

Scope of NGOs in Rural Technologies for Sustainable Rural Development



Sociology

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P. MANIKANTA

Research Scholar, Dept. of Population Studies and Social Work, S. V. University, Tirupati - 517501

O. SUDHAKAR REDDY

Social Development Professional

ABSTRACT

The establishment of NGO is a reflection of service values of human beings. In eliminating the various serious problems in society, apart from the Government, the role of NGOs are immeasurable. Non-Governmental Organizations (NGOs) playing an enormous role in rural development in India. NGOs are initiating various rural development activities in collaboration with government organizations, institutions, international funding organizations.

Since few decades development in science and technology has shown its significance in urbanization, industrialization and in many other areas. But these technology interventions not up to the mark in agriculture sector as well as in rural development. Due to the increased industrialization and various problems in agriculture sector, many rural poor migrating to urban for their livelihood opportunities.

Many Government institutions established cost effective rural technology centers along with training institutions to train the rural unemployed on various technologies. They are also providing financial support to the trained people through PMEGP, SGSY and other schemes to establish self-employment activities in their localities which control the migration and supports Sustainable Rural Development.

INTRODUCTION

Today the country has not been in a position to eliminate all challenges for sustainable development in this widespread poverty and deprivation, exploitation and discrimination situations. As solutions for this The Non-Governmental Organizations (NGOs) have stepped in to provide basic health, education and child care services, running home for the destitute and distressed and providing training opportunities as well as implementing various rural development activities. Now the NGOs also have to take more initiatives for sustainable rural development with the intervention of rural technologies and self-employment programs.

RURAL TECHNOLOGIES:

Technology: Technology is the making, modification, usage, and knowledge of tools, machines, techniques, crafts, systems, and methods of organization, in order to solve a problem, improve a pre-existing solution to a problem, achieve a goal, handle an applied input/output relation or perform a specific function. It can also refer to the collection of such tools, including machinery, modifications, arrangements and procedures. Technologies significantly affect human as well as other animal species' ability to control and adapt to their natural environments. The term can either be applied generally or to specific areas: examples include construction technology, medical technology and information technology. (Wikipedia)

Rural technologies are the technologies which use for better agriculture productivity, livelihood support, easy rural transport, and easy access of water for drinking and agriculture purposes, improving livestock, highly utilizing the natural resources for rural development and over all betterment of the rural sectors.

SUSTAINABLE RURAL DEVELOPMENT

To meet the increasing high demands of human being in form and non-form sectors as well as in other rural sectors it is highly required to utilized developed and developing rural technologies. The needs of rural technologies are day by day increasing. The utilization of rural technologies also extended in storage of rural productions, livelihood activities, marketing, transportation, alternative and renewable energy sources, transportation water, education health sector and other many areas.

Technology selected for rural development should meet the local needs and it should be able to promote local talents and skills. It also required enhancing existing incomes, generating additional new employment opportunities, generating entrepreneurial temper and creating widest possible involvement of the rural poor and other disadvantaged groups.

"Sustainable development is the management and conservation of the natural resources base and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. (International Institute for Applied Systems Analysis)

IMPORTANCE OF TECHNOLOGY IN RURAL DEVELOPMENT

Technological advancement and rural development are truly related to each other. The level of a technology is also an important determinant of rural development. Technological process improves the quality of existence physical and human resources that increase the quality of these same productive resources likewise, technological progress results from new and improved ways of accomplishing traditional tasks such as growing crops, making clothing building a house etc.

Technology has wider demand to raise the productivity and income level of rural people which increases the standards of living, to remove scarcity of natural resources, contribution to growth and development, Contribution to agriculture transformation, create more income generation activities, usage of agro and industrial wastage, Development of cottage industries, Productivity and efficiency, Reduce production cost, Rural industrialization and in many other functioning.

The analysis of the need for promotion of rural technology would result in focusing on the basic necessities of people. We can separate five elements of social and economic infrastructure, which should be taken care of effectively by the local bodies and central government. They are – health, education, drinking water, housing and electricity. Followed by these the need for roads, efficient agricultural output, employment at grass-roots level and telecommunication cannot be neglected as well. All these goals of rural development converge towards development of effective rural technologies and a sound rural education to absorb the technological innovations.

IMPORTANCE OF TECHNOLOGY TRANSFER IN RURAL DEVELOPMENT

1. To develop basis key industries and infrastructure
2. To fill technological gap
3. To increase the growth rate
4. To increase production and productivity
5. To reduce poverty, inequalities, and unemployment
6. To solve balance of payment problems
7. To make less developed countries competitive
8. To save time and money
9. To overcome backwardness

10. To solve socio-economic problems.

FEW IMPLEMENTED COST EFFECTIVE AND TRADITIONAL RURAL TECHNOLOGIES

Non-conventional energy:

Non-conventional energy is synonymous terms used for the alternative energy or the renewable energy. In a broader sense the clean energy like solar, geothermal, water, wind, biomass, fuels, electricity etc. are taken as the non-conventional energy.

The most common definition is that renewable energy is form an energy resource that is replaced by a natural process at a rate that is equal to or faster than the rate at which that resource is being consumed.

Renewable energy is a subset of sustainable energy. And we similarly hope that all the non-conventional energy sources will become conventional, common and every day, as they are all free, green and emit no carbon dioxide.

Information and Communication Technology (ICT):

The strengthening of rural communication services through ICT is an important ingredient for the welfare and development of rural India as it has many advantages. Mobile Phone revolution has almost redefined the meaning of connectivity. In today's world when man is trying to automate every single process of manufacturing through powerful computers and machines, computer literacy has also become an important issue. Computer Literacy Missions have been launched in various states to incorporate this objective. ICT also helps in accessing health care in times of urgency and in cases where a village is located far from a city. It also gives timely information on business, price, market, demands etc. so that the people in rural regions can respond to changes in the market. It also provides information about employment and generates opportunities to women and underprivileged people regarding self-employment and income resources.

Low Cost Water Technologies and Energy Innovations:

Water is crucial for drinking and for irrigation purposes in rural areas. This is directly related to the agricultural yield. Though India is a monsoon dependent nation, the sporadic and erratic nature of monsoons causes a reduction in the output every year. Various technological advancements have been made to counter the danger of droughts. Manual well drilling, water pumping, water storage techniques, low pressure drip irrigation, water filters for purification of water etc. have been designed and are available at economical costs. Bio-fuel construction in recent years has accounted for growing energy demands in villages. It is an economical means of energy generation as it uses agricultural waste to produce fuel.

Housing Technologies:

Villagers like to build houses using materials which are familiar to them. Such familiarity is developed through a process of trial and error over a long period time. The trial and error in their experience relate to aspects of availability, utility, workability, durability, net cost and cost and similar other factors. Whatever materials are locally available are exploited to the extent of local knowledge of the people in the art of house construction. Mud and thatch are the cheapest and readily acceptable building materials commonly available in most parts of the works. Today the construction of building requires huge investments, due to rise in costs of all the related building materials. The costs of the materials, mainly cement, steel, sand and other building materials have increased enormously. To overcome all such difficulties and to avoid making such huge investments it is required to cut short the expenditure to some extent. To maintain the same quality of the work and the sustainability of the structure it is required to construct the structures with modifications and alternate technologies.

- R R Stone Masonry Walling in Super structure.
- Rat – Trap bonding brick work for walling.
- C C blocks walling & Fly ash bricks
- Adobe Mud Blocks & Tile facing Adobe Mud blocks walls,

Cement stabilized mud blocks, Rammed earth walling and columns & Wattle & Daub walling

- Mud walling & C R Stone masonry
- Hollow concrete Blocks
- Mangalore tile roofing
- Conical tile arch roofing.
- Filler slab & Arch roofing.
- Micro concrete tile roofing.
- Ferro – Cement Channel roofing.
- Brick Dome roof, Ferro cement arch roofing & Bamboo corrugated sheet roofing.
- Pre cast RCC panels over pre cast joists.
- Mud plastering to the mud block walls.
- Non-erode able mud plaster to the walls.
- Lime plaster

Technology in Sanitation:

It is necessary to develop appropriate low cost-low water sanitation devices which controls the major challenges for sustainable rural development like communicable diseases, lack of proper sanitation system, lack of toilets utilization etc., there are many model technologies are developed in sanitation area. Each model seeks to demonstrate something special, whether it is improvising locally available materials or the adoption of a particular practice or a technique. Nevertheless, there is an effort to ensure that whatever has been showcased is workable.

The focus is on three areas: low cost; low water usage; and, most importantly, solid and liquid disposal for gainful agricultural activities. To achieve low costs, different cost effective building materials have been used, besides designing pans with locally available materials like drums etc. to ensure low water usage, the slope of sanitation pans has been redesigned. Finally, the two –pit system facilities safe recycling of liquid and solid waste for gainful agriculture practices. The models have been grouped broadly under various heads as given below:

- Conventional toilet system
- Domestic sanitation models with the use of cost effective construction materials
- School sanitation model
- Anganwadi sanitation model
- Community model and Waste water management
- Animal waste management
- Solid waste management

The different Types of Sanitation Models available in Rural Sanitation Park are:

- Conventional Model Based on Septic Tank, Two Pit latrine with Flap Seal Pan and Brick Work, Twin Pit Latrine with Brick Panel and Twin Pit Latrine with Pre-cast concrete blocks
- circular twin pit toilet with bricks
- circular twin pit toilet with pre cast RCC rings
- Bamboo Mat Ply Superstructure
- Bamboo Reinforced Leach Pit
- Single Leach Pit Toilet with P-Trap Pan
- Burnt Clay Segment Leach Pit
- Modified Midnapur Toilet
- Eco-Sanitation Toilet, Anganwadi Toilet Block, School Sanitation Toilet Block Model and Community Toilet & Urinal Block
- Soak Pit for Bathroom Platform
- Spill Water Recycling Model
- Household Vermi Compost Unit
- Nedep Compost Unit
- Deenbandhu Biogas Plant with Toilet
- Gappi Fist Tank
- Ferrocement Tank

Apart from above technologies various Agriculture Technologies, livelihood supporting technologies and other technologies are developed in India by various government organizations like Rural Technology Park (RTP), NIRD, Hyderabad, Rural Technology Action Group(RTP), IIT, Chennai, Mumbai, Delhi and other locations, Indian Institute of Science (IISc) in 1970s.

Centre for ASTRA (Applied Science and Technology for Rural Advancement), CAPART, New Delhi, Few Non-Government organizations like Appropriate Rural Technology Institute (ARTI) is an NGO based in Maharashtra, Center of Science for Village, Wardha, Maharashtra etc.,

Technology dissemination process also differs from generation to generation. It requires understanding of economics, financing, institutions, management, stakeholders etc. So the learned planners of government bodies should be efficient enough to take into account all the factors.

Role of NGOs in sustainable rural development with rural technologies intervention

- NGOs can take up wider role in supporting rural education system by implementing grassroots level technology education centers for both educated and uneducated people as per their level of understanding and needs.
- Initiation in introducing more number of Rural Technology courses
- Establish Rural Technology Information Centers (RTIC) in village or mandals where rural people can get easily available technologies in India for various rural developmental activities.
- Create awareness on importance of Technology intervention in various aspects of Sustainable rural development
- Involve many Government organizations, Institutions and private organizations in implementation of rural technologies.\

- Play importance role in all possible ways for sustainable rural development with intervention of Rural cost affective and affordable technologies
- Create clear awareness on Government Schemes, Government and private or Non Government organizations which are providing training and subsidy schemes to train and establish rural technologies in villages.
- Organizing various exposure visits, camps, exhibitions for rural people to various technology resource centers.
- Creating clear awareness among school children belongs to rural communities which contribute in implementing the idea of rural technologies interventions. It also guides their parents.

As like the same NGOs require to take many initiatives for sustainable rural development with the intervention of rural technologies.

Conclusion

Any developing country cannot become developed without the development of its rural base. For a country like India, where almost sixty percent of the country's population lives in primitive conditions, it becomes even more important. Sustainable rural development is highly impossible without utilizing rural technologies. In this corner, for sustainable rural development the Non-Governmental Organizations (NGOs) can play crucial role with their grass root level network with Rural Technologies.

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