

**Redevelopment and Up gradation of Basic Infrastructural Facility at Tithal
Village of Valsad District**Alpesh R. Patel¹, Kuldip B. Patel², Chintan R. Patel³¹U.G. Student, Civil Engineering Department, Government Engineering College, Valsad, India²Assistant Professor, Civil Engineering Department, Government Engineering College, Valsad, India³U.G. Student, Civil Engineering Department, Government Engineering College, Valsad, India

Abstract:- In many fields, but still much is needed to be done in order to become developed nation. Statistics betrays that after independence our growth rate has increased from 3% to 9%.but still we are facing some problem. The millennium development goals in india has set a target of reducing, poverty by 50% of what it was in last 20 years. While the proportion of the people living below the poverty line has been declining over the years. The rate of such decline has been quite low, except during the recent past. Nearly 80 percent of the people living below the poverty line are located in rural areas. India became independent on 15 august 1947. Though after independence achieved tremendous success problems like poverty, illiteracy, lack of basic need like water supply, sanitation and road system etc. besides; a major chunk of population living in villages, (72%) is still backward. Though the government is spending million of rupees in the name of rural development, but still it's not getting the desired results.

The development of rural development is implementing a number of programs in rural areas through the state governments for poverty reduction, employment generation, rural infrastructure habitant's development, provision of basic minimum services.

The Research goal is to find out present status and techno-economic survey of village in terms of basic and public amenities, essential commodities, other infrastructural facilities for the need of people and to prepare reports on the adequacy of the available resource with reference to the population of the village and growth of the area. With the consultation of local revenue authorities, TDO and DDO the future need of the village, keeping to mind the need of the days, future targeted population growth etc, a projected development plan of the village ready to execute is required to be prepared under this Reserch as targeted at the end.

In this Research work was carried out on Tithal village of Valsad district for the existing available infrastructure facilities and future infrastructure facilities need assessment with population growth for human being. In this a local survey of Tithal village was carried out and problem related infrastructure facilities like water supply, road network, drainage line, community hall, renewable energy resources structures and street light, etc, was find out. After that planning, designing and cost estimation of most need based eco friendly infrastructure facilities with green technology was prepared.

Key Words: Infrastructure Facility, Rural Development, Tithal Village, Government

I. INTRODUCTION

Rural area development program (RADP) is a nonprofit and nongovernmental development organization working for the poor, disadvantaged and marginalized communities in the field of socio-economic development. It was established in the year 1994 with the moto: "let us work hard and adorn our village" from a team off young and experienced professionals having multidisciplinary background. It has been conducted several development projects related water supply, health and sanitation; environment conservation, poverty alleviation, income generation, climate change, education and women empowerment.

"India lives in its villages" – Mahatma Gandhi.

Literally and from the social, economic and political perspectives, this statement is valid even today. Around 65% of the state's population is living in rural areas. People in rural areas should have the same quality of life as is enjoyed by the people living in suburban and urban areas. Further there are cascading effects of poverty, unemployment, poor and inadequate infrastructure in rural areas on urban centers causing slums and consequential social and economic tensions manifesting in economic deprivation and urban poverty. Hence rural development which is concerned with economic growth and social justice, improvement in the living standard of the rural people by providing adequate and quality social services and minimum basic needs become essential. The above goals will be achieved by provision of basic amenities and infrastructure facilities.

The importance of developing infrastructural facilities in rural areas has long been recognized as central point in promoting economic growth. In rural areas it has wide ranging impacts on individuals, households and communities both in term of income and other quality of life indicators.

There are both direct and indirect benefits from infrastructure development and it is important to consider the indirect benefits in decision-making about infrastructure projects. Education, for example, can affect income and health both of that intern affect quality of life. There are also strong social benefits from infrastructure that need to be taken into account. Economic benefits such as increased income, employment productivity gain, batter income distribution and opportunity for diversification are obvious. Social benefits such as time savings school employment levels, excess to health services, environmental improvement, skill development, capacity building, improved information and gender impacts are less transparent, but in the longer term may be as or more effective in poverty reduction because they lead to sustained improvements in quality of life independent of income sources. The present study aims to solve the problems in village ab and build an ideal village by fulfilling the following objectives: The overall objective is to enhance the living standards of the village by providing / constructing infrastructural facilities in the Tithal village. The specific objectives of the Research were as follows:

- Construction of rain water harvesting system in the village.
- Redesign of community hall in the village.
- Reconstruction and upgradation of public health centre in the village.
- Redesign of sanitation system in the village

II. STUDY AREA

The Tithal village is located in the VALSAD district. It is 4 km away from the Valsad city. The approximate area of Tithal village is 239.85.33 ha. About 77% area falls under residence and rest 23% under the forest, The current population of Tithal village is 10053. Valsad is britishers called it Bulsar. This city have a collector ate, a district court, and is a municipality in the Valsad district of the Indian state of Gujarat. Valsad is a town inhabited by Gujarati people. Gujarati is the primary language in and around the town. Valsad is located at 20.63°N 72.93°E.



Fig 1: Study area of Valsad

III. METHODS & MATERIALS

In this research, initially the survey of Tithal village was done for finding out the problems of the village. After enlisting all the problems, these were categorized into four main groups namely, problem of sanitation system in village, Old Community hall in the village, Old Public health centre and Problem of water scarcity. Then, the data related to Problem were obtained from the R & B. Department Valsad. The methodology adopted in this project has been shown below through the flowchart.

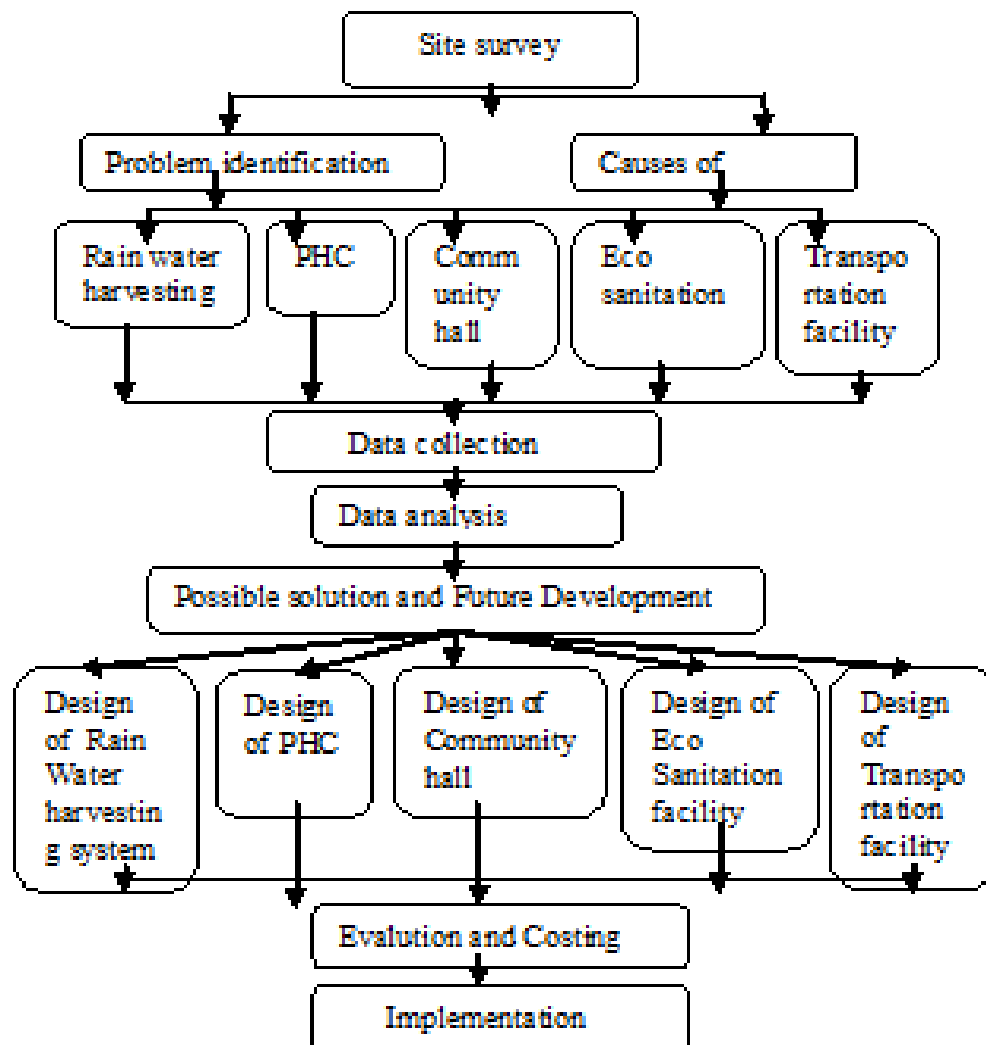


Fig 2: Flowchart of Methodology

IV. RESULTS AND DISCUSSION

Data analysis and design:

Collected data related to all the aspects were analyzed and were used for the design purposes. The Public health center, the rain water harvesting system, the eco sanitation system and community hall was designed keeping the village population by the year 2040. So the village population by the year 2040 was forecasted using incremental-increase method.

Reconstruction and up gradation of public health centre :

Based on the present village population, Reconstruction of Public health centre was done. For that plan of Public health center was redesigned. Designs of other components were also done in details. For this entire amenity, measurement sheets were prepared and after that abstract sheet were also prepared. After that total amount for the up gradation of public health centre were calculated.

Design of Public Toilet system:

Based on the present village population, Redesign of Public toilet was done. For that plan of Public toilet was taken. Designs of other components like design of beams, design of columns were also done in details. For this entire amenity, measurement sheets were prepared and after that abstract sheet were also prepared. After that total amount for the design of public toilets were calculated.

Design of Rainwater Harvesting System:

Based on the present village population, Catchment area for rainwater harvesting system were calculated. Also size of storage tank was calculated. For that Design of other components like design of underwater tank was done. Abstract sheet were also prepared. After that total amount for the design of Rain water harvesting system was calculated.

Design of Community Hall:

In tithal village community hall is available. It was constructed in 2001. The total area of community hall is 189.95 sq.mt. The capacity of Community hall is 250 person. Based on the present village population, The capacity of community hall can be increased. For this entire amenity, measurement sheets were prepared and after that abstract sheet were also prepared. After that total amount for the design and repair for community hall were calculated.

Based on the analysis, Total costs for construction (Redesign) of all amenities were found as below:

TABLE 1: COSTS FOR CONSTRUCTION (REDESIGN) OF ALL AMENITIES

Works	Cost of construction(Rs.)
Public toilet facility	477247.842
Community hall	840183
Public health center	4693000
Rain water harvesting system	663931.852

V. CONCLUSION

From all above observation and research we conclude that the village is also as important as urban areas. It is also an important part of our country and society. Hence it must also get all those facilities and importance which urban peoples are getting. It is also a right for the peoples living in village to get all the advantages of all the amenities. And also to eliminate migration from rural to urban area. For that the public utility facilities like community hall, public health center, sanitation facility, rain water harvesting system etc. should be construct in the village.

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REFERENCES

1. I. Prasada Rao*, B. Kangadurai*, P. K. Jain* and Dr. Neelam Jain* , "Information system for rural road network planning - a case study" * Scientist, Central Road Research Institute, New Delhi
2. Fishbein, R. (2001, June). "Rural Infrastructure in Africa: Policy Directions" (Africa Region Working Paper Series No. 18). Washington, DC: World Bank."
3. American Water Works Association. (1986). "Principles and Practices of Water Supply Operations."Introduction to Water Distribution .Vol 3
4. Sharma, P. R., 1977. "Caste. Social Mobility and Sanskritization: A study of Nepal's Old Legal Code". In hoilash Vol. 4 No.5 (pp. 277300)
5. Faust, R.W. , "The Hydraulic Principles of Water Supply Systems." PDH Center. Dec 2009.
6. Shah H.J., "Reinforced Concrete". Vol.2 Dec 2012.