

# Self-Sustainable Village Model: Need for Emerging India

Author 1 – Sayali Vivek Desai, Student- final Year B. Arch, MIT School of Architecture, Pune

Author 2 - Prof. Shilpa Nagapurkar, MIT School of Architecture, Pune.

**Abstract**— Human society is developing with rapid momentum and achieved various successes for making its livelihood better. Around 60% of the rural population in India lives in primitive conditions. Most of them have no access to electricity, necessary education & health services. Modern technology has not touched these people even after 60 years of independence. Rural poverty causes large scale migration to cities that further leads to significant complication. This is the current scenario but the scenario has another side too. Ralegan Siddhi and Hiware Bazar, in Maharashtra, are often known as the best villages of Modern India and the best examples of “Gram Swaraj” (Self Governance). Few hundred people changed the destiny of the village by their labor, long term planning, and logistics management of natural resources. A self-sufficient village not only brings economic benefits but also ecological and social benefits. The paper explores the methodology and measures adopted to make the village self-sustainable with the initiatives of people living in the village, the case of Ralegan Siddhi and Hiware Bazar. The paper aims to give observations and guidelines to make a self-sustainable environment through a sustainable community.

**Keyword**— Poverty, Gram Swaraj, natural resources, self-sufficient, sustainable community.

## 1 INTRODUCTION

# H

Human society is developing with rapid momentum and achieved various successes for making its livelihood better.

According to a report, around 65% of the Indians live in rural areas & out of that 65% around 60% of the rural population of India lives in primitive conditions.

The quality of life for the population residing in rural areas needs to be equal to the life for sub urban & urban population.

According to a report by *students of BHARATI VIDYAPEETH COLLEGE OF ENGINEERING, Navi Mumbai*, [1]. Rural societies are unenlightened & ignorant this is because of several problems that haunt rural societies. Lagging development process in these areas leads to a problem that is more or less unsolved from a longer period & when the rate of development accelerated that brought up new issues. The rural areas in India faces major problem related to agriculture, ownership of land, cottage industries, population, rural health and education, the status of women, child marriages, the problem of traditionalism and conservatism, unemployment, nutrition in villages, electricity, water supply, transport, leadership issues, lack of awareness, weak infrastructure, caste system, etc.

*“The future of India lies in its villages”.* Said by Mahatma Gandhi, thus the rural’s need to be developed in a smarter & sustainable

way. If Better livelihood is provided in the rural area it may reduce disturbing effects of poverty, unemployment, and inadequate infrastructure on urban centers causing slums and consequential social and economic tensions. Therefore, rural development 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. Such rural development not only improves livelihood in a rural area but also may reduce the migration of rural populations in urban areas for employment and reduce pressure on urban infrastructure. (Ref- IPASJ International Journal of Information Technology (IJIT)).

## 2. What are smart villages?

### 2.1 ABBREVIATION OF SMART.

#### S - Social, Skilled and Simple.

Zero Tolerance for Caste and Creed or better no caste & creed and no discrimination on Gender and Religion everyone is Literate and skilled Simple living and high thinking.

#### M - Moral, Methodical and Modern.

Moral values of Gandhi, Swami Vivekananda etc. Methodical using Total Literacy and latest techniques Modern like cities.

**A- Aware, Adaptive and Adjusting** Highest level of awareness on global social & economic issues. Adaptive and adjusting to fast changing environments.

**R - Responsive and Ready** Responsive to collective wisdom.

Co-operative movement & larger social issues Ready to generate own resources for self-sufficiency and self-reliance.

**T- Techno-Savvy and Transparent.**

Techno savvy for IT and Mobile usage Transparent in harmonic relations and delivery of services.

(REF- smart village & socio economic development of nation by IJIRAS Journal Division).

The above mentioned qualities make a village smart & self-sufficient.

## 2.2 TOWARDS DEVELOPMENT OF SMART VILLAGES.

Presently, rural development mainly focuses on poverty alleviation, better livelihood opportunities, provision of basic amenities and infrastructure facilities through innovative programs of self-employment. The government today has about eighteen schemes including the likes of the National Rural Livelihood Mission, Integrated Rural Development Program, and Mahatma Gandhi National Rural Employment Guarantee Act all of which aim to generate means of livelihood, eradicate poverty and provide jobs with minimum guaranteed wages. However, factors like fund mismanagement, unequal budget allocation among states, lack of awareness about the schemes, and administrative negligence have hindered the successful implementation of these schemes. (Ref- making India's villages self-sufficient. Suma Mani).

The main goal of the model village scheme by parliament is for each Member of Parliament & minister to adopt a village according to SAGY 2019 guidelines. (SAGY is an integrated village development plan, encompassing personal, human, social, and economic dimensions).

## 3 CASE STUDY OF RALEGAN SIDDHI & HIWARE BAZAR

### 3.1 case1 - Ralegan siddhi

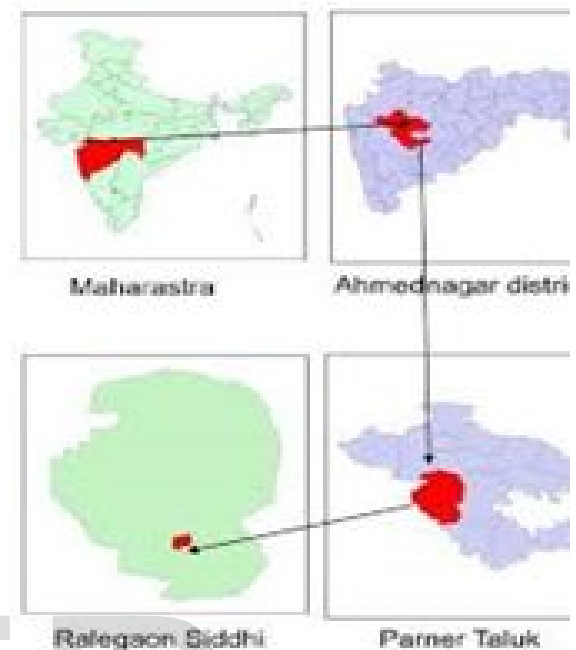


FIG-1 Location map of ralegan siddhi.

### 3.2 LEADER – sh. Anna hazare.



FIG 2- Image of anna hazare.

**3.3 PEOPLE WHO SUPPORTED** - dr. antia, Jamshedji Tata Trust, the Ralegan branch of Maharashtra Bank, Ahmednagar District Co-operative Bank, Soil Conservation Department, Social Forestry Department and other departments of Pamer Taluka Panchayat Samiti and Shri Ashok Bedarkar of the Rural Welfare Board of the Dorabji Tata Trust, Padmashri Anil Lakhina, former collector of

Ralegan

### 3.4 PROBLEM IN RALEGAN SIDDHI (1975)

- Drought prone area.
- Goondaism and vandalism.
- Recurring droughts and degraded agriculture.
- Alcoholism.
- Women in Ralegan used to get beaten by their alcoholic husbands for trivial reasons.
- Bad influence on youth.
- No young woman could dare to step out on the village streets after sunset.
- Except for the 35-40 families who were engaged in the business of illicit liquor, most other families were living in a state of absolute poverty.
- Persistent drought conditions and alcoholism had driven most of the people into heavy debts.
- Poor agricultural production and pressure by private money lenders to repay their debts had forced many people to migrate to other places in search of work.
- There was a shortage of water in the village, minimum water requirements were fulfilled by one or two wells.
- Insufficient food.
- Poor health
- Poor infrastructure.
- School education was totally neglected by the people of Ralegan. Till 1965 there was only one classroom for a primary school. In 1965 one more classroom was added and the school was later extended up to the 7th standard. Very few boys went to Shirur or Pamer to pursue their studies beyond 7th standard.
- Only one state transport bus for going to Shirur or Pamer schools. Thus transport also became an inhibiting factor for students to pursue their studies, in addition to the family and social life in the village.
- The social life of the village was also plagued by the practice of untouchability and caste discrimination.
- No separate well for the harijans, and the upper castes would not allow the harijans to draw water directly from the common well.
- In 1973, seventeen harijan families came together and took a loan of Rs. 22,500/- from the Ahmednagar District Co-operative Bank for digging a common well to irrigate their fields. The well was dug but it yielded insufficient water. Distribution of water and repayment of loans could not be managed properly and as a result these households sank deeper into debt; the bank threatened to recover the dues by auctioning their lands.
- There was no co-operative spirit in the village and no community feeling. The village Panchayat leadership had no role except to appropriate every Government scheme for personal benefit.

- Goats were offered to the deity and sacrificed at the Temple. This was followed by feasts where mutton and liquor were served. Fights over petty reasons were very common on such occasions.

### 3.5 DEVELOPMENT IN RALEGAN SIDDHI

- In 1972, when severe drought struck most parts of Maharashtra, various Tata Trusts and Tata Companies formed 'Tata. Relief Committee'. This Program was supported by food grains from the Catholic Relief Society. After the drought, the Rural Welfare Board of Dorabji Tata Trust continued with various programs like provision of medical relief and deepening of wells in addition to construction of check-dams for water conservation.
- The Gandhian dictum is that change should begin at the individual Level. If the individuals change, the village will change; and if the villages are changed, the country will be changed. This was clearly observed in the case of development of Ralegan siddhi.
- When Anna Hazare started working with Ralegan Siddhi, he did not have any model before him. The entire course of development in Ralegan was charted out by the people themselves. Local ingenuity, people's grasp and understanding about the roots-of the problems, their openness in accepting ideas from all sources, Anna's honesty and hard taskmaster attitude and above all, the collective response in taking up and implementing various schemes by the people, brought about the overall transformation.
- Stress on personal morality, abstaining. From alcohol, cigarettes and from non-vegetarian foods are essential components of a personal code of conduct imposed in Ralegan. The concept of personal morality here has been drawn chiefly from Hindu religion. It is a temple where oaths for giving up drinking were taken. It is a temple where all the disputes are settled because people believe that no one will tell a lie sitting in the temple.
- In Ralegan, however, personal morality and social morality have been beautifully inter-linked for laying the foundation of a new social order.
- The economic development programs, socialization of costs and socialization of surpluses are two outstanding features. Planting of trees or deepening of wells, Shramadaan is always an important component.
- The Shramadaan phenomenon achieves two purposes. One that it socializes the cost of the project and second, people develop a sense of belonging to the project because of their contribution in creating it and therefore they maintain it well. Shramadaan reduces initial costs and (therefore) also the burden of bank loans to be repaid.
- The principle followed is that for distribution of benefit

the village comes first and then the individual. Therefore almost all the projects implemented in the village are group benefit projects.

- Special attention has been paid to the development of the deprived sections of the society, so that the inequality gap is recommended.
- After the drought of 1972 the village also undertook watershed development under leadership of Anna Hazare to deal with drought & save the rainwater for irrigation.
- The role of leadership in Ralegan's success should not be understated.

(Ref- Ralegan siddhi model for village development by- dr. Ramesh Awasthi and Dashrath K. Panrnanand)

### 3.6 LEARNING'S FROM RALEGAN SIDDHI.

Public participation, self-improvisation and an efficient leader can change the image of a drowning village.

## 4. CASE 2 - HIWARE BAZAR



FIG 3- Location for hiware bazar

### 4.1 LEADER- Popatrao pawar.



FIG 4- Image of popat rao pawar

### 4.2 PROBLEMS IN HIWARE BAZAR.

- Hiware bazar represents the semi-arid village. It has run out of most of its natural assets.
- Deforestation.
- Draught & no conservation of water.
- Unproductive land.

- Ruined traditional water storage systems.
- In 1989- 1990 only 12% land was cultivable.
- Social problems such as alcohol addiction & gambling.

### 4.3 DEVELOPMENT PROCESS IN HIWARE BAZAR

- Watershed development inspired by Ralegan siddhi.
- The village prepared a five years plan and integrated model for water conservation.
- The village applied (AGY) to Adarsh Gaon Yojana, a state government scheme. The AGY was based on five principles: 1) ban on liquor, 2) cutting trees; 3) free grazing, 4) family planning, 5) Shramadaan, contribution for village development.
- Implementation of EGS (Employment Guarantee Scheme.) specifically targeting ecological regeneration. The funds for regeneration plans in Hiware bazar were received from the EGS Scheme.
- Application of AGY & EGS increased the catchment of water & turned the village into an ideal model. Implementation of watershed increased no. of wells for irrigation purpose, increased grass production, increased milk production, reduction in rate of below poverty line families.

### 4.4 LEARNINGS FROM HIWARE BAZAR

A partnership between the government and the village is apparent; it shows that a strong village community can make best use of available resources with a vision, institutional setup and efficient management.

(Ref- Hiware Bazar- a village of millionaires, Maharashtra, India. By- Supriya Singh.)

## 5 MAJOR ISSUES & RECOMMENDATION

**5.1 Poverty-** is very common issue in Indian rural. Various factors are responsible for poverty in rural areas. Rural population is mostly based on agriculture for livelihood and which in turn is highly dependent on rainfall. Inadequacy of rainfall can lead to low or in some cases zero cultivation of crops. Another factor is caste system, less facilities and opportunities for the lower castes.

**5.2 ELECTRICITY-** even after 75 years of independence, 63% of all rural households do not have electricity & use kerosene for lighting. Even for those electrified rural areas there is a tremendous shortage of power supply. Because of shortage in power supply industrial growth and general life is severely affected.

**5.3 WATER-**only about one third of rural households in India

are reached through pipe lines. The remaining two third of rural households are still living behind. Access to safe water varies from state to state. Water is such a basic need for survival and yet neglected in rural areas.

**5.4 CASTE SYSTEM-**it is a large part of Indian society and still remains. The system was created to promote harmonious working of societies. But later the balance of the harmonious system was interrupted by the invaders who took the opportunity to divide us. In many rural areas the lower caste population suffers bullying from the higher caste population.

**5.5 EDUCATION-** education leads to betterment of community and nation at large. Most common problems that hinders the growth of education in rural areas are as follows; lack of proper transportation , poor connectivity from one place to another, population belonging to remote rural areas have lesser incomes, which at times is too less to sustain a family of maybe four or five. Hence children from these families are most likely not enrolled in school, lack of proper infrastructure at these rural schools is also a major concern.

**5.6 TRANSPORT-** a major concern to connect the rural to urban & suburban areas improper roads, connecting bridges over river crossings, kaccha road, corruption in constructing proper roads, lesser transport facilities.

**5.6 AGRICULTURE-** Agriculture is the backbone of Indian economy, and contributes to the overall economy of the country. Problems faced by the agriculture industry are ; fragmented land holding, irrigation problems, seed problems, sustainability problems, overall dependence on traditional crops like rice & wheat, lack of market understanding.

**5.7 CHILD LABOR-** children's are exploited and are made to work in hazardous places like crackers factories, construction sites, hotels etc., they are mal treated. This issue occurs due to lack of education to parents of the children's & also financial capacity.

## **5.8 OBJECTIVES TO MAKE A VILLAGE SMART, SELF-SUFFICIENT & SUSTAINABLE -**

- To provide global means to local needs
- To use the potential of IT to maximize the benefits for the rural community
- Analysis of the villages on various socio-economic parameters at a micro as well as macro level;
- Improving the literacy rate of the villages by reducing the dropout rate;
- Maximizing the Employment Potential by providing the profiles of rural youth to the potential employers in India and abroad;

- Improving the economic conditions of the Semi-skilled and Unskilled labor by publishing their availability status on the Internet;
- Providing updated information and databanks to the Government for better analysis and individual profiling;
- Disseminating the information about various Agro-based Schemes and connectivity to the initiatives like AGRISNET, AGMARK-NET etc.;
- Web-based Career Counseling for the rural community by providing information on various courses;
- Providing databases on demand to the manufacturing organizations dealing in Agro-based products and implements like Tractors, Manures, and Fertilizers etc.
- To set up a Global Rural Development Grid (GRDG) by sharing information, ideas and solutions.

*(REF- smart village & socio economic development of nation by IJIRIS Journal Division).*

## **6 CONCLUSION**

Sustainability is the need of the time & smart self- sufficient villages are the future of India. The rural areas are dealt with many major issues but with help of local communities, government support & individual involvement in sincere development of rural will surely enhance the current situations in the rural areas. Making productive use of available resources is key to success of development.

## **7 ACKNOWLEDGEMENT**

I truly thank my guide ar. prof shilpa nagapurkar ma'am for giving me this opportunity & for her immense guidance & support throughout this research. I also thank the organizers of the national conference of sustainability in architecture, planning & technology-2020. for giving this opportunity.

## **8 REFERENCES**

1. <https://www.slideshare.net/shraddhamane4/rural-is-sues-and-development#:~:text=INTRODUCTION%20he%20Rural%20Society%20of%20India%20is%20very%20much%20backward.&text=For%20India's%20econo my%20to%20be,%2C%20hospitals%2C%20sanitation%2C%20etc.>
2. <http://statisticstimes.com/demographics/country/in dia-population.php>
3. <https://researchmatters.in/news/making-india%E2%80%99s-villages-self-sufficient>
4. <https://www.dailyexcelsior.com/need-smart-villages/#:~:text=The%20smart%20village%20concept%20is,gr owth%20model%20which%20is%20inclusive.&text=A %20smart%20village%20will%20not,support%20to%20 sustainable%20agricultural%20practices.>
5. <https://www.slideshare.net/gauravhtandon1/smart-v>

illages

6. [https://www.academia.edu/30801533/SMART\\_VILLAGES\\_and\\_SOCIO\\_ECONOMIC\\_DEVELOPMENT\\_OF\\_THE\\_NATION?auto=download&email\\_work\\_card=download-paper](https://www.academia.edu/30801533/SMART_VILLAGES_and_SOCIO_ECONOMIC_DEVELOPMENT_OF_THE_NATION?auto=download&email_work_card=download-paper)
7. <https://www.hydratelife.org/the-story-of-ralegan-siddhi-bringing-water-back-to-life/>
8. <http://www.fao.org/3/X5669E/x5669e06.htm>
9. <https://sustainabledevelopment.un.org/topics/ruraldevelopment/decisions>
10. [https://www.researchgate.net/publication/303184951\\_SUSTAINABLE\\_RURAL\\_DEVELOPMENT-INITIATIVES\\_TAKEN\\_BY\\_GOV'T\\_OF\\_INDIA#:~:text=Several%20poverty%20alleviation%20programmes%20have,%2C%20PMRY%2C%20JPRGY%2C%20etc.](https://www.researchgate.net/publication/303184951_SUSTAINABLE_RURAL_DEVELOPMENT-INITIATIVES_TAKEN_BY_GOV'T_OF_INDIA#:~:text=Several%20poverty%20alleviation%20programmes%20have,%2C%20PMRY%2C%20JPRGY%2C%20etc.)
11. [https://www.academia.edu/28876876/A\\_Model\\_for\\_Village\\_Development\\_Ralegan\\_Siddhi](https://www.academia.edu/28876876/A_Model_for_Village_Development_Ralegan_Siddhi)
12. [https://www.google.com/search?q=ralegan+siddhi+map&rlz=1C1CHNY\\_enIN907IN907&sxsrf=ALeKk024eH\\_7ZEY5U5xqpXV8MPhg2dmGw:1597655717655&source=lnms&tbm=isch&sa=X&ved=2ahUKEwinlZis86HrAhWEbysKHYcXAVQQ\\_AUoA3oECA0QBQ&biw=1366&bih=657#imgsrc=i1cmXmAjFUvZYM&imgdii=ZJTfLtkSO4RYLM](https://www.google.com/search?q=ralegan+siddhi+map&rlz=1C1CHNY_enIN907IN907&sxsrf=ALeKk024eH_7ZEY5U5xqpXV8MPhg2dmGw:1597655717655&source=lnms&tbm=isch&sa=X&ved=2ahUKEwinlZis86HrAhWEbysKHYcXAVQQ_AUoA3oECA0QBQ&biw=1366&bih=657#imgsrc=i1cmXmAjFUvZYM&imgdii=ZJTfLtkSO4RYLM)
13. [https://www.google.com/search?q=hiware+bazar+map&rlz=1C1CHNY\\_enIN907IN907&sxsrf=ALeKk00cAJhEdJpc4flpAdrgOcXvd-bbCg:1597664164790&source=lnms&tbm=isch&sa=X&ved=2ahUKEwj2z4zokqLrAhV173MBHYAPCY0Q\\_AUoAnoECA4QBA&biw=1366&bih=608#imgsrc=Sdl6iWa1JbtXMX](https://www.google.com/search?q=hiware+bazar+map&rlz=1C1CHNY_enIN907IN907&sxsrf=ALeKk00cAJhEdJpc4flpAdrgOcXvd-bbCg:1597664164790&source=lnms&tbm=isch&sa=X&ved=2ahUKEwj2z4zokqLrAhV173MBHYAPCY0Q_AUoAnoECA4QBA&biw=1366&bih=608#imgsrc=Sdl6iWa1JbtXMX)
14. [https://www.google.com/search?q=aana+hazare+pic&rlz=1C1CHNY\\_enIN907IN907&sxsrf=ALeKk03E-So19Em\\_lEWRhpXJryCq2AFvQw:1597687682634&source=lnms&tbm=isch&sa=X&ved=2ahUKEwjD66O26qLrAhXDWisKHZ7xDUUQ\\_AUoAnoECAwQBA&biw=1366&bih=608#imgsrc=QURnQjUwa4V5sM](https://www.google.com/search?q=aana+hazare+pic&rlz=1C1CHNY_enIN907IN907&sxsrf=ALeKk03E-So19Em_lEWRhpXJryCq2AFvQw:1597687682634&source=lnms&tbm=isch&sa=X&ved=2ahUKEwjD66O26qLrAhXDWisKHZ7xDUUQ_AUoAnoECAwQBA&biw=1366&bih=608#imgsrc=QURnQjUwa4V5sM)
15. [https://www.google.com/search?q=popatrao+pawar&tbm=isch&ved=2ahUKEwjklS36qLrAhV75XMBHR9tDQAQ2-cCegQIABAA&oq=POPAT+RAO+&gs\\_lcp=CgNpbWcQARgAMgYIABAKEBg6BwgjEOoCECc6BAgjECc6BQgAELEDOggIABCxAxCDAToECAAQQzoHCAAQsQMqqzoCCAA6BAgAEB46BggAEAUQHjoGCAAQCBAeUIPjDVjZlA5ggqIOaAFwAHgEgAHDAYgBmhGSAQQwLjE2mAEAoAEBqgELZ3dzLXdpei1pbWewAQRAAQE&sclient=img&ei=hcc6X6TAD\\_vKz7sPn9o1&bih=608&biw=1366&rlz=1C1CHNY\\_enIN907IN907#imgsrc=2tkVZLzdKeJbgM](https://www.google.com/search?q=popatrao+pawar&tbm=isch&ved=2ahUKEwjklS36qLrAhV75XMBHR9tDQAQ2-cCegQIABAA&oq=POPAT+RAO+&gs_lcp=CgNpbWcQARgAMgYIABAKEBg6BwgjEOoCECc6BAgjECc6BQgAELEDOggIABCxAxCDAToECAAQQzoHCAAQsQMqqzoCCAA6BAgAEB46BggAEAUQHjoGCAAQCBAeUIPjDVjZlA5ggqIOaAFwAHgEgAHDAYgBmhGSAQQwLjE2mAEAoAEBqgELZ3dzLXdpei1pbWewAQRAAQE&sclient=img&ei=hcc6X6TAD_vKz7sPn9o1&bih=608&biw=1366&rlz=1C1CHNY_enIN907IN907#imgsrc=2tkVZLzdKeJbgM)