

## Chapter 3

### METHODOLOGY AND MODELS

#### 3.1 OBJECT OF THE STUDY

The IRDP benefits were bestowed during the reference periods in West Bengal on selected beneficiaries. The measurements made so far by Indian investigators about the impact these benefits made on the beneficiaries as well as private people's reports circulated privately among private groups created a great deal of confusion about the usefulness of the manner of spending these sums. While we felt that the methods used by some investigators to measure the extent of economic amelioration of the beneficiaries may be tried in a different area, we are keen to innovate a new method to make the measurement more objective and accurate. The old method was tried by collecting information about the beneficiaries at different points time. So whatever change occurs to a beneficiary, after the use of the funds received, is measured. One object of the study is to try this method in the area chosen for this study. The only difference here is that we seek to include as many indicators as one field investigator can collect. The second object is to try a new method of measuring the improvement of the economic status of the beneficiaries.

This method consists in the construction of typological sets of beneficiaries and non-beneficiaries . For this purpose

beneficiaries are classified on the basis of two or more characteristics before they receive aid. Then against each class of beneficiaries a number of non-beneficiaries with identical characteristics found at the time the beneficiaries receive the aid are selected. So we have persons of identical personal setting. Some got the aid. Others did not. The measurement of the economic condition of the aid receiving persons and that of unaided persons is a true measure of the impact of aid on the aided persons.

One important object of the study is to restructure the integrated rural development projects. No activity, let alone agriculture, can give its operators income if the activity is not backed by required infrastructures. Some may call these by backward and forward linkages. Some used the term social overhead in a little earlier time. The question is not merely inputs required for production in the concerned activity or the network for guaranteeing the sale of output at fair price. It is equally necessary that supply of essential consumption goods and services of health care and medical treatment are available at the place of work of the productive workers of the activity or activities. For rural economies which are far away from regional centres it is of first importance that, as far as practicable, inputs are grown right in the rural economy and marketing network is continuously developed in proportion to the growth of output in the local level economy.

### 3.2 METHODOLOGY

We prefer simple methodology. Increase in complication carries with it increase in errors. The first point of our methodology is that, barring the choosing of types of non-beneficiaries, we do not make use of sampling at all. For studying the beneficiaries we selected a certain number of gram-panchayats and considered every one who received the aid during a particular reference year. To keep the field-work to a manageable size we selected three gram panchayats out of sixteen in the Maynaguri block. They were selected not as a sample but in terms of the convenience of field work.

To work out the typological approach we needed the matching set of non-beneficiaries. To get this set we just resorted to a systematic sampling to get the same number of non-beneficiaries against a set of beneficiaries with identical characteristics.

For the purpose of studying infrastructural response and input response we selected one population each from the project and non-project area. Each of this population comprises two hundred households. Each population was selected in such a way that the households were located around a central point in the settlement. The entire rural economy of the Maynaguri block was divided into project and non-project area

on the basis of location of various projects. The area that was not marked by the incidence of any project was treated as non-project area. IRDP benefits were, however, equally selectively distributed over both project and non-project areas.

### 3.3 MODELS

Viewed rather widely the entire process of the methodological work is a matter of modelling. Scientifically and artistically truth is sought in a systematic fashion by comparing between chiselled out systems. Nevertheless some additional mathematical models are used for the purpose of specific tasks.

Linear and Log-linear production functions are fitted to measure the input responses in agriculture. They are basically regression functions and are, therefore, exposed to the same merits and demerits to which regressions are exposed.

A macro mathematical model is fitted to the economic activities of the project area rather than to those of the non-project area for the simple reason that the project area has more activities than the non-project area. The model is of the Leontief type and is, therefore, ideally suited to the planning of integrated rural development at the grass-roots.