

Rural Planning and Development of Rameshwar Village

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Abstract—In this paper we discussed the solutions for the Rural development of Rameshwar village as Smart, Self-sufficient, sustainable, modern, developed village. We have focused on Sanitation, Security, Resource use, Provision of Basic Amenities, Improvement in standard of living of villagers, infrastructure facilities, Sustainable Energy sources, which will give an idea of development of Rameshwar village in respect of economy, technology, and culture. Due to which the gap between the urban and rural living in India will Reduce.

Index Terms—Rural development, Smart village, sustainable energy, Sanitation, Health, Rural India.

I. INTRODUCTION

The Indian population is around 138 crores, and it is the second most populous country on Earth, most of the population of India lives in Villages. Out of 600,000 villages in India, 1,25,000 villages are backward so the village needs to be developed and built as a Sustainable, modern, smart village. With modernization and urbanization people migrate from one place to another for various facilities like education, employment and attraction of people towards area or city. The village is the main criterion for the development of the nation. For true development of India rural development of villages are must Therefore, develop the village in a way that is self-sufficient in providing services, employment and is well connected with the rest of the world. Villages required to provide development in education, health, productive venture, clean water, sanitation, environmental sustainability and participatory democracy, helping to further improve access to energy. first the concept of village development was given by Mahatma Gandhi i.e., Swaraj and Suraj village. But nowadays it is known as Smart Village. As we know, India is a developing nation, with the help of Developed rural India we can make India a stronger developed nation. Nowadays our government is also paying more attention to

the Village development. The government is implementing a number of schemes for the Rural development.

II. LITERATURE REVIEW

Roghayeh in 'villagers and rural development' has given the ideas of Development from the Geographical Perspective. And given concept, definition of rural development. Roghayeh stated that the Rural development will change village from the traditional isolation to the society degenerated with national economy [7]. Ernady Syaodih discussed the smart village sustainable development and given the case study of the Lingsar village and analysed smart village development process [4]. Tarujiyoti Buragohain in 'Impact of Solar Energy in Rural Development in India' given study shows that the solar home-lighting system in the remote village can influence the life of village peoples significantly for the better [10]. R. Sutriadi in paper used literature review as a method for defining smart region, smart village, smart city, and the Technopolis for the Indonesian context as the technological and innovative as based on the concept of innovative thematic urban and regional development strategies [6]. Anand Singh and Meghpatel given the comparative case study of Punsari and akodara village on suitable parameters of smart village and also stated that the rural development will avoid further of people from village to city and can help to bring balance in the entire eco system [2]. Abhishek et al. given the discussion on solid waste in India recent changes and the responsibility of the government bodies [1]. Dr. Milind Kulkarni discussed the role of the engineering colleges in respect of various term as solid waste management, indoor air pollution, water supply and sanitation [3].

III. METHODOLOGY

For the work we Initially did the study of various literature and then visited village, accumulated the detail data about village. We had brief discussion with the villagers, then we analysed problems and discussed smart, self-sufficient, sustainable, modern solution for the development of the village.

IV. VILLAGE DETAILS

RAMESHWAR village is in Latur district of Maharashtra state in India. It belongs to the Marathwada region. It is fertile village dominated by agricultural land with technical irrigation, which can be cultivated kharif, rabi two times in one year. Besides being used to agriculture Some people also use the land for livestock activities, especially buffaloes, chickens, goats and cows. Rameshwar village has tourism potential such as ram Rahim setu, ram mandir, Jama masjid, is one of the tourist sites in Rameshwar Village, cultural tourist sites visited by many tourists, both domestic and foreign. Gopal baba mandir is a cultural destination and Eknath Shashti is one of the declining traditions in Rameshwar Village

V. RAMESHWAR VILLAGE

Table 1 Details of Village

Gram Panchayat	Rameshwar
Tehsil	Latur
District	Latur
State	Maharashtra
Nation	India
Pin code	413511
Area	504,76 hectares
Population	1562
Female Population	49.4%
Households	340
Assembly Constituency	Latur rural
Parliament constituency	Latur
Nearest town	Latur (25km)
Elevation	622m sea level
Literacy rate	63.5%



Figure 1 Visit 1



Figure 2 Visit 2

VI. DISCUSSION

For the development of Rameshwar village, we analysed some solutions for their Problems.

A. Water Scarcity

In summer Villagers experiences the water scarcity problems, from the starting of march month itself the level of ground water table start declining by the mid of may month the villagers face situation like drought. With help of innovative ideas and proper management we can reduce the effects of Water scarcity problem. As the preventive measures we can use the following measure for watershed management.

1. Rainwater Harvesting.
2. Drip Irrigation for agriculture
3. Plantation
4. Farm ponds

B. Dependency on Non-renewable energy sources

Now whole world is focusing on renewable energy usage as the traditional energy sources are not reliable and for future purpose, we have to minimize our dependency on traditional sources. Now all leading economies around the world pledge to become carbon neutral, now there is a great opportunity for India's villages to lead the country on the way to decarbonization of India and ensure a safe green economic recovery which is sustainable for future. Rameshwar village can reduce their dependency on traditional energy by using safe and green energy alternatives. renewable energy sources Integrated to existing setup will be economically sound and reliable at time of need.

1. Solar Panels

Most of the period of year the Weather in Rameshwar village remain sunny due to which the solar energy is best suited option for village as easily availability of solar energy. As traditionally supply of electricity is quite unreliable in village due to the scheduled and unscheduled power cutting of electricity so already there is an increase in interest of villagers for use of alternate energy source.

Also, in the year 2010 the government of India has launched a scheme naming Jawaharlal Nehru National solar mission, in this the 30% of the subsidy was given to the organization and individuals for cost of solar systems now it is upgraded to 40% in both rural and urban area.

So, providing solar panels to the residential homes and public building will be sustainable and Economical

2. Solar Street light

Solar street lights gets energy from direct sunlight which will be an alternate option for the conventional street lighting.

Advantage:

1. The Running cost will be zero.
2. No Need of maintenance up to the period of five years.
3. Green Energy as 100% power driven from sunlight.
4. works in Rainy weather.

3. Solar Pump

Agriculture is the main income source of most of the villagers in village. The solar pumps are the most

suitable option for farmers, The cost of operating pump will be zero as it will work on the sunlight, farmers can access the pumped water 24 hours a day. It will replace the diesel pumps so that there will be reduction in pollution.

Farmers can get up to the 90% of subsidy from various schemes of government.

4. Biogas Plant

The most of the agriculture and household waste generated in rural area is organic, so biogas plant can consume it and produce energy out of it. Biogas is a mixture of various gases produced due to breakdown of organic substance in absence of oxygen. If well maintained The life of biogas plant can go up to 25 years. main product from plant will be the gas which can be used in kitchen as an pollution free alternate option for conventional energy, The manure will also be produced which can be used for agriculture as fertilizer.

Initial cost of construction of biogas plant will be around 25000Rs. Which can be recovered soon from use of biogas produced. Government gives subsidy to biogas plant from 9000 to 11000Rs. Depending on criteria.

The biogas can also be used to produce electricity by converting gas into electricity in inventors. Technology is cheaper and helps in reduction of greenhouse gases.

C. Waste Management

Because the India have a very large population due to which it yearly produces around 62 million tons of solid waste, which creates a very bad impact on environment similarly in Rameshwar also lots of solid waste generates daily for management of this a proper setup of waste collection, transport and treatment should be established within gram panchayat. For collection process the tricycles are required normally 1 for every 300 household, in Rameshwar there are 340 households so 2 tricycles would be appropriate for village solid waste collection. During collection the proper segregation of waste must be there as organic, hazardous and inorganic. Organic waste can be easily managed it can be converted into energy by composting or dumping by proper landfilling. For other in-organic waste implementation of 3R formula should be implemented there Reduce-Reuse-Recycle , the

reduction in unnecessary waste creation then use of the reusable materials and in last recycling the materials for use.

D. Sanitation

Because the Almost every household in the village have toilets but the public places should also have facility of sanitation in village. For community health the public toilet play crucial role and also for individual. Public toilet contributes to environment health. If no toilet is available then The inability to satisfy essential physiological requirements will lead into several health issue. For holistic development of Rameshwar village public toilet construction on suitable location is needed. For the population two public toilets is recommended one at neighbourhood where market place, hospital, gymnasium, gram panchayat, bank and roads connecting to rui and tadki village are in surrounding and second near the area where school, gopal baba temple, jama masjid, and ram-Rahim setu is located near roads connecting dindegaon village.



Figure 3 Ideal Village Model



Figure 4 Sample Model

VII. CONCLUSION

Overall problems of Rameshwar village will be reduced after applying the above mentioned changes,

the holistic development of village will be possible due to which the true development of Rameshwar village can be achieved. The quality of life of villagers will be Improve, as the migration rate will decline. The village will attain development in the respect of culture, economic, public health and technology. The village will become Ideal for neighbourhood villages and will largely contribute to the Development of Nation.

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