



Country Report **Bangladesh**

ICT Initiatives in Agriculture

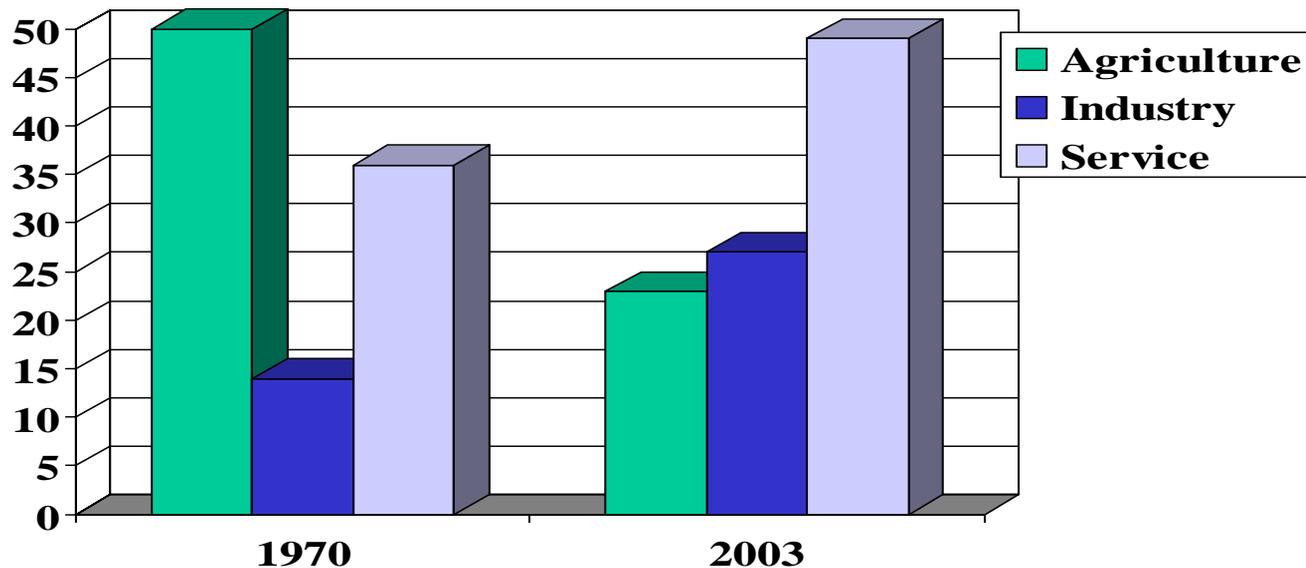
Bangladesh Agricultural Research Council

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Bangladesh Agricultural Research Council



Sectoral contribution (GDP) in the Economy



✦ *Crops contribute the major share in agriculture*

Employment

Agriculture	63 %
Services	26%
Industry	11%



National Goal

- **Economic Development**
- **Poverty alleviation**
- **Food Security**
- **Public Health and Safety**
- **Higher standard of Living**
- **Protection of Natural Environment**



ICT in Bangladesh

Background

- **First main frame computer introduced in 1964 in Research & later in financial sector**
- **Computers gained popularity in 1990s when PCs became user friendly & affordable**
- **Price drop due to exemption of import duties during 1998 & cost reduction in the global market.**
- **Introduction of Internet in 1996 with VSAT**
- **Bangladesh entering with submarine cable network- will facilitate ITC expansion**

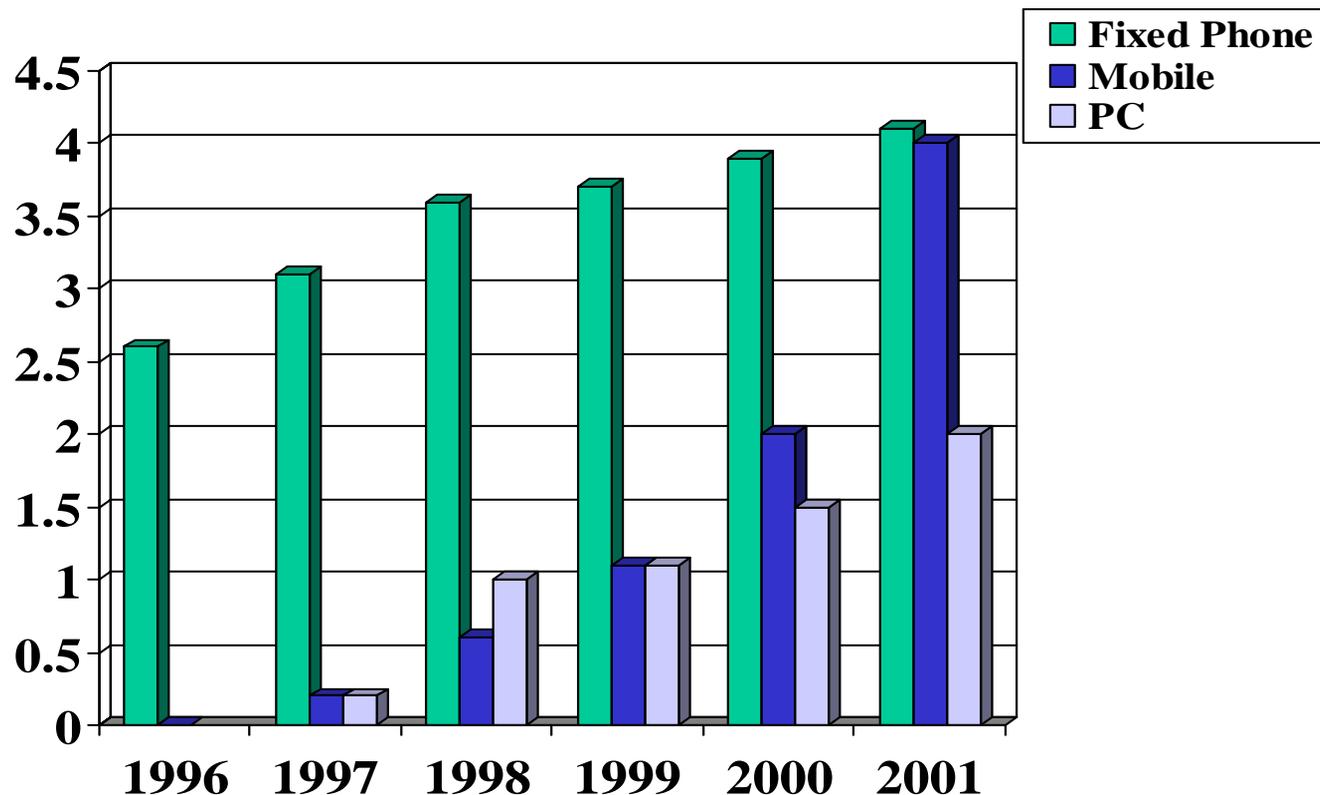


ICT INFRASTRUCTURE

- Digital divide exists among rural & city, rich & poor
- Four private mobile companies & 1.6 million mobiles-Grameen (NGO) is one of them
Internet user is about 500,000
- 155 Internet Service providers (ISPs)
- Highest Bandwidth available now 4 mbps
- There are 800,000 Land phones
- Government has waived the annual fees for ISPs operating in the rural areas



Fixed Lines, Mobile & PCs per 1000 people



Tele-density is highest in the cities; 32 per 1000



ICT Sector of Bangladesh

IT Education and personnel

- **Very few standard institutes with high quality education-** 28 universities & 20 Polytechniques
- **Producing 4500 graduates**
- **Costs are so high - barely within reach of general people**
- **Highly dense in Capital city**
- **Lack of proper syllabus**



Role of NGOs in ICT

- ✓ Highest number of NGOs are operating-very few has nation wide network
- ✓ Mainly micro-credit with livelihood program including agriculture
- ✓ Early adapter ICT then the public sector
- ✓ Reaching the grass root through ICT
- ✓ Computerized the system of management
- ✓ Grameen mobile Phone is popular



Role of NGOs in ICT

Success of Grameen (Rural) Bank in ICT

- ✓ **Grameen (Rural) bank earned global reputation in providing micro-credit to the landless and poor woman (95 percent borrowers are women)**
- ✓ **Loan recovery rate is 99 percent. Works in half of the total villages to reduce the poverty**
- ✓ **Operates without collateral & guarantee for improving the livelihood**
- ✓ **It has number of enterprises including rural energy & Telecommunication**
- ✓ **Village Phone by Grameen Bank started in 1997**
- ✓ **Innovative Program for expanded telecom infrastructure**



Success of Grameen (Rural) Bank in ICT

- ✓ Village based micro finance organization leased cellular mobile phone to members of the Grameen bank
- ✓ Promoting production, marketing and other economic activities
- ✓ Income generated through the earning of providing Phone service
- ✓ The average prices of agricultural commodities are higher in the village having village phone service compared to without phones



Success of Grameen (Rural) Bank in ICT

- ✓ Also communication during disaster, transmission of new ideas, mobility of people and health situation has improved and spoilage of perishable products has decreased
- ✓ The phone service provides higher income of agricultural products by significant amount compared to non- Phone area
- ✓ From December 2000 till today Village Phone reaches from 3 thousand to 50 thousand thru Grameen Bank loans to buy mobile phones and offer telecommunication services in nearly half of the villages



National Agricultural Research System (NARS)

- ✘ Ten Institutes makes the NARS**
- ✘ Bangladesh Agricultural Research Council Coordinates the NARS**
- ✘ Institutes responsible for doing research on Rice Jute, Sugarcane, vegetable, Fruits Fisheries, Livestock, Tea, Forest**
- ✘ Networking among the institutes not yet developed**



Agricultural Research and ICT Initiatives

ICT in agriculture is developing recently

Several ICT initiatives were undertaken for natural resource management

Land Resources Appraisal of Bangladesh

- Landforms, soils, inundation and climate computerized (1980-86)

Utilization of Agroecological Zones Database and GIS



Agricultural Research and ICT Initiatives

- **Research Management Information System**
 - *Personnel Management System -*
 - *Human Resource Management System -*
 - *Research Project Management System -*
 - *Equipment Inventory Management System –*



Agricultural Research and ICT Initiatives

- **Bangladesh Country Almanac**
 - a joint BARC-CIMMYT activity
 - to enable the non-GIS users to readily get spatial and non-spatial information/data in CD
- **Poverty mapping and its implications on the agricultural R&D&E in Bangladesh**
 - a BARC-IRRI joint activity to plan for intervention
 - major biophysical resources combined with the socio-economic situation to delineate the vulnerability



Agricultural Research and ICT Initiatives

- **Technology Database**
- **Agricultural Information Center (AIC) of BARC- well equipped The Essential Electronic Agricultural Library (TEEAL) in CD ROMs**
- **Soil Profile Database**
- **Website- NARS institutes have been developed**
 - **BARC website will be linked with web-enabled databases**
- **South Asian Association of Regional Cooperation (SAARC) Agricultural Information Center (SAIC)**



The National Agricultural Extension System

- **There are several agencies in the country, which provide agricultural extension service to the farmers**
 - **Government agencies –**
 - **Uses both electronic & print media for extension**
 - **Developing ICT at all levels down to district offices**
 - **NGOs, commercial enterprises and**
 - **input manufacturers/ wholesalers/dealers**



Agricultural Marketing

- Little market information reaches farmers or not up-to-date
- Delays in data processing prior to dissemination often make the price information obsolete
- Recent initiative in web based Agricultural Market Information Improvement Project (AMII) started functioning in limited scale
- Help to more accurate and faster knowledge of price movements of agricultural commodities

www.damdbd.org



Recommendations

- **Digital divide in urban-rural and national-international should be narrowed down**
- **ICT policy should be implemented to its full extent**
- **ICT should be utilized in agro-based industries**
- **All data related to agriculture should be made available through 'one window'**
- **Agricultural Marketing system should be upgraded with ICT facilities and skilled manpower**
- **Bureau of Statistics databases could be made available on the web.**



Recommendations

- **Awareness among the policy makers on the potential of ICT is a critical element of its development**
- **An intranet (network) should be established among the NARS organizations, DAE, and other relevant organizations**
- **Scientists/researchers and extension personnel should have opportunity of free access to Internet**
- **Government should take steps to build three basic infrastructures in the rural areas: electricity, telephone, and Internet connectivity**



Conclusion

- ICT bridges gap between developed and developing country, between rich and poor, between city & village, between male & female etc.**
- Lack of mass awareness on the potential of the ICT lags its expansion. Policy makers should be aware of its potential**
- The opportunities offered by ICTs should be utilized to its fullest extent to make an informed society & Improve the life**