



## INFORMATION COMMUNICATION TECHNOLOGIES

### Towards an alternative policy framework for implementation

P V UNNIKRISHNAN, E M SREEDHARAN

#### 1.0 Introduction

Information and Communication Technologies<sup>1</sup> (ICTs) are undoubtedly the most dominant technologies emerging in today's economic scenario globally<sup>2</sup>. The economic potential of ICTs for development is starkly highlighted by the United Nations Secretary General, Kofi Annan in his remarks at a session of the United Nations Commission on Science and Technology for Development (UNCSTD) in 1997 - *"Recent developments in the field of communication and information technology are indeed revolutionary in nature. Information and knowledge are expanding in quantity and accessibility. In such fields as agriculture, health, education, human resources and environmental management or transport and business development, the consequences really could be revolutionary. Communication and Information technology have enormous potential especially for developing countries and in furthering sustainable development."* [Annan, K. (1997)] A society in which the information embedded in ICT systems is combined productively with the creative potential and knowledge embodied in people, called "Knowledge Society", is being propagated by various international agencies as a model for sustainable development.

Even though the technological evolution in information communication technologies has aroused much interest among policy makers, the business sector, the media and the academic world in industrialised countries, the impediments to the diffusion and use of information technologies in developing economies need to be better understood. The UNCSTD Working Group on Information Technology and Development, which undertook an extensive study on these issues, has reached two principal conclusions :



## Information Communication Technologies for Human Development

1. Although the cost of using ICTs to build national information infrastructures which can contribute to innovative knowledge societies are high, the costs of not doing so are likely to be much higher.
2. *Developing countries are at very different starting positions in the task of building innovative and distinctive knowledge societies and in using their national information infrastructures to support their development objectives. [Mansell, Robin and Wehn Uta (1998)].*

Several policy makers in developing countries however approach the issue of ICT investments with caution. Based on the study of the working Group on IT and Development UNCSTD has advocated, drawing out of appropriate national strategies that could be built upon strengths of each country and are consistent with development goals.

There has been very few attempts to study the impact of ICTs on third world economies primarily because of severe problems of statistical classification and data availability; and issues arising out of non-standardisation of measurement of the impact of ICTs on economies further compound the problems involved. However there is broad agreement in scientific literature and public policy statements that the economic benefits that may accrue from the deployment of ICTs are unequally distributed through out the world and that the ICT gaps between the developed and developing countries are continuously widening<sup>3</sup>. It has been also pointed out that in most developing countries there are very many people whose lives have been barely touched by ICTs and that there are others who are being negatively affected by their exclusion from information societies or by the social and economic dislocations that can accompany the impact of these technologies.<sup>4</sup> Why this happens, is not difficult to find.



## Information Communication Technologies for Human Development

Global capitalism and the emergence of Information Communication Technologies have a dialectical relationship. On the one hand, ICTs form the technological basis of globalisation, opening up new markets and facilitating trading of services and products on a global scale. On the other hand, these technologies in turn are shaped by the rules of globalisation – concentration, liberalisation, privatisation and unequal intellectual property rights. For the same reason scholars like Noam Chomsky and Robert Mc Chesney describe global media and telecommunications systems as the new missionaries of corporate capitalism and argue that the global market system and the commercial media and communication system have widened social inequalities, weakened the ‘public sphere’ world wide and there is a necessity to look for democratic alternatives to market driven centralisation and commercialisation [Herman, S. Edward and Mc Chesney, W. Robert (1998)].

The issue of prioritisation of ICTs in the social and economic development agenda has also been seriously debated. As the human development report 1999 puts it – *“Information is only one of many needs. Email is no substitute for vaccines, and satellites cannot provide clean water. High profile technology projects risk overshadowing basic priorities. As one health worker in Katmandu said, ‘our priorities are hygiene, sanitation, safe drinking water..... how is access to the Internet going to change that? The main constraint is inadequate resources for health and education systems as a whole.”* Not all are in agreement with the above, there are some who argue that the focus of ICT in rural areas should be on basic telephony and broadcasting through radio and television rather than computerisation and internet connectivity. There are still others who argue that new technologies such as low cost web television<sup>5</sup>, wireless local loop<sup>6</sup>, cellular telephone and satellite based communication systems are opportunities for technological leapfrogging. They ardently feel that a technology choice based on the above



## Information Communication Technologies for Human Development

appropriate to the location and suitable ICT applications and content relevant to rural areas could drastically improve delivery of information related services to citizens, agricultural and health extension services and services in the social sector. However demonstrative success stories in developing country context are sparse and can hardly substantiate these arguments<sup>7</sup>.

The debate on prioritisation cannot simply be reduced to the issue of technology choice. The question is that of deciding upon a national priority – can we afford to neglect the basic economy for growth of Information Technology? Alarmed by the worsening global and domestic inequalities no less than Bill Gates had to admit “We are all created equal in virtual world” but “virtual equality”, he states” is for easier to achieve than real world equality. In the world of Global Information Revolution and Information highway, tens of millions of poorer individuals in the United States have not received the invitation so far, not to mention the great majority of the population in the rest of the world.

In the Indian context the inequalities are exasperating and are drastically precipitated by the mindless and reckless policies of liberalisation currently practiced in the country. It is sheer commonsense that the majority of the Indian population can genuinely benefit from IT and the growth of the IT sector in the country can be sustained only if the basic economy is strengthened. As Shri. Sitaram Yechuri, points out – “ *As far as India is concerned, there is a genuine dilemma. Not investing in IT implies forgoing the possibilities for economic development. At the same time excessive emphasis on IT means the danger of diverting resources away from the basic economy, which is the very foundation, for the IT take off. While judicious balance is required in the direction, it must be emphasised that the present hype over IT neglecting the basic economy can only prove disastrous for India.* “[Yechuri, Sitaram (2000)]



## **2.0. Information Technology Policy initiatives in the States**

In the light of the launching of the National Task Force on IT and the initiatives by various state governments there is a need to identify core areas for ICT applications which could bring in tangible benefits for the majority of the people and to work on replicable, high impact and high visibility implementations at the grass roots.

Information Technology initiatives, till recently, had been by and large, initiatives of the Government of India through the National Informatics Centre barring a few adhoc efforts by certain state government departments. There has been a paradigm shift recently from the traditional centralised public sector led investments towards state government initiatives with private sector participation. This is mostly the outcome of the implementation of local ICT strategies by various state governments.

Karnataka was the first state to adopt an IT policy in 1997. Maharashtra, Tamilnadu, Kerala and Andhra Pradesh took the cue and followed soon. In May 1998, the central government adopted the recommendations of the National Taskforce on Information Technology and Software Development that each state government should formulate an IT policy. As many as 14 state governments have set up IT Departments and budget allocations are being set apart for IT promotion. In several states task forces have been set up and action plans have been firmed up.

IT industry associations such as the National Association of Software and Services Companies (NASSCOM) the Confederation of Indian Industry (CII) and local chambers of commerce have been actively lobbying with various state governments for incorporating incentives for private investment and for strengthening of infrastructures.



## Information Communication Technologies for Human Development

The focus of IT policy declaration in various states has been consolidated in Table – 1 below:

**Table – 1**  
**Focus of IT Policy in different states**

**(A) Promotion of IT investment**

<b>Sl. No.</b>	<b>Policy initiative</b>	<b>States</b>
1.	Special package for financial assistance	Andhra Pradesh, Assam, Haryana, Karnataka, Kerala, Maharashtra, Orissa, Pondicherry, Punjab, Uttar Pradesh,
2.	Sales tax and Turn over tax exemption for 7/10 years	Andhra Pradesh, Assam, Goa, Karnataka, Kerala, Pondicherry, Punjab, Uttar Pradesh
3.	Exemption from or concessions on stamp duty / registration charge and works contract tax for Information Technology parks / Software Technology parks	Andhra Pradesh, Goa , Haryana, Kerala, Maharashtra, Punjab, Rajasthan, Tamilnadu,
4.	Executive authority of Information Technology parks to be empowered to give all clearances required for units within the technopark	Kerala, TamilNadu
5.	Same incentives for standalone software units as for units in information technologies parks and software technology parks	TamilNadu
6.	Software units including service and training to be entitled to industry status and eligible for all concessions and incentives applicable to industries	Delhi, Rajasthan, TamilNadu,
7.	Commercial buildings fully dedicated to software / IT industry exempted from land and building Tax on a case to case basis by an empowered committee	Rajasthan



## Information Communication Technologies for Human Development

8.	Software units permitted to be set up in residential plots in urban areas without change in land use	Assam, Delhi, Goa, Madhya Pradesh, Maharashtra, Pondicherry, Rajasthan
9.	Software industries exempted from pollution control Act	Andhra Pradesh, Delhi, Haryana, Karnataka, Kerala, Madhya Pradesh, Pondicherry, Rajasthan, TamilNadu, Tripura, , Uttar Pradesh,
10.	Single window clearance for IT companies	Chandigarh, Madhya Pradesh, Punjab, Rajasthan, Tripura, Uttar Pradesh
11.	IT industries to be treated as industrial consumers of electricity	Andhra Pradesh, Karnataka, Kerala, Rajasthan, TamilNadu,
12.	Priority in sanctioning and service of power	Karnataka, Kerala, Orissa, Pondicherry
13.	Exemption from power cuts	Andhra Pradesh, Haryana, Karnataka, Kerala, Orissa, Tamilnadu, Tripura, Uttar Pradesh, West Bengal
14.	Supply of power at proper frequency	West Bengal
15.	Captive power generation sets installed by IT industry eligible for exemption from payment of electricity tax and sales tax without time limit	Haryana, Kerala Maharashtra , TamilNadu,
16.	Subsidy for installation of captive generation sets	Kerala, Punjab
17.	Incubation facilities to encourage entrepreneurship	Andhra Pradesh, Delhi, Maharashtra, West Bengal,
18.	Venture capital fund to invest in software industry	Delhi, Kerala, Madhya Pradesh, Orissa, Rajasthan, West Bengal,



## Information Communication Technologies for Human Development

### (B) Investment in Infrastructure

Sl. No.	Policy initiative	States
1.	Investment in infrastructure for IT Technopark and Software Technology parks to be strengthened	Andhra Pradesh, Delhi, Karnataka, Kerala, Maharashtra, Rajasthan, Uttar Pradesh, Tamilnadu, West Bengal
2.	Participation of private sector to be encouraged in Technoparks and Software Technology Parks	Andhra Pradesh, Assam, Karnataka, Kerala, Tamilnadu,
3.	State Information Infrastructure to be established linking districts with private participation	Kerala, Madhya Pradesh, Rajasthan, Tamilnadu, West Bengal,
4.	Connectivity up to the panchayat level	Kerala, Madhya Pradesh, Rajasthan
5.	A percentage of sales tax receipts earmarked for strengthening IT infrastructure	Rajasthan
6.	Subsidy on leased connection	Assam

### (C) Human Resource Development for IT

Sl. No.	Policy initiative	States
1.	Establishing an Institute of excellence in Information Technology	Andhra Pradesh, Delhi, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Rajasthan, Tamilnadu, Uttar Pradesh, West Bengal,
2.	Strengthening of existing institutions and introducing IT as a specialised branch of study	Kerala, Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh, West Bengal,



## Information Communication Technologies for Human Development

3.	Corpus fund for strengthening training and educational infrastructure with private participation	Assam, Kerala,
4.	System for accreditation of training courses	Andhra Pradesh, Kerala
5.	Special computer schemes for schools, teachers and students	Chandrigrah, Goa, Rajasthan, Tripura
6.	Providing floor space in schools for private training institutions during non office hours	Madhya Pradesh, Rajasthan, Tamilnadu, Tripura
7.	Teachers training	Delhi, Goa, Madhya Pradesh, Maharashtra, Rajasthan, Pondicherry
8.	IT literacy made desirable / essential requirement for government and public sector employment	Chandigrah, Gujarat, Kerala, Rajasthan, West Bengal
9.	Initiatives for improving IT literacy	Delhi, Haryana, Kerala, Madhya Pradesh Rajasthan

### **(D) Developing of Government IT applications and content**

<b>Sl. No.</b>	<b>Policy initiative</b>	<b>States</b>
1.	Local language based systems	Andhra Pradesh, Haryana, Karnataka, Kerala, Madhya Pradesh, Pondicherry, Uttar Pradesh, West Bengal
2.	Building up computerised data base in government	Pondicherry, Madhya Pradesh, Rajasthan, West Bengal
3.	Smart card system for utility payments and service delivery	Delhi, Haryana, West Bengal,
4.	Information kiosks for delivery of services	Chandigarh, Delhi, Kerala, Madhya Pradesh, Uttar Pradesh
5.	Strengthening citizen interface through IT enabled services	Delhi, Kerala, Madhya Pradesh, Maharashtra Rajasthan, West Bengal,
6.	Specific focus on panchayat computerisation	Kerala, Madhya Pradesh



## Information Communication Technologies for Human Development

7.	Building up resource based data repositories and citizen databases for decentralised planning	Kerala, West Bengal
----	---	---------------------

*Note :-* Information Technology policy documents for Andhra Pradesh, Karnataka, Tamilnadu, Kerala, Maharashtra, Punjab, Madhya Pradesh, Delhi and West Bengal, Haryana, Assam, Goa, Gujarat, Orissa, Pondicherry, Uttar Pradesh, Chandigarh and Tripura have been examined.

The Table – 1 reflects only the explicit policy declarations in the policy document. In many cases the policy declarations don't necessarily represent the implementation status and progress of IT implementation in the state. Many of the late starters like Delhi, Rajasthan, Madhya Pradesh etc., had the advantage of consolidating the experience of the earlier starters and incorporating them into their policies. However our limited objective to analyse the overall policy framework of ICT implementation in the states can be easily achieved from this. The strengths and weaknesses of the policy frameworks very clearly emerges from the tabulation.

1. The policy documents have by and large inflated emphasis on incentives for industry, private sector participation, and for expansion of ICT infrastructure centred around technoparks and software technology parks. Strengthening the existing industrial base centred around Department of Electronics sponsored Software Technology parks is eminently justified. This however has the danger of creating enclaves of ICT centred in large cities with limited linkages to rural and backward areas. It is evident that there is limited focus on dispersed growth of ICT industry through Small and Medium Enterprises (SME) taking advantage of the footloose nature of ICT industries and their potential for networking.



## **Information Communication Technologies for Human Development**

---

2. The focus on ICT in schools and colleges is a very prudent step and would bear fruits in the medium and long run. In states with lower literacy levels this could be the first step towards ICT dissemination and promotion of computer literacy. To what extent the centres of excellence would strengthen local industry and local ICT initiatives would however depend on how effectively these centres are networked with the local needs and programmes.

3. The major weakness of most of the policy documents, except possibly Kerala and Madhya Pradesh is the total lack of rural focus. It is clear that ICT has been by and large looked upon as an elite and urban requirement. For the same reason there is also very little emphasis to dovetail the ICT initiatives with the overall developmental framework in the primary sector. Efforts to link initiatives like resource based planning is limited to Kerala and West Bengal. Local body computerisation and networking is the priority of states like Kerala and Madhya Pradesh only.

### **3.0. ICT perspective for Kerala.**

The IT policy for the Kerala State stands out on two counts

- i. The unqualified emphasis in the policy document on ICT dissemination and diffusion is significant.
- ii. The policy explicitly declares its commitment to implement local body computerisation, to extend citizen services through the local bodies computerisation programme and to use ICT for empowerment of the people and for fulfilling the right to information of the community at large.
- iii. The policy also has a distinct focus on developing resource based information system<sup>8</sup> for the state, which could evolve as the knowledge



## **Information Communication Technologies for Human Development**

base for the decentralised planning programme and other developmental initiatives in the State. This in turn could be the centre around which an integrated decision support tool for planning and management could emerge.

The Information Technology Policy document has benefited from two earlier initiatives of the State Planning Board in formulating a development-centred and bottom-up ICT outlook.

1. The report of the task force on electronic media.
2. The Pilot project proposal for a State level informatics system for strengthening the people's planning process and decentralised plan implementation.

The relevance of an ICT strategy based on the above viewpoint is that it has been formulated with a candid understanding of the issues in Kerala's development. The unique development experience of Kerala has attracted wide interest. Despite having one of the world's lowest per capita incomes, Kerala has achieved high levels of literacy and life expectancy and low infant mortality and birth rates comparable to developed countries<sup>9</sup>. With a few important exceptions such as unemployment and suicide rates, Kerala leads the rest of India and all low income countries of the world on just about every indicator we can come up with: health facilities, public distribution system, nutritional status, gender equality, providing social security for the elderly, for people in the unorganised sector, and for the destitute and physically handicapped persons.

From the eighties onwards, however the Kerala model seems to be engulfed in a very serious crisis. The Kerala economy from the late seventies has suffered from severe economic stagnation resulting from low productivity of crops, weak



## **Information Communication Technologies for Human Development**

industrial growth, decline of traditional industries such as coir, cashew, and handloom. This economic stagnation has aggravated Kerala's long-standing problem of unemployment, estimated at three to five times more than the all India levels. The stagnation in the productive sectors of the economy, the growing social expenditure and the neglect of the Central Government have contributed to a fiscal crisis in the state government, undermining its ability to intervene effectively in the economy and continue to finance the social infrastructures.

It was in the above context that the State Government initiated the People's Plan Campaign<sup>10</sup> for the Ninth Plan, a statewide movement for local planning and community development as a strategy to make a breakthrough in the development stalemate that the economy has got into. The State Government has transferred 35% of the state development budget as grant to the local elected bodies, to spend on local projects decided by the people from below. The campaign has resulted in all the local bodies producing study reports on the Panchayat/Municipalities with participation of the local communities. The campaign has seen people donating labour and material to supplement the resources devolved by the State Government. A number of participatory and innovative models of micro development have been emerging throughout the state in sanitation, housing, safe drinking water, education, agriculture and micro enterprises building<sup>11</sup>.

Sustaining this new democratic initiative which is so crucial for Kerala's economic growth requires providing opportunities for continued interaction of professional institutions, experts in different walks of life with the local body institutions and the voluntary work force created as a part of the campaign. It also require effective tools for better governance and improved service delivery.



## **Information Communication Technologies for Human Development**

This is what ICT in developing context can provide and this is precisely what Kerala is attempting.

A programme for computerisation for local bodies has been initiated with the support of the Planning Commission. A mission team called the Information Kerala Mission has been set up for the purpose. The Information Kerala Mission has evolved a human centred perspective<sup>12</sup> for ICT development and deployment, which includes participatory software development, local entrepreneur based support network and an activity-based user centred training programme in Malayalam focusing on demystification of technology [Unnikrishnan, P.V. and Sreedharan, E.M. (2000)].

A series of software applications for participatory e-governance, IT enabled services based on a citizen's database, Geographic Information System (GIS) based resource management tools and community portals for developmental intervention<sup>13</sup> and transparency in public administration are being developed. A few of this applications have already been deployed on a pilot basis [Unnikrishnan, P.V. (2000)]. A series of micro ICT enterprises for knowledge workers proactively interacting with the local development initiatives could also emerge which could also go a long way in addressing Kerala's unemployment problem. The micro enterprises could establish appropriate linkages with the Electronic Technology Park and the Software Technology Park on the one hand and the micro credit initiative managed by women through the Kudumbasree<sup>14</sup> programme on the other hand This programme would certainly open up new vistas in people oriented, development focused, human centred ICT application development and deployment.



#### **4.0. Conclusion**

The recent strides in ICT present formidable opportunities for human development-by enabling empowerment, by providing information and connectivity and by raising productivity, but achieving this potential depends on how the technology is used. ICT initiatives in the developing economies have to necessarily keep in view the widening social disparities and have to pertinently address the issues of the marginalised and deprived. These initiatives are to be interweaved with the efforts towards strengthening of the local and national economies to tackle the threats created by globalisation to human security. The efforts in Kerala – the People’s Plan Programme and its sequel the Information Kerala Mission are unique in that they address the issue of empowerment of the masses and strengthening of the local economies in their fight against the onslaught of globalisation. They can go a long way in formulating an alternative policy framework for human development in developing economies.

#### **BIBLIOGRAPHY**

1. Annan K., Secretary General of the United Nations. (1997), in United Nations Commission on Science and Technology for Development. “Inter-Agency Project on Universal Access to Basic Communication and Information Services”, 3rd session, Geneva, 12 May, E/CN. 16/1997/Misc. 3.
2. Herman, S. Edward and Mc Chesney W. Robert. (1998), “The Global Media the New Missionaries of Corporate Capitalism”, Madhyam Books, Delhi.



## **Information Communication Technologies for Human Development**

---

3. Mansell, Robin and Wehn Uta. (1998), “Knowledge Societies : Information Technology for sustainable Development”, for the United Nations Commission on Science and Technology for Development, Oxford University Press 1998.
4. Unnikrishnan, P.V. (2000), “On the Eve of Unfolding of a Silent Revolution”, The Deshabhimani Malayalam daily, 23 November 2000.
5. Unnikrishnan, P.V. and Sreedharan, E.M. (2000), “Information Kerala Mission – Evolution Methodology and Context”, International Seminar on Democratic Decentralisation, Technopark, Thiruvananthapuram, May 23–27, 2000.

Yechury, Sitaram “Economy in the knowledge society? Paper presented at International IT conference. Crafting a knowledge society in the 21st century 23-25 November 2000. Technopark Kerala.

[ Copyright@information kerala Mission ,2001

**All rights reserved. No part of the Book may be reproduced or utilized in any form or by any means, electronics or mechanical, including photocopying, recording or by any information storage or retrieval system, without permission in writing from the publisher]**

---

1. The following definition based on revision 3 of International Standard Industrial Classification (ISIC) has been broadly agreed to as the definition of the ICT sector.

### ***Manufacturing***

- 3000 – Office, accounting and computing machinery.
- 3130 – Insulated wire and cable.
- 3210 – Electronic valves and tubes and other electronic components.
- 3220 – Television and radio transmitters and apparatus for line telephony and line telegraphy.



## Information Communication Technologies for Human Development

---

- 3230 – Television and radio receivers, sound or video recording or reproducing apparatus, and associated goods.
- 3312 – Instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process equipment.
- 3313 – Industrial process control equipment.

### *Services*

- 5150 – Wholesaling of machinery, equipment and supplies\*
- 7123 – Renting of office machinery and equipment (including computers).
- 6420 – Telecommunications.
- 72 – Computer and related activities.

\* limited to include only the wholesaling of ICT goods as shown in the Manufacturing component of the definition shown above.

2. The info-communication sector is an enormous part of the global economy, with output valued at almost \$1.5 trillion in 1994. This was divided between telecommunication (46 percent), computers (33 percent), and media (21 percent). The info-communication sector has been growing at twice the rate of the balance of the global economy in the 1990s with no indication of a let-up [Herman, S. Edward and Mc Chesney, W. Robert (1998)].

3. The Human Development report 1999 carries extensive documentation on the digital divide arising out of the inequality in access to the emerging network society. The report points out that a widely acceptable measure of basic access to telecommunications is having 1 telephone for every 100 people – a teledensity of 1. Yet as we enter the new millennium, a quarter of countries still have not achieved this basic level.

Thailand has more cellular phones than the whole of Africa. The United States has more computers than the rest of the world combined and more computers per capita than any other country.



## **Information Communication Technologies for Human Development**

---

In mid- 1998 industrial countries – home to less than 15% of people – had 88% of Internet users. North America alone- with less than 5%of all people-had more than 50% of Internet users. By contrast South Asia is home to over 20% of all people had less than 1% of the world's Internet users.

4. The World Employment Report 1998-99 which succinctly analysis the impact of globalisation and changes in the technology on the global employment scenario, in the context of the limited employment opportunities, raises serious concerns about the social exclusion of the unemployed youth, long term unemployed, older displaced workers, the less skilled workers, workers with disabilities, ethnic minority groups and last but not least women who face higher barriers to employment across all these categories.

### **5. Web TV**

Web TV is a product which enables users to surf the web using a TV set with a built in or set top Internet access. Web TV users will gain access to Internet through the company's own Internet service provider. The Web TV set top box requires no hard disk and has only 2 MB of RAM; most of the storage and application software resides on the network server.

### **6. Wireless Local loop**

Cellular radio and digital wireless access using Personal Communication Services (PCS) can be used as alternative to installation of new cables by providing a wireless local loop access to the super highway in countries with inadequate telecommunication networks. Because it uses advanced cellular technology, the wireless local loop can provide data and facsimile communications in addition to voice.

7. There is no intention to undermine the importance and relevance of the few initiatives like the Computerisation of Registration of Deeds and Mandal revenue offices in Andhra Pradesh, the Honey bee Network in Gujarat, Panchayat Computerisation initiative in Kerala, Multipurpose Electronic and Computer centres in Madhya Pradesh, Disaster Management Project and the wired village experiment in Maharashtra, and Electronic support for Rural Health



## **Information Communication Technologies for Human Development**

---

care workers in Rajasthan. No doubt these initiatives are remarkable, but there are severe constraints to the replicability of most of them barring a few on a national scale. Further the benefits to the local community and the actual involvement of the local community in formulation and management of the programmes vary drastically across these initiatives.

8. The resource based information system envisaged shall encompass a comprehensive socio economic citizen profile, similar to the social security data base in the United State linked to geographical information system consisting of spatially referenced land, water and cover information. The information system shall be used as a decision support system for integrated and sustainable resource based planning at the farm, watershed, panchayat and block level on the one hand and urban infrastructure and services management system on the other. ICT enabled citizen services shall be also linked to this.

9. If it were a separate country, Kerala would have been the sixteenth poorest in the world with a per capita income of only \$250 in 1998. This is hardly 1% of the US average of \$29340. If we account for the purchasing power in Kerala, an average Keralite would have less than 3% of what an average American lives on. However Kerala has an effective literacy rate of 90.59 against 99.0 in the US. The birth rate in Kerala was 17.0 per thousand in 1995 against 16.0 in the US. The infant mortality rate in Kerala (13.0 per thousand in 1995) is within 6 per thousand compared to the US (7.0 per thousand in 1995).

10. The People's Plan campaign is probably the largest democratisation project underway in the world today. The entire population of Kerala is affected by the campaign and so far more than three million of them have actively participated in one or other of the campaign activities.

11. The physical achievements of the first three years have raised expectations that in the initial years of the new millennium, Kerala will be able to provide housing to all, potable drinking water to all, households within reasonable distance, high levels of sanitary conditions throughout the state, eradicating many of the visible indicators of poverty, achieving perceptible improvements in the agriculture sector particularly in vegetable cultivation and significant step-up of quality of our health and educational infrastructure.



## **Information Communication Technologies for Human Development**

---

12. The human centred approach to information systems is based on to the so-called soft methods. It is argued that traditional engineering approaches are hard or functionalist, being based on a view of world which sees it as composed of determinable, rule based systems. Soft methods by contrast, take an interpretivist, ideographic stance: the world is seen as determinable only from the viewpoints of human participants. It is widely argued that whilst hard methods give rise to a systematic approach to information systems, soft methods typically rely on a more holistic, systemic view, which it is maintained are more representative of the domain.

13. This portal would be a clearing house for science and technology inputs for micro level development and could also facilitate marketing of products and services, resource mobilisation, technology tie-ups and also provide inputs for project monitoring and management.

14. The Kudumbasree Project has been drawn from the experience of the Urban Poverty Alleviation Project successfully implemented in Alappuzha municipalities and is targeted at the women in the most poverty ridden families of the state who are identified through a social security risk factor based indexing. A variety of self employment schemes have been formulated integrating the ongoing schemes in the Government sector which are also linked to micro credit initiatives managed completely by women organised in neighbourhood groups. The project was inaugurated by Shri.A.B.Vajpayee on 17th May 1998. The programme has drawn international attention and has been awarded the commendation for innovative efforts in poverty eradication in developing countries from the Commonwealth Association for Public Administration and Management.