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REVIEWS IN BRIEF

Development Communication: Process and Impact—A Micro Study in Mahbubnagar District, Andhra Pradesh, N. K. Jaiswal, N. Vittal, A. K. Jaiswal and G. Ramchandraiah, National Institute of Rural Development, Rajendranagar, Hyderabad-30, Andhra Pradesh, 1981. Pp. vi+151. Rs. 30.00.

The study makes an attempt to assess the status of planning for developmental communication in rural areas and focuses its attention on "communication as an organizational process and as a resource in development." Specifically, it explores formal and informal channels of communication in rural areas, examines how far communication channels and content are effective in conveying to the rural population developmental information relating to agriculture, health practices and social legislation and studies the utilization of developmental information by the target audience, the integration of communication channels, inputs and development functionaries and the shape of communication policy planning for rural areas. Though the thematic scope of the study is ambitious, its coverage is limited to Mahbubnagar district of Andhra Pradesh, which lies in the semi-arid tract of Telangana. In addition to regular channels of communication, the district is covered by Hyderabad's television (TV) station. Communication is studied as a part of development, beginning from schemes, organizations administering them and public response at the district, block and village levels. It is based on information collected from a sample of 150 people from two villages, one each from Shadnagar block and Jadcherla block and from 17 officials at the district and 22 functionaries at the block levels in 1978-79. The respondents at the village level covered big, medium and small farmers and the landless families. Of the two selected villages, one has access to TV, is connected with an all-weather road, has a middle school, livestock unit and milk collection centre while the other village lacked all these items of infrastructure. The study has followed a combination of personal observation and discussion and interviews for eliciting information at the three levels and has also used information obtained from secondary sources. The report also includes case studies of two developmental activities, *viz.*, distribution of high-yielding variety of hybrid jowar and sheep rearing, one from each village, and of four families, two from each village in the study area. The study showed that between formal and informal channels of communication, the latter appeared to play a greater role in the final utilization of information though data might initially originate from formal channels such as mass media or extension personnel. Utilization of developmental information in terms of application was low except in agriculture. Integration of communication channels, inputs and developmental functionaries was weak. Education was a neglected aspect of implementation. There was also absence of communication policy planning and lack of co-ordination of developmental activities by the different departments. The difficulty of planning a communication strategy was only surpassed by the difficulty of implementing it. The need is suggested for

integration of mass media with on-going programmes of rural development and between infrastructure and communication—the need to support information with inputs or to support a scheme with communication.

Study on Conservation of Light Diesel Oil Used in Pump-sets for Lift Irrigation in Gujarat State, S. M. Patel and R. K. Gupta, Institute of Co-operative Management, Ahmedabad; Petroleum Conservation Research Association, New Delhi-1, 1979. Pp. xv+158.

This report presents the findings of a research project undertaken during 1976-78 to study the problem of conservation of light diesel oil used in pumpsets for lift irrigation in Gujarat State. The research project was sponsored by the Petroleum Conservation Research Association, New Delhi and conducted by the Institute of Co-operative Management, Ahmedabad in collaboration with the Research and Development Centre of Indian Oil Corporation, Faridabad. The main objectives of the research project were: (*a*) to determine the present status of efficiency and fuel consumption of lift irrigation pumpsets with the farmers and the scope for improvement of these pumpsets by way of proper selection and maintenance, (*b*) to identify the factors responsible for low operational efficiency of the pumpsets, and (*c*) to determine the present status of extension services and technical guidance available to the farmers in the proper selection and maintenance of the pumpsets. The study was conducted in three phases. In the first phase a diagnostic study was conducted covering a sample of 1,724 farmers with pumpsets located in 60 randomly selected villages in Banaskantha, Rajkot and Junagadh districts of Gujarat with a view to providing a realistic estimate of avoidable fuel consumption and to suggest measures for achieving the targets of conservation of light diesel oil used for lift irrigation. In the second phase of the project a detailed study of 174 selected pumpsets was conducted to identify the factors responsible for higher fuel consumption. Another notable feature of this project was that in the third phase a practical demonstration of the impact and utility of the measures recommended for reducing fuel consumption was made at 57 selected pumpsets in 12 sample villages of six selected talukas of the State. The study focuses attention on the existing situation and errors made in the installation and operation of dieselised pumpsets at the farm level and their effects on fuel consumption and suggests specific corrective measures that can be adopted by the farmers for the conservation of light diesel oil for irrigation.

Gujarat accounted for about one-third of the total consumption of light diesel oil in India with 3.6 lakh dieselised pumpsets. The farmers in the selected villages had used 319 brands of oil engines. About one-fourth of the oil engines in the study area were operated at less than 60 per cent of the rated speeds and the power developed by the prime-movers was also lower than the rated horse power. A large number of them were purchased without any consideration on size or quality of the oil engine required to operate the pump.

Mechanical defects or faults in the operation of oil engines had led to harmful effects like (*a*) inadequate compression, incomplete combustion of fuel and development of low power, (*b*) high fuel consumption per unit of work, (*c*) frequent repairs and replacements, (*d*) high cost of operation and (*e*) break down during critical irrigation season. The farmers were generally ignorant about the selection and use of proper sizes of suction and delivery pipes. The role played by extension agencies and institutional financing agencies in educating farmers on the need and method of proper selection of lift irrigation equipments was found to be inadequate. The 'ideal' or desired level of consumption was computed at 0.25 litre of light diesel oil for lifting 1 ha. cm. of water per meter of static lift. The study indicated that over-consumption of fuel for lifting water was of the order of 50.8 per cent of expected 'ideal' level of consumption of fuel. On an average, over-consumption of fuel was estimated at 400 litres per pumpset per annum. A major finding of the study is that it is technically feasible to conserve light diesel oil used in pumpsets to the extent of 25 to 30 per cent of the present level of fuel consumption by taking proper measures, with a reduction in the cost of fuel and lubricating oil amounting to Rs. 500 per pumpset per annum. It is estimated that the annual saving in fuel and energy used for lift irrigation would be worth more than Rs. 15 crores in Gujarat. The study makes an important contribution to the literature on the subject.

Technical Feasibility for Adoption of Improved Agricultural Practices in the Tribal Sub-Plan Area of Western Maharashtra, Rajaram G. Patil and Jagannathrao R. Pawar, Department of Agricultural Economics, Mahatma Phule Agricultural University, Phulenagar, Rahuri, Dist. Ahmednagar (Maharashtra), 1981. Pp. 228.

The report presents the findings of a survey which was sponsored by the Ministry of Social Welfare, Government of Maharashtra and conducted by the authors to examine the technical feasibility for the adoption of improved agricultural practices in the tribal areas of Western Maharashtra. The study assumes great significance because agriculture is the main source of livelihood for the tribals and modernization of agriculture in the Tribal Sub-Plan area is linked with the availability of capital resources, efficiency in the allocation of these limited resources to different uses, nature of technology and extent of its adoption as determined by agro-economic considerations on different types of farms. The study is based on data obtained from a sample of 990 tribal cultivators and 198 non-tribal cultivators selected from 99 villages in five districts of the State relating to the year 1977-78. At the macro level, various aspects of agricultural development are studied in respect of all the 1,907 tribal villages included in the Tribal Sub-Plan areas of 22 tehsils in the five districts of Dhule, Jalgaon, Nasik, Ahmednagar and Pune. Information collected at the farm level covered aspects such as family size, land holding, pattern of land use, capital investment, livestock, crop pattern, resources use

and yields of different crops, the structure of costs and returns from different crops, family income, family expenditure and borrowings and repayment of loans. The results of the survey are presented districtwise for the five districts. The micro level study indicated that the tribal farms were capital starved and the structure of resource use was inadequate for the majority of the crops. The productivity of different crops was relatively low and consequently the levels of income and standard of living of the tribal farmers were low. Tribal agriculture in the area is backward. The scope is indicated for transforming traditional agriculture through provision of economic incentives to tribal farmers, adoption of improved production practices, supply of new forms of agricultural inputs and credit, arrangements for effective extension education and investment for exploitation and conservation of natural resources.

Planning for Integrated Rural Development Programme, Amalapuram Block (East Godavari District, Andhra Pradesh), R. N. Tripathy, B. K. Thapliyal and F. M. Pradhan, National Institute of Rural Development, Rajendranagar, Hyderabad-30, Andhra Pradesh, 1981. Pp. ix+443. Rs. 85.00.

In this monumental volume, an attempt is made to formulate a developmental plan for Amalapuram block in East Godavari district of Andhra Pradesh. The conceptual framework used in formulating the developmental plan is to link the family plans with cluster, block and district level plans to ensure sectoral and spatial integration, on the one hand, and effective implementation and monitoring, on the other. The main objectives of the study were (*i*) to assess the resource potential of the block, (*ii*) to identify the families below the poverty line and the activities which suit different classes and categories of beneficiaries for creating additional income so as to enable them to cross the poverty line and (*iii*) to identify growth centres for generating and sustaining activities in their respective hinterlands and to provide necessary infrastructure and package of inputs for the beneficiary-oriented activities. Besides, an attempt is also made to formulate plans for optimum exploitation of local resources to generate additional employment opportunities for the poorer sections in the block, to make an assessment of infrastructural requirements in the area and to integrate the beneficiary-oriented activities with sectoral schemes for the balanced development of the block. The project was sponsored by the Forest and Rural Development Department of the Government of Andhra Pradesh. The study uses both primary and secondary data. Primary data were obtained from a base-line survey conducted during 1979-80 covering a sample of 38,717 households belonging to the small and marginal farmers, agricultural labourers, artisans and non-agricultural labourers, selected from all the 57 villages in the block. The variables studied in the formulation of the developmental plan included geo-physical characteristics of the area, population and its growth, occupational pattern, land use pattern; caste and occupation of the family, size of

family and family occupation, sources of income and assets position, total annual income from different sources and per capita annual income; and among sectoral activities, agriculture, horticulture, animal husbandry, fisheries, small and household industries, basic and sectoral infrastructure and social facilities. Families whose per capita annual income were below. Rs. 700 were identified as beneficiaries falling below the poverty line. The study analyses the data relating to the identified families in each caste, occupational category and income grouped according to the choice of activity each has preferred. As the major focus of the plan is on the development of the weaker sections in the shortest possible period, the plan period is spread over ten years for making adequate resources available for the purpose and for bringing into the fold more beneficiaries gradually. It develops and uses a spatial network by identifying basic planning units consisting of a number of villages with close socio-economic linkages and a focal point in them to integrate individual family plans with resource potential in different sectors and provision of programme-specific infrastructure. An attempt is also made to aggregate the cluster plans at the block level for formulating a block plan and the development of supporting services required by the different sectors or individual schemes for the block as a whole. An action plan for programme implementation is then formulated, which takes into consideration (*a*) phasing of the different sectoral and beneficiary-oriented programmes, (*b*) financial management and (*c*) organizational set-up and co-ordination between various departments. The volume will prove useful as a reference guide to all those entrusted with the administration and implementation of rural development programmes.