

# DFID/FAO/ODI Strategic Programme for Information on Sustainable Livelihoods - India Country Component

## Background

### *Poverty and poverty reduction strategies in India*

India is a low-income country, with a GDP per capita in 1996 of \$380. About half the population lives on less than \$1 a day. Government surveys indicate that 320 million people, 35% of the total population, fall below the Government of India official poverty line, which is lower than the \$1 a day benchmark. Some 80% of poor people live in rural areas, where the incidence of poverty is slightly higher than in urban areas (37% c.f. 31%). Rates of poverty vary widely between states, from 12% below the Indian Government poverty line in Punjab to 55% in Bihar. For most states, however, the figure is 25-45%. [DFID, 1999]

Government poverty reduction initiatives include reservation policies for scheduled castes and tribes, legislative measures, and a wide range of employment, safety net and subsidy programmes for the poor (costing over 1% GDP). Rural public works have generally been the most successful, providing out-of-season employment to large numbers of poor people, but have not involved any upgrading of skills. Credit schemes have generally benefited both poor and non-poor groups, and have not been linked to training. Subsidised public food distribution systems have been least effective in terms of the share of benefits received by the poor, although they have helped prevent famine and the Government has proposed a more targeted scheme. Further poverty strategies are focused at the state level, such as the Andhra Pradesh (AP) poverty reduction strategy with five priority areas:

- Improved Human Development outcomes
- Enhanced livelihood security
- Governance reforms and fiscal stabilisation
- Greater empowerment of poor women and disadvantaged groups
- Impact assessment for decision-making through good quality and timely information.

### *DFID in India*

DFID has a large aid programme in India, focusing in four States - Andhra Pradesh, Madhya Pradesh (MP), Orissa and West Bengal where DFID provides budgetary support to State and Union governments and encourages cooperation and collaboration with the private sector, NGOs, the research community and other bilateral multilateral donors. Other specific activities aim to make government more effective, improve health and education, and support livelihoods. Some examples of current activities include:

- £162 million to help the governments of Orissa and Andhra Pradesh restructure their power industries and seek greater efficiency.
- £27 million programme to support civil society activities promoting the empowerment of poor people in India's one hundred poorest districts.
- £177 million to various education projects in India. Support to the District Primary Education Programme of the Government of India.
- £128 million to six separate programmes in drought-prone non-irrigated areas of the country – in Western Orissa, Andhra Pradesh, Karnataka, and in tribal areas of Western and Eastern India to promote sustainable livelihoods for poor rural people, and the rehabilitation of environmentally degraded land with the active participation of local people, particularly those normally excluded.

- £26 million to two major micro- finance projects, which aim to increase the access of the poor, especially women, to services such as savings, loans and insurance, which can help them increase assets and reduce vulnerability.
- £ 60 million to the Andhra Pradesh Rural Livelihoods Project which aims to integrate the Sustainable Rural Livelihoods approach into improved watershed management.

### *Information Systems and ICT*

National and State Governments in India have invested heavily in developing IT infrastructure and information systems over the last few years.....

## **The Country Visit**

A team from DFID, FAO and ODI visited India in November 2001 to identify opportunities for practical field activities for the Strategic Programme for Information in Support of Sustainable Livelihoods. The team visited Delhi, Bhopal and Dhar in Madhya Pradesh (MP), Chennai and Pondicherry in Tamil Nadu, Bubeneshwar and Jagatsinghpur in Orissa, and Hyderabad in Andra Pradesh (AP). Team members met staff in a wide range of government, non-government and private sector organisations involved in providing services to communities, and representatives from farmer's and community groups, and collected background documentation<sup>1</sup>.

## **Key Themes**

Focusing on the role of information in support of sustainable livelihoods, the team identified a number of constraints, opportunities and priorities for intervention that corresponded well with the key themes identified during the desk study<sup>2</sup>.

### *1. Cost, value and sustainability.*

There is much practical experience in India of extending telecommunications and internet connectivity through institutions and to rural areas through public, private and public-private partnerships, although most has been financed by the government. There are also several examples of initiatives providing locally relevant information at village level through information "kiosks" with internet or intranet connectivity, where users are prepared to pay for services. Large-scale public investment in information provision to farmers and rural communities through the State Departments of Agriculture and Agricultural Universities using a wide range of media from print to interactive, satellite-linked television provides an excellent basis on which to build.

### *2. Empowerment and Democracy.*

Although some government (AP-womens' groups) and non-government (e.g. Dhar-Gyandoot network, Pondicherry e-villages) projects are successfully showing how poorer rural communities can be empowered by providing locally information relevant on the wider aspects of livelihoods such as governance issues, market-related topics as well as crop production methods, these pilot ventures cover only a tiny minority and leave some key questions unaddressed. The existing inequities in access to information are only likely to be addressed by making such approaches scaleable by documenting and disseminating operational guidelines, methods and tools, and by considering the remoter areas where the poorest often live.

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<sup>1</sup> More details of the visit are provided in the field trip reports (Team 1 and Team 2), the Itinerary and the list of documents collected.

<sup>2</sup> A full list of constraints, opportunities and priorities is given in the document Key Issues Synthesised from Team Notes.

### 3. *Local content and context.*

Even in projects which are aimed at delivering information to rural communities, there is a shortage of appropriate “public goods” information in electronic form, and what content exists is often not in the local language(s). Material published by government institutions, such as Universities and Departments of Agriculture is generally over-complex and technical, only available in printed form, and not aimed at farmers or rural householders. However, there are several interesting and popular experiments providing rural communities with interactive question-answer sessions to policy makers and experts over a combination of telephone and television channels.

### 4. *Building on existing systems.*

The Government of India has invested heavily in the country’s telecommunications infrastructure, through a land-based backbone supplemented by satellite- and microwave-based connectivity where appropriate or specifically justified. This infrastructure is set to provide telephone and potentially internet connectivity to block level throughout the country over the next few years, and beyond in some areas. The principal governmental institutions, some larger community-level organisations, and most large- and medium-sized private sector organizations have access to and use the Internet technologies, such as email and to a lesser extent the Web. Many of these also have digital internal information and communication systems which work reasonably well. Enormous improvements in information availability could be achieved by improving connections between these disparate knowledge systems, but substantial investment will be required in customizing and applying systems standards and methodologies.

### 5. *Building capacity.*

India has a rich supply of knowledgeable and highly skilled professionals in the areas of information and agricultural (*sensu latu*) technologies, as well as vibrant private and non-governmental sectors capable of providing a wide spectrum of services to rural communities. Indian farmers have shown that they are capable of producing national surpluses of the main food grains under increasingly uncertain climatic conditions. But, the context is changing as: (a) public funds are being withdrawn from agricultural support services such as extension, forcing a shift from person-to-person Training-and-Visit (T&V) systems, increasing the role of private-sector service providers and leading to more impersonal information delivery systems; and (b) the emphasis in agricultural production is on diversification, shifting from cereals for food to protein-rich, and market-oriented products for income-generation. New skills are needed in this changing environment: (a) farmers need to know about less traditional crops and farming systems, as well as markets, and small enterprise development, and they are forced to seek information from a wider range of sources; (b) agricultural support services such as research and extension need to produce a different range of more practical information that farmers can understand and use more easily, and will be needing new information systems to share information more effectively with other professionals and related organisations; and (c) ICT specialists need to re-engineer their skills to suit the rural infrastructure and rural users, as information systems reach down to farmers.

### 6. *Realistic approaches.*

India already has a rich variety of initiatives for building improved information systems and services in rural areas. The most successful combine new technology with existing information and communication systems, and cater as closely as possible to local needs. Government agricultural officials at State level in AP claim improved efficiency through monthly video-conferences with staff in all 28 Districts, which supplements their biannual face-to-face meetings. The AP Government has also entered into a public-private venture to digitise some of its information system supporting delivery of primary healthcare in villages, and somewhat controversially is attempting to introduce palm-top devices for data recording and transmission by frontline healthworkers. Introduction of these new information systems

confronts great challenges in technology and mobilisation of content. The Gyandoot project in MP has established 32 self-financing, village-based “kiosks” linked by an Intranet application run over a wide area network (WAN), and rural communities are using these facilities to improve their access to public information (land records and technical advice) and as a communication channel for complaints and grievances (via e-mail to District government). The project has to support all the costs of system development and maintenance, although great economies of scale could be achieved if the work were to be undertaken in the public domain at State level. The project’s manager also considers it will be necessary to enrich the content offering over the next few months, but does not have the no funds are available to upgrade the WAN to provide the higher connectivity capacity required<sup>3</sup>. In contrast, a small private sector supplier of agricultural advice and inputs<sup>4</sup> in AP is struggling to establish itself in several villages used to free but ineffective government services, because it has chosen to build a complex digital information system to support its field staff. A large start-up investment was required to construct the system’s software from first principles, and to digitise even the public-domain content because no suitable content was already available from government institutions or elsewhere. The company now wishes to protect its investment in the system, and other endeavours in this area would have to repeat this almost prohibitive initial outlay.

### 7. *Strengthening partnerships.*

A wide range of formal and informal partnerships drive India’s development. In the agricultural sector alone, institutional networks on an enormous scale employ over 30,000 scientists and academics in over 150 research institutes and universities, responsible for generating technical information for a public establishment of over 70,000 extension workers at state, district, block and village level. Responsibility for rural development and agricultural production policies has been officially decentralised to State level, although the Ministries in Delhi still provide general advice and guidance. Although formal partnerships and systems for cooperation have evolved between government departments, institutes and universities at national and state level, information exchange and communication between organizations is often patchy and slow in practice. This weakness is compounded from the district-level downwards, so that communication between local agricultural stakeholders and higher level institutions can be very inefficient. In addition, the existing partnerships are often not wholly appropriate to India’s modern streamlined approaches to government, to the government’s efforts to privatise parts of its agricultural support services, and to market-based rural development. New partnerships are needed in this new environment, to deliver the right kind of information in the right format to support the livelihoods of the rural poor.

### **New Policies**

Preparation is well underway in India for the 10<sup>th</sup> 5-Year Plan, which is due to start in 2002. The Planning Commission “Approach Document”<sup>5</sup> prepared as a consultative draft, states that agriculture should remain a high priority for the government given that over 60% of people depend on it for their livelihoods, and that these include 80% of India’s population living below the poverty line. However, recommendations are made that India should (a) diversify its crop production sector to avoid the surpluses arising from 30 years of intensification of production of the primary staple food grains, (b) continue to invest in agricultural research, (c) move towards privatisation of extension services, and (d) invest in all aspects of information and knowledge exchange, including the telecommunications infrastructure. This shift is reflected in the supporting documentation from most government Departments. The new national policy framework for Agricultural Extension describes a radical new approach to agricultural extension in which: “*Extension agencies, services and*

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<sup>3</sup> The upgrade would involve installation of Wireless in the Local Loop (WiLL) technology.

<sup>4</sup> Samaikya Agritech Pvt. Ltd.

<sup>5</sup> September 2001

*workers will need to exercise a more proactive and participatory role, serve as knowledge / information agents, initiating and facilitating mutually meaningful and equitable knowledge-based transactions among agricultural researchers, trainers and primary producers. All this needs to be done in an effective and cost efficient manner.”* The framework identifies the following strategic priorities for the 10<sup>th</sup> plan period:

- Policy Reforms
- Institutional Restructuring
- Management Reforms
- Strengthening Research-Extension Linkages
- Capacity Building and Skill Upgradation
- Empowerment of Farmers
- Mainstreaming of Women in Agriculture
- Use of Media and Information Technology
- Financial Sustainability
- Changing Role of Government

### **Priorities for information and information systems**

The focus for a Strategic Programme to improve information for rural livelihoods in India should be on improving information exchange between the diverse decentralised agencies involved in rural development, in particular those involved in poverty alleviation, food security and land reform. Information systems and services need to be improved to ensure they meet the needs of both men and women, and contribute to greater transparency, better governance and improved disaster responsiveness. Better information systems are needed to accommodate literacy and language differences, to meet users' (livelihood) needs, and provide the right information in the right format for people to make decisions and take action. Although there are many innovative approaches to improve information availability in India using modern ICTs, they have mostly developed in isolation and with little systematic evaluation or exchanges of lessons learned. Information systems for rural communities need to provide a range of types of information content such as market prices, non-farm sector information, small enterprise development and economics, information on government schemes, weather and early-warning information, indigenous and traditional knowledge. Information systems for policy makers need better and more reliable poverty monitoring indicators.

### **A Strategic Role for FAO**

The effective provision of information to improve livelihoods in poor rural communities in India is influenced by an enormous range of policies, institutions and processes, including the World Trade Agreement, international agencies, and CG Review process at international level, to Panchayat-level development programmes, and village-level women's groups. Figure 1 illustrates some of these.

**Figure 1: Policies, institutions and processes affecting information for livelihoods in India**

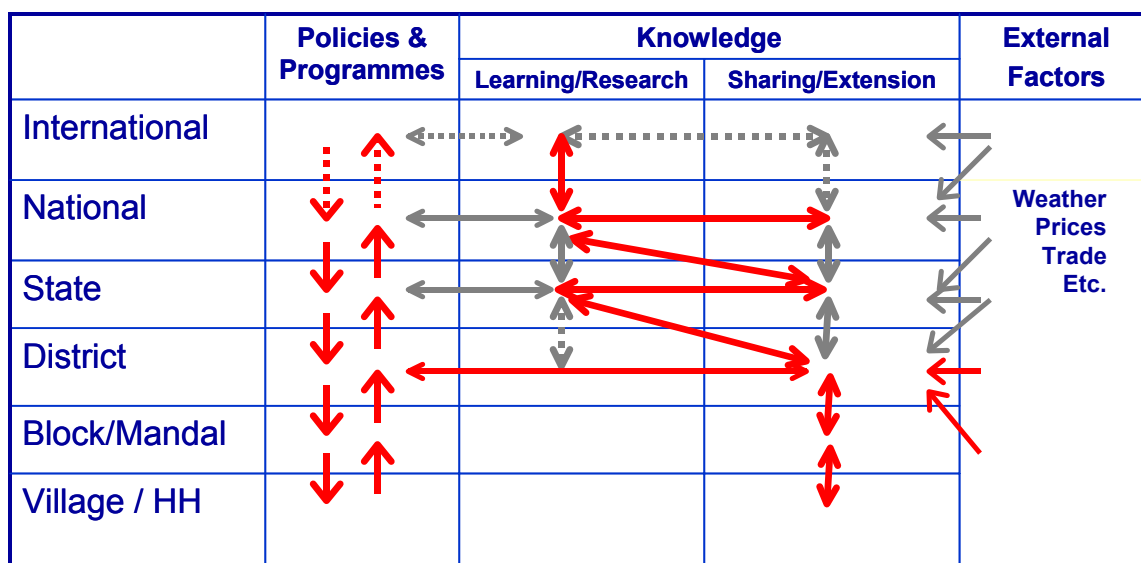
	<b>Policies</b>	<b>Institutions</b>	<b>Processes</b>
<b>International</b>	World Trade Agreement	UNDP, FAO, CGIAR, FAO	Doha Meeting, CG Review
<b>National</b>	9 <sup>th</sup> Plan, 10 <sup>th</sup> Plan, Agric. Policy, Ag. Ext Policy etc	Line Ministries, ICAR, Nat. Research Networks, NIAM, MANAGE, Broadcasting etc	9 <sup>th</sup> Plan implementation, 10 <sup>th</sup> Plan Preparation, NATP, ARIS, WIRFP etc
<b>State</b>	State Development Plans, AP 2020 Vision	SAUs, State Ministries, Samaikya Agritech	APRLP, NATP, MPRLP, Res-Ext Meetings etc
<b>District</b>	District Development Plan	ATMA, Extension Network, District Planning Board etc	NATP, Gyandoot, Ag. Marketing Committee
<b>Block / Mandal</b>	Block Development Plan	Sneha Mahil Women's Group	Watershed management schemes, Block DA
<b>Village / HH</b>		Panchayat, Families, Women's groups, Traders	Livelihood strategies

FAO has an international mandate to collect, analyse and disseminate information relating to nutrition, food and agriculture. In addition, it has a major normative role in the establishment and promotion of sound policies and procedures on agricultural development and food security, including information exchange and communication. FAO is ideally positioned to influence the international and national policies, institutions and processes, and in particular, to improve the links between them.

Figure 2 summarises some of some key features of livelihood-relevant information flows in the institutional hierarchy in India, where each element of the matrix represents one or more institutions. The basic infrastructure exists for collection and aggregation of information for policy and programme planning from village to national level, although it is generally recognized that new methodologies are needed to address the relevance and accuracy of data. Systems do also exist for dissemination of information about national and state policies and programmes via the Panchayati Raj institutions to rural communities, although in reality many rural poor people and especially those in remote areas do not have access.

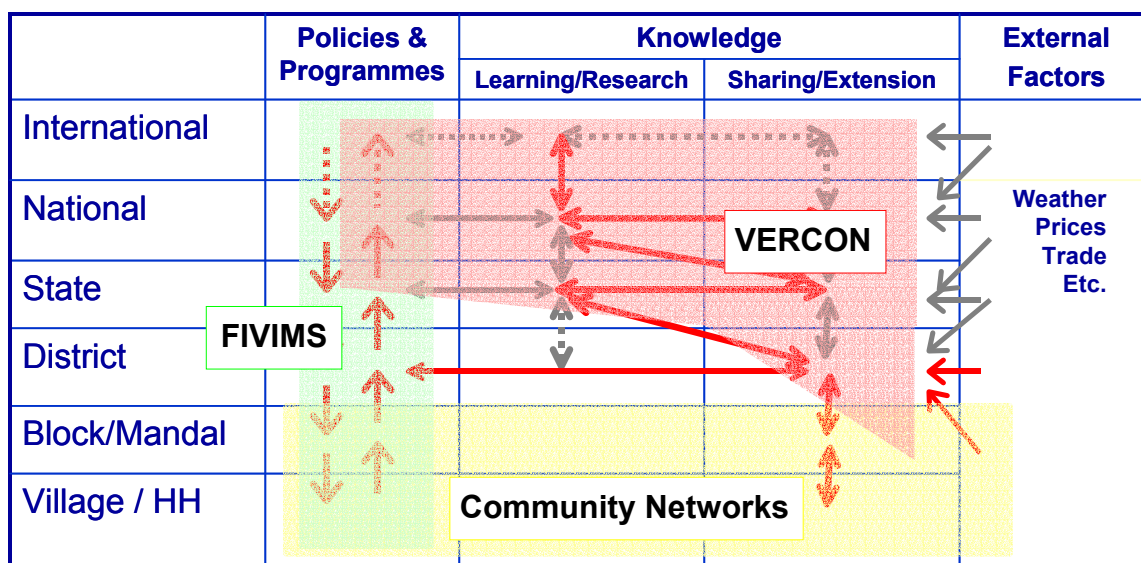
Various formal and informal channels also exist for information exchange and communication between knowledge learning (research) and knowledge sharing (extension) institutions at national and state levels, although it is widely claimed that these need strengthening in terms of availability of content and accessibility. Communication systems within the districts and between them and the state-level institutions clearly need to be improved. Additionally, there is a strong unfulfilled demand for livelihoods-relevant information about the external context especially at district level.

**Figure 2: Livelihood-relevant information flows in India<sup>6</sup>**



FAO has developed a range of conceptual models that address various aspects of communication and information exchange in the knowledge networks involved in supporting rural livelihoods in India. Customization and implementation of three of these approaches in India could help enormously to improve some of the information flows as well as mobilizing the content into accessible forms – as shown in Figure 3. The first aims at developing Community-based Networks, or “FARMNets”, using a range of traditional and digital ICTs to improve information availability at village and block level. FAO’s “Virtual Extension and Research Cooperation Network” (VERCON) model could be used to help connect India’s extensive research network with the rapidly evolving public and private extension institutions and service suppliers. Lastly, piloting of a national FIVIMS<sup>7</sup> could dramatically improve the quality and flow of information about poverty and food security in rural communities and households for policy makers at district level and above.

**Figure 3: Community Networks, FIVIMS and VERCON in India**



<sup>6</sup> Solid Arrows indicate frequently active links; Dotted arrows indicate infrequently active links; Red arrows indicate links requiring strengthening.

<sup>7</sup> Food Security and Vulnerability Information and Mapping System

## Programme Components

The Indian national component of the “Strategic Programme for Information in support of Rural Livelihoods” should have two principal areas of activity. The first would be designed to improve FAOs capacity to fulfil its normative mandate in India – to provide information on agricultural production, food security and poverty reduction from other countries to organizations in India, and to disseminate information about India to the international community. The second would be to work with partners in India to test or if necessary develop methodologies and tools for new information systems, which could then be applied more widely in India and elsewhere. Further discussion with the Govt of India and potential partners will be necessary to identify opportunities to develop and/or test the three existing FAO models introduced above, and these discussions may also identify others. The next steps to operationalise each element of the programme are described below.

### *Enhancing FAOs normative role in India*

India has a strong information culture, and systems for collecting, aggregating and analysing data from field to national level to inform policy and programme planning processes. However, informants observed that much primary data in India is unreliable, and that organizations tend to rely on their own information. Relatively few people contacted were aware of the scope of FAO’s information, although some policy makers regularly use FAO technical and statistical information, and many information managers use FAO information standards and norms (e.g. AGRIS and AGROVOC etc.). There is an opportunity for the Strategic Programme to enhance the use of FAO’s information and information services and standards in India through:

- Further discussions with potential stakeholders to identify their information needs, and how they could be met through improved delivery of FAO’s existing information.
- Strengthening the capacity of FAO-India to provide information to stakeholders in India through improved internal information management, and information delivery systems.
- The active promotion of FAO information, systems, and normative advice to stakeholders in India.
- Establishing systems for the regular evaluation of the impact of FAO’s information in India to provide feedback on FAO’s international information services.

### *Community Networks*

The Community Networks or “FARMNets” model is designed to make use of a combination of traditional oral, inter-personal and printed and modern IT-based media to gather and share relevant information to community members at village level. They are often focused around telecentres or computer kiosks with access to a continuously updated database or web site of relevant local information, and connected to the internet or a local intranet. The kiosks are usually managed by a local person, who provides information, from the computer, to people who cannot read or use a computer, along with a range of other computer-based services. Community Networks are designed to provide access to the majority of the local population, especially the poor, women or socially disadvantaged, and usually seek to combine new with traditional or indigenous knowledge. There are a large number of different examples already operating in India, but staff working in local networks visited by the Strategic Programme Team, wanted help to:

- improve network access through new communications technology and by using other media such as community radio;
- establish systems to generate and disseminate more locally-relevant content;
- improve the interface with other information systems.

FAO has gathered a substantial number of lessons from local variants of the FARMNets model of Community Networks, which have been based on a wide range of means of

communication including person-to-person contact, printed media, and audiovisual extension materials, radio, television, computer networks and the internet. There is an opportunity for the Strategic Programme to share some of this experience and work together with partners in India to:

- establish a collaborative action-research programme with a small number of existing community networks;
- help to develop and test new systems;
- develop feedback mechanisms to gather evidence and enable comprehensive evaluations;
- document and package successful approaches for wider use elsewhere.

Partners would include amongst others local government, NGOs, community-based organizations, tradesmen, and broadcasters.

### *FIVIMS*

FIVIMS is an internationally supported initiative to collect and analyse information on food security and vulnerability, to help national and provincial governments develop better policies and responses to improve food security for vulnerable groups. Given that FIVIMS has yet to be implemented in India, the Government is planning to implement a project over the next 18 months under a FAO-supported TCP<sup>8</sup> to test the FIVIMS approach at district and state level. The pilot project will explore methods for monitoring pockets of food insecurity exist at sub-district level for effective targeting of assistance to the most vulnerable groups. It was noted that there is a large potential overlap between the information needed for a FIVIMS-like approach and some aspects of the information that local stakeholders would like to be able to obtain through the Community Networks.

There is an opportunity therefore for the Strategic Programme to work with the FIVIMS pilot project to extend the approach to block and village levels and:

- strengthen the role of the National Informatics Centre (currently responsible for national FIVIMS data) to gather and provide useful information at district level and below;
- undertake a cross-sectoral analysis of specific indicators relevant to food insecurity and vulnerability;
- establish inter-sectoral communication advisory committees;
- help develop better information systems to strengthen information sharing between agencies (possibly through community networks); and
- document and communicate the experience to other national FIVIMS processes elsewhere.

Partners would include a wide range of national Ministries and major agencies, local government, NGOs, multi- and bilateral agencies, and university academics.

### *VERCON*

Agricultural research institutions in India have begun to put resources into building digital information systems and web sites, and the Indian Council for Agricultural Research has set out to develop a national agricultural research information system (ARIS) that links up the institutes. Some organisations involved in agricultural extension, especially a few of the state agricultural universities, also have relatively sophisticated information systems including web sites. However, the large public institutions have in general made slow progress in the development of electronic dissemination and communication, and links between research and extension remain based primarily on person-to-person contacts at meetings, workshops and seminars. Both researchers and extension staff expressed a need

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<sup>8</sup> Technical Cooperation Project

for better communication between research and extension agencies, especially to increase the accessibility of the public goods being generated.

FAO has developed the VERCON concept, which aims at improving linkages between and within agricultural research and extension institutions through strengthening the human network of staff of research and extension institutions, faculties of agricultural education, NGO workers and in some cases agricultural producers themselves. A VERCON aims at providing an electronic network which allows stakeholders to communicate and to develop, share, store and retrieve information. The concept is currently being tested in Egypt, but VERCON is intended to be a series of unique national implementations.

There is an opportunity for the Strategic Programme to work with research and extension agencies in all sectors<sup>9</sup> in India to develop and test VERCON-like systems to strengthen linkages between institutions, improve knowledge generation and exchange, introduce and/or strengthen two-way communication processes, generate, share, store & retrieve information/knowledge.

The process would need to include:

- identifying a small number of research and agencies to work with in one or more specific geographical locations;
- an institutional appraisal and development of a functional specification for the human and electronic networks and systems;
- implementation of a pilot project;
- evaluation and adjustment;
- wider-scale rollout in India including development & training; and
- documentation and packaging of the approach for application elsewhere.

Partners could include one or more state agricultural universities, national research institutes, international research centres, national and local extension and marketing institutions and intermediaries.

### **Implementation**

India is a larger and more complex institutional environment than the other two countries identified for components of the Strategic Programme (Ghana and Uganda). Further discussion is necessary with FAO's link agency in India, the Department of Agricultural Cooperation, which is set to establish an inter-departmental Task Force to address the following issues over the next few months

- the precise nature and scope of the programme interventions, within the overall framework as above, in relation to existing development activities and initiatives;
- the key partners in each intervention;
- the geographical location of interventions;
- the governance and guidance of the programme component in India.

However, it is likely that a team of at least two full time project staff will be needed, one of whom at least will be based in the FAO office in Delhi.

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<sup>9</sup> Governmental, Non-Governmental, and Private