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DIGITATION VILLAGE CHALLENGE FOR NEXT GENERATION

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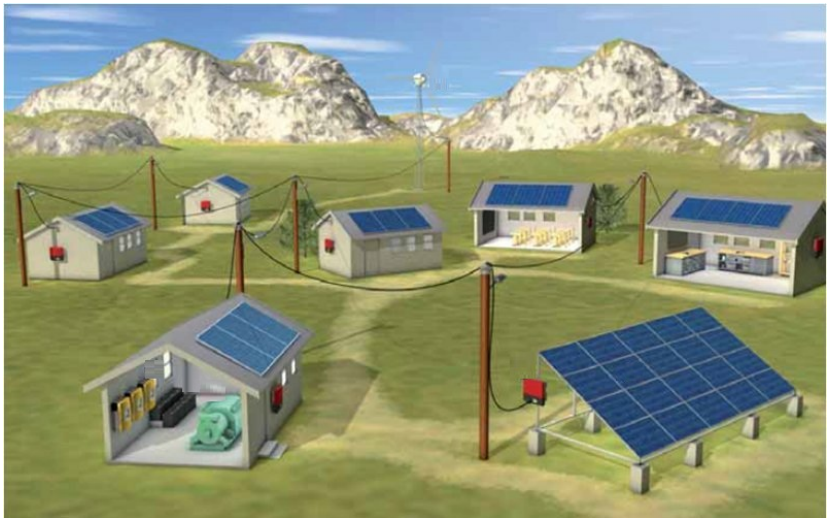
Abstract-- Human society is developing with rapid momentum and achieved various successes for making its livelihood better. The civilization is witness for various changes related to it's the development through different catalysts like industrial development, green revaluation, science and technology, 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. Due to such suitable situations of urban landscapes good amount of success of this technology is visible in the form of smart cities and better livelihood of residing human beings. The present research article discusses about rural development in developing world for the up-liftmen of livelihood of the rural masses and to take a 'look ahead' at scientific developments and technologies that might be influential over the next 10-20 years. The driving motivation behind the concept on " Smart Village " is that the technology should acts as a catalyst for development, enabling education and local business opportunities, improving health and welfare, enhancing democratic engagement and overall enhancement of rural village dwellers. The " Smart Village " concept aims to realize its goal through providing policymakers with insightful, bottom–up analyses of the challenges of village development.



INTRODUCTION

When “India lives in its villages" said Mahatma Gandhi, a great freedom fighter and visionary leader of India. A rural area is a geographic area that is located outside cities and towns, while rural areas are also known as 'village' in India. In these villages, agriculture is the chief source of livelihood along with fishing, cottage industries, pottery, etc. According to the Erstwhile Planning Commission of India, a settlement with a maximum population of 15,000 is considered as “Village”. Much of India’s rural population lives in nucleated villages, which most commonly have

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a settlement form described as shapeless agglomerate. India being a rural dominated country, the smartness concept is not even thought about the rural areas.

The government has already recognized this issue and has put serious efforts through various schemes for enhancing livelihood of rural masses. Presently, rural development mainly focuses on poverty alleviation, better livelihood opportunities, and provision of basic amenities and infrastructure facilities through innovative programmes of self-employment. Hence, 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 becomes essential. Such rural development not only improves.

TOWARDS DEVELOPMENT OF SMART VILLAGES:

1. Economic Component: This component will include local administration and economic factors. It will cover Governance models, bandwidth, mobility, cloud computing, entrepreneurship etc.
2. Environmental Component: This component will address the issues related to resources and infrastructures available at local level. It may covers cleaner technologies, public and alternative transportation, green spaces, smart growth, Climate change etc.
3. Social Component: This component may address issues related to community life, participatory democracy, social Innovation, proximity services etc.

GEOSPATIALTECHNOLOGYFORSMARTVILLAGES:

ICT is a composite word having combination of many tools and technologies. Detailed discussion on each and every tool and technology is out of scope in this paper. But, one of promising technology like Geoinformatics may be useful for villages, while transforming rural villages towards smart village. Geoinformatics technologies can play a very Prominent role in the deployment and implementation of ICT in the "Smart Village" in terms of decision support systems. Available different spatial and non-spatial layers can be combined and integrated to facilitate analysis and make the best decision [11]. Recent developments in GIS, GPS, remote sensing, web-services and location-based services and technologies can support innovative solutions for management, governance and citizen participation practices compliant with Smart Village objectives. Geo-spatial data and Geographic Information System (GIS) are essential components for building smart villages in a basic way that maps the physical world into virtual environment. GIS-based planning and support systems allow planners and village community to efficiently create and visualize alternative scenarios and determine their possible impacts on future land use patterns and associated population with employment trends. The future of India lies in converting each and every village into smart villages. The concept of smart village will provide the similar kind of facilities to the villages, so that the agrarian community will remain in villages and not migrate to urban areas. Future generations will contribute immensely in development process and enjoy the traditional agriculture activity with the use of modern technology. Following are some potential areas, where Smart Village may create measurable and significant impact:

Road Infrastructure: GIS analysis ensures all the houses in rural areas are well connected through rural road.

- *Smart water supply: There should be provision for water supply for agricultural, household use and drinking. This May facilitate effective and judicial utilization of the surface and ground water resources.*
- *Smart sanitization: Smart equipment's may be adopted in rural areas to facilitate disease free villages.*
- *Education: GIS analysis may be carried out to find suitable locations to establish state-of-the art education hubs for the villages. Virtual classroom facility may be provided to use the benefit of available experts at other locations.*
- *Disaster management (DM): Villagers are easily affected by disasters due to lack of preparedness. DM cells may be set up at the panchayat level to address all the disaster related issues. DM cell will connect to the National Disaster*
- *•Management Authority (NDMA) through the central server for monitoring the future scenarios.*

EDUCATION:

The primary aim Child Learning Centres is to support first-generation learners in slums and rural areas where access to quality education is limited. The children who attend the free evening tuitions are those who come from poverty-stricken families. Most of their parents are uneducated, and are unable to help them with school work and assignments. Smart villages aim to increase the time available for students to study and will address prevalent factors that negatively affect the ability of students to acquire the knowledge and skills necessary to achieve economic goals and improve labour productivity. These include Eliminating the need to spend time collecting traditional biomass, reducing respiratory illness caused by indoor air pollution, and ensuring that lighting is both safe and of sufficient quality.

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Among social institutions, educational systems play a critical role in reproducing social inequalities in the modern world. Latin America is no exception. Privatisation, deregulation and the expansion of for-profit fee-charging schools have increasingly eroded and weakened the region's public systems, stratifying access and jeopardising the right to education for all. As a result, and despite improvements, educational systems are still failing society, constituting a persistent source of social exclusion. Our programs provide one sound meal each day the children attend school. The meals are prepared, cooked and served to the children at the school to guarantee that they will have a chance at improving their health and wellbeing. In addition to the guaranteed nutritional meal the programs also provide a free education in English, Maths, Moral studies and basic computer skills. In addition, the whole family is monitored by the Community Support Department ensuring the entire family gets a helping hand. We have many one-off donation options to provide help, such as bikes, family necessities and housing repairs. Each school kit includes a school bag, a water bottle, a notebook, pens, pencils, and 14 stationery items. Such a school kit is much more than just a pack of essential items.; it is a powerful tool that boosts the self-confidence of children, gives them the motivation to go to school, and prevents them from dropping-out of school due to lack of resources their parents cannot afford. This, in turn, helps them to acquire an education which will assure them a better future.

DIVERSE TECHNOLOGY OPTIONS EXPAND VILLAGE ENERGY SERVICES:

With these technological cornerstones, aid organisations, governments, academia and the private sector are developing and supporting a wide range of approaches to serve the needs of the poor, including pico lighting devices – often very small 1–2 watt solar panels charging lithium-ion batteries which in turn power low-cost/high-efficiency light-emitting diode (LED) lamps, solar home systems and community-scale micro- and mini-grids. Decentralised systems are clearly not complete substitutes for a reliable grid connection, but they represent an important level of access until a reliable grid is available and feasible, and a platform from which to develop more distributed energy services. By overcoming access barriers, often through market-based structures, these systems provide entirely new ways of bringing energy services to poor and formerly un-connected people.

related to the industrial production and consumption of mineral fertilisers and chemical pesticides. Agricultural mechanisation, post-harvest drying and processing, as well as groundwater pumping, make heavy demands on energy supply. According to estimates from the Food and Agriculture Organization of the United Nations, the dependence of agriculture on fossil energy means that the global average energy requirement to produce 1 tonne of cereal is about 85 kilograms of oil equivalent; it can be as low as 20 kg per tonne in Africa through traditional methods, and as high as 116 kg per tonne in Western countries through industrialisation.

LIFE FOR WOMEN AND GIRLS VILLAGES:

Around 6 million people live in rural areas with no access to electricity. People depend on firewood and charcoal for lighting, cooking and heating, which is of poor quality, and batteries for electrical appliances, which are costly. The extension of the electricity grid will take some time to reach these communities, some of which are so dispersed and demand so little power that even mini-grids are not an economic solution. The lack of electricity means that they are extremely isolated and have little opportunity for economic improvement. The goal of give girls and women dignity, respect and independence through the creation of an electricity supply for their village homes. No working contract is signed with the women beneficiaries as the idea is for them to take ownership of the overall concept. The working relationship aims to build tolerance, trust, compassion and generosity with the women. These women will introduce simple, basic and clean electricity through the use of solar photovoltaic in remote inaccessible villages.

Health: home kerosene use, which created respiratory and eye problems, especially for women and girls involved in household chores, has been reduced. Health clinics have also received solar lighting, improving health care; women with babies are particular beneficiaries as they are regular visitors to these clinics.

Education: girls can now study at night in a safe environment and some schools have received solar electrification facilities. In Environment: over the lifetime of each 50-watt panel that replaces kerosene lighting, between 3 and 6 tonnes of carbon dioxide emissions will be avoided.

Savings on energy costs: the solar panels were less expensive than current rural energy Options, thus households could make savings. As women are the breadwinners in rural settings, the money saved can be used for other economic purposes.

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