

SUSTAINABLE RURAL DEVELOPMENT IN INDIA: ISSUES AND CHALLENGES

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Abstract

The term 'rural development' is of focal interest and is widely acclaimed in both the developed and developing countries like India. In the Indian context rural development assumes special significance for two important reasons. First about two thirds of the population still lives in villages and there cannot be any progress so long as rural areas remain backward. Second, the backwardness of the rural sector would be a major impediment to the overall progress of the economy. Poverty in rural areas has remained by and large, the main focal point of governments and development agencies. Sustainable rural development is the most effective way to eliminate this curse. Aim of this paper is to study the relation between agriculture and rural development, role of agriculture in sustainable rural development. Some tools for sustainable rural development are also proposed.

Keywords:

Agriculture;

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1.Introduction

India is a country of villages and its development is synonymous with the development of the people living in rural areas. India is a vast and second most populous country of the world. But a big part of this population has been leading an uncertain economic life due to non-synchronization of employment opportunities in agriculture sector because of the fast growing population.

India is predominately an agricultural country and farming is their main occupation. In terms of methods of production, social organization and political mobilization, rural sector is extremely backward and weak. Moreover, technical developments in field of agriculture have increased the gap between the rich and poor, as the better off farmers adopted modern farm technology to a greater extent than the smaller one's. The all India Rural Credit Review Committee in its report warned "If the fruits of development continue to be denied to the large sections of rural community, while prosperity accrues to some, the tensions social and economic may not only upset the process of orderly and peaceful change in the rural economy but even frustrate the national affords to set up agricultural production."  It was therefore felt necessary to make arrangements for the distribution of fruits of development to the rural weak and backward section of society.

It is rightly pointed out that a purely agricultural country remains backward even in respect of agriculture. Most of the labour force in India depends on agriculture, not because it is remunerative but because there are no alternative employment opportunities. This is a major cause for the backwardness of Indian agriculture. A part of the labour force now engaged in agriculture needs to be shifted to non-agricultural occupations

The stress on rural development is also due to many constraints facing the rural areas, which generally suffer from inadequate infrastructure facilities and technological advancements. The rural areas are not well placed in terms of even minimum needs like safe drinking water, primary health and road transport. This apart, the rural population suffers from indigence, ignorance and illiteracy. Their traditional outlook towards development has been preventing them from taking full advantage of the incentives offered by the Government. Also, the ownership of land and

other assets has been heavily concentrated in hands of a few. It is precisely for this reason that the benefits of rural development programmes failed to reach the rural population targeted for these benefits to the extent expected.

2. Sustainability and Rural Development

The term '*sustainable development*' has largely been promulgated by the industrialized nations in the context of global environmental processes and concerns, and it has catalyzed attention on the relationship between economic growth and the natural resource base on which this depends. Most people use the phrase "sustainable development" interchangeably with "ecologically sustainable or environmentally sound development". This interpretation is characterized by: (a) "sustainability" being understood as "ecological sustainability": and (b) a conceptualization of SD as a process of change that has (ecological) sustainability added to its list of objectives. In short, although sustainable rural development may assume a variety of forms, there are three key expressions of this emerging paradigm:

- It is a response to the price/cost-squeeze on agriculture. It adds income and employment opportunities to the agricultural sector by enlarging value added;
- It expresses new relationships between the agricultural sector and society at large. It contributes to the construction of a new agricultural sector that corresponds to the needs and expectations of society at large;
- It implies a redefinition, recombination and/or reconfiguration of rural resources.

3. Agriculture and sustainable Rural Development

A core challenge to sustainable development is the attainment of sustainable agriculture which means improving productivity and the income of the poor, without affecting the planet's critical life support system. Agriculture is the backbone of national economy in many developing countries, in India it accounts for 6 out of every 10 jobs. Without agricultural productivity, people in the rural areas will either starve or attempt to seek a better life elsewhere. Cities on the other hand cannot tolerate further strain. As such the need is to make the development greener but that will need new kinds of tools that will be gentle and not scar the earth's imaginative

strategies that will create such tools and many hands eager to put them to work. Such tools will promote sustainable agriculture without affecting the eco-balances. Some of these tools are:

- **Conservation of Forests**

In the eco-balance system a major area is the conservation of forest. In India, annual requirement of fuel is in the order of 150 million tones whereas the production is hardly about 20 million tones. The degradation or denudation of the forest is of the order of about 1.5 million tones per annum and therefore the country is going to have barren forest in a very near future.

Besides, the practice of shifting cultivation by tribal's is another important environmental situation. It is also non-sustainable economic activity for them. As such it is essential that, such individuals should be provided with forest based subsidiary occupation like minor forest produce (cultivation of fruits, vegetables, plantation crops, etc.) in order to retain them in their areas with a sustainable activity and also to promote forestry in the hill area.

Further, wherever possible captivity plantation should be encouraged for the wood based industry. The Government Task force should use the tissue culture and micro propagation technique for the production of important forest trees[10]. Fuel timbers, etc., which could be planted on Government lands, under Government Sponsored Schemes, such as social forestry and the waste land development programme, etc.

- **Biotechnology & Biodiversity**

To augment sustainable and higher production in agriculture, allied agriculture activities, agro based industry and others as well as to increase employment opportunities among the rural poor, it has become necessary to upgrade the existing technology of production.

Biotechnology, a labor intensive technology, refers to variety of techniques involving living organisms as a means of production and uses tissue or cell culture, cloning and fermentation; cell fusion, embryo transfer and recombinant DNA technology etc. This technology has been developing rapidly in the world since 1980. A number of biotechnological industries have been

established in the field of agriculture, pharmaceuticals, food and feeds, energy and the environment protection.

In addition to the frontier technologies like genetic engineering and biotechnology, India has varying agro climatic zones, suitable to produce variety of hybrid plants and animals[8]. It has a vast pool of high caliber agricultural scientists, cheap agricultural laborers and the agro-chemical inputs.

India with this unique position can not only generate employment among rural folk and eradicate poverty but also can commercialize agriculture in the field of crop production, horticulture, aquaculture, floriculture, mushroom production, live-stock and poultry production, etc. It can become a major exporter of agricultural raw materials and food to the world.

- **Chemical Fertilizers vs. Bio-fertilizers**

It is estimated that 50% of the increase in food grains production in the last decade was due to extensive use of chemical fertilizers. However, the deleterious effects (soil salinity and alkalinity) of excessive use of chemical fertilizers, particularly in the absence of organic manures were recognized in many parts of the country, including the nitrate nitrogen pollution of the ground water. Besides 75% of the farmers are in the category of small and marginal farmers, who cannot afford to use costly chemical fertilizers. Therefore, it is necessary to look for alternatives which will promote cost effectiveness and sustainability in farming.

Another important fact is the use of chemical fertilizers without estimating the soil fertility. This is misuse of costly complex fertilizers and micro nutrients which also leads to environmental problems. It is estimated that only less than 30% of the applied chemical N fertilizer is made use of by rice plants and the rest are wasted by way of volatilization, surface run off and seepage losses[3].

Higher yields of crops can be obtained without many externally purchased chemical fertilizers by recycling the farm wastes and allowing mineralization to take place. Further, the biological nitrogen fixation is the most important alternative for the replacement of nitrogen fertilizers. Crop rotation which includes pulses and the green manure legumes, can replace nitrogen fertilizers to a large extent.

In Brazil and Argentina soybeans are grown without any nitrogen fertilizers. This crop contributes to soil fertility without hazards to environment.

- **Pesticides and Their Alternatives**

In India crop losses caused by pests have been estimated at Rs. 500 billion per annum. As such the use of pesticides in India is very high and it has emerged as the 2nd largest pesticide manufacturer next of Japan in Asia. According to World Health Organization (WHO) study, the average consumption of pesticides in the world is 450 grams per hectare and in India it is around 3kg. In Guntur District of Andhra Pradesh alone this figure has touched the consumption rate of 10 kg. per hectare. Because of extensive use of pesticide most of the species of pests in Guntur and Krishna district of Andhra Pradesh have been found to be 300 fold more resistant than those in other areas.

While the chemical pesticides are instrumental in achieving significant increase in crop productivity, it also leads to serious ecological and human health hazards. It destroys predators and parasites, beneficial insects (honey bees, silk worms) and other useful animal species [2].

In the contest of foregoing there is a strong need to develop the alternatives and total dependence on pesticides should be reduced. In the recent years the concept of integrated pest management has gained momentum [12]. The use of bio-pesticides has proved beneficial not only to protect environment and human life but also has reduced the cost of cultivation of agricultural crops. Many of the beneficial insects are being used to control the other harmful insects. Use of pesticides of plant origin (Neem, Karanj) provides an excellent alternative for protecting crops from all insects/pests of economic importance. Several herbal extracts are being produced by a number of leading companies in India which are equally effective, cheaper and are fully eco-friendly.

- **Post Harvest Technology**

In India, it is estimated that about 30% of agricultural produce are spoiled or wasted in different stages of handling right from the site of production to storage. With availability of sufficient productive lands, varied agro-climatic conditions, abundant sunshine and the cheap labour force

there is tremendous scope in our country for development of floriculture, aquaculture, fruits, and vegetables, etc. Incidentally, we are the second largest producers of fruits and vegetables in the world, but our export of these items are negligible (less than 1%). Thus main reason is the heavy losses (about 40%) at different stages of post harvesting process owing to faulty handling, transportation and processing techniques.

In the light of foregoing there is a need to preserve food to make it available as fresh as possible to the consumers. Each food has got a specific structure, texture, flavor, color and nutritive value. The causes of deterioration are physical, chemical and biological due to growth and activity of micro-organisms like bacteria, moulds, insects, etc. Spoilage may appear as loss of weight, softening, souring, rotting, wilting or may be in combined form. Ultimately the food is decomposed and becomes inedible. A variety of processes are available to preserve foods which are used either alone or in combination. The ultimate aim is to increase the storage life of food by reducing the metabolic changes continuously taking place inside the food (i.e. respiration, ripening processes, etc.) moisture loss, physiological disorders and further growth of microbes etc.

- **Growing Population and Poverty**

India's population of 1.324 billion is growing at the rate of 1.19% every year. If this trend of growth continues by 2025 it may overtake China the most populous country of the world. High population growth rate is usually an indicator of poverty. About 23.6% people are below poverty line, 63.4 millions have no access to drinking water, 10% villages have no electricity and 30% are yet to be connected by all weather roads.

The increasing population continues to erode the net benefits. Although they spend 85% of income on food, the poorest 20% of the population are still unable to consume more than 1500 calories a day as against the minimum requirement of 2300 calories considered by the Niti Ayog. The poverty and population is also linked to illiteracy. Higher is the poverty higher will be illiteracy, and if illiteracy is high population will not be controlled. The uncontrolled population growth has adverse effects on environment also. It threatens the precarious balance between the natural resources and people. The lands are divided into small holdings and fragments. Per unit

production has gone down and the whole population is sustained only on 4.8% of the world's income. It is therefore, necessary that the illiteracy should be eradicated forcefully and family planning should be implemented effectively.

- **Rural Development and Village Industries**

The term rural development was understood in the past to mean only agricultural development, and no attention was given to other sectors of rural economy. Fortunately in the 12th plan this approach has been changed so as to accept the philosophy of overall development of rural economy. Rural development is not merely agricultural development but rural transformation which includes development of all the facets of human civilization. The new approach to rural development intends to cover all sectors in rural area to give a new mould to the society through various measures[7]. According to this new approach Rural Development is concerned with modernization of the rural society and with its transition from traditional isolation to integration with the national economy.

The development of small scale village industries is the need of the hour to check rural people flocking towards urban areas. The Government has been supporting the village and small scale industries by restricting the volume of production in large scale sector, but these programmes are not picking up as new industrial goods are available in the village markets from the urban manufacturing industries which can compete with the goods produced by the village industries.

Despite several efforts made by the Government through various schemes for revitalization of village and cottage industries in rural areas, the artisans in the sub sector have not been able to improve their economic condition because of various problems they are facing in their local rural markets. They have not been benefited much from the poverty alleviation and rural employment generation programmes implemented in recent years[9]. With a view to overcome the difficulties being faced by such individuals, it is essential that proper planning at grass root level should be done for them, which may envisage technical assistance at their door-step, training to them for their competence, financial and material support, supply of designs accompanied by arrangements for rural marketing systems, etc.

- **Rural Credit and Peoples Participation**

For deployment of credit in the rural area an extensive infrastructure was created by Nationalization of Imperial Bank of India in 1955, State Bank subsidiaries in 1959, 14 major commercial banks in 1969, another 6 commercial banks in 1980, setting up of Regional Rural Banks (RRBs) in 1975 and by formation of NABARD in 1982. A multiagency approach was adopted for expansion of rural credit, involving commercial banks, RRBs and cooperatives. A massive branch expansion program was undertaken by the commercial banks. Out of over 62,000 branches of commercial banks 35,000 are operating in rural areas. Besides RRBs with their 14,000 branches are catering credit needs of rural people. In addition, there are 84,000 Primary Agricultural Credit Societies (PACs) functioning in villages.

Despite the vast expansion of the formal credit system, half of the rural households are still outside the ambit of the institutional credit and majority of them are dependent on money lenders especially when there is occurrence of natural calamities like droughts or floods as also in personal tragedies and customary ceremonies which entail heavy expenditure. The major facts behind their dependency on non-institutional credit are the non-availability of institutional credit for consumption purposes, delayed and inadequate credit from credit institutions, illiteracy, lack of awareness and incapacities to deal with the formal credit institutions[5]. The attitude of the bankers has also not been very positive because of high transaction cost, poor recovery, poor end use and diversification of loans.

Thus, there are several bottlenecks and constraints for both the credit institutions and the borrowers when credit expansion takes place direct through formal system of credit delivery in rural areas. In this regard Self Help Groups (SHGs) have been found to be very helpful to their members in inculcating among them the habits of thrift, savings and banking. What is perhaps most relevant in the case of SHGs is the peer pressure they are able to exert in order to ensure that credit is utilized for the purpose for which it has been taken and is repaid according to schedule. As reported by NABARD, the recovery performance of the members of SHGs has been found overwhelmingly satisfactory at around 95% when compared with around 40% in the case of direct bank lending to individuals of the target groups. The transaction cost of the bank is

also reduced to a large extent since the loan is advanced to the group direct or through Non-Government Organizations (NGOs) and not to the individual members.

As the organization of self help group is based on the concept of people's participation in decision making, the selection of activities for individual members, the quantum of loan, purpose of loan, time of loan, period of loan, etc. are decided by the group only. The group members in due course develop self reliance and change their outlook towards themselves and rest of the society through self analysis.

The concept of people's participation and Self Help Group has been tried in several developing countries and found successful in Philippines, Indonesia and Bangladesh, etc. In India the pilot project for linking banks with Self Help Groups has been launched in the year 1992 and the result has been found successful, particularly in the case of groups formed by women. However, much more has to be achieved with the cooperation of the financial institutions, other implementing agencies and the beneficiaries themselves.

Conclusion

The rural development is the product of interaction between various physical, technological, economic, socio-cultural, institutional and environmental factors. So, a single approach to rural development would not be effective. Indeed, the rural sector should experience the required changes so that it can join the mainstream of national development and contribute its share for economic development. In addition to the tools discussed in this paper, there are several other issues also such as gender issues, common properties issues, issues related to poverty alleviation programmes and so on, which have direct bearing on rural development; it is, therefore, necessary to examine these issues also to take an overall view about rural development in India. What is needed is the multidisciplinary approach by all, who are directly or indirectly concerned to the rural development. Rural sector, therefore, is prepared to emerge as a major contributor in economic development of our country. It has been rightly said, "In the end, however, rural development should not be seen as a package of specific needs but as a transformation of rural life and conditions.

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