

## **World Development Foundation, New Delhi**

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### **About World Development Foundation**

World Development Foundation (WDF) is a knowledge-based, global foundation with a commitment to enrich and sustain the lives and livelihoods of poor and excluded people throughout the world. WDF strives to empower the poor by providing education and training with the use of Radio, TV and the Internet. It also conducts research and seminars on social and economic issues. All these efforts are aimed at one goal, namely, Life Enrichment of the Poor and Socially Challenged. We have got expertise in providing turnkey solution for Broadcast services. We have a vision that the broadcasting is the most convenient and cost-effective means of sharing knowledge, removal of poverty, empowerment of poor and under privileged, propagating the rights of women and children etc. However, it is essential that the whole system is established with professional competence and we work as catalyst in its operation. Capacity building is very important. We are running training programmes at a number of places in the country to train the youth from poor families and to make them employable. We have already conducted training courses jointly with the Universities namely, Narendra Deva University of Agriculture & Technology, Faizabad, UP, Birsa Agricultural University, Ranchi, Indira Gandhi Krishi Vishwa Vidyalaya, Raipur etc.

We are also working with **Media Lab Asia (MLAsia) under Ministry of IT, Govt. of India** which **helps the dissemination of innovations and technology that benefit the greatest number of the underprivileged population.**

**WDF and MLAsia, joined hand to use the Community Radio Stations for the help of farmers through broadcast of improved methods of agriculture in various regions of the Country. WDF is now implementing a pilot project "Agricultural Knowledge Dissemination System" for Bihar Govt. A brief outline of the project is given below:**

## **Vision Document**

### **Project Description**

The project basically envisages developing a knowledge network and dissemination system for increasing access and capacity building of farming and allied techniques to the farmers in the state of Bihar for enhanced food production, vegetable/fruit yield and livestock production. This involves setting up of an Electronic Media Production Centre (EMPC) for audio and video production with all components such as PCR, Edit room, digital archives, library; developing an e-portal; strengthening selected KVKs to make them data access/distribution centres, connectivity using High Speed Internet/Internet cloud to KVKs / Common Service Centres/Kiosks being set up by State Govt. under National e-governance Plan of GOI, Developing relevant content on various themes such as farm technology, animal husbandry, climatology, agronomy, plant disease management, post harvest management, warning for flood/cyclone etc

### **Agriculture in Bihar**

Agriculture is the backbone of Bihar's economy, generating nearly 42 per cent of the state domestic product and employing 81 per cent of the workforce. Government of Bihar has initiated various innovative agricultural development programmes like *Mukhyamantri Triv Beej Vistar Yojna / Vyagyanik Kisan Ke dwar* and appointment of one Krishi Salahkar (agriculture adviser) in each of the state's 8,463 panchayats to provide agricultural extension services for a rapid growth in this sector.

However, If we examine some of the statistics, the rice production which covers about 60 percent cultivated area in Kharif season in Bihar, was 51 kgs Per hectare in 2008-09 as against the target of 29.72 quintals/ha set for terminal year of Eleventh Five Year Plan (2011-12). However rice productivity is much higher in Bhojpur, Buxur, Rohtas, Aurangabad and West-Chaparan districts which ranged from 22 to 26 quintals/per hectare. Performance of wheat the second most important crop has been almost similar to rice crop in Bihar. Maize is only crop in Bihar which performed well but area under winter maize has been stagnant at 2 lakh hectare during last three years. The yield in Bihar is still lower than Andhra (40 quintal), Karnataka, (30 quintals) and Punjab (27 quintals.)

Bihar's share in area under fruits and vegetables in the country is estimated to 9 percent but accounts for about 10 percent of fruits and vegetables production in the country, mainly due to comparatively high productivity in mango, litchi and banana to respective national averages. Livestock production is second most important occupation in rural area. It contributes more than 35 percent to state gross agriculture domestic product. Livestock production kept steady growth in Bihar during last 7 years.

It is possible to give a boost to these productions. Some of the impediments in enhanced production are lack of knowledge dissemination and availability of immediate input about the excellent knowledge available in University and colleges albeit, mostly on research papers. *Agricultural innovation is a socially constructed process.* Innovation is the result of the interaction of a multitude of agents and stakeholders. If agricultural research and extension are important to agricultural innovation, so is essential to propagate it to the farmers, to create the incentives for a farmer to decide to change the way in which he or she works. The present proposal is to cover this gap.

## Knowledge Dissemination using Knowledge Network

In a world being shaken up by today's knowledge explosion, it is indeed ironical to find millions of people victimized of hunger, illiteracy, ignorance, gaps in communication and the resultant powerlessness. This is due to poor use of the ICT technologies in education, knowledge distribution and capacity building. An Agricultural Knowledge and Information System for Rural Development (Agricultural Knowledge Dissemination System (ANDS) in Bihar) shall link people and institutions to promote mutual learning and generate, share, and utilize agriculture-related technology, knowledge, and information. The system integrates farmers, agricultural educators, researchers, and extensionists to harness knowledge and information from various sources for better farming and improved livelihoods. This integration is suggested by the "knowledge triangle" displayed in Fig.1.

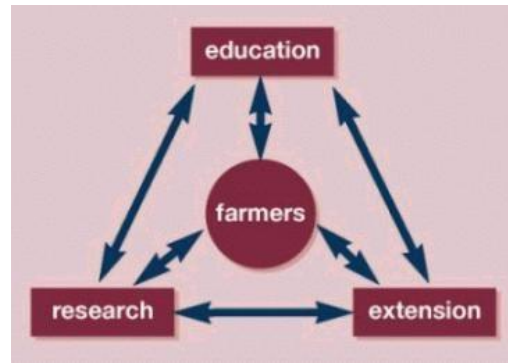


Fig. 1

Rural people, especially farmers, are at the heart of the knowledge triangle. Education, research and extension are services - public or private - designed to respond to their needs for knowledge with which to improve their productivity, incomes and welfare and manage the natural resources on which they depend in a sustainable way.

A shared responsiveness to rural people and an orientation towards their goals ensures synergies in the activities of agricultural educators, researchers and extension officers. Farmers and other rural people are partners within the knowledge system, not simply recipients.

## System Architecture

The system Architecture for the creation, storage and dissemination is shown in Figure-2. It basically consists of an *State of the Art* Electronic Media Production Centre (EMPC) for audio and video production with all components such as PCR, Edit room, digital archives, library; an agriculture e-portal; selected KVKs to work as data access/distribution centres, connectivity using High Speed Internet/Internet cloud to KVKs / Common Service Centres/Kiosks being set up by State Govt. under National e-governance Plan of GOI, Data Base of relevant content on various themes such as farm technology, animal husbandry, climatology, agronomy, plant disease management, post harvest management, warning for flood/cyclone etc

The media and meta data are stored in the servers to be installed at BAU. EMPC shall be used for production of content and also for connectivity to selected KVKs through high speed Internet data network for data capture. The farmers shall access data by either BAU/KVKs or through Common Service Centres being set up separately by state Govt. under National e-

governance plan through web access from the e-portal. Govt of Bihar has already established 5565 CSCs (Known as Vasudha e-Seva Kendras) The access shall also be through SMS, via internet cloud and radio browsing at CRSs being set up at KVKs.

### Concept Diagram showing the system connectivity

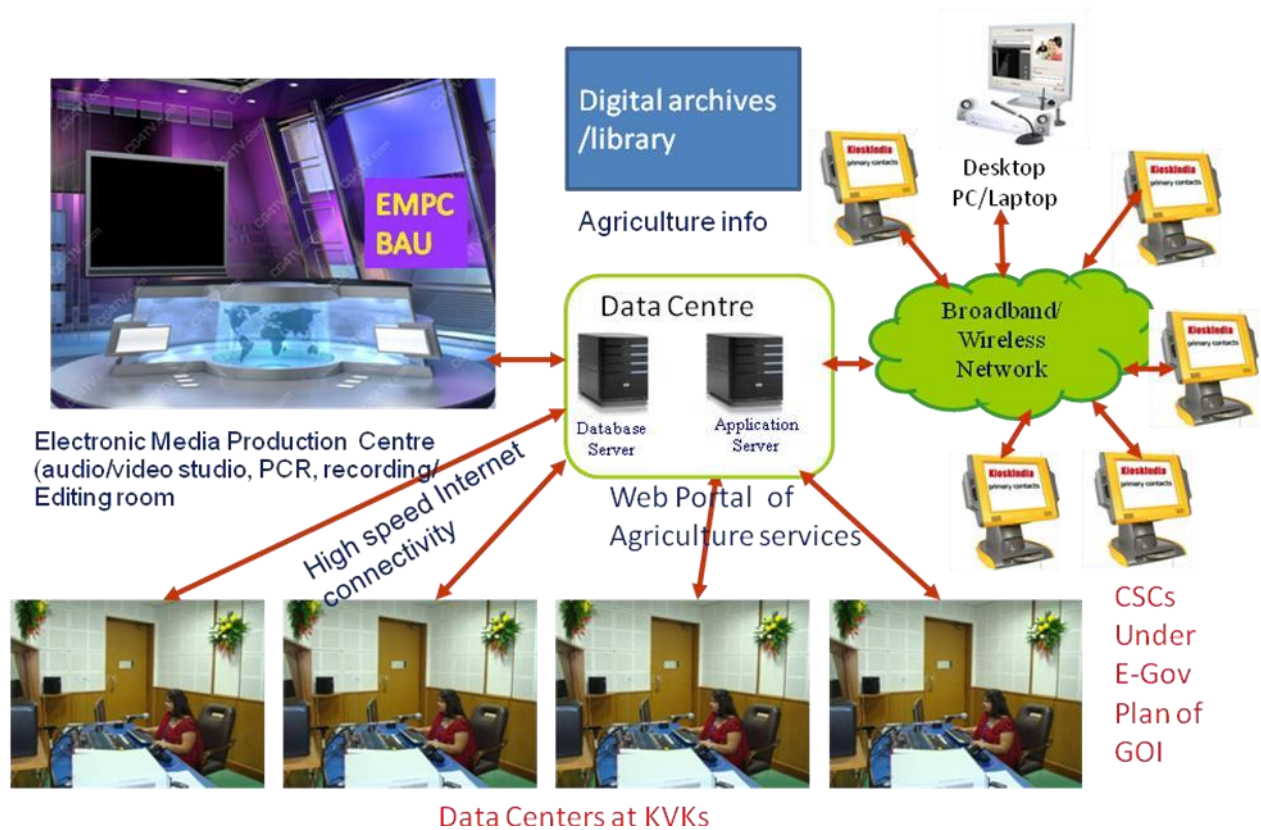


Fig. 2: System Architecture

### Components of entire work

- Advice and consultancy in implementation of the project
- A state of the art modern Electronic Media & Production Centre (EMPC)
- Developing an agriculture e-portal in Hindi & English
- A dissemination system consisting of web-casting using Web Portal for agriculture related services, SMS facilities for farmers with high speed internet connectivity between BAU and various KVKs/selected centres/and common Services Centres (CSCs) being set up under the national e-governance plan. (5565 CSCs known as Vasudha e-Seva Kendras have been set up)

- And developing 300 hrs or complete information (climatology, variety, agronomy, plant disease management, post harvest management etc.) and recommended package of practices for the mandate crops in the form of video/audio/multimedia to be put on the web portal which shall be augmented / updated continuously. Their classification, cataloguing, indexing and some push method of delivery.
- A connectivity system between BAU and selected data centres for direct communication between EMPC and the centres ➤ Management of system for three years.
- Impact assessment

## Intervention by World Development Foundation

As a professional resource center, World Development Foundation will offer a spectrum of services including planning, system design, specialized technical assistance, hardware and software supply, video /audio production, implementation of the scheme, communication strategic planning, audience research, training, monitoring and evaluation, support for coordination among different partners' interventions, identification and mobilization of private sector partners etc. Implementation efforts will intersect more than one traditional science and engineering discipline namely acoustic design, communication systems, software engineering, production of content, implementation, operation and applications.

## Outcome

It is expected that the project shall provide a wireless infrastructure with multimedia centres/ data centres through which information on farming and allied technology shall be propagated to improve food /vegetable/ livestock production. This will start a mass moment for use of wireless network for farm development in the state of Bihar. The achievement of these objectives is vital to bridge the growing gap between the less developed states and the developed states. This would also fulfill the need for a coordinated, holistic approach to the harnessing the potential of technology for the increased food production and this development of the deprived and poor farmers of the State.

## Future

A pilot funded by Bihar Govt. is under implementation. WDF is seeking funds from international donor agencies to implement full scale project.

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