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## A STUDY OF RURAL DEVELOPMENT MANAGEMENT IN APPLICATION OF ICT IN GEOGRAPHY

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### ABSTRACT

The focus must be to enhance living quality as a whole in rural regions and not just the growth of an isolated sector when discussing rural development. Rural development implies rather an extensive and healthy development of rural regions. The ICT includes communications devices or software, mobile phones, computers, internet and network hardware and software, satellite systems and so on and various associated services and applications, as India is a developing country and it cannot rely solely on its urban and rural sector and must see development. Development is essential. ICT may be a simple series of instruments that can serve as a springboard for rural India's democratic and sustainable development. India's rural development is one of the biggest drivers in the Indian economy's growth. And PRAJA: reaching people in rural areas, the research that addressed the role of ICT in education, ICT in public service provision Technological developments, ICT Applications in an RURAL evolution process, ICT's health role Schemes for Indian rural development, Indian rural

development, ICT and agricultural development organizations, ICT's role in climate change.

**Keyword:** ICT, rural development, ICTs application, PGDM.

### INTRODUCTION

India is a rural nation, which is extremely low socioeconomic situation for approximately 50 percent of the villages. Since the beginning of independence, attempts have been undertaken to emancipate rural people from their living standards. The federal government's five-year plans likewise focus mostly on rural development. India's Ministry of Rural Development is the top authority for developing rural development policies, rules and acts. The main contributions to rural business and economics include agriculture, crafts, fisheries, poultry and diaries. Rural development with a view to economic growth and social fairness, improvement of rural people's living standards via sufficient and high-quality social services and minimal fundamental necessities becomes crucial. The current rural development plan is primarily

focused on reducing poverty, improving livelihood, providing basic utilities and infrastructure via creative salary and self-employment initiatives. The latest rural development instrument is ICT. If correctly used, information and communication technology may be of tremendous benefit for grassroots development. At the same time, the government remains challenged to captivate rural masses, mostly uneducated, so that they can adopt the new, totally foreign technology. The Government of India has several rural development plans and organizations are also involved in the execution of these programmes.

India is a village nation, and its socio-economic transformation is always a development indicator. Rural development is usually seen as rural development. The idea covers wealth and place in rural regions within its reach. The aim must be to enhance living quality as a whole in rural regions and not just the growth of an isolated sector when discussing rural development. Rural development implies rather an extensive and healthy development of rural regions.

Rural region is geographically situated outside of cities or towns with few houses or other structures. More than 68% of India's population is rural and agriculturally reliant. By growing and preserving crops, they earn their living. They cultivate land as their main source of income. ICT is a collection of instruments used for village and farmer development in rural regions. Information and Communication Technology ICTs comprise

computer hardware, software for computers, radio, TV, mobile phones, digital camera, Wi-Fi, projectors and other software applications for exchanging and sharing information among themselves.

ICT offers a platform where all farming and village farmers may simply make a living and keep their time, crops and other goods safe. Farmers with inadequate cultivation, seed and watering expertise ought to experience a large number of risks from bad soil, drought and pesticides. In order for farmers to benefit completely from such schemes, ICT offers a mechanism for implementing all the government-sponsored schemes made for farmers / villagers: I e PMMY (Pardhan Mantri Madras Yojana), PMMY(Pardhan Mantri Awash Yojana); KCC(Kissan Credit Card)-, SGSY-, SC/ST/OBC- and DRI (Different Interest rate) ITC can assist to ensure financial inclusion and, therefore, the rationalization of the food subsidization. ICT may offer verification on the online job card and arrange workshops to raise awareness of farmers / Villagers for the same. ICT can provide all the banking facilities I: e-banking, mobile banking, e-billings and other mobile applications for farmers like PAYTM, Airtel Money, State Bank Buddy, JKBank Mpay to save their time and money and allow all transactions / recharges in their homes without vision. ICT can act as a tool for women's empowerment through Ecommerce. In order to develop and execute a better system for pests, droughts, cloud explosion and other natural disaster, ICT provides farmers with general information on

climatic and climate change throughout plant seasons.

### **Role of ICT in Education**

Educational institutions have considered the use of computers and the Internet to improve the quality of education by making learning more life-specific. Rural folks are in the era of electronic media today. It is the biggest requirement at this time to manage large amounts of information and communicate this to farmers / rural villagers. Computers or internet is not limited to ICT. ICT extends between usage of FM radio and communication via satellite. The usage of ICT will increase the effectiveness of teaching and make learning more exploratory. With ICT, students may quickly get online study materials, lectures and notes from all around the globe. To this end, ICT was seen as an excellent instrument to enhance the meaning of education, learning and education.

### **ICT in public service delivery**

The delivery of services is a key component of the public duty of all governments. Today, people want government services that are more efficient and responsive. Consequently, the supply of civic services has become an important priority for governments worldwide. With the emergence of ICT, governments today have increasing need to use these methods to offer people with more efficient and responsive services. Governments around the globe are using ICT to undertake significant processes of change in citizen service provision.

ICT enables the involvement of people and simplifies government work procedures to enhance the quality and responsiveness of services to the citizen. It allows people to utilize knowledge to improve their lives and strive for socio-economic development as a vital resource. It has allowed governments to make efficient services available to the target population through various channels, such as the Internet, mobile devices, the WAP, etc. The next paragraphs describe a project called "PRAJA," which is built on ICT applications to serve rural people

### **PRAJA: Reaching People in Rural Areas**

The project is aimed at providing district- and mandal (block) all public services to rural communities. The NIC supports the project in the West Godavari district of Andhra Pradesh for the first time technically. The 'Praja' project is an attempt to bring government closer and empower people via ICT. The project is aimed at people. It makes government easier for the people to access. It aims to provide different governments with rural services to citizens (G2Cs) and citizens (C2Cs). The project has supplied web-capable rural kiosk known at mandal level and in the village as Praja Seva Kendram. The Praja Seva Kendram is completely computerized and operates on a district network linked by dial-up circuits or the internet. A district portal for accessing different civic services is maintained by the Praja Seva Kendram. These services vary from issue of different certifications to information on different programmes and also

extend to networking people and enable them to make mutual benefit transactions more flexible and convenient. The project enables access to groups to be marginalized and therefore helps to overcome the current information gaps and is a step towards digital unity. Many of the Praja Seva Kendram are operated as self-employed units using jobless youngsters from CEOs and the Rural Employment Plan of the Prime Ministers as beneficiaries. In the project, all communities may become centers of knowledge and learn from one another symbiotically and benefit from worldwide networks. This project promotes rural e-commerce and rural cyber forums in villages in addition to the provision of government services. Continuing and supplementing the electronic transactions are conventional routes of civic service delivery, particularly to people unaware of the technology or electronic transactions. Consequently, governments need to raise awareness and inform people about how technological channels are used. Citizens may learn about changes in service provision systems via appropriate education.

### **ICT applications in rural development**

ICTs are able to empower and assist development substantially. This big technology revolution may affect any society's potential for growth substantially. They have extremely broad and wide-ranging uses for agricultural and rural development. ICTs have made a meaningful contribution to the generation, dissemination, and transmission of

knowledge and promotion of development via telecommunications technology, computer and information processing technologies, data and imaging technology and interactive technology. The confluence of these technologies has produced a new social and economic reality in rural areas and a new technical and manufacturing sector. Increased connection and faster information flow have created new boundaries.

ICTs create a learning and innovation capacity in rural communities which enhances the efficacy of their attempts to solve and improve their lives. It helps these communities to accomplish the goals of poverty eradication, food security and sustainability in rural regions and enhances the efficacy of their development efforts via informed decision making.

However, the use of technology is mainly confined to metropolitan regions. Not enough has been gained from rural regions. In order to tackle rural development issues in various sectors of the economy, such as agriculture, energy, health and sanitation, rural development, housing and habituating etc, ICTs must be utilized carefully as key means in their development work, etc.

The so-called green technologies and sound delivery systems, which guarantee economic and ecological sustainability and maximized use of local resources stressing rural people's capacity development in technology, must thus be developed and introduced appropriately. This Endeavor is essential for the improvement of quality of life in rural areas, so as to achieve long term sustainability

through institutional ties and active participating among voluntary agencies, scientific and technological groups, research and development institutions, financial agencies and above all the primary stakeholders.

### **ICT for Education**

Furthermore, the adequate use of ICTs in the classroom promotes critical, integrative and contextual teaching and learning; (the ability to locate, evaluate and use information). In this way, the total efficiency of education delivery at the national, state/provincial and community levels is improved in schools and educational institutions. The use of ICT in education is intended to enhance the quality of education and learning and to make the access to education more democratic.

### **Technological Developments**

1. In recent decades R&D work in electrical engineering, computer science and MEMS has increased the capabilities and capabilities for producing thinner, lighter, smaller and lightweight, user-friendly, energy-efficient, and cost-effective gadgets. These gadgets may make consumers more affordable. Technological breakthroughs and their applications create rooms for broader applications in non-conventional areas such as farming, management, education, health care, banking, transportation, railway car and commercial vehicle tracking, logistics, supply chain management and myriad other human activities. The National Digital

Literacy Mission aims to become digitally literate at least 1 individual in every home by 2020. The national fiber optic network has provided broadband access to more than two lakhs in India's Panchayat Village and has fostered an inclusive growth and rural development digital divide. Providing rural urban facilities (PURA), empowerment of the rural people, improved governance, inclusive growth and sustainable development in India has been driving the spread of IT and ICT technologies, mobile penetration and cheap personal computers such as AKASH-II. The new avenues of job generation and youth development in rural regions are being opened up by the National IT Centers (NIC), which support e-government development, Village Knowledge Centers (VKC's), e-chaupals, newsstands, Sarva Shiksha Abhiyan (SSA), ICT tools, video presentations, online books etc.

2. The ICT application may significantly help rural communities in achieving their objectives of improving agricultural production, efficient use of the resources available at the local level, and economic success. The uses of ICT in various areas of activity throughout the world are growing. Intensive scientific and technological research and advances have made WSN technology cheap, simple to install, maintain and operate. Applications vary from home to global regions, from urban to rural and health to farming, fire monitoring, and environmental monitoring and so on. For farmers, it is helpful to use cost-effective value engineering approach, alternative materials, processes, technology and innovation.

3. Wireless networks of sensors illustrate overall computing capability utilizing little intelligent, low-cost sensing and computer equipment. WSNs are the combining of wireless communication, computing and distributed sensing. In recent decades, the cost of components used in WSN decreased as a result of technical advancements in semiconductor technology. First, every year or two, there are twice as many transistors on an affordable chip. Secondly, WSN applications have received a boost in terms of miniature power capabilities and the ability to dynamically monitor sensor network performance in order to reduce the energy usage. Micro sensors, wireless interfaces and on board computing may now be included with relatively little power on a very small scale. Complete systems that can be computerized, stored, communicated, sensed, and stored energy are constructed into a millimeter cubic area. They are anticipated to provide cheaper sensor devices for compact form factor. Medicine and industrial control procedures revolutionize the connection between ICT and wireless technology. A broad variety of physical phenomena, both geographically and temporally dense environment, may be closely integrated and densely distributed in sensors. The amplitude of most physical signals attenuates sharply with distance. Deeply built in sensor networks may now uncover previously difficult occurrences. Energy harvest is a feasible option to creating durable WSNs for space and other applications, where work planning relies on the nature of environmental energy sources. When

WSNs utilize collected energy, batteries may potentially be used as an additional energy source

4. A new field of access to internet and home networking through cellular voice making has been created by Wifi Sensor Networking. With the information and communications technology sector, wireless networks affect our lifestyles. After its exponential expansion in recent decades, the wireless sector has become one of the largest businesses.

### **Role of ICT in Health**

Without going to extremely high and expensive hospitals, ICT may make a significant contribution to improving the healthcare of rural populations, offering different health care services outside the doorway. By utilizing ICT, physicians in remote hospitals may utilize their Medical Training and Internet Service to diagnose patients. By utilizing ICD an email to different other doctors across the globe to aid diagnosis and treat preterm newborn children, who have enabled him to save many lives, he sends CT scans, ultrasound, ECG and other medical pictures. ICT can assist bridge the division of information between health professionals and the populations in the development sector in underdeveloped nations by providing clear and more composite ways for the access, communication and transfer of data. ICT also has the ability to improve health system efficiency and prevent medical mistakes by expanding databases and other applications. The e-health facility is utilized by ICT. Using ICT, patients are informed

that medical test results are prepared via SMS / e-mail.

### **Rural Development Schemes in India**

- **Pardhan Mantri Sadak Yojana (PMGSY):** This is a programme established by the Central Government of India and is completely supported by this scheme. The primary aim of the project is to link all the dwellings with over 500 people living there via weatherproof paved roads in rural regions.
- **Swarnjayanti Gram Swarozgar Yojana (SGSY)** is a complete package with all features such as training, infrastructure development, business planning, financial support, bank lending, establishing self-assistance groups and subsidies. SGSY has been implemented as part of its implementation.
- **Sampoorna Gramin Rozgar Yojana (SGRY)** seeks to increase food protection via the use of wage employment in rural regions that is impacted by disasters after state government evaluation and assessment by the Minister of Agriculture (Ministry of Agriculture).
- **Indira Awas Yojana:** This programme focuses on giving housing assistance across the country's rural regions.

### **Rural Development in India-Organizations**

- **Department of Rural Development in India:** This department offers training and research

facilities, development of human resources, DRDA functional support, supervision of project implementation and programmes.

- The primary aim of the Haryana State Cooperative Apex Bank Limited is to provide financial assistance for rural craftsmen, farmers, farmers, non-skilled agricultural workers, small-scale and large rural businesses in Haryana.
- **National Agriculture and Rural Development Bank:** The main aim of the Bank is to create credit for developing handicrafts, farming, small-scale, village, agricultural, rural and cottage industries and related economic operations in the rural sector.
- **Sindhanur Urban Souharda Co-operative Bank:** Sindhanur Urban Souharda Co-operative Bank's primary aim is to offer rural sector financial assistance.
- The RBH was established up in order to promote agriculture. • **RBH Rural Business Hubs (RBH).** The Rural Hubs Core Groups help the Rural Business Hubs operate smoothly.
- **The People's Action and Rural Technology Advancement (CAPART) Council:** Promoting and organizing the growing joint venture between the Indian Government and the volunteer rural development groups.

### **ICT and Agricultural development**

In agriculture, ICTs are able to provide access to information that drives or promotes the exchange of knowledge. ICTs basically make it easier for all necessary data, knowledge and information that

have previously been processed and modified to be established, managed, stored, retrieved and disseminated. As the research focuses on the differences between ICTs and their use must contribute to growth especially in agriculture. ICT in agriculture is an emerging area focused on the improvement of agriculture and rural development in India. In order to enable improved agricultural production, ICT can supply farmers with reliable information.

Private efforts and government programmes for agricultural development are developed via public-private partnerships. But the advantage of ICT has yet to reach all farmers in India, which is still developing and changing as a new trend. Maybe technical progress is not being received by many farmers, particularly original farmers and shareholders, owing to bad economic and social circumstances. Analphabetism, linguistic difficulties and a lack of commitment to new technologies are further issues.

The manner ICT initiatives are accessing, assessing, implementing, and providing material may make farmers more likely to utilize the ICT, thus contributing to the success of a project. A major component of ICT initiatives is the appropriate content in order to meet the information requirements of farmers. The degree to which the information is tailored and located affects the relevance of a farmer. Local material is characterized by geographical location, culture, or language or as content socially, culturally, cost-

effectively and politely appropriate to a particular society as content designed for the unique local audience. Local content is therefore the expression of the knowledge of a community. Local content comprises external or worldwide information that has been turned into a knowledge base, modified and absorbed. Yet ICT initiatives may not always be relevant to local context and requirements, because of a separation between the project and its ultimate users. The benefits of ICTs still need to be reached by all farmers, particularly those marginalized or partner and living in distant parts of the nation, because their economic circumstances, communication barriers, and social constraining are bad, do not get this service or better to say they don't. Analphabetism, a language barrier, poverty and a lack of government officials in agriculture are further reasons. New technology is not adopted.

### **Role of ICT in Climate Change**

Weather forecasters utilize ICT to educate people about weather updates via mass media. It knows also the populations about the weather dangers. In order to monitor the weather and the weather system which may impact rural regions, different control equipment such as weather satellites, weather radars and wind profiler systems are employed. For climate change and weather, Earth simulations are utilized. Some mobile services for flood control are utilized in different rural regions, where flooding is a significant issue for farmers. These mobile services are used for information about the weather. ICT aids farmers by alerting



them by means of simple text messages on the usage of flood water to produce crops. The text messages also alert farmers of flood occurrences to assist them prepare their crops and provide advice on how flood damage can be mitigated. ICT also supports disaster management, relief and early warning.

## CONCLUSION

The use of media among farmers is greater, with almost everyone consuming 99% in media, whether it be traditional or folk media, electronic media or new media. According to the data, many different kinds of media are used by farmers. Some 11 percent of them use the internet. An average of 17 percent access agro-based information media, leaving a proportion of them for purposes other than entertainment, news and other material. ICT is a collection of instruments which may serve as a springboard for rural India's democratic and sustainable development. For social, economic and potential development with a special focus on assisting individuals and communities that are impoverished and meaningful, ICT may be utilized. In this area, laptops and PCs are seldom utilized, and just 1,75% of farmers have used such devices or farmer progenies utilizing laptop PCs, informing their parents about the question of agriculture. The significance of ICT applications for agricultural extension are known to 8.67 percent of farmers. The ICT application collected information 21.3 percent of farmers increased their output by the advice of extension workers. ICT is certainly an instrument

for addressing and therefore preparing increasing problems in rural regions for unforeseen global transformation. The Indian economy may properly be termed the rural economy, since 60% of the population of the nation lives in villages and grows in farming. Therefore, the socio-economic transformation of rural regions is an indication for the economic growth of the country. Provide effective and diverse routes of delivery for rural target populations to provide food security, livelihood, the elimination of poverty and sustainable development.

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