

Sustainable Development for Backward Rural Areas: The Nalkantha Region of Gujarat, India

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ABSTRACT Sustainable development may be defined as improving the quality of human life which is at present below the subsistence level. The sustainability and self-sufficiency are not a recent concept. Before 1950's by and large villages were self-sufficient, but now many are backward, that is, below self-sufficiency. To attain self-sufficiency in villages, there should be generation of employment both in farm and non-farm activities. In the present study an attempt has been made to analyse the problems of sustainability of a backward region-Nalkantha of Gujarat.

INTRODUCTION

Developmental programmes have taken different forms in rural India. Even though steps have been taken to develop rural areas economically and socially, a satisfactory result has not yet reached. In many cases the rural people are remaining backward being unable to sustain themselves. Here sustainable development is defined as improving the quality of human life which is at present below the subsistence level. In other words, development of an area should be such that it can support the need of the community within the framework of the local eco-system. The idea behind sustainable development is to use local resources in such a way so that resources are maintained and conserved from degradation to support population with food and employment. The aim is for holding people to the soil with proper distribution of population and management of eco-system by local residents with appropriate technology.

In rural areas there are a number of natural hazards like drought, flood, soil erosion, salinity of soil and water etc., which affect the development of those areas. Along with

the poor physical resources, the human resources too are very poor due to low literacy and technical knowledge. They are not aware of the techniques to overcome the hazards or divert themselves to some other occupation rather than cultivation, in order to sustain themselves. For this, proper planning is needed to utilize the physical and human resources in an optimum way.

Due to lack of full employment a mass scale yearly migration takes place. Land at origin is given less care, which results in the deterioration of the land from bad to worse. In order to save the environment from degradation, there should be developmental programmes, leading to conservation and productivity.

The sustainability and self-sufficiency are not of a recent concept. The original idea is that of Gandhiji who insisted on fulfilling the basic needs by producing it or earning to purchase it. In Gandhiji's time, by and large villages were self-sufficient, but now many are backward, that is, below self-sufficiency due to pressure of population on land and to the loss of village crafts. To attain self-sufficiency in villages, there should be generation of employment both in farm and non-farm activities.

OBJECTIVES

The objectives of this paper are to analyze the problems of sustainability of a backward region with low productivity due to physical handicaps and low level of technology and to suggest a diversification of farm and non-farm activities for harnessing local resources in an organised way to achieve a better standard of living. A combination of various activities will eventually help the people and the place to

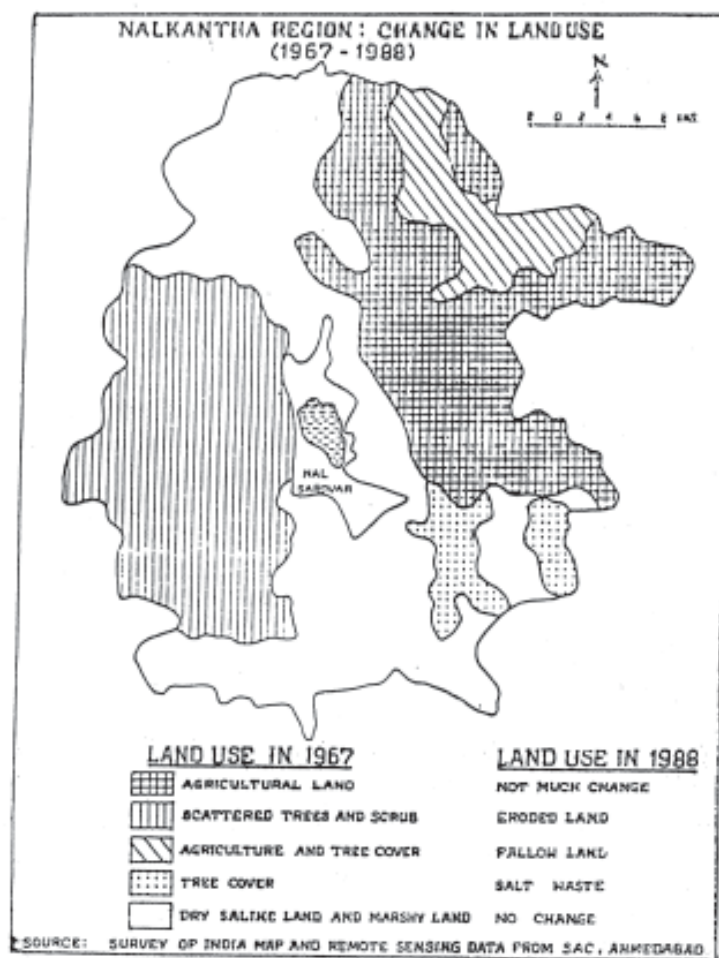


Fig. 1

develop in their own way through the process of conservation and sustainability.

METHODS

The Nalkantha Region has been focussed here at different levels. The changes in land use at a regional level has been studied during 1968-1988, using both Survey of India topographical maps and remote sensing data, obtained from Space Applications Center, Ahmedabad. A micro-level household survey was conducted in sample villages in order to know income, assets, consumption pattern of large and small farmers to have an idea of sustainability.

THE STUDY AREA

The Nalkantha Region of Gujarat is located in Ahmedabad and Surendranagar districts including five talukas and eighty-one villages around the Nal Sarovar. The entire region has an area of 1,564 km² including the 35 km² of Nal Sarovar (lake). The whole area was a part of ocean in the past, which was uplifted and was filled up with deposition in due course. Due to this, there is high salinity throughout the region. It is a basin with Nal lake in the middle. This basin type feature makes the water drained into the lake and leaving the area saline. The location of the region is on the axis of Gulf of Khambhat and Kutchch.

The changes in land use is shown in figure 1. When the Survey of India, map of 1967 is compared with the Remote Sensing Data (IRS image) of 1988, it is seen that areas with agriculture and tree cover have become fallow lands. The areas under tree cover and scrubs have become salt waste and eroded land. The dry saline land and marshy land are not changed – they are already degraded. This degradation of land is due to lack of rainfall on one hand and accumulation of salt carried on the other. Thus the whole area is degrading year after year, making the eco-system a fragile and weak one.

At a micro level the small farmer having less than 5 acre of land and large farmer having more than 10 acre of land, are studied to have an idea of their sustainability. The data is collected by field survey. Fifty households from Liya village of Viramgam taluka are studied, taking into account of their income from agriculture, their consumption pattern etc. Table 1 shows the pattern of income per person and per acre. Average income per person from agriculture for the small farmer is Rs. 660 per annum which is very low. Taking into consideration the minimum amount of food, clothing and shelter for just survival, Rs. 3000 per person per annum has been estimated here as the level of sustainability by VIIIth Five Year Plan. Even though the large farmer is better off, he too is below the sustainability. Hence the people migrate to other places to arm their living. Here migration is a process of strategy for survival as there is no work at their own region.

The whole area is provided with civic amenities like primary school, health center, post-office, electricity and the like. But due to lack of proper management and income, these amenities are not properly utilised. For example, children go to school just to get their mid-day meals and not to read and write. If some vocational training centers are started, the children can be benefited in a better way. Training on basket making, timber work and pottery making can improve their skill and thereby earn a living. The health centers are not at all visited by the residents as they believe in old customs and practices. They never go to doctors even during critical conditions. It is advisable to have ayurvedic medicines with herbs and plants rather than allopathy in these areas. Even though adult education centers have started in each village, nobody is attending the classes. If they are given training on maintaining good health and to improve agricultural activities, it will be of more use. Electricity is supplied to the villages, but the residents are not able to use it due to their poverty. Along with street lights if every household is given one light connection, that will be more useful. Even though post-office is seen in all villages, it is not properly utilised due to illiteracy of the mass. These all show the under utilisation or mismanagement of the facilities. Only provision of facilities do not guarantee its utilisation and well being of people. Along with providing facilities, the authorities should see that it is properly used by the people. Hence stress should be given to proper management

Table 1: Farmers' deficit for sustainability

Type of farmer	Total land in Acre	Total income in Rs.	Total People	Mean income per year per acre Rs.	Mean income per person in Rs.	Mean size of family	Estimated minimum need per person per year in Rs.	Deficit per person per year in Rs.
Small	42	51,400	78	1220	660	7	3000	2340
Large	540	3,53,180	188	650	1880	7	3000	1120

Source: Field Data, 1992

of the given facilities to raise the standard of living of people of backward regions.

PLANNING FOR SUSTAINABILITY

It is necessary to find out to what extent these degraded and fragile eco-systems can be upgraded and maintained with appropriate technology and management, so as to sustain rural population to its soil with farm and non-farm activities for the whole year. The work of reclaiming saline land has been undertaken by the Gujarat State Kharland Development Board. Various methods have been recommended for reclaiming the saline land. The soil can be improved by using gypsum, sulphur, sulphuric acid and molasses. The proportion of salinity can be reduced by building embankments on the soil, filling the area with fresh water and thus washing away salinity. The upper white layer of salt in such soil can be removed by scratching out and collecting salt from it. The soil can also be improved by adding organic matter, by growing a crop of Ikkad (a type of plant) in an area having green belt. To grow crops which suck up more salt like beet root, tobacco and spinach, have been recommended.

Among all physical limitations soil is the base which plays a significant role in agricultural activity. The functions of the soil depend on its physical, chemical and biological characteristics. The soil in this region is having a pH value more than 7.5 in almost all places. Hence soil testing has to be done before suggesting the cultivation of crops. Special varieties of grass which can resist the salinity can be grown here to be used as fodder. Thus along with fodder cultivation, dairy farming too can be developed which will provide employment for more man days. Tree plantation like "ber" which needs less water on a commercial basis, can be done for fuel and fruit.

As a whole the land is not good for profitable cultivation, hence some alternative arrangements have to be done. Here the developmental planning has to be focussed on the organisation of the people in their own land. This can be

done by knowing the attitude and skill of the people and how they perceive things. Due to their attachment to their land, they may be ready to do any work provided there. It is better to start some agrobased cottage industries like food processing on a co-operative basis along with agricultural development. Stress should be given to the development of education, health and nutrition along with income, to improve the standard of living.

All developments are possible only if the people themselves are interested and are involved. The local people should be made aware of the local potentialities and the way to exploit it properly, without disturbing the eco-system. They should be taught with the help of village level worker (VLW) about the different uses of land which can provide them both full time employment and enough income to sustain themselves. The incentives should come from the people and not to be enforced. So planning has to start from teaching the local people about the alternative use of land to provide alternate employment through co-operatives which will prevent their migration. Every thing is possible if done on a co-operative basis, joining people together. Thus the backward area can be developed by taking care of the needs, capabilities, perception and organisation of people themselves.

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