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BASIC FACILITIES REQUIRED FOR REHABILITED VILLAGE AMBEGHAR-ZADOLI

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ABSTRACT

Smart village is the concept adopted by national, state and local governments of India, as an initiative focused on holistic rural development, derived from Mahatma Gandhi's vision of adarsh gram. In Smart village access to sustainable energy services acts as a catalyst for development- enabling the provision of good education and healthcare, access to clean water, sanitation, productive enterprises to boost income and enhanced security. In this report we focus on access to assure basic facilities. We making smart village by using smart techniques and services.

***Key word*: -Natural source, smart village, waste management,**

I.INTRODUCTION

The village communities are little republics, having nearly everything that they want within themselves, and almost independent of any foreign relations. In the development process, there will be many changes in the demand and supply of various needs, as rural population will pass through the process of change. At present, one of the major challenges in India is growing population and rapid urbanization. This urban growth to certain extent is unavoidable, as the economic pursuits and aspirations of the population do change and evolve. This needs to be managed through a balance between rural and urban quality of life.

There is an immense interest in the development of Smart Cities in recent times. But as we perceive, in the Indian context, villages are the heart of the nation. Hence, for the development to percolate to the grass root level, focus must be devoted to the progress of villages. In spite of a large scale migration of people from rural to urban areas, which is increasing the burden and posing a huge threat to the cities, still there are some villages which are thickly populated. The main aim is to smarten the villages using advanced wireless, IT and other latest technologies and also to encourage entrepreneurial attitude among its residents to achieve self-sustainability.

II.LITERATURE REVIEW

2.1"Digitalization of India: Smart Villages towards Smart India"(December 2016) Dr. K.Priyadarsini,Prof. Dr.N.Vijayaratnam,

The health, educational and civil facilities are also either absent or not up to the mark. Making such villages as 'Smart Villages' is surely a noble program announced by Government". But no one in villages has seen what exactly, in the Indian conditions, smart village means. The objective of this paper is to discuss about components of Digital India and its nine pillars, adaption of 'look at Villages' policy and the smart villages driving towards smart India and the prerequisites of a smart villages cluster.

2.2"Energy and agriculture for smart villages in India"(September 2016)TayyabSafdar and Brian Heap

The concept of the "smart village", as developed by the Smart Villages Initiative, is that modern energy access acts as a catalyst for development— education, health, food security, productive enterprise, environment, and participatory democracy which in turn supports further improvements in energy access. In the global context, energy access can provide a much needed driver for sustainable economic growth and development for a major, but neglected, sector of the world's population: the 1.1 billion people who do not have access to electricity. Most of those people are based in rural areas.

2.3 "The Indian smart village: Foundation for growing India", International Journal of Applied Research 2016; 2(3): 72-74.Pritesh Y. Shukla

Stated that smart village knows about its citizens, available resources, applicable services and schemes. It knows what it needs and when it needs. Smart village initiative focuses on improved resource-use efficiency, empowered local self-governance, access to assured basic amenities and responsible individual and community behavior to build a vibrant and happy society. The present research paper discusses about rural development in developing world for the up-liftman of livelihood of the rural masses. The driving motivation behind the concept on "Smart Village" is that the technology should acts as a means for development, enabling education and local business opportunities, improving health and welfare, enhancing democratic engagement and overall enhancement of rural village dwellers. Now its need of the strategy, planning and above all monitoring and execution of the activities using appropriate governance models. The present era is increased on Information and Communication Technology.

2.4"Smart Villages through Information Technology Need of Emerging India", IPASJ International Journal of Information Technology (IIJIT), ISSN 2321-5976.(July 2015) PinakRanade, Sunil Londhe, Asima Mishra

Suggested that society is developing with rapid momentum and achieved various successes for making its livelihood better. The civilization is witness for various changes related to its the development through different catalysts like industrial development, green revaluation, science and technology, etc. The present era is augmented on Information and Communication Technology. This technology has proved its potential in various sectors of development in urban and rural landscapes. Urban areas are seems to more inclined to accept and

adopt Information and Communication Technology due to advantages of literacy and better infrastructure as compared to rural areas.

2.5 "Clean and Smart Village", Article in International Journal for Computational Methods in Engineering Science and Mechanics. (June 2015) Milind Kulkarni

Studied Indian villages and stated that In India majority of the population still lives in villages. A lot of work needs to be done in making the villages clean. There are different aspects of clean village such as: water supply, sanitation, indoor air quality, solid waste management and renewable energy etc. All these aspects have different alternatives with the associated merits and demerits. In some aspects such as water supply, considerable work is done whereas in some areas like sanitation lot of work is required to be done. We can learn lot of lessons based on success and failure in adopting different alternatives. Keeping in touch with technology clean village projects should integrate technology and digital design, which will make the village not only clean but also smart.

III.CONCEPT

We aim to provide policymakers, donors, and development agencies concerned with rural energy access with new insights on the real barriers to energy access in villages in developing countries—technological, financial and political—and how they can be overcome. We have chosen to focus on remote off-grid villages, where local solutions (home- or institution-based systems and mini-grids) are both more realistic and cheaper than national grid extension. Our concern is to ensure that energy access results in development and the creation of "smart villages "in which many of the benefits of life in modern societies are available to rural communities.

The smart village's concept explores how recent developments in the use of renewable

Energy—solar, wind, hydro, biomass, and hybrid combinations—offer attractive and sustainable

opportunities for rural communities in India. The national grid may never reach some communities in off-grid villages for economic and geographical reasons so that these villages are often without a reliable supply of energy for lighting homes, charging mobile phones, or powering agriculture and its associated businesses. Such villages depend on kerosene for cooking, which is harmful to human health, and diesel for energy generation, which contributes to greenhouse gas emissions.

IV.NEED AND IMPORTANCE OF BASIC FACILITIES FOR VILLAGE REHABILITED VILLAGE AMBEGHAR-ZADOLI

The village communities are little republics, having nearly everything that they want within themselves, and almost independent of any foreign relations. In the development process, there will be many changes in the demand and supply of various needs, as rural population will pass through the process of change. At present, one of the major challenges in India is growing population and rapid urbanization. This urban growth to certain extent is unavoidable, as the economic pursuits and aspirations of the population do change and evolve. This needs to be managed through a balance between rural and urban quality of life

A village with basic facilities will provide long-term social, economic, and environmental welfare activity for village community which will enable and empower enhanced participation in local governance processes, promote entrepreneurship and build more resilient communities. At the same time, the village have to ensure proper sanitation facility, good education, better infrastructure, clean drinking water, health facilities, environment protection, resource use efficiency, waste management, renewable energy etc.

V.REQUIREMENTS OF SMART VILLAGE FOR REHABILITED VILLAGE AMBEGHAR-ZADOLI :

1. Improving sanitation conditions
2. Provide waste management.
3. Required rain water harvesting
4. Provide in every house Water pipe line facility.
5. Use of renewable energy sources.
6. Conservation of energy.
7. Latest and economical management.
9. Markets and fairs.

VI. ADVANTAGES

1. Provide rain water harvesting to save the water.
2. Provide good health and security.
3. Helps to reduce the storm drainage load and flooding in the cities.
4. Provide solid waste disposal which is harmful for human health and environment.
5. Prevents water wastage by arresting soil erosion and mitigates flood.
6. Maximum use of natural source.

VII. DATA OF AMBEGHAR-ZADOLI VILLAGE

1 Area: 1.59 sq.km

2 No. of houses: 83

3 Population: Men and Women = 530+413= 943

4 Water Supply systems: Boar wells (67)

5 Power Supply from Palus

6 Education Facilities: 1 School and 1 KG School

7 Income Source: Agriculture, Poultry Houses, Animal Conservation.

8 Main Crops: Soya Bean, Crop Sugarcane

9 Major Problems : Scarcity of water, undeveloped roads, No solid waste treatment, No use of natural resources.

VIII. SOLID WASTE MANAGEMENT BY VERMICOMPOSTING

In 45 days vermicomposting is done. In this E. fetidia earthworms were used. In this four substrate prepared of different composition. The prepare compositions were Soil + cow dung, Soil+ vegetable waste + fruit waste, Soil + vegetable waste + fruit waste + cow dung, soil+ paper waste+ cow dung. At periodical interval 15 days the chemical analysis is done during which TP, TK, TOC, TKN, C:N were analyzed. It is conclude that vermicomposting method is very suitable in areas where there are no facilities to process the waste i.e. villages. It provides good organic manure and income to the farmers.

8.1 Substrates Used For Vermicomposting

Following are the substrates used in vermicomposting

1. Soil + cow dung (0.5:1)
2. Soil + vegetable + fruit waste (1:1colllege waste: cow dung)
3. Soil + vegetable + fruit waste + cow dung (1:1 college waste: cow dung)
4. Soil + paper waste + cow dung (1:1 paper waste: cow dung)

8.2 Construction of a worm farm

Stage 1: Bedding

First stage in vermicomposting to create a perfect climate, a "worm bed". It is made by using coarse materials such as shredded twigs, coconut fibre, mulch or wood shavings/sawdust as a basis, varying ac-cording to what is available locally. In this all the components should have been produced organically.

Properties of the worm bed:

1. Protected from extreme fluctuations in temperature
2. Guarantee of well-balanced humidity and aeration

Stage 2: Feed

The next step is to covering of the worm bed with a layer of feed matter which consist of vegetable waste and manure.

Stage 3: Introducing the worms

To the compost heap in batches the worms are added

Stage 4: Watering the worm compost

The amount of water needed depends on the climate that is temperature, evaporation.

Stage 5: Cover the compost heap

The compost heap needs to be covered in order to protect the worm population from predators such as birds, rats, snakes, cock-roaches and ants, but also from heavy rains. Here, the most suitable materials are:

1. Banana leaves
2. Polyethylene foil
3. Wood
4. Bamboo
5. Bricks
6. Corrugated sheeting

7. Palm leaves

Stage 6: Monitoring the worm compost

Once a week the compost heap should be checked once a week.

8.3 Various worm composting methods

There are various methods of making worm compost: tray stacks, windrows, compost heaps and bins, complete recycling systems, containers and box systems. Sometimes a simple wooden chest is sufficient. Most worm composting methods are relatively simple and require little effort.

8.4 Size of the worm compost heap

Most compost heaps are 1 – 2 m wide, 30 – 50 cm high, and can be as long as desired. The compost should not be over 60 cm deep.

8.5 Location of worm compost heaps

Between rows of trees or housed in shelters the compost heaps can be distributed.

IX.SOLAR STREET LIGHT

Solar street lights provide energy from the sun to provide an energy source to conventional street lighting.

Benefits:

1. Running cost is zero..
2. In rainy weather guarantied working.
3. Up to 5 years no schedule maintenance required.
4. Environment friendly
5. By using solar panels reduce fossil fuel consumption.

Dimension

L=34.5cm, B=17cm, Wt =2.5kg, pole ht=10Ft,

Position = underground.

All India courier cost for the street light =Rs. 3000

24 streetlights are existing which are obtained from Samajkalyan and Aamdar fund

In Zadoli village we provide 22 street lights,

Total cost =10 X 3000= 30000 Rs.

Government provide 30% subsidy of total project cost.

Solar Panels:

•In most part of India supply of electricity is quite unreliable.

• In most of the cities in India due to increased scheduled and un-scheduled power cuts, interest in using electricity generated through alternate sources has also increased.

• Therefore there is need of use of renewable energy. Solar panels designed to absorb sunrays as source of energy for generating electricity. Some solar panels exceeding 19% efficiency.

• A scheme Jawaharlal Nehru national solar mission in 2010 launched by Government..As a part of this mission the government has initiated a subsidy scheme to help the individual and

organization. Initially the subsidy was 30% but in recent time it is modified to 40% on the capital cost of solar system for rural and urban areas.

• Provisions of 50 KW electricity generations for those 60 solar panels are required.

• The amount required for that Rs.19843.

X. WATERSHED MANAGEMENT

Watershed development is refers as set of measures that help retain water within a watershed.

Watershed management includes soil and water conservation, a forestation, grasslands development and protection of biomass.

• Properly organizing the hydrosphere in order to prevent major water crisis in future that means the watershed management.

• To implant the sustainable management of natural resources to improve the quality of living for the population is the main goal of Watershed Management

Important aspects of water management include:

• Hydrosphere

• Hydrological cycle

• Exchange of water

• Transportation of water and irrigation.

Techniques for water and soil conservation:

1. Earthen bunds: reduction in soil erosion: on downstream side of bund increases the ground water table of wells within 1 to2km. The submerged material that has been flown off catchment area can be used as fertilizer.

2. Continuous contour trenches: Surface water flow velocity reduces, promotes in filtration, and prevents pollutants from draining into water bodies.

3. Farm ponds: On the upper side of the farms Ponds constructed to block and store the runoff rainwater which can be used during emergencies are called farm ponds. The main objective of farm pond is to store the water from the surface runoff in the ponds and use for the irrigation purpose. The water stored in the farm ponds is generally used when irregular rains a received. Places where construction of wells are not possible in such areas, the farm ponds are constructed. The farm ponds is generally used when irregular rains a received. Places where construction of wells are not possible in such areas, the farm ponds are constructed.

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