
SDNP Mozambique: Taking Risks: Developing Regional Connectivity

"We have a different type of society here," says Teresa Alfaro, National Co-ordinator of SDNP in Mozambique. "There are very poor people who don't have access to anything. Then there's the other class that has access to everything. Unfortunately, the middle class is very small." This is one reason why it is so difficult to introduce Information Technology (IT) in Mozambique. There's also the 40 percent adult literacy rate, and a ratio of three telephone lines for every 1,000 people.

Then there is geography. The country is large, and most of the wealth, the infrastructure and the opportunities are concentrated in the capital, Maputo, at the very southern tip. In Mozambique, everything outside Maputo is "remote." "When I say remote, I'm not talking about rural areas," says Ms. Alfaro. "I'm talking about the capitals of provinces."

Up-country connectivity

SDNP was setup in Mozambique in 1996 and is based in the Ministry for the Co-ordination of Environmental Affairs - MICOA, the government institution responsible for the development of a national strategy for sustainable development.

A significant information gap had existed in Mozambique on issues related to sustainable development and environmental management in general. The decade long war which ended in 1975 had essentially sealed off large parts of the country. Research and development had come to a virtual standstill. Much of the infrastructure had been destroyed during the war. Communications between the capital, provincial and district authorities have been very difficult.

The objective of SDNP was to provide connectivity where not available, users training and development of content on sustainable development.

When the project started in 1996, only the Universidade Eduardo Mondlane (CIUEM) was providing Internet access in the capital at a cost of 75 USD/month. By 1997 the IT situation in Maputo, the capital city, had changed with 5 other ISP entering the market and prices going down from 45 to 25USD /month. By that time SDNP, had established two e-mail nodes in Beira and Nampula: the first e-mail servers to be placed in the Center and North of the country! Now the nodes are working successfully, serving about 120 people.

But Internet access was prohibitive outside the capital, due both to high telephone costs and heavily congested lines. So with strong support from the UNDP Resident Representant a huge task was assigned to SDNP: to help in regional development by providing full Internet access to the center of the country by placing a [VSAT](#) [Very Small Aperture Terminal] in Beira.

SDNP Mozambique received US \$500,000 from local UNDP resources, in addition to basic project funds of US \$200,000 from UNDP headquarters, for the project period 1997 - 1998. Most of the US \$500,000 was to be used to set up VSATs in the provincial capitals of Beira in central Mozambique, and Nampula in the North, where people would otherwise have no access to email or the Internet. The money was also used to upgrade existing IT infrastructure in Maputo, and a third VSAT is planned for the Northern city of Quelimane.

Beira, Mozambique's second largest city is the capital of Sofala province. It acts as the business

and transport hub for the central region of the country. The development of the city is closely linked to the port and the railway which were designed to serve most of Mozambique's inland neighbors - the Beira Corridor. Communication in Beira was still mainly by fax, at very high costs, and as with any international call, the minimum cost was equivalent to a three minute connection.

The new provincial IT nodes are each housed in recently-built universities. The VSAT in Beira operates through an agreement between the Catholic University of Mozambique and the Ministry of Environmental Affairs, which provides office space in Maputo for SDNP and with which it collaborates closely. The Beira hub will be part of the Catholic University's Centre for Research and Documentation on Integrated Development (CIDDI), which already has 15 computers. Students at Beira's Pedagogic University will also benefit from email and Internet access. Moreover, SDNP subsidises the cost of the leased lines at the two universities, for about US \$300 a month.

We have two main objectives," says Ms. Alfaro. "The first one is to provide access via dedicated lines to the two universities in Beira. The second is to promote the establishment of ISPs in Beira." Currently Internet and TCP/IP based networking skills are virtually non-existent in Beira. As a result, another goal of the project is to build up pool of competent Internet technical administrators capable of installing and maintaining a growing network.

This will start with a series of on-site training and installation workshops in Beira which will take place at the hub and at the premises of each user as they are being connected to the network.

SDNP is entering into a Build-Operate-Transfer agreement with Telecomunicac es de Mocambique (TDM), the national operator company which has a monopoly on voice but not data communications. TDM had planned to bring an Internet node to Beira, however the time-frame and system had not been decided upon. So it was determined that the best strategy would be to provide the VSAT equipment to TDM.

This initiative is seen as serving a useful role in speeding up the process of establishing a low cost Internet hub in Beira. It also facilitates the development of the industrial and commercial sectors which are the basis for growth in the city, and circumvents the threat of TDM establishing a competing service. Under the current arrangement, TDM will not charge for the VSAT or hub equipment housing facilities for the duration of the project and in return it would eventually be given the VSAT equipment. In addition, TDM would also be able to select two of its staff to attend the training workshops, and access to the Internet link at no cost.

"When pioneering IT in a country like Mozambique, you may have to invest a lot in basic infrastructure and hardware, only to serve a few customers, at least at first. Ultimately we want to leave connectivity behind because there are others doing it," says Ms. Alfaro. "But we still believe we have to go ahead with it in places like in the North where you have 30 or 40 people interested, but the ISPs will not set up a server for 30 people." So SDNP decided to fill the gap. Having so far trained 45 people in the provinces and many more in Maputo there are now 120 users linked to the provincial nodes.

Training, modems and support for entrepreneurs

But setting up email links was not enough. The SDNP team wanted to reach all those who wanted training in the use of email and the Internet, and in a number of software programmes. Often they needed modems as well. "The problem was that no one was used to this technology," says Ms. Alfaro, "so we started providing free modems and free training, mainly to Government, the universities, enterprises and NGOs. For the first two years we dedicated most of our time to training these types of people, and we're still doing it."

Ms. Alfaro estimates that about two percent of the modems SDNP distributed went to private businesses. She says that providing IT to Mozambique's fledgling business sector right now is crucial in order to "start the process" of economic development of her country. "We need those enterprises to be using email," she explains. "It's important to us because at the moment they are the ones that are holding the economy together. So if we want the economy to move, if we want them to have access to international prices and international markets, they must start using these technologies."

Telecentres for youth

SDNP is also planning to establish four Youth Communication Facilities or Telecentres, one in each region of the country. "It's for youngsters to have access, not only to the Internet, but to computers in general," Ms. Alfaro explains. SDNP Mozambique has received US \$60,000 from the Canadian NGO IDRC (the International Development Research Council) in support of these Telecentres. The first centre will be set up at the local headquarters of the Ministry of the Environment in Quelimane in the North, where SDNP plans to install a third VSAT.

Actually, a de facto telecentre already exists in Maputo in SDNP's office at the Ministry of the Environment. SDNP had set up a computer with a modem for public access at Maputo's central library, but problems arose when people started dialing the server. "Telephone communications are expensive," says Ms. Alfaro, "so the library sends people to our office where we have a leased line. We allow people to come here and look for whatever they want on the Internet." Every day, about five people, mostly students and journalists, come to the SDNP office to get on line.

At present, future activities of SDNP Mozambique are uncertain. Funding from UNDP has ended, and while the Ministry of the Environment provides office facilities, it does not offer financial support. An independent study is being conducted to determine whether SDNP can become self-supporting by charging fees for training and connectivity. Whatever the outcome, the first steps have been taken toward "decentralising" IT access in Mozambique.

If you would like to contribute to sustaining this and similar initiatives, for more information write to: info@sdnp.undp.org

Definitions: VSAT

VSAT or Very Small Aperture Terminals are small, software-driven earth stations, used for the reliable transmission of data, video, or voice via satellite. A VSAT network consists of a central hub (master earth station), many remote VSATs, and the satellite transponder space segment. The hub station is always larger than the remote VSATs. The VSAT equipment consists of two units: one placed outdoors for a line-of-sight to the satellite, and one placed indoors to interface with the user's communications device (e.g. data terminal equipment). The outdoor unit consists of a small antenna, mount, and electronics for signal reception and transmission. The indoor unit is a small desktop box that contains receiver and transmitter boards and an interface to the user's equipment. Both units are connected via cabling. A VSAT network can be provided through a purchase or lease arrangement with fixed transmission costs regardless of distance or number of receiving sites. VSATs have become a solution in many developing countries to extend data, voice and video communications, providing high quality digital links to locations where telephone services are poor or not available.