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## Review on Development of Smart Villages

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### ABSTRACT

Over recent decades, rural and urban communities are facing numerous social and economic changes and challenges. Some of those challenges have been increasingly addressed through the lenses of technological developments and digitalization. In this paper, we have made a review of already existing practices while focusing on the existing implementations of the Smart Village concept and the importance of digital transformation for rural areas. We give special attention to EU policies that we are using as an already existing framework for understanding our own forthcoming examples. We have shown the parallels between the findings and insights from different regions and made an evaluation of presented practices. Our main argument stems from our own previous experiences and experiences of other research approaches, and is grounded on the argument that rural areas are not uniform, and that smart rural development has to be applied in combination with place-based approach.

**Keywords:** Smart Village, Awareness program, Infrastructure Development.

### I. INTRODUCTION

In today's world, one of the most concerning issues is protection of human civilization from the threatening effect of manmade wastes. Indeed, wastes are generally unwanted after primary use. Among different waste materials, solid wastes are generated in our society through various humans' activities. In its consequence population and their education level, monthly income is also a contributing factor in waste generation. The waste management is easy for limited population however, in India due to rapid increase in population together with modern urbanization the lifestyle has also been simultaneously changed.

Consequently, solid waste management becomes a major concern in the twenty-first century.

In India, there are several Villages out of which many are backward which requires designing and building as Smart Village. Now a days, people migrate from one place to another for different facilities such as education, employments etc. So, modern village should be self-dependent in providing services, employment, education facilities, infrastructure, solid waste management, clean water, should provide accommodation for sustainable family relationship without disturbing the lifestyle. And participatory democracy which helps to support further improvement of the villages.

The review examined the conceptual intersection between the main features of primary health care, and sustainable development goals. Survey respondents mentioned improved health in their populations as one of the key achievements in their implementation of primary health care, for example, progress in maternal health and child care, a decrease in communicable diseases, a high success rate in immunization coverage and control of vaccine-preventable diseases, and improved life expectancy. A smaller number of respondents cited the reduction in non-communicable disease risk factors such as tobacco and alcohol use. And the initiatives such as public health insurance schemes and other financing mechanisms addressed socioeconomic disparities and made health care more accessible.

## II. LITERATURE REVIEW

**1. Kochare Akshay, Kendre Madhav, Anarse Prabhu, Bhosale Ajit, Prof. A.Tripathi (05 May- 2019)** this project report deals with study and development of village as a smart village. They said smart village as bundle of services of which are delivered to its residence and businesses in an effective and efficient manner. "Smart Village" is the modern energy access acts as a catalyst for development in education, health, security, productive enterprise, environment that in turns support further improvement in energy access. In this report they focused on improved resource use efficiency, local self-governance, access to assure basic amenities and responsible individual and community behavior to build happy society by making smart village with taking smart decisions using smart technologies and services.

**2. Swapnil B. Kale, Kiran R. Varpe, Rohit S. Chothave, Khushal S, Borse, Prof. P.H.Khairnar (3 merch-2017)** they had provided E-Learning facilities to village school. The child attracted towards the digital media. Hence the increasing the interest of child by using E-

class. To aware the villagers towards consumption of electricity. Use solar energy, wind energy as source of electricity. To aware villagers to use CFL bulbs, LED lights, etc. Smart health services are needed to improve the quality of life in village. The village hospitals needs new devices. Provide X-ray machine and other machines which are very important for complete checkup purposes. To provide well under ground drainage system, Waste water treatment plant, Rain water harvesting to new building, soak pit in groups. Use of water treatment plant for purified water. Agriculture is lifeline of villagers and our nation. To provide the new technology for increase yield of crops by using compost fertilizer, reduce or neglecting chemical fertilizers. To use latest instruments to speedup agricultural work.

**3. Bhagya Niranjanbhai Patel<sup>1</sup>, Prof. Rinni Shah (12 Dec-2017)** Smart villages will serve as complementary engines of economic growth to smart cities producing goods and services for local rural markets as well as high value added agricultural and rural industry products for both national and international markets. And they will act as stewards for the environment as well as, in some cases, functioning as ecotourism hubs. This project provide conversion of Normal village to smart village by providing or improving facilities solid waste management, sanitation, Swachta to Development of village and Increase living of standers and employment. Trying to providing or improving this solid waste management, sanitation facilities, cleanness implement facility between Village development & upliment. Above facilities is to be improved or provided through government scheme and fund and under campaign for smart village.

**4.Rutuja Somwanshi, Utkarsh Shindepatil, Deepali Tule, Archana Mankar, Namdev Ingle (6 june-2016)** had established a waste collection, transport and treatment within the panchayat. They collected bio-

degradable as well non-biodegradable waste from each house itself by making two dustbin green and red dustbin. They have also uses Reverse Osmosis (RO) instead of spending money on medical facilities use clean drinking water. RO is a water purification technology that uses semipermeable membrane to remove ions, molecules and larger particles from drinking water. They have also installed BIOGAS PLANT which is produced from raw materials such as agricultural waste, manure, municipal waste, plant material, sewage green waste or food waste. The cow dung is brought from cowsheds from nearby areas, where owners want to dispose it anyway. It is a cheaper technology, helps to reduce the greenhouse gases and also helps to reduce waste generated.

**5. Dr. Pritesh Y Shukla (13 feb-2016)** he has suggested that smart villages are the foundation for growing India. Smart villages are the need of the hour as development is needed for both rural and urban areas. The technological support already exist for urban areas and there is hard pressure on urban landscape due to migration of rural people for livelihood. Smart villages will not only reduce migration but also irrigate the population flow from urban to rural areas as well. And at most the overall development of the country can be possible with the development of the villages only.

**6. Mrs. B. Josephine Sandhya Rani (3 December-2016)** the primary aim was to harness the benefits of information technology forth rural folks. The initiative is a community effort to mobilize the collective strengths of people from various streams and integrate it with information technology to provide benefits to the rural community. Gandhian Concept of Ideal Village-SWARAJ. Gandhi Ji said, my idea of Village Swaraj is that it is a complete republic, independent of its neighbor's for its own vital wants, and yet interdependent for many others in which

dependence is a necessity. Reconstruction of rural India on the basis of the concept of ideal village was Gandhian dream because it embodies great environmental ambiance needed for healthy human living. Theoretically, Gandhian approach to rural development maybe labelled as 'idealist'. It attaches supreme importance to moral values and gives primacy to moral values over material conditions.

**7. Dr. Milind Kulkarni (may-2015)** in villages the problem of solid waste is not as acute as in urban areas due to less generation. However it will be a good move to inculcate the habit of segregation of wet and dry waste. Wet waste can be treated in biogas plants where dry waste can be recycled. He has also studied about Indoor air pollution that women and infants in villages suffer from high level of exposure to air pollutants generated due to use of low grade cooking fuels. The exposure results in respiratory diseases and adversely affects the health. Thus, ventilation in houses can play a major role in reduction of concentration of air pollutants indoors. A simple innovation such as provision of vent helps a lot.

**8. Agarwal Sunny Kumar P., Upadhyaya Deep S. (11 April- 2014)** They did a primary surveys such as household surveys, questionnaire survey, to know the real status of the infrastructure services and quality of life they are living in the particular area and the major problems and issues they are facing, questionnaire survey of the real estate developers to know the scope and trend and scope of the development and status of the market and demand of that place. The study of the existing situation of infrastructure services and other physical feature will be included in it.

Meeting and Interviews of the key persons, expertise and Government regarding the existing situation, limitations and constraints, also possibilities of

different Government approaches, Acts and schemes. From the above study situation analysis, study of the existing institutional framework, primary and secondary data analysis and mapping the best appropriate strategy to be formulated with possible recommendation, implementation strategy and allocating the roles and responsibilities of the different local bodies.

**TABLE 1**

<b>Sr. No.</b>	<b>Title of Paper</b>	<b>Name of Author</b>	<b>Year of Publication</b>	<b>Focused Area</b>
1.	Case study of smart and local village	Kochare Akshay, Kendre Madhav, Anarse Prabhu, Bhoale Ajit, Prof. A.Tripath	2019	Focused on improved resource use efficiency, local self-governance, access to assure basic amenities
2.	The Development of Village	Swapnil B. Kale, Kiran R. Varpe, Rohit S. Chothave, Khushal S. Borse, Prof. P.H.Khairnar	2017	E-Learning facilities to village school
3.	Smart village a case study of kola Vada village	Bhagya Niranjambhal Patel, Prof. Rinni Shah	2017	Focused on providing or improving facilities solid waste management, sanitation, Swachta to Development of village and Increase living of standers and employment.
4.	Study and development of village as a smart village	Rutuja somwanshi, Utkarsha Shindepatil, Deepali Tule, Archana Mankar, Namdev Ingle	2016	To establish a waste collection, transport and treatment within the panchayat.
5.	The Indian smart village: Foundation for growing India	Dr. Pritesh Y Shukla	2016	Focused on government programs such as Major programs in Agriculture, to improved employment, to improve nutrition security
6.	Smart Village – The Real Future of India	Mrs. B. Josephine Sandhya Rani	2016	The primary aim was to harness the benefits of information technology

				forth rural folks
7.	Clean and Smart Village	Dr. Milind Kulkarni	2015	Sanitation, solid waste management, indoor air pollution
8.	Infrastructure Development of Village	Agarwal Sunny Kumar P. Upadhuaya Deep S.	2014	Situation analysis, study of the existing institutional framework, primary and secondary data analysis and mapping

### III. CONCLUSION

- Development of Smart Villages is needed for both rural and urban areas for better livelihood and technology. The technological support already exist at the urban side and there is high pressure on urban side due to migration of rural people for livelihood.
- Smart Village will not only reduce this Migration but also irrigate the population from urban to rural areas as well.
- Education, classes for vocation, awareness programs etc. to villages can well established the thinking of the youth. An Educated rural youth will be a powerful asset to the country and even, if he/she shifts to a urban side can prove to be a well channelize youth rather than any burden
- At most the overall development of the country can be possible with the development of villages as “The future of India lies in its villages” Mahatma Gandhi.

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