

Smart Villages: The Real Future of Emerging India

Dr. Savita Dwivedi

Plot no-208 Kailashpuri Colony Modha South Behind Chandraprbha Marvels, Ayodhya 224001, U.P

ABSTRACT: *Human society is progressing with fast urge and accumulated various successes for making its sustenance. The civilization gone through for various changes affiliated to its development through different accelerators like green revaluation, science and technology, industrial development etc. The present era is intensified on Information and Communication Technology. The increasing population of the world makes it necessary to alleviate the cities and villages to serve in a smart way. Hence, the idea of Smart cities came into being. Smart Villages are the need of the hour as development is needed for both rural and urban areas for improved livelihood. The impulsive motive behind the concept on "Smart Village " is that the technology. Now it's need of the hour is - integrated planning, strategy, and above all monitoring and execution of the activities using proper governance models to work properly for the real future of emerging India. This paper has made an attempt to discuss the initiatives factors of the smart village and its implications. It focuses on the key areas as vision and need for smart villages, approaches, government programmes, technology used for smart villages, areas of interest in smart village and its outcomes expected.*

KEY WORDS: *Emerging India, Information and Communication Technology, Smart Villages,*

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I. INTRODUCTION

As per statistics there are 676 districts in 29 states and 7 Union territories in India with a total number of 6, 38,000 villages. All areas which are not categorized as urban area are considered as rural area. Numbers of villages in India are approximately 6, 38,588. According to 2011 census, rural area has population of 68.84%, whereas urban area has population of 31.16% only. A rural area is a geographic area that is located outside cities and towns are also known as 'village' in India. The population inhabit in the rural area needs the same calibre and status of life as enjoyed by people living in sub urban and urban areas. The government has already accepted this consequence and has put solemn endeavour through diverse schemes for enhancing livelihood of rural masses. Such rural progressive growth and development not only amend livelihood in rural area, but also may abridge the migration of flyaway rural population in urban areas.

The current modern era of human development is quit ahead and familiarly known as "Smart age". Human beings are using smart phones, smart TVs and live-in smart homes. The concept of smartness is popular in respect and honour of human development regardless of rural or urban area, literate or illiterate in all the countries and India is not omission to it. Like many developing countries, India too is a rural dominated country. The idea of "Smart Village" will also attention to multiple challenges such as unplanned urbanization, under-development of villages, migration for economic pursuance, improved standard of living etc.

VISION OF SMART VILLAGE

To accomplish the 'Smart Village/Ward' status, the community, individually and collectively, will be empowered to take smart decisions using smart technologies and with the support of smart manpower and by managing to be self-sufficient.

INITIATIVES FACTORS FOR THE SMART VILLAGE

In recent epoch, there is vast interest in the development of Smart Cities. Globally, the concept of 'Smart City' is a momentous initiative that endeavours to improve the quality of life of urban citizens. The smart city is having good initiative potential for development of urban areas and India has also recognized this potential and is at the The Smart Village concept will be based on the local conditions, infrastructure, available resources in rural area and local requisition as well as potential of export of good to urban areas. **NEED FOR SMART VILLAGES** At present, one of the major challenges in India is growing population and rapid urbanization. This urban growth to certain expansion is unavoidable, as the economic pursuits and aspirations of the population do change and expand. This needs to be invert and suitably managed through a balance between rural and urban quality of life. A "Smart Village" will furnish long-term social, economic, and environmental welfare action for village community which will capable and empower enhanced involvement in local

governance processes, encourage entrepreneurship and build more lively communities. At the same time, a “Smart Village” will ensure good education, better infrastructure, proper sanitation facility, health facilities, waste management, renewable energy, environment protection, clean drinking water, resource use efficiency etc..

TOWARDS DEVELOPMENT OF SMART VILLAGES

It is clear that the situations and challenges in developing urban and rural area are different due to the constraints and opportunities the components taken in to notice will alter from region to region for villages, founded on the available resources and opportunities. Some generalized guidelines for the development of Smart Villages Based on various programs undertaken taken by Central and state governments along with advanced technological initiatives, the Smart Village can achieve SMART infrastructure, SMART service delivery, SMART technology and innovation, SMART institutions along with optimal mobilization and utilization of available resources, leading a head to faster and more inclusive growth. Economic, Environmental, social components will encircle a sustainable and inclusive development of all sections of the village community, so as they enjoy a high standard of living.

APPROACHES

The ‘Smart Village-Smart Ward’ programme will adopt the following approach in achieving its consequences with Swachh Village/Ward and sustainable development of resources as overall guiding principle:

1. community Mobilizing for participatory local level development;
2. Converging government schemes and private and voluntary initiatives to achieve comprehensive development;
3. Building partnerships with voluntary organizations, co-operatives, academic and research institutions;
4. Attention to a life-cycle approach and gender sensitization;
5. Focusing on outcomes and sustainability;
6. Protecting local traditions and heritage of the village; and

TECHNOLOGIES USED IN SMART VILLAGES

1. Wireless sensor network (WSN)
2. 3S
3. Cloud Computing
4. Big Data
5. Radio Frequency Identification (RFID)

AREA OF INTEREST IN SMART VILLAGES

Following are some potential areas, where Smart Village may create measurable and significant impact: -

1. Smart Buildings – security cameras, fire safety, electricity managements
2. Smart Dairy-Remote supervision and monitoring in open fields and barns.
3. Smart Farming- Satellite data for farm activities.
4. Smart agriculture- Smart agricultural equipment for crop production.
5. Smart Weather and Irrigation-Weather forecast water levels in dams.
6. Smart health care –Smart beds and equipment’s to monitor patient.s
7. Smart Education – Interactive learning through videos
8. Smart surveillance system – CC cameras and sensors to detect robbery

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.

EXPECTED OUTCOME OF THE PROGRAMME

A ‘Smart Village/Ward’ encompasses sustainable and inclusive development of all sections of its Community, so. The 100 per cent achievement of the following basic amenities, they enjoy a high standard of living.

1. Homes for all – with access to toilet, safe-drinking water, and regular power
2. Skills and Village Enterprise development with bank and market linkages gave more flexible access to youth.
3. Has functional solid/liquid waste management system.
4. 4.End all preventable maternal deaths and infant deaths.
5. Zero school drop outs of boys and girls up to 12th class.

6. Functional toilet, potable water, electricity available in Anganwadi Centres, schools.
7. Malnutrition free (children below 9 years of age).
8. No girl-child marriages (girls below 18 years of age).
9. Every village household has a functional bank account/PM Jan Dhan Bank Account.
10. Every GP/Ward has green trees plantations all over its geographic boundaries.
11. Every GP/Ward has functional water conservation and harvesting structures.
12. Every GP/Ward has functional Information Centre, Computer Lab, and Meese-Seva Centre

GOVERNMENT PROGRAMS FOR SMART VILLAGE

MAJOR PROGRAMS IN AGRICULTURE

National Agricultural Development Program

1. Bank loans, Free Electricity•
2. Accelerated Irrigation Benefit Program
3. Fertilizer Subsidy

MAJOR PROGRAMS TO IMPROVE EMPLOYMENT

1. Mahatma Gandhi National Rural Employment Guarantee Scheme
2. National Food Security Bill
3. Public Distribution System

MAJOR PROGRAMS & PARTNERSHIPS TO IMPROVE NUTRITION SECURITY

1. Mid-Day Meal Scheme
2. Annapurna Scheme (Ministry of Rural Development) for senior citizens
3. Integrated Child Development Scheme (ICDS)
4. Emergency feeding program (in eight districts in Orissa)
5. The Nutritional Program for Adolescent Girls
6. GP – Gram panchayat

II. CONCLUSION

Besides smart cities, it is necessary for us to have smart village for, sustainable and inclusive future of emerging India. Smart Villages are the need of the hour as development is needed for both rural and urban areas for better livelihood and technology itself will offer competent solution. The technological assistance already exists at the urban side and there is a terrible pressure on urban landscapes due to migration of rural people for livelihood. Smart Villages will not only reduce this migration but also irrigate the population flow from urban to rural area as well. Considering education and vocational skill of youth in villages can well channelize the energies of the youth as a powerful tool for the nation. An educated rural youth will be an asset to the country and at most the overall development of the country can be possible with the development of the villages only.

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