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REVIEWS IN BRIEF

Rural Life in Assam Hills (*Case Studies of Four Villages*), Studies in Rural Change—Assam Series, Agro-Economic Research Centre for North-East India, Assam Agricultural University, Jorhat, Assam, 1969. Pp. xiv + 294. Rs. 15.00.

This publication presents the results of surveys of socio-economic life of four tribal villages, one each purposively selected from the four hill districts of Assam. The surveys were undertaken between 1961 and 1965 under the continuous village survey programme. These surveys cover four major tribes of Assam, *viz.*, the Mikirs, the Khasis, the Garos and the Mizos (Lushais). The villages selected for the surveys are Kanther Terang in the United Mikir and North Cachar Hill district, Mawtnum in the United Khasi and Jaintia Hills district, Banshidua in the Garo Hills district and Hmunpui in the Mizo Hills district. The results of each study are presented in two parts. The first part gives information relating to the topography and socio-economic conditions of life in each district and the second part presents the results of the socio-economic survey of each village. The survey of Kanther Terang village reveals that the village economy has not been materially affected by the impact made by urban contact and the economy still remains tied to *jhuming* or shifting cultivation. In the tribal village of Mawtnum, both *jhuming* and settled farming are practised, though the former is accounted by only 17 per cent of the households in the village. Settled farming inclusive of wet paddy and garden crops cultivation has been found to be more paying by the Khasis than *jhuming* because of its comparatively higher return of output per acre. Due to the impact of developmental activities initiated by the government, the social and economic set-up of the village has been undergoing change for the better. It is observed that some of the erstwhile *jhumias* in this village have taken up alternative non-agricultural occupations. In Banshidua, the economic life of the Garos has not improved much beyond the traditional subsistence living. A trend has been discernible towards the adoption of settled farming in the cultivation of wet paddy. The survey of Hmunpui village reveals that while there has been rapid and far-reaching changes in the social life of the Mizos, there has been little development in the economic field. The economy of the village is solely dependent on *jhuming*. The existing lag between social and economic developments has created a deep-rooted tension in the political life of the Mizos. All the four village surveys underline the importance of planned change over from *jhuming* to settled farming and stress the need for development of communications and transport, provision of marketing facilities and development of subsidiary occupations for enabling the tribals to improve their standard of living.

Population, Resources, Environment : Issues in Human Ecology, Paul R. Ehrlich and Anne H. Ehrlich, Stanford University, W. H. Freeman and Company, San Franciso, California, U.S.A., 1970. Pp. 383. $ 8.95.

This textbook analyses the crisis of over-population, especially in the under-developed countries of the world and the resulting demands on food, resources, and the environment. It takes a broad ecological approach and demonstrates that the problems of modern society such as environmental deterioration, hunger, resource depletion and war are closely interconnected and that together they constitute a challenge without precedent in human history. A wide diversity of

sources are drawn upon for documenting the reasons for the growing alarm over mankind's prospects and many constructive proposals are offered for helping to improve those prospects. The main conclusions of the study are as follows : Considering present technology and patterns of behaviour, the world is grossly over-populated now. The large absolute number of people and the rate of growth of population are major obstacles to solving human problems. The limits of human capability to produce food by conventional means have very nearly been reached. Problems of supply and distribution of food have resulted in roughly half of humanity being under-nourished or malnourished. Some 10-20 million people are starving to death annually at present. Attempts to increase food production further will tend to accelerate the deterioration of the environment, which in turn will eventually reduce the capacity of the land to produce food. There is no technological panacea for the complex of problems arising from the population-food-environment crisis. But technology properly applied in such areas as pollution abatement, communications and fertility control, can provide massive assistance. The basic solutions involve dramatic and rapid changes in human attitudes, especially those relating to population control, economic growth, technology, the environment and conflict resolution. Chapter 5 entitled "Food Production" is particularly instructive. The annotated bibliographies given at the end of each chapter and the general bibliography and the index at the end of the book enhance its utility.

Farming Systems of the World, A. N. Duckham and G. B. Masefield, Chatto & Windus Ltd., London, 1970. Pp. xviii + 542. £ 6.00.

This textbook has grown out of a lecture course in 'Comparative Agriculture' given at the Reading University and is based on research done by the authors and their personal experience in the field. Divided into three parts composed of 26 chapters, Part I analyses the nature of the farming systems and the factors influencing their location and intensity in different parts of the world, excluding the communist countries. Basically, four farming systems are identified, namely, permanent plantation or tree crops, tillage with or without livestock, grassland/grazing with ruminant livestock, and alternating between tillage and grassland. Each system is subdivided on the basis of input intensity into extensive, semi-intensive and intensive. Of the factors influencing the location and intensity of farming systems, ecological and socio-economic factors are considered important in developing economies whilst in advanced economies the ecological group has less impact on the farming systems. In advanced temperate regions, with a Beckerman Index greater than 40 and where even though population density is high but resources per head are ample, a well-marked spectrum of farming systems exists in countries such as North America, north-west Europe, Australia and New Zealand. The spectrum ranges from extensive grazing systems in warm, dry areas and then, through tillage, alternating and cultivated grassland systems, back to extensive grazing systems in cold or cool wet mountain areas. When socio-economic factors are held constant, ecological factors and market access have critical influence on the location and intensity of farming systems. But their importance is receding before the advance of science and technology. Socio-economic factors, including scientific and industrial inputs have increasingly dominated the use of the environment. In the light of this analysis, Part II describes the socio-economic background and in particular, the climate, soils, vegetation and

farming systems of selected countries. Part III outlines, for temperate areas, a mainly qualitative synthesis of the location and intensity of the classes of farming systems, and suggests some models of synthesis which could be, at least in part, quantified and possibly have predictive use. It also briefly discusses the factors affecting economic stability and efficiency of farming systems and considers the application of such syntheses and principles to tropical agriculture. An attempt is made in this part to examine in relation to developed countries, (*a*) the nature of the current technological revolution, (*b*) the geographical effects of the trends generated by this revolution, (*c*) the trends in the interactions between population growth, demand and food production resources and (*d*) the implications for the future. Part III also considers the trends in tropical food production in the recent past and examines the problems of future food supplies in the world. A list for suggested reading is given at the end of each chapter. This book will prove useful to students of comparative agriculture and it is an invaluable reference work for field agriculturists, research workers and agricultural administrators.

The Sino-American Joint Commission on Rural Reconstruction : Twenty Years of Co-operation for Agricultural Development, T. H. Shen, Cornell University Press, Ithaca, U.S.A. and London, 1970. Pp. xiv + 278.

This book is complementary to two previous publications, namely, Agricultural Resources of China, and Agricultural Development in Taiwan Since World War II. It tells the story of the success and failures of the Joint Commission on Rural Reconstruction (JCRR) in its efforts at solving the pressing and complex problems of agricultural and economic development in Taiwan. Part I of this book describes the origins of the JCRR, its policies, and organizational pattern and gives a brief analysis of its budget. The agricultural rehabilitation and reforms carried out in Taiwan in the early 'fifties and the plans for new development are reviewed in Part II. The major agricultural development projects implemented in Taiwan, which demonstrate the JCRR approach to problem solving are described in Part III. The last part attempts to evaluate the effort of the JCRR during the last twenty years, examines some of the unfinished tasks and points out some of the failures of the JCRR programme.

Initially set up on August 5, 1948, as a non-permanent Sino-American agency for the post-war rural reconstruction of China, the JCRR has helped more than 95 per cent of the rural people in Taiwan to live a better life. The accomplishments of JCRR have been attributed to a variety of factors such as a stable political and social order in which projects can operate, a progress-oriented Government, a literate, industrious and thrifty farming population, a steady flow of United States economic aid up to 1965, the flexibility of programmes and projects, freedom from political pressure or other forms of outside influence, and a real concern for the urgent needs of the farmers whose views are solicited and are taken into consideration in the formulation of policy. Its approach is mainly one of integrated rural development rather than an aggregation of localized community development programmes. The role played by JCRR in agricultural development has been on the whole that of a catalytic agent. By providing technical and financial assistance, it has given direction to agricultural policies, encouraged improvements in methods of implementation, motivated projects difficult to activate and generated a spirit of self-help among the local agencies. The JCRR projects have been

generally initiated by local agencies to whom technical or financial assistance has been provided. The projects are concerned with either technological improvements or institutional changes and readjustments. The former included the introduction of new and improved varieties of crops, better cultural methods, the aplication of more fertilizers in the right amount and at the right time, the use of pesticides and irrigation water and other technological innovations. The latter comprised of reform programmes. The implementation of the Land-to-the-Tiller Act, the reorganization of the farmers' associations, the irrigation and the fishermen's associations, and improvement of marketing procedures and facilities have been the most noteworthy programmes. By means of this two-pronged approach, agricultural production has been boosted and agricultural development stimulated in Taiwan. Based on constant farm price, the average annual growth rate of agriculture, to which JCRR projects have contributed an important share, was 6.2 per cent from 1953 to 1956, 5 per cent from 1957 to 1960, 6.4 per cent from 1961 to 1964 and 6.6 per cent from 1965 to 1968 with an annual average of 6 per cent for the entire sixteen-year period. The aggregate agricultural output of crops, livestock, fisheries and forest products in 1968 was almost three times over the 1950-52 average. Though most projects have succeded, a few of them also failed such as the introduction of Peking ducks into Taiwan, a fruit cannery and an irrigation project. The failure of these projects is attributed, by and large, to the consumer's preference for the native ducks, and to inherent weakness of the projects themselves and to lack of necessary supporting facilities from the sponsoring agencies. The tasks that remain to be tackled in future relate to (*i*) the appearance of new diseases and insect pests consequent on the development and introduction of new crops and new crop varieties, (*ii*) diminution in the farm size and continued farm fragmentation, (*iii*) steady encroachment on agricultural lands by industrial and housing constructions thereby aggravating the land problem, (*iv*) high cost of production requisites and (*v*) strengthening the research efforts with a view to maintaining the growth of Taiwanese agriculture at a desired rate.

Regional Planning for Social Facilities—An Examination of Central Place Concepts and Their Application: A Case of Study Eastern Maharashtra, Sudhir, Wanmali, National Institute of Community Development, Hyderabad (A.P.) 1970. Pp. viii + 94. Rs. 12.00.

This brochure attempts to examine the distribution of social facilities over an area and to investigate how an improved organizational form could be evolved for the provision of social facilities in an area, with the help of the theoretical framework of the central place concepts developed by W. Christaller. The methodology of this study is based on two studies made in Eastern Maharashtra. One of these studies examines the hierarchy of towns in Vidarbha and its signifinance for regional planning. The data for this study were collected in 1964-65. The other study analyses the pattern of the provision of social facilities in the Nagpur metropolitan region, based on data collected in 1969. Divided into seven chapters, the introductory chapter describes the tasks of regional planning in India, the relationship between regional development, regional planning and the hierarchy of settlements, and presents examples of application of the central place concepts in various parts of the world. The salient features of the central place theory are described in the second chapter. A brief description of the two study areas is given in the next chapter. Chapter 4 deals with the hierarchy of settle

ments in the Nagpur metropolitan region. It makes an attempt to determine the centrality of settlements and to identify the typical settlements and functions associated with them in the region. The functions considered for the study are such social facilities as bus service, health, communication, co-operative and other finance, trade (marketing of agricultural products) and shops. In Chapter 5, the complementary regions of service centres in the Nagpur metropolitan region are identified in terms of areas and population served, and in the next chapter the standards of services offered by these centres are studied at the sub-regional level. In the last chapter, regional planning is considered as a problem in the spatial integration and functional co-ordination of towns with the help of case studies from Vidarbha. The regional urban system of Vidarbha is categorized into four parts, *viz.*, towns having (*i*) divisional, (*ii*) district, (*iii*) taluka and (*iv*) local importance. The models developed in this chapter show how spatial integration could be achieved with examples taken from eight major functions performed by towns of Vidarbha. The major functions considered include (1) administration and judiciary, (2) internal security, (3) commerce and finance, (4) education, (5) health, (6) communications, (7) transport (bus service) and (8) trade. The pattern of integration for each level of towns is discussed in detail with a view to understanding the functioning of the central place concept. In the Vidarbha study, functional integration is achieved through systems approach whereas in the Nagpur metropolitan region study, it is sought to be achieved with the help of population thresholds. For attaining spatial integration of regional settlement and regional functional systems, it is suggested that the highest order settlement should co-ordinate the highest level functions of the regional functional system. The next lower order settlement should co-ordinate the next lower level functions. On the basis of population thresholds, it is suggested that it would be possible to identify settlements that are lacking in central functions of different types. When the allocation of resources is on a sectoral basis, this method along with the systems model provides a scientific and objective basis for the distribution of the developmental resources. The author deserves warm praise for bringing out this painstaking study pertaining to a neglected field which is not explored in depth by the regional planner in India.