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# Bridging the Mountainous Divide: A Case for ICTs for Mountain Women

Helen Aitkin

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*Why would a telecommunication provider consider investing in telecommunications infrastructure services in remote mountainous areas? Population is sparse; installation costs are especially high given the poor road conditions, the distance from the main grid, and the frequent lack of reliable electricity; economies tend to operate at a subsistence level; villagers are often illiterate and unskilled in the use of even the most basic telecom services; and many mountain people are from minority groups, isolated as much by geography as by their language and culture.*

*Often, too, isolated mountain communities have a disproportionately high popula-*

*tion of women, children, and the elderly, on account of the common and ever-increasing out-migration by men of the household for seasonal employment. The women left behind are generally already overburdened with the responsibilities of family and home as well as subsistence farming and microeconomic activities. Why also should governments or donor agencies choose to invest limited resources in information and communication technologies (ICTs) when basic human needs—food, health, clean water, and education—urgently require improvement? How have ICTs ever benefited the poor? This article gives examples of successful ventures in mountain regions.*



## Food or information and communication technologies?

The case for investment in information and communication technologies (ICTs) for remote mountain communities is very compelling. From Thailand to Bolivia, Uganda to Nepal, India to Ecuador, stories are unfolding of how new ICTs are making a difference in the lives of real people in rural and remote communities—farmers, traders, market women, migrant workers—people young and old, men as well as women (Figure 1).

There has been much discussion among donor agencies and national telecom policy-makers committed to finding solutions to bridging the digital divide and seeking sustainable solutions to the challenge of providing telephone and Internet access to people living in rural and remote communities. Interesting and informative stories are now being told about rural and remote telecom innovation—stories that support the business case for a demand-based telecom service. Indeed, people in rural and remote communities want and need improved access to the information highway (Figure 2).

## Telephones: the quick link to the outside world

In the mountainous areas of northern Thailand, minority hill tribes living in widely scattered villages are isolated by poor and sometimes impassable roads, by

lack of community access, and by their language and culture. Many villages are still without electricity. Before telephones were first introduced in this region in the mid-1990s, the hill people, who are largely small-scale farmers, had no access to emergency health or security services and were completely cut off from family members who were working or studying in other areas.

## Quick access to market prices

Once public telephones were installed, they were quickly adopted and put to use in a variety of social and economic applications. As in lowland areas, access to telephones has increased the availability of market price information. Now, when farmers sell their vegetables and fruits to traders who come to the village areas, they know whether they are being offered a fair price. The traders, in turn, are more willing to pay a higher price for goods, with the knowledge of profit potential when they take the goods to market in larger urban centers. This has had the effect of stimulating trade and boosting vegetable production in the hill regions. Before telephones were installed, the only source of information on market prices was from individuals returning from lowland towns.

## Shortest road

With the advent of telephones, local retail stores in highland centers accessible by road are able to phone in orders for



**FIGURE 1** Women at the ProMujer Center in La Paz, Bolivia received computer training in a program designed to help young mothers find employment. Now, their young children come to the Center after school, where their mothers can introduce them to computer skills. (Photo by Galin Kora, TeleCommons Development Group)



**FIGURE 2** Women gather around one of the Internet terminals in the Nakaseke Telecentre in Uganda. These women were accustomed to being laughed at when they approached a computer. Now, they have direct access to the information they need to improve their productivity without relying on an agricultural extension agent, who is most likely a man and who, experience shows, communicates only with men farmers. (Photo by Anne S. Walker, International Women's Tribune Centre)

goods from Chiang Mai wholesalers, who now deliver the products to the stores. Earlier, retailers had to travel to Chiang Mai themselves to pick up the goods—a journey of half a day or more.

### **Social bridge**

Keeping in touch with family members working and studying in other areas is of particular importance to people from minority tribes: the human connection is worth the price of a phone call. Because of social and cultural differences, those who relocate to more urban areas, even within Thailand, feel isolated from their families by both distance and language, and phone calls are a highly valued life-line. A telecommunication needs assessment undertaken in the community of Pong Phayao in northern Thailand in 2001 indicated that by far the main purpose of outgoing phone calls was to keep in touch with family and friends. Sixty-five percent of the calls were family related, in comparison with the next most important reason, which was business related.

Women, however, were most likely to make a family-related phone call (72% of the calls). This may be partly attributable

### **Take Hold of What You Have**

Don't let the changing times ...  
The changing technology mean  
technology changing hands.  
Don't lose your ground in the game  
they call development.

Take hold of what you have,  
of what you know and do already.  
Keep it.  
Cultivate it.  
Capture innovations,  
and invent.  
Teach yourselves,  
set your own horizons.  
Take part fiercely in the future.  
Take stock of changing times.

Be all that you can  
and all that you want.

(From *Tech and Tools* by Elizabeth Cox, Papua New Guinea, 1995; NGO forum in Nairobi, Kenya.)

to the phenomenon of out-migration of men for work. The same study noted that between 10% and 15% of men from the northern Thailand communities left for work outside the hill areas to earn money to send back to their families. A demand study undertaken by the TeleCommons Development Group in the Bolivian highlands found that women use the phone on average between 2.6 and 3.3 times per month (compared with between 4 and 5.2 times per month for men) and make more international calls than do men.

### **Financial safety net**

Not only does the telephone make it easier to look for work, but it is also a critical tool for facilitating the flow of remittance payments, which can constitute a significant portion of the household income. In Nepal, Bangladesh, and Haiti, as in the many other countries where remittances are an ever-increasing source of revenue for families in rural and remote communities, the cost of a phone call is easily justified when it can trigger a payment or track its safe delivery (Figure 3).

In Haiti the incredible phenomenon of remittances from emigrant family mem-



bers has fueled the telecom industry. In fact, this has driven both telephone use and the use of the Internet to make phone calls through “voice-over IP.” People quickly embraced the new technology because voice-over IP provides a cheaper alternative to Teleco Haiti’s long-distance rates. Jean-Pierre Bailly, owner of a large cyber-café in the capital, Port-au-Prince, says that people are willing to come in from the rural areas to make these cheaper phone calls. He also notes that people use the Internet for one reason—to ask for money. “Send more money” is the message that constantly echoes through the cyber-café—and this money, amounting to at least \$3 million a day, is the country’s main “industry.”

### Awareness of the power of ICTs drives demand

People are quick to adopt new technologies and learn the necessary skills to operate them effectively if they can clearly perceive the practical benefits. The Internet is a communication technology that requires more skill than does a telephone to be used effectively. But it can be an appropriate technology for women in mountainous regions, despite the challenges of connectivity, language, literacy, and lack of time and interest in a technology, which may be perceived as just one more thing to crowd an already too busy day.

Introduction of Internet access and use in rural and remote communities is a gradual process. It is certainly not the priority of Internet Service Providers, whose interests lie in the profitable densely populated urban centers. Nonetheless, many countries have put in place policies that require telecommunication providers to serve rural communities with quality voice and data services. The new lines, or in many cases satellite connections that are being extended to communities that formerly had little or no access to a telephone in their community, can provide Internet as well as telephone services.

### Policies keep women in the picture

Concurrent with the rural rollout of telephone lines has been a commitment from



**FIGURE 3** A woman of the Dalit caste, considered the lowest social class, receives a phone call from her husband, who is away working in Kathmandu. The phone call confirms that her husband has sent money, which the family in the remote mountain village of Ramghat, Nepal, can soon expect to arrive to support their basic needs. (Photo by Ricardo Ramirez)

international organizations to “bridge the digital divide.” This has resulted not only in the promotion of telecom deregulation but also in the phenomenon of donor-supported “telecenters” that generally support a suite of services, which may include telephone, fax, Internet, and printing capabilities. This has led to some interesting experiments in “last-mile” solutions, such as the installation of donor-funded public access telecenters in libraries, schools or community centers, or as fully funded stand-alone entities. Although many of the telecenters established with external funding are not likely to survive without ongoing financial support, they have played a role in raising awareness of the potential use of new ICTs and in training in the use of these facilities.

Because donor policies generally promote gender equality, women and girls have been encouraged to use telecenters, and programs have been developed around their needs and interests. A telecenter initiative currently underway in Thailand is encouraging full community participation in the planning of the telecaster’s location, management, and services. Participatory planning workshops were held in 6 communities to raise awareness of ICTs, to identify barriers to access, to

*“You see 80-year-old women from the countryside telephoning. Who would have even thought 10 years ago that they’d ever be using a computer?” (Jean-Pierre Bailly, Port-au-Prince, Haiti)*



**FIGURE 4** Rita Mijumbi, a consultant for the International Women's Tribune Centre (IWTC), uses a digital camera to take photos for a CD-ROM for rural women, destined for use at telecenters in Uganda. (Photo by Anne S. Walker, IWTC)

map information and communication needs, and to develop a community action plan for the implementation of the project. Women participated equally in the planning, to ensure that the telecenters are designed to serve their needs and that they feel a sense of ownership of the finished product.

For Rita Mijumbi in Uganda, e-mail is an important tool in the work she does helping women learn to use computers and the Internet (Figure 4). Project management and communication with project sponsors relies heavily on e-mail, though this is something she does not take for granted. "Rural telecommunication is still a big challenge!" she writes. "When I am out there in my upcountry office, I take days without checking my e-mail! We still can't get a sustainable e-mail/Internet solution to that part of the country." Like Rita, a Ugandan organization, WOUGHNET, relies on the Internet to link women's organizations within Uganda and

worldwide, with the goal of promoting the use of ICTs to improve the lives of women by sharing experiences and linking with funding agencies and other resources through their web site [www.woughnet.org](http://www.woughnet.org). Although at this stage most Internet users in Uganda are professional women, training, promotion, and improved access to the Internet have encouraged more women farmers to explore the power of the Internet to locate farming information, and more entrepreneurs to use the Internet as a business tool.

### Women's special role in driving ICTs

Women are often the primary drivers of ICT development in their communities and, in many cases, make up the majority of the sellers of ICT services. In Thailand, women manage most of the existing telecenters. In Bangladesh, the Grameen Village Phone program provides cell phones to village women through a microcredit loan, which casts them in the role of the local public telephone provider (Figure 5). An evaluation of this program found that when village women are the operators, phone use and revenues are significantly higher than in those few instances when men provided the same service.

Promoting the involvement of women in ICT initiatives has proven to have significant development benefits. The Grameen Village Phone operators have gained significant social status within their communities, both because of their increased income and recognition of the important service they provide. Improved communication and information access has a direct impact on social and economic development, particularly in rural and remote communities. It is, therefore, critical to ensure that women have full opportunity to gain equal access to ICTs, to learn how to use them effectively, and to share in the social and economic rewards ICTs can generate. Moreover, women should be involved in planning and decision making to ensure that ICT programs are designed in a way that is relevant to their needs.

### Key issues and considerations

1. Women in mountainous regions, like women in all communities, have a need to communicate.
2. Women in mountainous regions, like women in all communities, have a need for information.
3. The Internet is only one of a number of different communication media. Telephone and radio are key communication channels that must not be overlooked.
4. Remittance economies often drive the need for communication within families.
5. Young people from isolated areas who have moved to distant urban centers for further education are a driving force behind the need for communication.
6. Women, particularly in cultures with distinct differentiation of gender roles, need to be exposed to ICTs in order to begin to learn to harness the power of new communication tools.
7. The cost of a phone call can be easily justified given the savings in time and transportation costs or the remittance revenue it generates.
8. Provision of telecom services by a woman operator is sometimes the key to optimum use and provider profitability.
9. There is a role for donor agencies in subsidizing and supporting telecom initiatives for mountain women. Kick starting projects, raising awareness of the



**FIGURE 5** Grameen Village-Phone operator Parveena Aktar provides telephone service to people in her village in Bangladesh. Purchased with a micro-credit loan from the Grameen Bank, the mobile telephone makes it possible for people in the community to keep in touch with their families working or living out of town, and income from phone services allows Parveena to pay back her loan and earn a good living. (Photo by Don Richardson, TeleCommons Development Group)

potential of ICTs, capacity building, and fostering a “culture of communication” can help women identify for themselves how telecommunication—telephone and Internet—can be used as a practical tool to help them improve their livelihoods and even save money.

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### FURTHER READING

**Marcelle G.** 1997. Removing gender barriers: level playing field for women. *Voices for Change: A Journal on Communication for Development* 1.3:38–40.

**Midas Agronomics and Resource Management and Development Centre, Chiang Mai University (RMDC-CMU).** 1996. *Towards Universal Access: Linking Remote Areas. Socioeconomic Impact Study of Rural Telecommunications in Thailand.* Bangkok: Midas Agronomics.

**Lachance A.** 2001. Downloading dollars. *Enroute*. Oct: 61–64.

**No-Frills Consultants, Intelcon.** 1998. *Rural Telecommunications in Nepal: A Socio-Economic Study.* Kathmandu: Danish Development Agency (DANIDA).

**Richardson D, Ramirez R, Moinul Haq.** 2000. *Grameen Telecom's Village Phone Programme in Rural Bangladesh: A Multi-Media Case Study.* Guelph, ON, Canada: TeleCommons Development Group. Available at www.telecommons.com/villagephone/index.html.

**Winrock International, TeleCommons Development Group.** 2002. *Rural Connectivity and Energy Initiative* [draft report available from the author]. Arlington, VA: Winrock International.