

## Pakistan: Success in Networking for Development

On a stifling day in May, 1993, two and a half tons of an unidentified chemical substance were found near a railway station in Karachi, Pakistan. A warehouse owner, thinking the material might be useful for something, picked it up. He and his driver died soon afterwards from inhaling toxic fumes. The local police then impounded the material, dumping it into the already polluted Lyari River.

When the story was reported by the press, it caused alarm. The International Union for the Conservation of Nature (IUCN), which had assisted the Government of Pakistan in producing a National Conservation Strategy, took the lead in demanding the safe disposal of the material. It was removed from the river and a sample of it tested under IUCN's auspices in a well-known chemistry research institute. The substance was identified as *meta-dinitrobenzene*, a highly toxic, potentially explosive chemical.

Neither the government nor the NGOs involved had any idea how to disposal of this material, or even how to handle it safely. So IUCN contacted its partner organisation, the Sustainable Development Networking Programme (SDNP Pakistan), recently established in the capital, Islamabad, to promote the use of Information Technologies in support of sustainable development. SDNP's infrastructure was not yet in place, and no one in Pakistan had access to either email or the Internet. All SDNP staff could do was dial long distance to a commercial, store-and-forward Bulletin Board System (See box on technical terms, page ...) in Lahore, 250 kms from Islamabad. Their message was an SOS appeal for information and expert advice addressed to two Internet conferences, or newsgroups: en.toxics on PeaceNet and en.alerts on EcoNet, on the Association of Progressive Communications (APC) network.

The response -- both through fax and e-mail -- was overwhelming. More than 50 individuals and organisations responded to the highly technical query with concrete suggestions and offers of help. There were responses from places as diverse as Brazil and Finland, New Zealand and Switzerland, in addition to the US, the UK, and Germany. Respondents included leading organisations, experts in related fields, students and concerned individuals, and Pakistani expatriates.

Some of these individuals searched commercial databases to retrieve useful information, while others sent comprehensive fact sheets covering the properties of the substance, how to handle it, its known effects on human beings and possible ways of detoxification and disposal. All this information, which poured in for more than a week, was enough to compile a small book. And it provided ample guidelines for the safe incineration of the material outside the city.

### A four-part partnership

This incident demonstrates why UNDP has set up a global chain of 25 national SDNPs (with activities in a total of 40 countries) as a means of helping countries fulfill the guidelines of Agenda 21 and promote sustainable development. And it equally vindicates the support that SDNP Pakistan's programme manager, IUCN, has provided in making SDNP an engine of Pakistan's National Conservation Strategy.

The partnership with IUCN has been a central feature of SDNPK since its inception. "Our idea was that there should be freer flows of information and more -- also better -- information on development and the environment," says Dhunmai Cowasjee, head of the Communications Unit of IUCN Pakistan. "So when UNDP first spoke about the SDNP project, IUCN was very willing to become a partner and manage the project." IUCN Pakistan receives a management fee of 10 percent of the project budget from SDNP funds.

As a result of the safe disposal of the toxic material in 1993, IUCN was asked to prepare a protocol manual for Pakistan's civil administration, using the information SDNPK had gathered. And for the fledgling SDNPK, faced with the task of "waking up" the country to the benefits of Information Technologies (IT), the dumping of this chemical proved to be a blessing in disguise. The crisis and its safe resolution were widely publicised in the media, and SDNPK won recognition overnight.

During the initial phase of the project -- January to June 1993 -- funding in the amount of US \$60,000 was channeled from UNDP directly to IUCN, as project manager. A portion of this amount was even carried over into the second phase of the project, which lasted from February, 1995 to July, 1996. During this second phase, UNDP contributed US

\$225,000, while an additional US \$225,000 came from Canada's International Development Research Centre (IDRC).

Paul Oquist, head of the Governance Unit at UNDP Pakistan, has been involved with SDNP since the early days. "SDNP was the pioneer in e-mail connectivity in Pakistan," he explains. "It literally played an historic role in that regard. The transparency that can come from open access to information is an important step in Pakistan's efforts to attain greater accountability in public affairs."

David Balsom was Senior Programme Specialist at IDRC at the time, and had himself been a pioneer in trying to promote email and networking in support of

development and research activities since the early 1980s. "At that time, most people in the North -- development professionals and donors -- thought it was inappropriate

to invest development money in such a programme," he says. "But in the South, NGOs and some of the poorest countries were the most receptive to exploring the use of email in support of their activities." The technology was seen as a means of overcoming some North-South inequities and building empowerment through better access to information and broader participation in regional and global activities.

By the early 90's, programmes such as UNDP's SDNP had come on the scene, and IDRC agreed to collaborate with SDNP, says Mr. Balsom, largely because of the strengths of the other partners. "There was a very supportive UNDP Resident Representative, a dynamic NGO, IUCN, to manage the project, and a very capable Project Leader," he explains. "It was an ideal situation, and I think the project has played a significant role in advancing networking in Pakistan."

Dhunmai Cowasjee of IUCN is also enthusiastic about the ways in which SDNP has helped support her agency's goals, such as the publication of IUCN's monthly, Urdu-language, environmental magazine on SDNP's network. "This project that has gone much further than we originally envisaged," she says.

### **Starting from zero**

When SDNPK started working in Pakistan in 1993, there was an IT vacuum in the country which SDNP had to be addressed if the project was to function at all. "Pakistan was lagging behind in electronic networking services," says Hasan Rizvi, National Co-ordinator of SDN Pakistan. "The reason was the monopoly of the Pakistani carrier, the government-owned PTT." During SDNP's first year of operations, an opportunity presented itself to address this problem directly.

In 1993, SDNPK helped prepare a policy paper for the Information and Communication Committee of the Prime Minister's Research and Analysis wing. The paper recommended the privatisation of data communications in Pakistan. "The Prime Minister must have liked our argument," says Mr. Rizvi. Within a year the government opened data networking to the private sector. "That was when Pakistan made a big leap in getting Internet services. Today, there are more than 30 ISPs operating in the country."

### **Simple, inexpensive technology**

At the beginning, with no IT infrastructure in place and all of Pakistan to work with, Mr. Rizvi found instead that the most economical and simplest option was to set up store-and-forward UUCP nodes in major cities of the country. Email was exchanged via a dial-up link with SDNP headquarters at UNDP in New York. This did not involve major capital outlay, nor did it require state-of-the-art technology. According to Mr. Rizvi, it involved "one or two computers and two or three phone lines and modems in our office, first in Islamabad, then in the other cities as well."

He says that one of the reasons for the reliability of SDNP's services, especially in the beginning when there were no online services available in the country, was the support received from SDNP headquarters in New York. All international mail addressed to Pakistan, and all mail from Pakistan to international channels, was exchanged via a single call each time. The system almost never failed. This kind of diligence earned SDNP a reputation for providing the most reliable email service in the country. "Until the end of 1996 when big ISPs came in with online Internet service, SDNP was by far the largest network in the country. Even now it is one of the biggest," says Mr. Rizvi."

A UUCP node was installed in Islamabad in March, 1994, in Karachi and Lahore in March, 1995, in Peshawar near the

Afghan border in December, 1995, and in Quetta, capital of Baluchistan, in August, 1998. SDNP has a total staff of nine to run these four operations, with IUCN directly managing the Karachi node. By March, 1999, some 5,000 organisations and individuals around the country had email and Internet access through SDNP Pakistan, which translates to a total of 15,000 to 20,000 individual users. Even in "backward," sparsely-populated Baluchistan, there are 220 links to the Quetta node.

### **Networks of stakeholders**

During its pilot phase, SDNP came up with a blueprint for a multi-sectoral information network of key implementors of sustainable development, an idea which, given the newness of IT in Pakistan, Mr. Rizvi describes as "rather grandiose." Called the Business, Education, Research and Development Network, or BERDNET, the system was designed to provide information and discussion networks for individuals active in these and other sectors. To set up the network, SDNP conducted an information needs survey among organisations and individuals involved in sustainable development activities, some of whom were already members of the IUCN network in Pakistan. There were nearly 30 such organisations and individuals, including environmental and other NGOs, women's groups, policy institutes, government agencies, private businesses and consultancies, who soon formed the nucleus of SDN Pakistan's clientele.

The careful establishment of this network of key stakeholders proved to be far more effective than a more traditional marketing approach. "We did not market our services," says Mr. Rizvi, "but somehow these services came to be known through word of mouth. Once you have a critical mass, people just start clustering towards you."

Apart from special workshops for bigger organisations, such as the Pakistan Agricultural Research Council (PARC) and the Pakistan Library Association (PLA), basic training was imparted mostly at the SDNP premises. Short, customised sessions were arranged for clients weekly. To create awareness about Internet technologies among the general public, a weekly seminar on email and the Internet was held from March, 1994 until September, 1997. More advanced training was conducted almost entirely through email, including two tutorials in the use of the Internet. More than 500 people took part in the second tutorial, which took place in 1997.

Mr. Rizvi plans to launch direct online services in Islamabad, Karachi, Lahore and Peshawar by mid-1999. Until then, SDNP's services continue to be provided the old-fashioned way, by the store-and-forward UUCP system through New York; but since early 1997, instead of expensive international calls (which SDNP formerly subsidised) the exchanges with New York have been channeled through the Internet via local calls. Despite the somewhat antiquated hardware, SDN Pakistan's customers generally find their services efficient and affordable.

"Apart from global electronic mail and offline Internet services, we have a number of mailing lists, discussion lists and offline conferences," says Mr. Rizvi. "SDNPK is the only network in Pakistan which provides a sense of community to the people who log into our servers." These people, he says, don't as a rule use SDNP as a means of surfing the Net; until July 1999 the Internet access rates of other ISPs will remain more affordable. But users of SDN get local email services free of charge, and pay an average of US \$20 a month for other services, based on the volume of messages. And on SDN they find half a dozen discussion lists and more than 30 conferences and newsgroups on various topics, ranging from the environment and sustainable development to women's issues, education, information technology, public health, economic issues and NGOs.

"For example," says Mr. Rizvi, "Before the Beijing Conference for women, we set up a special list of Pakistani organisations for women which was distributed to the subscribers of SDNP." There are also news bulletins from the Islamabad Stock Exchange and a daily electronic leaflet featuring advertisements and announcements. A number of distribution lists transmit several Pakistani publications - newspapers, medical journals, a wire service and various periodicals -- to the subscribers of SDNP, who can download them into their computers.

Bilal Naqeeb is a programme specialist with Strengthening Participatory Organisations (SPO). The NGO has used SDNPK's services since 1993 to communicate daily with its five regional offices through a network SDNPK set up for SPO in Islamabad. He points out that SDNPK offers unique services to the development community. "Even when people use other servers for their Internet accounts," says Mr. Naqeeb, "They still want to keep the SDNPK account to be in touch with other development organisations."

### **Reaching the masses**

Yet the fact remains that the very prospect of ushering a country like Pakistan into the information age can be daunting. "Even if Internet services become easily available and accessible," Hasan Rizvi concedes, "the truth is that most

Pakistanis under present circumstances would not be able to use them, and would not really benefit from them."

Then there is the problem of language, an issue that excludes much of the word's population from access to IT. Of the five main Pakistani languages, there is software available only in Urdu, the national language, and as yet no standard such as ASCII has been agreed upon, so one kind of Urdu software is incompatible with another. (Still, SDNP regularly publishes an Urdu newspaper on its network, in addition to IUCN's environmental magazine, also in Urdu.) "If we had a standard for web browsing in Urdu, that would be a big achievement," says Mr. Rizvi.

Another problem in providing IT services to all of Pakistan is the remoteness and inadequate infrastructure of much of the country. This is why the installation of a UUCP node in Quetta, the capital of Baluchistan province, is so significant. Even the many commercial ISPs that now exist do not serve these areas. "Now that there are more than 30 ISPs in the country, it would seem that the connectivity problem has been taken care of," says Mr. Rizvi. "But that is only partially true. Most of these ISPs have set up shop in major cities, which means that many backward or remote areas still do not have basic connectivity."

Although Baluchistan is remote in terms of its terrain and infrastructure, its area is vast, comprising 40 percent of Pakistan. Telephone calls from town to town in Baluchistan are long distance, and prohibitively expensive. "We recently signed an agreement with the Primary Education Department of the Government of Baluchistan to link up their 24 district centers through the SDNP network," says Mr. Rizvi. "Phone lines are in place, and already six out of 24 offices of the province's Primary Education Department are linked together by email. It is expected that soon each centre will have a computer and modem as well.

### **Making money**

Accomplishments like introducing email to Baluchistan have required careful financial planning. Early on, SDNP developed a highly effective system of charging for its services. They charged members of BERDNET no registration fee, and no monthly fee. Members simply paid a nominal amount for each international email message sent via the dial-up telephone link with SDNP headquarters in New York. Those who use only local email pay nothing at all. When nodes were established in more than one city in Pakistan, a small fee was charged for messages between cities. "Users pay for the actual amount of international or inland data they send or receive through the international channels: the kilobyte of data," says Mr. Rizvi. "The main expenditure for us is the long distance calls."

Mr. Rizvi describes the financial "balancing act" SDNPK has performed. "We were trying to achieve a development objective but also wanted our operations to be sustainable," he explains. The solution was a sliding scale of rates for different customers. "Rather than confining ourselves to the so-called development sector, we opened our services to all and sundry. Our maximum rates were for the business sector, then the personal users, then the government agencies. The development agencies and the educational sector have the most concessional rates. This is an area in which SDNPK has so far achieved a dramatic success compared to any other SDNP the world over."

He's right. The strategy has not only provided for SDNP during long periods between UNDP funding cycles, but it has ensured that UNDP's contribution of US \$240,000 for the current funding cycle (October 1998 - September 2000) will be only about 16 percent of the total budget of US \$1.28 million. The remaining 84 percent will consist of revenues SDNP has generated, and expects to continue to generate, through the services it provides. "At one point, our official funding actually ended in mid-1996, and the new phase of our project started in October 1998," says Mr. Rizvi. "During all this period we did not receive a penny of support from UNDP or any other development agency. On September 30, 1998, when we went into the new phase of our project, our profits were slightly in excess of US \$600,000."

### **Present and future**

SDNP's current phase of operations is, according to Mr. Rizvi, "rather ambitious," and involves setting up full online services in Islamabad, Karachi, Lahore and Peshawar in mid-1999. This means that customers will have instant access to the Internet and faster, direct email service at affordable rates. "One thing that we want to do, and that most of our users would like us to do, is to have fixed volume charges rather than having them pay per kilobyte," says Mr. Rizvi. "This means we will allow an email account which can send and receive email up to one megabyte, which is a huge amount of data, for about US \$2 a month. This would take care of all their email for a month."

An additional, and equally important focus of SDN Pakistan will be to help improve the quantity and quality of information services in the country. "This involves working with key government agencies on public domain information, to help them put that information on the Net, in both English and, once the standard is developed, in Urdu," says Mr. Rizvi.

These efforts are linked to a UNDP Governance project called the Government Information House (GIH), still in the blueprint phase, which is designed to put public domain information from various public agencies on the Internet. Once mechanisms for its implementation have been worked out, SDNP expects to use its experience in networking with NGOs to play a key role in promoting transparency and accountability between government and civil society. "There would be very good synergy between SDNP Pakistan and the GIH," says Mr. Rizvi.

Paul Oquist, head of the Governance Unit of UNDP Pakistan, agrees. "The governance information system will promote connectivity within government and between government and the people, as well as publishing government information," he explains. "SDNP can support this advance in transparency by providing people with information about, and access to, government and communications with government. For example, SDNP could circulate information about government programmes to the NGOs in order to get an even stronger multiplier effect."

### **A plan for rural telecentres**

Key to SDNPK's success has been its partnership with other organisations, and it seems likely that this tradition will continue. Even though IT is more and more widely available in Pakistan today, SDNPK still has a distinct role to play in finding ever new ways to harness these technologies in the service of sustainable development.

One of SDNP's most faithful users has been SPO, Supporting Participatory Organisations, which works intensively to strengthen rural Community-based Organizations (CBOs) in five provinces throughout the county. The idea now, according to SPO Programme Specialist Bilal Naqeeb, is to set up telecentres in the remote parts of these rural areas.

"If SDNPK provides the services in the small towns, we can easily establish the telecentres," he says, barely containing his excitement. "We want to start in Punjab, where we have some good partner organisations, with literate people. The infrastructure is also there, so we can just provide the training and they can start working."

Hasan Rizvi is excited as well, though cautious. "We still need to try it out," he says, "and this might take place in the next few months. SPO works with literally thousands of CBOs, all over the country. We might be able to reach out first in one of the districts and then maybe, who knows, to a wider network of such CBOs in Pakistan."