# Vishwakarma Yojna: an approach for Development of Villages in Gujarat State

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## ABSTRACT

**The Next Two Billion People will live in cities and town; So We Need To Plan Now. Almost all future population growth in the next 40 years will be absorbed by cities of the developing world, which are unprepared for such rapid expansion. Planning needs to begin now to take advantage of the many benefits cities can offer. While cities concentrate poverty, they also provide the best means of escaping it. Cities have long been the engines of economic growth. Densely populated areas can be more environmentally sustainable than sprawling communities and allow for more efficient provision of services. The ideas, connections and activities in cities often generate the solutions to the problems they create.**

**Vishwakarma Yojna is one of the approaches to reduce urban city Pressure and lower the migration rate by developing village with a 'rural soul' but with all urban amenities that a city may have. The developmental work in villages that could undertake as per the need of the village in particular includes Physical, Social and Renewable infrastructure Facilities. It is also proposed to frame "Vishwakarma Yojna" to provide the benefit of real work experience to engineering students of Gujarat Technological University and simultaneously apply their technical knowledge in the development of infrastructure in rural development.**

***Keywords- Migration; Infrastructure Facilites; Urban Pressure; Rural Developement***

## 1. INTRODUCTION

About 70% of India's population, or 750 million, live in its 600,000 villages. More than 85% of these villages are in the plains or on the Deccan plateau. The average village has 200-250 households, and occupies an area of 5 sq. km. Most of this is farmland, and it is typical to find all the houses in one or two clusters. Villages are thus spaced 2-3 km apart, and spread out in all directions from the market towns. The market centers are typically spaced 30-40 km apart. Each such centre serves a catchment of around 250-300 villages in a radius of about 20 km. As the population and the economy grow, several large villages are continually morphing into towns and market centers. 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 people living in sub urban 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 becomes essential. The present study deals with the same.

Vishwakarma Yojna would provide "Design to Delivery" solution for development of villages in 'Rurban' areas. The developmental work in villages that could undertaken as per the need of the village in particular includes Physical infrastructure facilities (Water, Drainage, Road, Electricity, Solid waste Management, Storm Water Network, Telecommunication & Other), Social infrastructure facilities (Education, Health, Community Hall, Library, Recreation Facilities & other) and renewable energy (Rain water harvesting, Biogas plant, Solar Street lights & Other) for Sustainable development. It is proposed to frame "Vishwakarma Yojna" to provide the benefit of real work experience to engineering students and simultaneously apply their technical knowledge in the development of infrastructure in rural development. Under this scheme, the villages of "Rurban" area will be adopted by the engineering colleges under the Gujarat Technological University. The Engineering colleges would study the identified villages and make the recommendations on the application of technology to achieve integrated and comprehensive development, through project preparation and management.

### *1.1 Aim of the Project*

***"Developing village with a 'rural soul' but with all urban amenities that a city may have"***

Aim of the project is to provide urban amenities in rural areas and maintaining the rural soul. This will help in developing villages in sustainable manner, reduce migration from villages and prevent the cities from the urban pressure.

*1.2 Objectives:*

**Creation of infrastructure - connectivity, civic and social infrastructure along with provision of alternative Economy generation is the key pillars that the concept hinges on.**

- Basic physical infrastructure – Water Supply, Transport, Sewerage and Solid Waste Management should be the priority focus and be provided.
- Basic Social infrastructure – Health and Education facilities should be provided and ensure proper delivery of facilities to village dwellers.
- Promote integrated development of rural areas with provision of quality housing, better connectivity, employment opportunities and supporting physical and social infrastructure.
- Reduce migration from rural to urban areas due to lack of basic services and sufficient economic activities in rural areas.
- Internal roads within village settlement, Efficient Mass Transportation systems to improve connectivity between urban and rural areas, Public transportation facilities that need to be developed like bus stops, transport depot etc
- Identification of sanitation facilities that need improvement – sewerage and drainage line for household connection, door to door solid waste collection & dumping facilities
- Electricity connections like street lighting that is energy efficient and eco-friendly
- Refurbishing of village lakes, water tanks and wells, construction of rain water harvesting structures for sustainable Development

## 2. METHODOLOGY-IMPLEMENTATION

Total 85 villages from 24 districts of Gujarat have been identified for Vishwakarma Yojna for Phase- I. Table 1 show villages studied under Vishwakarma Yojna of Gujarat State.

**Table 1** *Villages for Vishwakarma Yojna: Phase-I*

| Sr. No. | District | Villages | Sr. No. | District | Villages | Sr. No. | District | Villages |
|---|---|---|---|---|---|---|---|---|
| **1.** | Ahmedabad | Mandal<br>Detroj<br>Ranpur | **9.** | Tapi | Uchhal<br>Valod<br>Nizar | **17.** | Junagadh | Maliya(H)<br>Mendarda<br>Bhensan |
| **2.** | Anand | Tarapur | **10.** | Dang | Ahwa | **18.** | Patan | Sami<br>Varahi |
| **3.** | Gandhinagar | Randheja | **11.** | Valsad | Kaprada | **19.** | Jamnagar | Jodiya<br>Lalpur<br>Kalyanpur |
| **4.** | Kheda | Matar<br>Virpur | **12.** | Navasari | Chikli<br>Vansada | **20.** | Bhavnagar | Umarala<br>Ghoga |
| **5.** | Bharuch | Valiya<br>Hansot<br>Jagadia<br>Vagra | **13.** | Surendranagar | Lakhtar<br>Sayla<br>Muli<br>Chuda | **21.** | Panchmahal | Gohanba<br>Jambughoda<br>Morava<br>Kadana<br>Bakor |
| **6.** | Narmada | Tilakvada<br>Sangbara<br>Dediyapada | **14.** | Amreli | Liliya<br>Kukavav<br>Khambha<br>Dhari | **22.** | Sabarkhanta | Bhiloda<br>Dhansura<br>Meghraj<br>Vijaynagar<br>Malpur |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **7.** | Vadodara | Sankheda<br>Shinor<br>Naswadi<br>Jetpur<br>kwant<br>Wagodia | **15.** | Surat | Kamrej<br>Olpad<br>Umarpada<br>Mangrol<br>Palsana<br>Mahuva | **23.** | Banaskhanta | Diyodar<br>Shihori<br>Dantiwada<br>Amirgadh<br>Vav<br>Ambaji<br>Vadgam<br>Danta |
| **8.** | Dahod | Fatehpura<br>Dhanpur<br>Garbada<br>Limkheda | **16.** | Rajkot | Kotda<br>Tankara<br>Jamkandorana<br>Padghari<br>Lodhika | **24.** | Kutchh | Nakhatrana<br>Mundra<br>Naliya<br>Dayapar |

*2.1 Approach so far*

By studying the present status and techno-economic survey of 85 villages in different districts of the state in terms of basic services, public amenities, other infrastructural facilities for the need of the people and to prepare a report on the expected socio-economic growth of the area with the consultation of TDO, DDO and Sarpanch. The project is been divided in to three parts: Techno-economic survey of villages, Development document preparation (Plan and estimate of proposed development by finding Gap analysis), detailed Project Report with development strategies and action plan. Following parameters have been studied during techno-economic survey of villages. For broader view data of Bharuch District has been analyzed and lacuna can be found by comparing with planning standards. Household data, Occupational detail, Water facilities, Drainage facilities, Sanitation availability, Storm water network, Solid waste Management facilities, Recreation facilities, Education facilities, Health Facilities, Transportation facilities, Road network, Irrigation system, Use of non conventional energy sources, Migration rate, Literacy rate and other necessary data analyzed for sustainable planning.

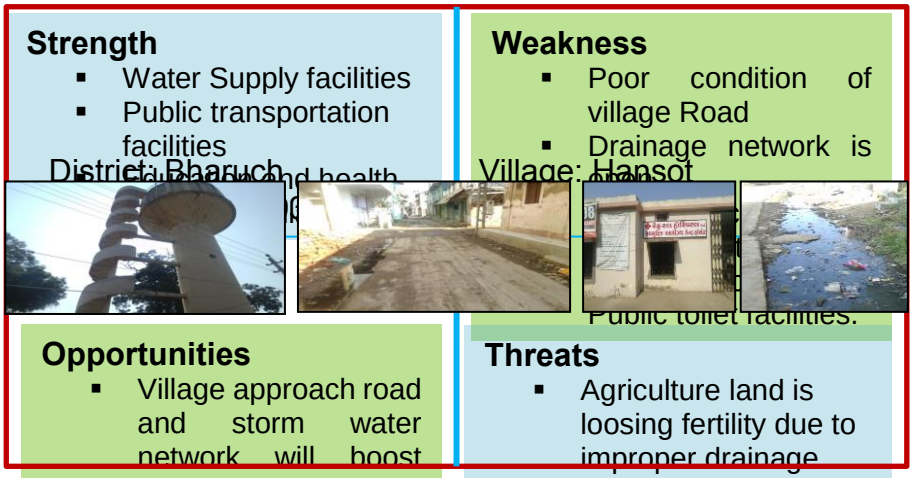


**Figure 1** *SWOT of Hansot village- Rural Services of Bharuch District*

SWOT analysis of village Hansot is presented in Figure 1. Major issue found in Hansot village is lacuna of Sanitation facilities and open Drainage network. In the same way all the villages is being analyzed and from the Gap analysis future strategies will be identified and provision of those infrastructure facilities will be provided. GAP analysis for all these villages were performed by comparing existing Situation with Rural planning Norms and UDPFI guidelines for providing infrastructure facilities as considering it as town.

*2.2 Design Philosophy*

From the gap analysis, development strategies for village development have been proposed and planning proposals for Physical infrastructure, Social Infrastructure and Renewable energy Source planning for 85 villages are suggested and

proposals are under pipeline as per all regulations and norms with consultation of TDO, DDO & Sarpanch. All the proposal are designed by keeping the following parameters in mind like built and landscape into a cohesive whole, Water charging / reuse as integral part of the design process, Major thrust into local / regional species, Low energy intensive, Low maintenance , Creation of sustainable environments, In tune with Sun / wind / water / soil, Introduce alternate energy sources, Generate an effective reuse & recharging the water basin, Introduce separate systems of distribution network for raw water and drinking water, Drainage to be treated with root zone technology and reuse the treated water.

## 3. RECOMMENDATIONS & SUGGESTIONS

- For essential water distribution; Rain Water Harvesting, Artificial Recharge, Recycled water from Sewage Treatment plant can be solution for better future.
- Rain water harvesting system is been suggested and planned for all the Government Buildings for Phase-I.
- 'low-cost sewerage and sewage treatment system with total sanitation' is been suggested for few villages having pollution problem of Land and water.
- Village approach road and internal road for better Transport conditions of villages is been recommended.
- Integrated and Sustainable Solid & Liquid Resource Management - TAPI Model is been suggested for efficient SWM services with less input, more outcome and economic generation for Villages.
- The Gujarat Government is promoting the Total Sanitation Campaign (TSC) and Community Rural Sanitation Program which is about to implemented in all studied villages for better sanitation facility.
- Education facilities from grass root level- Aaganwadi to ITI is been suggested and planned as per requirement.
- Health facilities such as Dispensaries, Child welfare & Maternity homes, PHC and CHC recommended and planned as per norms and population growth.
- Socio cultural facilities like Community hall, play grounds, Parks, Library, Garden, Eco parks, Beautification of pond(water can be stored in monsoon), Natural water sources beautification and other have been suggested and planned for some villages.

## 4. CONCLUSION

Long-range planning must take place in a public forum, with opportunities for public participation, if it is to be representative. The support of the community can also foster improved implementation opportunities. An approach that has been used successfully when planning for the future of a community involves preceding the planning process with an exercise designed to develop vision of the future for the “Vishwakarma Yojna”. By developing Rural India, the future scenario for urbanization can be change in Sustainable manner.

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- Dr. Indrajit Patel (Hon. Director)
- Mrs. Jagruti Shah (Project Coordinator)
- OSD ,GTU & Nodal Officers from GTU Institutes
- Team of Students from GTU Institutes

Core & Monitoring Committee Members

- DoTE Members
- GTU Principals
- Government Sectors
- Industries and Professionals

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