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SUSTAINABLE RURAL DEVELOPMENT AND ICT: AN OVERVIEW

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ABSTRACT

Information and communication technologies (ICT) play an important role in addressing these challenges and uplifting the livelihoods of the rural poor. ICT offers an opportunity to introduce new activities, new services and applications into rural areas or to enhance existing services. ICTs can play a significant role in combating rural and urban poverty and fostering sustainable development through creating information rich societies and supporting livelihoods. If ICTs are appropriately deployed and realize the differential needs of urban and rural people, they can become powerful tools of economic, social and political empowerment. Rural Development forms an important agenda of the Government. However, the application of Information and communication technology (ICT) in the Rural Development sector has been relatively slow. The main reasons for this are poor ICT infrastructure in rural areas, poor ICT awareness among agency officials working in rural areas and local language issues. Hence this paper made an analyse to explain the sustainable rural development and ICT.

Keywords: Sustainable Development, ICT, Rural areas, Livelihood pattern, Infrastructure.

INTRODUCTION

Rural Development forms an important agenda of the Government. However, the application of Information and communication technology (ICT) in the Rural Development sector has been relatively slow. The main reasons for this are poor ICT infrastructure in rural areas, poor ICT awareness among agency

officials working in rural areas and local language issues. Agriculture is an important sector with more than 70% of the Indian population living in rural areas and earns its live hood by agriculture and allied means of income. The sector faces major challenges of enhancing production in a situation of dwindling natural

resources necessary for production. The growing demand for agricultural products, however, also offers opportunities for producers to sustain and improve their livelihoods.¹ Information and communication technologies (ICT) play an important role in addressing these challenges and uplifting the livelihoods of the rural poor. ICT offers an opportunity to introduce new activities, new services and applications into rural areas or to enhance existing services.

ICT: AN OVERVIEW

ICT can be interpreted broadly as “technologies that facilitate communication and the processing and transmission of information by electronic means.” ICT promises a fundamental change in all aspects of our lives, including knowledge dissemination, social interaction, economic and business practices, political engagement, media, education, health, leisure and entertainment.

In India ICT applications such as Warana, Dristee, Sari, Sks, E-Chaupal, Cybermohalla, Bhoomi, E-Mitra, Deesha, Star, Setu, Friends, E-Seva, Lokmitra, E-Post, Gramdoot, Dyandoot, Tarahaat, Dhan, Akshaya, Honeybee, Praja are in functioning for rural development.²

ICTs can play a significant role in combating rural and urban poverty and

fostering sustainable development through creating information rich societies and supporting livelihoods. If ICTs are appropriately deployed and realize the differential needs of urban and rural people, they can become powerful tools of economic, social and political empowerment.

The agricultural sector is confronted with the major challenge of increasing production to feed a growing and increasingly prosperous population in a situation of decreasing availability of natural resources. Factors of particular concern are water shortages, declining soil fertility, effects of climate change and rapid decrease of fertile agricultural lands due to urbanisation. However, the growing demand, including for higher quality products, also offers opportunities for improving the livelihoods of rural communities. Realizing these opportunities requires compliance with more stringent quality standards and regulations for the production and handling of agricultural produce. New approaches and technical innovations are required to cope with these challenges and to enhance the livelihoods of the rural population. The role of ICT to enhance food security and support rural livelihoods is increasingly recognised and was officially endorsed at the World Summit on the Information Society (WSIS) 2003-

2005. This includes the use of computers, internet, geographical information systems, mobile phones, as well as traditional media such as radio or TV. Although it is a relatively new phenomenon, evidence of the contribution of ICT to agricultural development and poverty alleviation is becoming increasingly available.¹

ICT AND AGRICULTURE

The vast majority of poor people lives in rural areas and derives their livelihoods directly or indirectly from agriculture. Increasing the efficiency, productivity and sustainability of small-scale farms is an area where ICT can make a significant contribution. Farming involves risks and uncertainties, with farmers facing many threats from poor soils, drought, erosion and pests. ICTs can deliver useful information to farmers about agriculture like crop care and animal husbandry, fertilizer and feedstock inputs, pest control, seed sourcing and market prices.

ICT FOR EDUCATION

Moreover, appropriate use of ICTs in the classroom fosters critical, integrative and contextual teaching and learning; develops information literacy (the ability to locate, evaluate and use information). Thus, it improves the overall efficiency of

the delivery of education in schools and educational management institutions at the national, state/provincial and community level. The use of ICTs in education aims to improve the quality of teaching and learning as well as democratize the access to education.

ICT FOR ECONOMIC DEVELOPMENT

Information and Communication Technology has a vital role in connecting the rural community to outside world for exchange of information, a basic necessity for economic development. Effective use of ICT can demolish geographical boundaries and can bring rural communities closer to global economic systems and be of meaningful help to the underprivileged.

EMPLOYMENT OPPORTUNITIES

Poor people in rural localities have lack of opportunities for employment because they often do not have access to information about them. One use of ICTs is to provide on-line services for job placement through electronic labor exchanges in public employment service or other placement agencies.

ICT IN E-GOVERNANCE

The poverty can be adequately addressed by effective use of e-governance

and ICT application in environmental management. Improved governance by using ICT can have direct impact in reducing poverty and improving the environment. ICT can contribute in a large way in making government processes more efficient and transparent by encouraging communication and information sharing among rural and marginalized people.

ICT IN CAPACITY-BUILDING AND EMPOWERMENT

Communities and farmer organisations can be helped through the use of ICTs to strengthen their own capacities and better represent their constituencies when negotiating input and output prices, land claims, resource rights and infrastructure projects. ICT enables rural communities to interact with other stakeholders, thus reducing social isolation. It widens the perspective of local communities in terms of national or global developments, opens up new business opportunities and allows easier contact with friends and relatives.³

A role is also played by ICT in making processes more efficient and transparent. It helps in making laws and land titles more accessible. Global Positioning Systems (GPS) linked to Geographical Information Systems (GIS), digital cameras and internet, help rural

communities to document and communicate their situation. Rural communities benefit from better access to credit and rural banking facilities. Recent mobile banking initiatives offer further scope to reduce costs and stimulate local trade. The Indian AMUL programme automates milk collection and payments for its 500,000 members, thereby enhancing transparency of the milk volume and quality collected and ensuring fair payments to farmers.³

ICT AND SERVICE DELIVERY MECHANISMS

There is a huge gap between information residing in agricultural knowledge centres and rural communities. At local level, multi-stakeholder mechanisms are important to make relevant information accessible to end users. Intermediary organizations have to connect rural communities to available knowledge. Users will increasingly want tailor-made, quality answers to their questions. In the Agricultural Clinics in India customers get answers within one to two days. Mobile Q&A services are being piloted in India. At national level, mechanisms need to be in place to ensure learning and information sharing.

The type of ICT used by local communities is subject to rapid change.

However, broadband internet access is seen as central for societal innovation because storing of large datasets and live communication requires good connectivity. Until recently, connectivity in rural areas was limited to slow dial-up lines. Satellite connections now make broadband access possible in remote areas. Use of mobile phones has seen an enormous increase in recent years. Nevertheless, big differences still exist in broadband access between developed and developing countries. New wireless technologies such as MESH and WiMAX, and new-generation mobile phone networks, will provide high speed internet services at sharply reduced costs, thereby dramatically increasing internet coverage in rural areas.⁶

ICT AND HEALTH

Health care is one of the most promising areas for poverty alleviation. ICTs are being used in India to facilitate remote consultation, diagnosis and treatment. Delivering health care with ICTs enables health care professionals and institutions to address the critical medical needs of rural communities, especially those in remote locations and those that lack qualified medical personnel and services.

ICT AND SUSTAINABLE RURAL GROWTH

1. Strengthening Rural Governance:

Introduction of ICTs in rural India is expected to bring in changes in the whole process of rural governance by improving transparency, accountability and administrative efficiency of rural institutions, promoting participation of the poor in decision-making processes and improving the efficiency and responsiveness of rural service delivery. It can facilitate speedy, transparent, accountable, efficient and effective interaction between rural citizens - this not only promotes better administration but also saves time and transactions costs of government operations. At the same time, ICT improves interaction with and within civil society and encourages civil society participation in the rural governing process.

2. Encouraging social transformation:

Access to information is of fundamental importance to any development process. The recent development of ICT is greatly facilitating the flow of information and knowledge, beyond the border of social and economic status. In this context, ICTs are now widely recognized as a critical tool to

tackle development issues in developing countries which ultimately lead to social transformation.

3. Ensuring A Better Quality of Life:

Application of ICT has the potential to improve living standards of people in remote and rural areas by providing important commercial, social and educational benefits. By expanding the use of government services – ICT strengthens the livelihood opportunities for rural India. ICT can ensure a better quality of life for the rural poor with an improved access to markets, health, and education – which pushes rural India towards economic development, job-creation and poverty- alleviation.

4. Strengthening the Information-base of rural communities:

ICT initiatives may be designed to provide support to local governance as well as to react to the queries generated by local needs of the rural communities. As rural poor are often unaware of their rights, entitlements and the availability of various government schemes and extension services, ICT can also improve their access to the information they need. It has the potential to ensure improved provision of short-term information required by the rural poor for effective livelihood strategies.

4. Intensifying Effort towards implementation of the rural development initiatives:

For ensuring effective implementation of the rural development programmes - ICT plays a crucial role through demand- driven information and communication services . It has the potential to increase the benefits and reduce the opportunity costs of people's participation in the process of rural development. The potential of using ICT to promote rural development lies in addressing the information gaps and blockages by strengthening the decision-making capacity of the rural poor as well as the resource institutions of every rural community.

5. Enhancing people's participation in nation- building process:

The importance of communication in mobilizing people and seeking their willing participation in the development process of a country is well recognized. In India, this concern about reaching people, communicating with them and equipping them with new skills have been emphasized over and again in successive five year plans which provide the blue print of the country's planned development. In a developing country like India – ICT is regarded as one of the key elements in modernizing agriculture, in producing healthy, literate and trained

workers for industry and for bringing about effective participation in nation building activity. All these together contribute immensely for making rural development a reality.⁴

In India, around 70% of its total population lives in the rural areas, they all have the right to acquire information; but it is almost impossible to expect that people at grass root level, living in rural areas, and those who have only elementary education, to participate actively in the world of information and communication which is solely based on computers and the Internet. Rural information systems have traditionally focused on supplying information to the rural poor and supplying information about rural areas to policy makers, but it is now recognised that past systems have been largely ineffective in addressing the needs of the rural poor. The extension of agricultural information in particular is evolving beyond merely transmitting messages. It is becoming more open, more participatory and more demand-driven, involving interactivity, negotiation and two-way Information exchanges. There is a new emphasis on the acquisition of information and enabling the rural poor to request information specific to their particular livelihood needs. Communication specialists increasingly recognise the

enormous potential of ICT to support and enhance these changes. On the other hand, social scientist observed that access to required information is rightly proportionate with the rate of any integrated development, like rural development and ICT has been one of the major components and driving force for rural development.⁵

CONCLUSION

The development of a society largely depends on the access to information and so far in rural India - ICT has greatly facilitated the flow of information and knowledge offering the socially-marginalized and unaware community unprecedented opportunities to attain their own entitlements. On the other hand, to break the vicious circle of rural poverty and to bridge the digital divide and empower the rural communities - ICT-intervention has proved its effectiveness in the sphere of capacity-building of rural communities for breaking these barriers. So, the government, technology industry and society should work together to deploy ICT to accelerate economic and social development in rural areas. Hence it may be concluded that an integrated framework for ICT interventions in rural areas will unquestionably pave the way towards sustainable rural growth.⁷

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