

### **IDRC projects:**

Canada's International Development Research Centre (IDRC) supports action-oriented research projects, in close collaboration with partners from the developing world, to build evidence towards building healthier, more equitable and more prosperous societies. To date, IDRC projects have had a significant impact, particularly in Community-based Natural Resource Management and in using Information and Communication Technologies (ICTs) for development. IDRC support for Bhutanese projects and interests ties into government's development strategy to increase Gross National Happiness (GNH).

The government wishes to retain the country's unique culture and safeguard its social values through the GNH concept. To "operationalize" GNH, it hosted an international conference in 2004. With IDRC support, GPI*Atlantic* (Genuine Progress Index for Atlantic Canada), a Canadian research organization based in Nova Scotia, attended the conference in Bhutan and held a follow up conference in Halifax. IDRC-supported research contributes to three important pillars of GNH: conservation of the natural environment, equitable and sustainable socio-economic development, and good governance.

### **Natural Resource Management:**

IDRC is supporting the government's implementation of a policy that places natural resources under the management of the communities that depend on them. IDRC's research partner, the Council for Renewable Natural Resources Research of Bhutan, which is part of the Ministry of Agriculture, is conducting local research and training activities to define what this policy means in practice, and ensure that all Ministry staff also understands how to proceed with implementation.

Additionally, IDRC has been promoting Community-based Natural Resource Management in Asia since 1997. Although this approach is being used in research activities in 10 Asian countries, Bhutan is the first country to have adopted it as a national strategy. Following research supported by IDRC and the Swiss Agency for Development Cooperation (SDC), the Ministry of Agriculture developed a national framework and action plan based on the approach in 2002. Bhutan is also benefiting from an IDRC-supported regional effort to help government agencies involve the most marginalized members of society in the community management of natural resources.

IDRC-funded research in the 1980s has laid much of the groundwork for these efforts. The first activity IDRC supported in Bhutan, in 1984, focused on improving rice crops. The International Rice Research Institute, based in the Philippines, trained 40 scientists and technicians in farming systems research, an approach that improves seeds, access to water, farming techniques, and post harvest processing technologies. This support laid the foundation for Bhutan's national rice research and development program, and strengthened the Ministry of Agriculture's extension activities.

### **Information and Communications Technology for Development:**

As a country that has relatively recently introduced several information and communication technologies (ICTs), Bhutan provides a strong example of a nation that is 'leap-frogging' over older, and often, obsolete technologies by making well-informed decisions to use proven technologies that will work for Bhutan's unique geographic and socio-economic situation. IDRC's Pan Asia Networking (PAN) program has worked with Bhutan from the very beginning to ensure ICTs are introduced to the kingdom and its proliferation and applications unfold in an equitable manner to benefit Bhutanese society.

Beginning with co-funding the first Internet Service Provider (Druknet) in 1999, IDRC has since worked with:

a) **The National Institute of Education (NIE)** to support a distance education project for teachers in Samste to strengthen teacher training programs. This project is one of nine projects that form PAN's regional distance education network – PANdora (Pan Asia Networking Distance and Open Resource Access – [www.pandora-asia.org](http://www.pandora-asia.org)). Following a survey to assess the needs and views of students about ICTs, NIE introduced an open source learning management system for use with four course modules – more will be added in subsequent years. This project supports course materials, which use both online and traditional media.

b) **And partnered with the Department of Information and Technology (DIT)** on two key projects – the first is PAN Localization project ([www.pan110.net](http://www.pan110.net)), which enables Dzongkha use for computers and the second is a rural connectivity project that is designed and deployed in rural areas in a way that leverages Bhutan's high mountain passes through the use of Wireless Fidelity (WiFi) technologies.

Dzongkha Linux is a locally developed version of the freely available Linux operation system. The project, which began in 2002, offers various computing applications in Dzongkha, including word processing, spreadsheets, presentations, as well as email, chatting and web browsing applications. The first phase of the project is coming to a close in mid-2007, before which a regional meeting for the PAN110n projects will be held in Thimphu in January 2007. A second multi-year phase of this regional project has been approved by PAN-IDRC.

The Ministry of Information and Communication's Department of Information Technology, is seeking to identify the best Wireless Fidelity (Wi-Fi) solutions to suite the unique condition and needs of rural Bhutanese citizens. Tangmachu, Lhuntse and Kuenga Rabten, Trongsa have been selected for this project. Individuals from various groups in these areas participated with researchers to decide on their communication and information needs. They have input into the design and testing of the systems, then join in evaluating their social and economic impacts. At completion, Bhutan will have gained new capabilities in setting up and running WiFi networks, developing content and applications for rural users, and planning using participatory processes.



*Pema, the centre manager in Tangmachu helps a local user*

PAN-IDRC has selected Bhutan as one of its focus countries to conduct holistic country programming in the coming five years (2006-2011).

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