

North-East India is an extensive area comprising about 7 per cent of the country. Out of its 255,037 Sq. Km. of area about 18,000 Sq.Km., accounting for 70 per cent is covered by hills, mountains and plateaus. Almost whole of each Arunachal Pradesh, Nagaland and Mizoram, Manipur except its small basin, Tripura except its western margin bordering Bangladesh and a district of Assam are covered by hills and mountains of varying altitudes and degrees of slope. The whole of Meghalaya and a district of Assam are covered by plateaus, which again, presents a rugged topography akin to hills rather than to undulating plateaus.

The hills and plateaus have been acted upon by active erosional processes and seismic movements. All the Tertiary hills of Arunachal Pradesh, Nagaland, North Cachar, Manipur, Mizoram and Tripura, and even the Pre-Cambrian hills of Meghalaya and Karbi Anglong Plateaus are steep-sided and criss-crossed by deep and winding valleys and gorges. The hill ranges everywhere vary in altitude from 600 m to 6,000 m, some of them in the northern part of Arunachal rising even more.

The hills are subject to heavy rainfall, the annual average being 2,500 mm. About 80 per cent of this deluge is concentrated to the five summer months of the year. The heavy rainfall and the consequent surface run-off, sheet-floods, landslides, inflated volumes of water in the streams with turbulent currents substantially hinder transport and communication among different parts, and isolate one hill from another.

It is this physical background, aided, of course, by the historical process of peopling, that has given rise to the diversity in ethnic, socio-cultural and economic condition within this region. The total population of the hills of N.E. India is about 5.4 million (1981), excluding that of the Manipur Central and Tripura West Districts. What is important here is that out of this population about 75 per cent are tribals belonging to as many as 140 tribal groups and sub-groups. Of the major indigenous tribes, Arunachal has 27, Manipur - 20, Nagaland - 16, Tripura - 7, Mizoram - 5, and Meghalaya - 4. Some of these tribes are fairly large having more than 300 000 population in each, while others are small, with less than 5,000 in each. Every one of these tribes has its own socio-cultural traditions and language and belongs to a different level of material culture.

The distribution of population in the hills is sparse compared to the national standard, varying from 7 persons Sq. Km. in Arunachal to about 60 Sq. Km. in Meghalaya. But one has to measure it in the backdrop of the prevailing basic occupation. It is estimated that in a "slash and burn" cultivation with broadcast method one square kilometre of area can support permanently only 4 persons, with dribbling method 5 persons and with the use of hoe 6-8 persons. Thus it can be seen that, unless the methods of agriculture are changed and/or other avenues of livelihood are found, the density has already reached a saturation point in the hills of N.E. India. But the way in which the population has been increasing, of late, in these areas, the planners will only be bewildered. Over the decade 1971-81, the population of Nagaland increased by 49.43 per cent, that of Mizoram by 46.75 per cent, of Assam hills by 33.5 per cent, of Arunachal by 34.34 per cent, of Manipur by 31.57 per cent, of Tripura by 31.55 per cent, and of Meghalaya by 31.30 per cent, as against 24.4 per cent of the country as a whole.

Side by side with this spectacular growth of population, certain socio-cultural changes, having bearing on economy, have also been occurring. Firstly, there has been a significant rise in literacy, Mizoram recording about 60 per cent of its population as literate in 1981, each of Manipur, Nagaland and Tripura about 42 per cent, and Meghalaya 33.2 per cent. Even Arunachal, which

had a literacy percentage of about 10 in 1971, has doubled it to 20 per cent in 1981. Another socio-cultural phenomenon is the growth of urban population. According to the census of 1981, Manipur has an urban population of 26.44 per cent, Mizoram 25.17 per cent, Meghalaya 18.03 per cent and Nagaland 15.54 per cent. Arunachal, which had less than 3 per cent of urban population (1971), has also more than doubled it to above 6 per cent in 1981. More spectacular here is the growth of the number of towns from 22 in 1971 to 70 in 1981. But this phenomenal increase owes its origin not to the intrinsic growth of regional economy, but to the superimposition of a few administrative and other primary services.

In spite of these social and demographic developments in the region, the economic changes have been slow. A glance over the economic classification of the population of the region shows that Meghalaya has 55.17 per cent, Nagaland 54.17 per cent, Assam hills 53.48 per cent, Arunachal 52.59 per cent, Manipur 46.03 per cent, Mizoram 44.66 per cent and Tripura 32.24 per cent of their respective population in the working bracket, as against 32.8 per cent of the nation. This high rate of participation in work is not due to the capacity of the economy of the region, but a pathetic reflection of incapacity of the prevailing economy to generate surplus. A large number of the family members including children and female-folk has to be engaged in gathering, cultivation, animal husbandry and a little cottage industry in order to subsist, in the absence of a dependable surplus. Agriculture, with its meagre productivity, due mainly to the primitive methods, engages 35.67 per cent of the total population in Arunachal, 33.13 per cent in Nagaland, 33 per cent in the Assam hills, 32.47 per cent in Meghalaya, 30.76 per cent in Mizoram and 27.96 per cent in Manipur directly.

Although the main method of cultivation in the hills is jhumming with an extremely low productivity, the operational holdings are not large. In Manipur 95 per cent, in Tripura 94.7 per cent, in Meghalaya 89 per cent, in Nagaland 44 per cent and in Arunachal 30 per cent of the operational holdings are of the size of 2 hectares or less.

The proportion of workers engaged in the secondary sector of industries is nowhere in the hills above one per cent of the total population. In the tertiary sector, especially in services, there has been a significant proportion, between 9 and 13 per cent of the respective total population.

This state of economy of the region has resulted in a low per capita income of Rs. 911.00 as against Rs. 1163.00 of the nation (1980-81).

What warrants notice is the fact that in spite of about four decades of planning, nothing much has been done towards building at least the infra-structure of development. The transport and communication systems are yet to be established. Out of seven states of the region, 4 are yet to get a rail-head within their territories. Road system is also poorly developed. The road density is as low as 0.11 Km per Sq. Km. in the Assam hills, 0.14 Km in each of Arunachal and Mizoram, 0.16 Km in Meghalaya, 0.35 Km in Nagaland, 0.39 Km in Manipur and about 0.7 Km in each of Manipur and Tripura. Power position, in fact, is still worse. The hills region has a total available electric energy of about 300 million Kwh accounting for 0.34 per cent of that of the nation, per capita consumption being 9 units to 35 units, as against that of 131 units of the country (1981).

It is in this physical, demographic and socio-economic background of the region, that measures will have to be adopted for its all round development. Considering the historical, political, and social processes obtained, the philosophy of development will have to be unique. The causes of failure to develop during the last four decades should help the scholars, administrators and planners to find out a workable methodology.

It has to be understood that because of the historical and social processes, in the economic front the physical mobilisation of resources and social mobilisation of potentials are still at a low level. The agriculture in the hills is primitive jhumming. But it must not be forgotten that jhumming is not merely an economic activity but also a way of life. It is not as much harmful as it is made out to be. Unless a better and economically more viable and socially adaptable substitute is worked out, no amount of gospels imparting notoreity to it shall dissuade the peasants from perpetuating it.

In the social front, it has to be realised that educational development has preceded economic development in this region. Urbanisation has started with young men and women migrating to the emerging towns in search of socio-economic opportunities. The tribal ethos and customs are loosening their grip with the chief's authority declining and clan-ties becoming weaker. But at the same time, tribal identity at political and cultural level is gaining ground. What makes the whole situation still more complex is the fact that the level of these changes varies from tribe to tribe, who are many.

Any discussion, any study, any seminar, aimed at socio-economic development of the hill region must, therefore, take into account these processes while bearing in mind that the people to be developed must themselves be the active partners of development.

ABOUT THE BOOK

The present volume is the product of deliberations of a National Seminar on Hill Area Development, organised in March 1988 by the Department of Geography, NEHU, Shillong. The hill areas of the country have special problems needing attention from academicians and planners, though the hill areas by themselves are not a homogeneous category. The hill areas of the N. E. Region of the country not only have specific environmental differences from other hill areas of the country but are inhabited by a large number of tribal communities. Various papers, the collection of which has taken shape of the current volume, addresses to various problems of development of these communities confronted today with the fast changing face of the regional economy as well as changing values and norms of their little societies.

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