*info*Dev

Facilitating communications in response to HIV/AIDS in South-East Asia

UNAIDS Case Study

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Cover photo: The InfoDev implementer in Thailand, the Mirror Arts Group conducting training.
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Photos : Mirror Arts Group, UNAIDS SEAPICT

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FACILITATING
COMMUNICATIONS IN
RESPONSE TO HIV/AIDS IN
SOUTH-EAST ASIA

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The contents of this case study are based on an evaluation conducted by Health Information Consulting (HIC) of the infoDev project in South-East Asia, which is managed by the UNAIDS Asian Pacific Intercountry Team in Bangkok. David Bridger, Information Support Manager, was the focal point for this project. The UNAIDS responsible staff member and Technical Networks Adviser was Olusoji Adeyi.

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Foreword by UNAIDS

Over the last decade developed countries have experienced dramatic changes in the scope and reach of information technologies and infrastructures. In particular, electronic communications such as e-mail and the Internet have rapidly expanded, underscoring what is commonly referred to as the 'information age' or 'digital revolution'.

For developing countries, however, this digital revolution has been slow to materialize, raising some serious concerns. How can countries already struggling to provide adequate infrastructures for health, education and agriculture hope to have the resources required to harness such technologies and gain equitable access? Without such infrastructures developing countries are becoming further marginalized, creating a digital divide – the gap between those who have access to the new digital technologies and those who do not.

In discussing information and communication technologies related to development we must consider how best to integrate them. We need to explore innovative ways to leverage the new technologies for distance learning or bringing basic HIV/AIDS prevention information to patients and practitioners or providing new crop techniques to farmers.

While these new technologies present enormous challenges they also offer potential benefits through the acceleration of economic and social development and greater inclusion of isolated populations, particularly rural, into the mainstream of society and economic activity. Such technologies enable people to share information quickly and also to participate actively in the exchange of this information. Community

organizations with e-mail access can participate in online discussions, instilling a sense of ownership of an issue and enabling debate and discussion of it in their own terms and language.

Empowerment and participation are essential components in mobilizing a country's response against HIV/AIDS. Community-based and mass organizations, community representatives and government policy-makers (collectively and individually) need access to fast and reliable sources of information. They require the capacity to share this information with key partners and players within their respective countries.

If encouraged and harnessed to its full potential, basic e-mail and Internet facilities can play a key role in identifying and documenting best practices. To contain the HIV epidemic, people must have access to timely and appropriate information among other key interventions. When used in conjunction with other forms of communication and media, e-mail and the Internet can serve as a powerful tool in prevention.

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Introduction

In 1995 it was estimated that 1 million people in South-East Asia were infected with HIV. The numbers were projected to grow to 10 million by the year 2000. At that time, the region was in the formative stages of the epidemic. Consequently, information and data concerning the impact and true state of the epidemic were similarly scarce. Although the region includes countries with cultural, social and economic diversity, which result in major differences in both the spread and response to the HIV epidemic, there was a growing realization of the regional perspectives of the epidemic and its shared determinants. Countries in the region agreed that, as well as using the experiences of the epidemic and responses from other parts of the world, a regional approach was required because many HIV/AIDS-related issues transcend national boundaries.

The prevalence and nature of the HIV epidemic vary from country to country in South-East Asia. The rates of HIV infection in the general population are comparatively low in some countries – in Indonesia and the Philippines the numbers of people living with HIV are in the order of 5 and 7 per 10 000 people respectively. In other countries the rates are markedly higher – in Cambodia, Myanmar and Thailand between 2% and 4% of the population live with HIV.

The infection rates within general populations however disguise the true problem, as specific, marginalized groups of people tend to have much higher rates of HIV infection. Because of the ready availability of illicit drugs in the region there are large numbers of injecting drug users (IDUs) and HIV prevalence is very high in this group. In Myanmar

about 70% of IDUs are infected while the rate in Thailand, where prevention programmes have been in place for a number of years, remains at 33%. Sex workers are another vulnerable group. The worst affected countries are Cambodia, Myanmar and Thailand, where the rates of infection among female sex workers in urban areas are 61%, 17.5% and 13% respectively. Although figures are difficult to obtain, a third group with very high rates of HIV infection are men who have sex with men.

Contributing factors to the spread of HIV in the region include labour migration and military conflict, which split up families, poverty and trafficking in women and girls that leads to prostitution, discrimination against people with known or suspected HIV infection, and scarcity of HIV counselling, testing facilities and condoms.

The *info*Dev implementer in Thailand, the Mirror Arts Group conducting training. Credit: Mirror Arts Group (www.bannok.com)

The *info*Dev project

To support the development of a regional approach to HIV/AIDS, UNAIDS, with funding from the World Bank, has coordinated an *info*Dev project, focused on increasing e-mail connectivity between strategic allies working in the HIV/AIDS field in South-East Asia. *info*Dev is a global grant programme managed by the World Bank to promote innovative projects on the use of information and communication technologies (ICTs), with a special emphasis on the needs of the poor in developing countries. For more information see the *info*Dev web site (www.infodev.org).

*info*Dev phase 1 project objectives

In 1996, the project began in Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Thailand, Viet Nam, and Yunnan Province in China. During the project's initial phase, e-mail connectivity was provided to the Office of the National AIDS Programmes in each country and the South-East Asian regional AIDS discussion forum (called SEA-AIDS) and a file archive for HIV/AIDS-related matters were established. A bi-weekly update on matters related to the region's common response to HIV/AIDS was produced and distributed via the SEA-AIDS forum.

*info*Dev Phase 2 project objectives

The second, much larger phase of the project was intended to expand the network by increasing connectivity to many more strategic allies in these countries. The overall objective was to facilitate the exchange of information and experiences in the region, thereby expanding and strengthening the regional networks involved in HIV/AIDS. This included the following more detailed objectives:

1. dissemination of information related to HIV/AIDS within a country;
2. interactive dialogue on HIV/AIDS between organizations and individuals within a country;
3. interactive dialogue on HIV/AIDS between organizations and individuals in the region; and
4. general development of the use of ICTs in the health sector.

The second phase has been completed in five of the nine countries. Recently, a formal evaluation of the *info*Dev project was completed to assess the project's success and make recommendations for the design and implementation of future network-building projects. The findings from the report *Evaluation of infoDev project in South-East Asia* form the basis of this case study.

Introduction to this case study: context and scope

This case study focuses on phase two of the project with particular reference to three countries – the Philippines, Thailand and Viet Nam. The case study highlights the different processes utilized and outcomes achieved in each of the three countries and discusses the lessons learned from the project. This approach enables an extrapolation of a methodology for establishing and implementing similar electronic networking projects in the future.

An overview of project implementation

1. Project initiation and sponsorship

Prior to project implementation, UNAIDS conducted an assessment and consultation exercise in each country to gain the support of the national HIV/AIDS organizations, determine the organizations to be assisted, assess the technology environment in the country and determine an implementation process. Once completed, UNAIDS developed a fully budgeted proposal.

2. Project implementation

2.1 Approach
Two approaches were employed for management and implementation during initial stages of the project.

- A commercial company was selected in the countries where services existed that was able to provide both the technical support to connect the organizations and training to use e-mail. A tendering process was completed to select the company. This approach was taken in Thailand where The Mirror Art Group, a Bangkok-based company, was selected because they had sufficient skills to provide the technical support and training; they already had a relationship with the national AIDS body as their communications subcontractor and they provided a bulletin board service for discussion on HIV/AIDS in Thailand.

- In other countries, an information officer (IO) was employed to provide both the technical support and training. This approach was chosen in Viet Nam in response to the lack of commercial companies available to provide the implementation services. In addition, the IO could serve as a liaison between the various parties involved in the project. Although commercial companies with sufficient implementation skills and resources existed in the Philippines, an IO was hired because initial results from Indonesia, Malaysia and Thailand, where commercial companies had provided the services, appeared to be less successful than in Viet Nam. In both cases, the IO was based in the UNAIDS office in the respective capital cities.

The *info*Dev Officers from Thailand, Malaysia, Indonesia and the Philippines meet in Malaysia to exchange experience and attend 5th International Congress on AIDS in Asia and the Pacific, October 1999.
Credit: UNAIDS SEAPICT

2.2 Connectivity

The commercial companies and IOs were responsible for arranging the organizations' connectivity. Most organizations were responsible for providing their own hardware, although the project made limited provision for supplying modems to a number of poorly resourced organizations in each country. The varying telecommunications environments across the countries determined the arrangements necessary for providing connectivity.

• In the Philippines and Thailand the environment was open and competitive since a number of Internet service providers (ISPs) existed. In these countries ISPs were selected on a case-by-case basis for each organization, using price and reliability as the key criteria. The infrastructure, however, was inadequate in more remote parts of the Philippines, therefore not all the organizations initially selected could be assisted. Participating organizations received access to both e-mail and Internet services.

• In Viet Nam a small number of commercial companies operated within a more restrictive regulatory environment. A reasonable telecommunications infrastructure existed within the major cities but was extremely limited in rural areas. NetNam, the commercial arm of a Government organization, was selected as the ISP to provide e-mail connection services. NetNam could provide the widest coverage of e-mail services across the country and had the most experience in providing technical assistance to Government organizations. Although most organizations were given access to e-mail services only – on the grounds that the focus of the project was to provide e-mail connectivity to allow information-sharing between organizations – NetNam was afforded both e-mail and Internet access.

2.3 Training

In all three countries, members of participating organizations were trained. Training varied in length, from one to four days. In Thailand and Viet Nam, where 40 or more organizations were assisted in each place, centralized training sessions were held with large numbers of attendees. In the Philippines, where fewer organizations participated, the IO trained participants at the office of each organization. In most cases the staff attending the training courses were novice computer users, having substantial training needs.

2.4 Ongoing technical support

Commercial companies and IOs were responsible for providing ongoing technical support to the organizations in their respective countries. As expected, the support requirements were high because of the lack of information technology (IT) skills within the organizations. Support was provided through a variety of channels – e-mail, phone calls and on-site assistance, although the latter could only be provided to organizations located in proximity to company headquarters or UNAIDS offices.

2.5 Promoting information exchange

In all three countries, one of the project's objectives was to establish a culture of information exchange. E-mail lists focusing on HIV/AIDS or wider issues were established. In each country, however, use of e-mail lists differed. In

Philippines *info*Dev Information Officer training staff of Pinoy-Plus, a Manila-based NGO. Credit: UNAIDS SEAPICT

Viet Nam, once the task of connecting and training was completed, the IO focused on the distribution of relevant information to each organization through e-mail. On a daily basis, the IO gathered HIV/AIDS-related information from a variety of sources, (including the SEA-AIDS files, UNAIDS Best Practice documents, international HIV/AIDS web sites and newspaper articles), translated the texts into Vietnamese and distributed them accordingly. The implementing company in Thailand conducted a similar exercise, albeit less frequently. The focus in the Philippines was quite different, partly because English is widely used, therefore there was less need for translated information. The IO worked closely with the organizations to effect a workplace culture change – ensuring that the staff within the organizations incorporated the use of Internet technologies, particularly e-mail, into their daily work processes. S/He encouraged them, where appropriate, to use e-mail, instead of phones and postal mail, to communicate and exchange information and ideas with other organizations working in the HIV/AIDS field.

3. Forging partnerships and alliances

The project by its very nature – expanding and strengthening networks – aimed to build partnerships and alliances. In each country UNAIDS gained the support of the key national AIDS bodies and in some countries, such as Cambodia, Laos and Viet Nam, government authorization was required before the project could commence. Once these key organizations were identified UNAIDS worked closely with them to determine the organizations to be assisted and to plan the implementation. This was a lengthy exercise taking up to a year or more, particularly in those countries where government authorization was required. It is important that, when planning any future projects, the length of time required for obtaining the support or sponsorship of these key organizations is considered.

The types of organizations assisted as part of the project varied between participating countries and broadly reflects the differing approach countries have adopted to manage the HIV/AIDS epidemic. In Cambodia, Laos and Viet Nam most of the organizations were national institutions such as ministries of health and education, research/academic organizations and mass organizations such as the Viet Nam Women's Union. By contrast, in the Philippines and Thailand most of the organizations were either non-governmental organizations (NGOs) or People living with AIDS (PWA) groups. As a result, the kinds of partnerships that developed differ significantly from country to country. The organizations in Viet Nam generally only exchanged information with other participants in the project through fairly formal and instructive communications. No evidence suggests that the project resulted in the formation of strong partnerships between the *info*Dev organizations or with private sector organizations. In the latter countries, the NGOs and PWA groups who were assisted not only share information with each other but now communicate with other NGO and community organizations, government organizations working in the HIV/AIDS area, business organizations proactive in the HIV area and funding agencies. The *info*Dev project does appear to have enabled the development of multi-sector partnerships in this group.

The project enabled organizations to establish relationships with new donors in two ways. First, in addition to the World Bank funding, other donors such as Ford Foundation and UNDP assisted some organizations to purchase PCs and printers. In some instances, this was the first time the donors assisted these organizations and they have been careful to continue the relationship since. Secondly, having the facility to communicate by e-mail and browse

the Internet has enabled organizations to find information about potential new donors and source funds from them.

4. Terminating the project and future sustainability

Initial plans for the *info*Dev project were to connect approximately 40 organizations in each country over the space of a year. At the end of that time the organizations were to assume responsibility for the ongoing commercial costs of Internet access, manage ongoing training needs within the organization and assume responsibility for the maintenance of their computer systems. Although the Thai project was completed within a year, it became apparent that this timeframe was insufficient for novice users to familiarize themselves with the computers and to incorporate the use of Internet technologies into their workplace. Many organizations did not appear to consider e-mail and the Internet as critical to their success and did not plan for the long-term sustainability of Internet access or computer maintenance.

Consequently, project duration has been extended in the more recent projects. Real benefits have been achieved in the Philippines as a result of the extension and the fact that the targets were more modest (only 15 organizations were assisted). The IO was able to provide intensive training with follow-up sessions which allowed the organizations to become fully familiar with the use of the technology, understand its importance to the organizations and make plans for future costs and maintenance of their systems.

*info*Dev monitoring and evaluation

1. Achieving the objectives

The recently completed evaluation examined whether the four objectives related to information exchange and network building were achieved. In few cases were all four objectives achieved. However, achieving one or two objectives, as was the general trend, was sufficient for most organizations to view the project positively. Generally, most organizations within a country achieved the same objective(s). Each of the countries chosen for the case study achieved different objectives as follows:

1. *Dissemination of information related to HIV/AIDS within a country.* E-mail messages, particularly to e-mail lists, are very effective ways to disseminate valuable information to large numbers of people. The *info*Dev organizations use their e-mail access to distribute HIV/AIDS-related information by this method to varying degrees. In particular, Viet Nam disseminates information in this way. With this type of communication the flow of information tends to be from the centre outwards and there is very little from the periphery inwards or horizontal peer-to-peer information exchange and development of ideas.

2. *Interactive dialogue on HIV/AIDS between organizations and individuals within a country.* By enabling organizations and individuals to share their knowledge and experiences related to HIV/AIDS it was hoped that collaborative and supportive HIV/AIDS networks would develop in each country. This was achieved in many organizations, particularly during the term of the project. The Philippines has been most successful in this regard. The country's

organizations have continued to actively request information from others, pass on information about their programmes, participate in discussions in the Pinoy Reproductive Health mailing list and incorporate the use of e-mail into their daily work processes.

3. *Interactive dialogue on HIV/AIDS between organizations and individuals in the region.* Since many HIV/AIDS-related issues transcend national boundaries, UNAIDS anticipated that organizations would share their knowledge and experiences with other institutions in the region. This has been one of the weaknesses of the project because it does not seem to have occurred to any great extent – either through the organizations' participation in discussion forums such as SEA-AIDS or communicating with individual entities in the region. The current focus appears to be on sharing information on an intra-country basis rather than inter-country.

4. *General development of the use of Internet-based information technologies in the health sector.* Although the focus of the project was on building networks via the use of e-mail, organizations have taken advantage of other benefits that Internet technologies offer. Many institutions use the Internet to access both HIV/AIDS-related and other information. In Thailand, this has been the primary focus of their electronic communications. Some organizations have developed their own web pages, which enable them to inform others of their existence and promote their programmes. Recent developments include a Thai group of organizations that discusses HIV/AIDS issues through a chat room. They are also investigating teleconferencing.

2. Extracting the lessons

Many factors had an impact on why organizations achieved the objectives to varying degrees. While some have been

highlighted in the previous sections, it is useful to summarize the key factors here as they are significant lessons to take from this project and must be considered when planning similar projects. They include:

- *Telecommunications environment.* Both the regulatory environment and the condition of the infrastructure affect the cost, speed of data transmission and reliability of connections. These had an impact on which organizations could be included in the project and determined how often, and for what purpose, organizations used their online access.
- *Socio-cultural factors.* These affect how participants use the technology. The country's level of response to the HIV/AIDS epidemic determined how the technology was used. In countries where the national response to the epidemic started relatively recently, people lacked information. Hence using e-mail to broadcast translated information to large numbers of recipients proved an effective way to rapidly improve people's knowledge. Cultural factors may have affected how comfortable participants felt with communicating via e-mail. Inevitably the presence of a language barrier had a large impact on what information people could access and with whom they could communicate.
- *Political factors.* The political structure in each country determined the best approach when informing people about HIV/AIDS information. Both dissemination of information from the centre outwards and the promotion of informal, collaborative exchanges between peers at all levels were considered as the two primary options.
- *Training and technical support.* Both the quality and availability of the training and technical support played a large role in how organizations used the technology. Those organizations that received intensive, needs-based training and timely support have been the most actively

involved in exchanging informa-
tion and collaborating with others
in the networks.

The *info*Dev implementer in Thailand,
the Mirror Arts Group conducting training.
Credit: Mirror Arts Group (www.bannok.com)

3. Identifying challenges for the future

The main challenge for the organizations involved follow-
ing the withdrawal of support is to sustain and build on
their ability to communicate electronically and to extend
their reach. Some organizations, particularly those in the
Philippines, were very aware of that need, and were encour-
aged by the IO to plan for the long term. From the project's
start they prepared for funding and the necessary technical
support to continue when the *info*Dev support was with-
drawn. These organizations have demonstrated that cost
savings on postage and faxes could be made as a result of
using e-mail, and have thus been able to compete internally
for funds to pay for ongoing commercial online access costs.
Other organizations do not appear to have planned (or were
not able to obtain funds and/or support) for the end of the
project and are now struggling with limited access or lack of
technical support.

In Viet Nam the continual cost of online access has not been
such an issue for the Government organizations. However,

these organizations faced an equal challenge in the sustainability of the translation service following the departure of the IO. Unfortunately, this was not successfully managed and currently, translated material is not regularly distributed. Consequently, the HIV/AIDS forum is used infrequently and many institutions that used e-mail to receive the translated information now only make limited use of it, if at all. Clearly, sustaining networking projects in countries where a language barrier exists requires planning for translation services on a continuous basis. This is further detailed later in the case study.

*info*Dev project: an example of best practice?

What specific elements of the project reflect best practice? For UNAIDS, best practice includes the continuous process of learning, feedback, reflection and analysis of what does and doesn't work and why. Five criteria have been identified to help analyse a practice: effectiveness, efficiency, ethical soundness, relevance and sustainability. A given practice need not meet all five best-practice criteria but should provide useful lessons that can be replicated elsewhere. The *info*Dev project demonstrates UNAIDS best practice in several ways:

Effectiveness: Measured both in numbers of organizations now able to communicate by electronic means (15-47 organizations in each country) and e-mail messages posted to e-mailing lists (103 messages posted to the Philippines–based Pinoy Reproductive Health Forum in September 2000), the project appears to be effective in attaining its goal of enabling organizations to communicate

by e-mail, thereby promoting the exchange of information about HIV/AIDS.

Efficiency: In countries like Viet Nam where many people need information about a broad range of HIV/AIDS topics, the use of e-mail lists has been an effective method of disseminating information. The recipients have often printed and distributed the information to others inside and outside their organization, thus reaching many people without access to electronic means of communication. Efficiency of implementation varied across the countries but in some cases very positive outcomes were achieved with relatively few resources. In the Philippines for example, one IO was able to provide the majority of the technical support and all the training to allow several organizations to become very proficient users of e-mail and the Internet. The other inputs included the funding for the cost of monthly Internet access for each organization and the purchase of several modems. At an individual organizational level, efficiency was further increased when participants, who had received training, passed on the information to their colleagues.

Relevance: Clearly, information is one of the keys to managing the HIV epidemic successfully. The means of preventing the epidemic's spread are known: the issue is how to get that message across to the population in a form that encourages behavioural change. Many approaches to achieving this goal have been explored and some have been proved better in specific situations than others. There is no time for everyone to make the same mistakes: the HIV/AIDS community must learn from each other's experiences to achieve the best results with the resources available. The efforts made to gain the proactive support of the national AIDS bodies, and their participation in selecting the organiza-

tions, ensured that the organizations that were assisted were relevant to the national response to the HIV/AIDS epidemic.

In several countries training was found to be inadequate. However, successful outcomes were achieved where training programmes were tailored to meet the specific needs of participants. In the Philippines, the training provided was relevant to both the needs of the participants and the goals of the project – focusing primarily on e-mail use and appropriate for novice users. Sufficient follow-up support was provided so that participants became very familiar with the use of the technology and made the necessary workplace culture change to incorporate e-mail technology into their daily work processes.

Sustainability: Although the project was only recently completed in a number of countries, a pattern has emerged with regard to ensuring that ongoing electronic access is sustainable. Those organizations, specifically in the Philippines, that incorporated e-mail and/or Internet technology into their daily work processes during the project's term, ensured sustainability regarding continuous funding expansion and strengthening of their e-mail and networking capabilities. The organizations in the Philippines and, increasingly, in Thailand are two examples of sustainability.


Staff at the Manila-based NGO, The Children's Lab, e-mailing counterparts in Indonesia. Credit: UNAIDS SEAPICT

Establishing electronic networks in the future – a best-practice methodology

Many design and implementation elements of the *info*Dev project were highly successful. The project has been a valuable exercise in enabling individuals and organizations working in the HIV/AIDS area to exchange information, share experiences and develop ideas. During the course of the project, and as a result of the formal evaluation, insights have been gained as to a) the specific factors that determine the possible outcomes and b) the problems that are common to projects like this and how they may be resolved. Accordingly, a methodology has been proposed to assess the future feasibility and support the planning and implementation of similar projects to establish electronic communication networks.

The flow chart on pages 26-27 shows the process, depicting the project's various stages. They include:
1. Defining the project's objective(s) and identifying the countries to be involved.
2. Evaluating the factors that will determine the specific objectives for the network in each country and the approach to implementation.
3. Determining the approach to implementation.
4. Planning the implementation.
5. Implementing the electronic network.
6. Evaluating the outcomes.
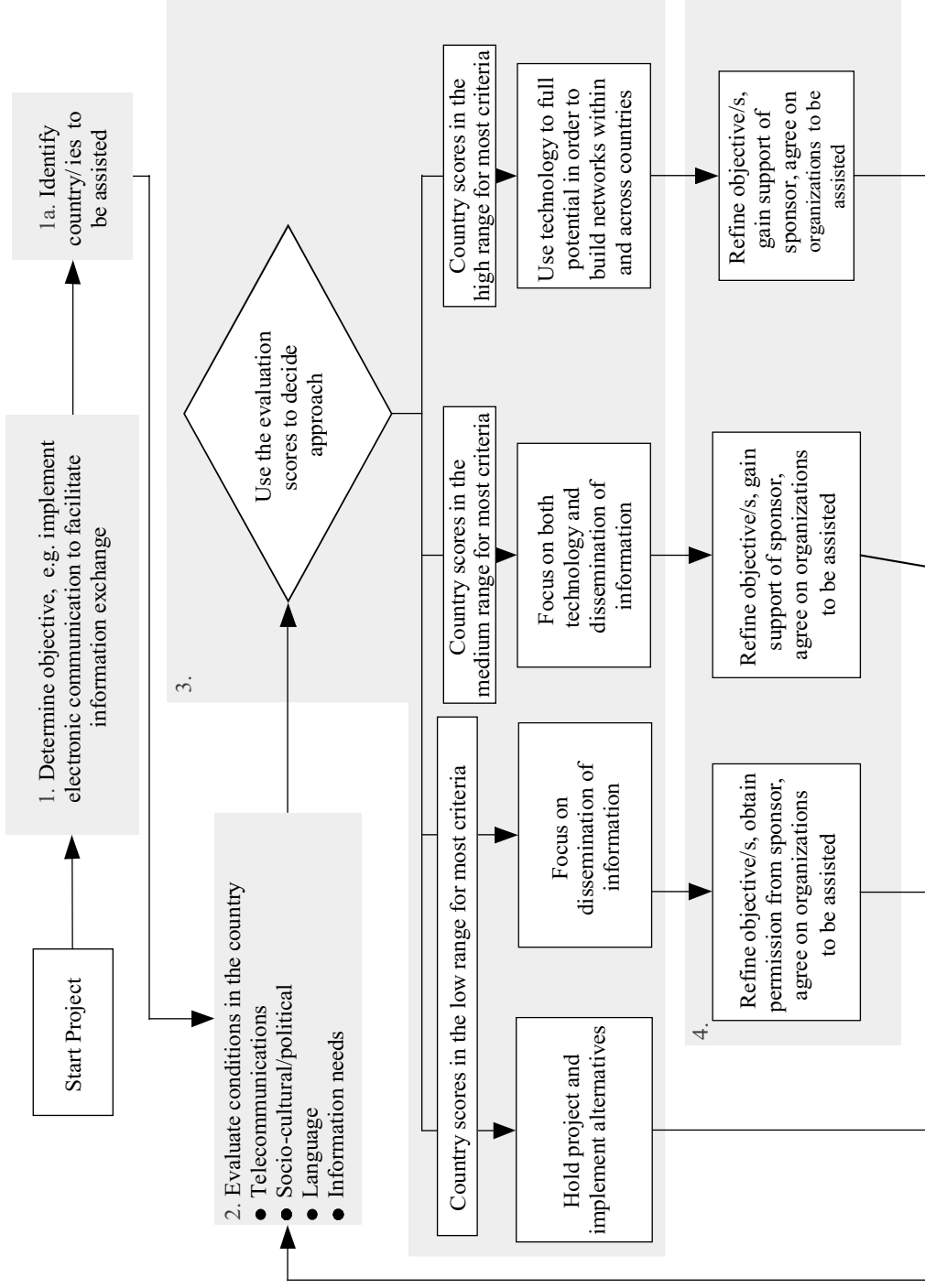
Start Project

1. Determine objective, e.g. implement electronic communication to facilitate information exchange

1a. Identify country/ies to be assisted

2. Evaluate conditions in the country
 • Telecommunications
 • Socio-cultural/political
 • Language
 • Information needs

3.

Use the evaluation scores to decide approach

Country scores in the high range for most criteria

Use technology to full potential in order to build networks within and across countries

Refine objective/s, gain support of sponsor, agree on organizations to be assisted

Country scores in the medium range for most criteria

Focus on both technology and dissemination of information

Refine objective/s, gain support of sponsor, agree on organizations to be assisted

Country scores in the low range for most criteria

Focus on dissemination of information

Refine objective/s, obtain permission from sponsor, agree on organizations to be assisted

4.

Hold project and implement alternatives

5.

Alternatives:
- Enable one person within country with e-mail/Internet who obtains translates, prints, distributes information
- Investigate other technologies - radio broadcasts

IO provides
- Technical support
- Translates, distributes documents
- e-mail training
- Use e-mail lists
- Disseminate wide topic range
- Sustainability planning by national authority or donor
- Donor to monitor content

IO provides
- Training – e-mail and Internet
- Translates, distributes documents
- Promote 'get-to-know' sessions
- Encourage workplace culture change and participation in intra-country discussion groups
- Technical support provided by IO or commercial company
- Use e-mail lists to disseminate information and for sharing experiences, developing ideas
- Disseminate specific information
- Sustainability planning by organizations and national authority or donor
- Promote other internet technologies - webpages, chat rooms.

IO provides
- Training - focus on e-mail and troubleshooting, then Internet
- Encourage workplace culture change and participation in intra and intercountry discussion groups
- Technical support provided by IO or commercial company
- Information exchange is geared to specific needs
- E-mail lists used for sharing experiences, developing ideas
- Sustainability planning by organizations
- Promote other Internet technologies – webpages, chat rooms

6.

Consider limiting factors, e.g.
- lack of funds...
- lack of time...
- inadequate technology...
- inadequate people resources...

Is the project successful?

No

Yes

Move to next phase of project if deemed appropriate

Some of the stages need explanation beyond that demonstrated in the flowchart. These follow on from the flowchart on the pages 26-27.

1. Defining the objective

The first step is to define the overall objective(s) of the project. At this stage it may be sufficient to have fairly broad aims; for example, the objective of the *info*Dev project was to facilitate the exchange of information and experiences in the region, thereby expanding and strengthening the regional networks involved in HIV/AIDS. As the project progresses however, it is important to evaluate and possibly revise the objective(s), particularly if several countries are involved in the project. As noted earlier, the overall objective of the *info*Dev project actually comprised four more detailed objectives and generally organizations only achieved one or two. The objective/s should therefore be revisited when stages two and three below are completed, as at that point it will be clear what is achievable and the most beneficial.

2. Evaluating the environment

Earlier in the case study a number of specific factors were noted that influenced the outcomes and objectives the organizations achieved. These included socio-cultural and political factors, the telecommunications environment, the current information needs within a country and the presence of language barriers. The lesson to be taken from this is to assess the environment, with reference to these factors, for each country, at the project's outset. Evaluation results will point the way forward to the implementation approach to be taken and the objectives for each country. A useful way to evaluate the environment is to consider several spe-

cific questions or criteria and assign a score to the answers for each country. The approach to the implementation can be determined from the score.

We suggest that the following questions should be considered as they are closely linked to factors that affected the outcomes of the *info*Dev project. For each country consider the following questions and decide where the country lies on the spectrum described below.

Telecommunications environment:
- What is the nature of the country's infrastructure? Think about availability of connections, reliability and speed of transmission.
- What technical support services are available?
- What are the connection costs?
- What are the hardware costs?

1 = Non-existent, or extremely poor throughout the country, costs of hardware and connections generally high.
2 = Poor throughout the country, costs of hardware and connections generally high.
3 = Reasonable service in the cities but poor in provincial regions, costs of hardware and connections vary by region.
4 = Good, reliable service in the cities and some services in provincial regions, costs of hardware and connections variable.
5 = Good, reliable service throughout the country, costs of hardware and connections variable.

Socio-cultural factors:
- What is the nature of the political environment?
- To what extent are organizations open to new ideas and able to exercise initiative and innovation?

- Are the organizations willing to evaluate and compare the performance of their organization?
- Are there specific cultural factors that have an impact on how people communicate?

1 = Centralized, hierarchical, afraid or disinterested to share information and exchange ideas, information strongly controlled by government.

2 = Centralized and hierarchical, will exchange information with specific organizations, some level of control over content of information.

3 = Will exchange information with specific organizations.

4 = Open, collaborative, willing to exchange information and share ideas between organizations within country, less desire/willingness to share ideas with other countries because of language difficulties or believe it is irrelevant.

5 = Open, collaborative, willing to exchange information and share ideas between organizations within country and internationally.

Language barriers:
- Does a language barrier exist?
- Is there a common local (intra-country) language?
  (The issue of a common regional (inter-country) language is addressed later in this section)

1 = National language is the only language spoken by the majority of people.

2 = People have some skills in English or another common second language.

3 = Many people are well skilled in English or another common language.

Information needs in the country:
How developed is the country's response to the HIV/AIDS epidemic?

1 = National response started very recently, very limited amounts of information in the country, and public has little knowledge of prevention, care and treatment of HIV/AIDS.
2 = National response started several years ago, moderate amount of information available in country and public has limited knowledge of prevention, care and treatment of HIV/AIDS.
3 = National response commenced many years ago, much information is available in the country already, public are reasonably informed of prevention, care and treatment of HIV/AIDS.

3. Deciding the approach

The evaluation results should give a fairly strong indication of the approach to take for the implementation. The three approaches reflect, with some refinements, the various implementations of the *info*Dev project. In Viet Nam the implementation focused on the dissemination of information, in the Philippines the focus was to use technology to build networks and Thailand adopted a hybrid approach.

In some cases the decision to put the project on hold may be valid. For example, during the course of the *info*Dev project it was decided to hold off implementing in Myanmar as the technology infrastructure was inadequate (Rangoon experiences 10- to 12-hour power cuts daily) and the political environment would have limited what could be achieved. When implementing an electronic network is not viable, alternative methods of disseminating information should be

investigated. These can vary from broadcasting HIV/AIDS-related information by radio, disseminating information via the printed media, assisting a key organization (government, NGO or international donor organization) to obtain e-mail/Internet access so they can source relevant information as well as translate and distribute it in printed format.

4. Planning the implementation

Once agreement is reached on the approach, the support of key organizations, such as the National AIDS programme, must be obtained since they are likely to help select the organizations to be assisted. Their involvement in refining and agreeing to the objectives of the network is also key.

At the planning stage, decisions are required as to who will provide the technical support and training. The *info*Dev project evaluation suggests that the best option may be to outsource the technical support to a commercial company *and* employ an IO. He or she would provide the training, translate and distribute relevant HIV/AIDS information, take a proactive role in encouraging the organizations to use e-mail in an interactive manner and provide a liaison role between the commercial company, the national AIDS body, UNAIDS and the organizations. The commercial company provides initial connections for the organizations and ongoing technical support. The reason for this approach is that the skills required to provide both the training and support roles are considerable – technical and people skills as well as some awareness of HIV/AIDS, or at least of general health issues, are required. It may be difficult to find all the skills in one individual. This however should be judged on a case-by-case basis.

5. Implementation

The key implementation activities to be undertaken are listed in the flow chart on pages 26-27 and have been discussed in depth previously in the case study. A few points however require further explanation:

5.1 Training

In projects of this type where the skills of the users are poor, and inadequate technical resources exist within the organization, the following should be provided to ensure the project's success:

- Provision of a problem-based training programme comprising small classes, with access to a PC for each user. The length of training needs to be tailored to the skills of the users but is likely to be in the order of several days – and not necessarily on consecutive days. It is often more useful to have several training sessions spread over several weeks or months allowing users to practise their skills in the periods between the sessions and build on the skills at each consecutive session. Training should not only focus on how to use e-mail and/or the Internet but also ensure that participants have a good conceptual understanding and awareness of the new medium and its potential to bring them benefits. Ensure participants are given lists of useful web addresses and the e-mail addresses of relevant organizations, particularly those involved in the project. It is also important that users at least have some basic skills in the general maintenance and operation of PCs, that is, in how to shut down a PC properly, to ensure that the PC is turned off cleanly when not being used, to recover after an interruption if the electricity supply is inconsistent, and to be able to troubleshoot common problems with a modem and communications linkage.

- Training documentation should also be provided – both user and troubleshooting guides. The participants of the ITrain project, run by the Canada-based International Development Research Centre, have developed a number of useful training materials. They are focused on the use of the Internet and include such modules as establishing and sustaining electronic mailing lists. The materials can be found on the web site http://unganisha.idrc.ca/itrain/. They can be downloaded free of charge and altered if required.
- Staff turnover is often high in many organizations involved in this type of project. Therefore ensure sufficient numbers of staff are trained and encourage the staff to pass their skills on to others in their organization. Staff will only feel confident about doing this if their own training was effective.

5.2 Technical support

The technical support requirements will generally be high in projects where minimal technical skills exist within the organizations and most users are novices with computers. The following should be provided to ensure the project's success:

- Provision of sufficiently capable technical support, such as a Help Desk service or equivalent during the life of the project. This must be adequately resourced so that organizations can obtain assistance in a timely manner. During the planning stage of the project the number and geographical location of organizations selected must be matched with the resources available for training and technical support. If ongoing technical support cannot be provided for organizations based in remote areas, then it may not be worth connecting those organizations until conditions improve. In those instances, consider mailing hard copy of relevant information.
- Provision for long-term support, i.e. following the pro-

ject's completion, should be made while the project is still in progress. Options include establishing agreements with local computer shops or ISPs, establishing self-help groups (friends, colleagues, members of other organizations in the network) who share problems and solutions.

5.3 Length of project

Ensure the project's term allows sufficient time for organizations to make the required changes in the workplace culture so as to obtain the full benefits of e-mail and Internet access. Experience gained from the *info*Dev project indicates the timeframe required is *two* years. The costs of the project will of course be higher than for a year-long project as the funding for the IO and/or technical support will need to run for two years. This should be more than compensated for by the medium- to long-term improvement in effectiveness.

5.4 Sensitive information

All societies have cultural mores and taboos but some societies are more open to discussing them. Additionally, some governments are more sensitive about sharing information than others. The following points should be considered during the implementation:

- Key organizations can take a proactive role in encouraging the discussion of culturally taboo subjects. To stimulate and challenge discussion, it may be useful to employ 'plants', that is, place someone in the audience to pose specific questions or raise difficult issues.
- Shared e-mail addresses can make people reluctant to participate in e-mail lists and discussion forums since they may be uncertain of whether they are perceived as speaking for the organization or as individuals. Where possible, users within an organization should be given an individual e-mail address.
- In societies where stigmatization and discrimination may

result if subjects are talked about openly, closed e-mail lists and discussion forums are a useful option for exchanging information. These are lists closed to the general public – only subscribed members can view the content, thus allowing them to discuss topics freely.

If there is a belief that information is likely to be censored, or interpreted with a particular slant, a monitoring role should be performed if possible. This could be done by an international organization or charity by reviewing the information posted to e-mail lists and discussion forums. Consultation with the appropriate authorities in the country to encourage more open access to information is the next step to take where possible.

5.5 Specific cultural factors

- When specific cultural values and traits are identified as likely to have an impact on the outcomes of the project, efforts should be made to accommodate these factors. For example, a number of the Thai people involved in the *info*Dev project mentioned that if they had met people face to face from the other organizations early in the project they would have felt more comfortable establishing e-mail communications with them.

5.6 Establishing a regional network

It was difficult establishing a regional network, as opposed to intra-country networks during the *info*Dev project. The following factors should be considered during the implementation:

- The language barrier, if one exists, is a major obstacle to any sort of regional communications. Some parts of the world, as in South-East Asia, may have a large number of local languages but few that are widely read and understood. This would seem to be a situation that

should be addressed by providing a translation service. Key items of information would be identified for translation and then disseminated to all intra-country networks. An intra-country coordinator could act as a link and identify local material that might be of wider interest regionally and internationally. The functions need to be ongoing to sustain the network after technical implementation is complete.

- If participants have no history of working together on a regional basis, or are uncomfortable doing so, a regional network could be actively promoted by a moderator – similar to ensuring that a small group works together where a facilitator stimulates, challenges and queries members, enabling them to work together more effectively.

- Utilize regional conferences to strengthen the network. Allocate sessions at conferences for participants who have been involved in the networking project. Use the sessions to provide further training in the use of the technology and to encourage the participants to build working relationships with their colleagues in the region.

- Ensure regional e-mail lists and discussion forums are relevant – if the range of topics posted to the list is too broad participants may not feel that it is worth spending time searching for and reading the specific topics that interest them.

- Attachments, especially larger files, should not generally be sent via e-mail, since the recipients have no option but to try to download them, which may be costly (connection time) and fraught with other problems. Note that the recipient may have little or no use for the information. Ideally attachments should be downloaded from a web site, whose location is advised by e-mail. Where Internet access is limited, the attachments can readily be distributed by mail, which may be more efficient in those circumstances.

6. Evaluation

The project's evaluation is an important step in the process and should focus on whether the objectives were achieved. If they have been successfully achieved, consideration should be given to the value of further phases of the project. These may include expanding the network to more organizations within a country and/or expanding the ways in which existing network members use Internet technologies. In those organizations where staff has become familiar, and comfortable, with using e-mail and the Internet, further assistance could be provided to enable them to develop their own web pages and communicate through chat rooms or participate in net meetings. For organizations that were only provided with e-mail access it may be useful to reassess conditions in the country. If the environment has changed it may be useful to initiate the further Internet access phase and training for relevant organizations.

During the evaluation it is important to assess whether the long-term sustainability of the network has been catered for. There are a number of factors to consider, some of which have been mentioned earlier, but which bear repeating:

- Ensure that the organizations have made arrangements to assume responsibility for paying the costs of commercial e-mail/Internet access once the project funding ceases.
- Encourage the organizations to create a business case for their continuation by monitoring and analysing the savings made on postage and phone calls during the term of the project. This should contribute to convincing the organization's funders that access is not an additional cost. If a number of donors fund an organization it may be useful to spread the budget for commercial access across a number of projects within the organization. Consider providing free e-mail access for the first year of

the project only. If the organizations have to make arrangements for the cost of their e-mail access during the second year of the project, they are more likely to sustain this once the project ends.

- It is imperative that arrangements be made for providing continuous technical support. Options include establishing agreements with local computer shops or ISPs and self-help groups.
- The sustainability of the network will, for many countries, be contingent on the continued provision of information in the national language. There is no doubt that the translation of relevant HIV/AIDS information on a regular basis requires substantial input. Unless this is provided many of the network members will cease using e-mail because it offers them little benefit.

If at the end of the project the objectives have not been met, the reasons for such/any shortcomings should be included in the final evaluation. The project should continue since the need for beginning it in the first place is unlikely to have changed. It is recommended that a project begin again at stage two of the process. That is, evaluate the conditions in the country and make certain that the reasons for the failure first time around are taken into account. The approach to take for the implementation should become obvious and may not necessarily be different to the first implementation except that the conditions are now more suitable, e.g. a project may have failed because the telecommunications infrastructure was actually inadequate in rural areas when the organizations were first connected. By the time the project starts again, the telecommunications environment may have changed substantially, thus making it possible to follow the same approach as previously but with much greater likelihood of success. Furthermore, the participants will have learned from the previous experience.

Resource list: networking, technology and development

The following list represents a number of the key resources utilized throughout the project. We have also included an annotated list of organizations involved in networking programmes with an international focus. This list is largely based on the links provided by the *info*Dev web site at http://www.infodev.org/about/other.htm

All links were current as of March 2001.

1. Key reports

Credé A, Mansell R. *Knowledge Societies... in a Nutshell: Information Technology for Sustainable Development*, Canada, International Development Research Centre, (IDRC),1998. www.idrc.ca

Fervoy P, Martínez J, Sáenz M. *Promoting Equitable Access, Meaningful Use and Appropriation of the Internet*, Canada, International Development Research Centre (IDRC), 2001.

Mansell R, Wehn U, eds. *Knowledge Societies: Information Technology for Sustainable Development.* The United Nations Commission on Science and Technology for Development, 1998. (ISBN 0-19-829410-7)
http://www.unctad.org/en/subsites/dite/5_intgov/5_cstd.htm.

Pruett D, Deane J. The Internet and poverty: real help or real hype? *Panos Briefing 28*, April 1998.
http://www.oneworld.org/panos/briefing/interpov.htm

Panos has several briefing papers on Information Technology available at:
http://www.oneworld.org/panos/briefing/itindex.htm

Rodriguez F, Wilson Ernest J. *Are Poor Countries Losing the Information Revolution?* College Park, The University of Maryland, May 2000. (Working paper for the *info*Dev project, available on the Internet only).
http://www.infodev.org/library/wilsonrodriguez.doc

Wilson, Ernest J. III. *Meeting the Challenges of Internet Inequality*. June 1999 (available on the Internet).
http://www.bsos.umd.edu/cidcm/papers/ewilson/isocmss.htm.

World Bank Development Report 1998/99: Knowledge for Development. New York, Oxford University Press, 1998.
http://www.worldbank.org/wdr/wdr98/contents.htm

2. Tools for establishing electronic networks

Cothrel J, Williams Ruth L. On-line communities: helping them form and grow. *The Journal of Knowledge Management*, 1999, Vol. 3, No 1:54-60.

Cothrel J. Measuring the Success of an Online Community. *Strategy and Leadership*, 2000, Vol. 28, No. 3.
http://www.participate.com/research/art-measuresuccess.asp

James M, Rykert L. *From Workplace To Workspace: Using E-mail Lists to Work Together* Canada, IDRC, 1998.
http://www.idrc.ca/books/848/index_e.html#dir

3. Organizations

The World Bank

http://www.worldbank.org

The World Bank is involved with rural communications activities in more than 15 countries, focusing on policy, revenue and tariff arrangements and infrastructure development for rural telecommunications. Central to the Bank's policy work is access to communications by the poorest people, most of whom live in rural areas. The Bank has established the multi-donor *Info*Dev Fund (http://www.infodev.org). *Info*Dev is a programme designed to provide governments of developing nations with policy advice and best practices information on the economic development potential of communications and information systems.

European Commission

http://www.europa.eu.int/comm/index_en.htm

The activities of the European Commission in the field of Information Technology are executed through the Information Society Activity Centre (ISAC). The Centre aims to ensure coherence and maximum synergy among different 'information society' approaches in the framework of the European Union.

Inter-American Development Bank (IADB)

http://ww.iadb.org

The Information Technology for Development Unit (http://www.iadb.org/regions/itdev/about_us.htm) is part of the IADB providing technical advice and technical guidance to

borrowing client governments and private entities in the area of Information Technologies. The unit provides technical backstopping for project development and other activities supported by the Bank in the information technology field and offers strategic and technical advice to governments on how to make better use of available information management technologies.

International Telecommunication Union (ITU)
http://www.itu.int

The Telecommunication Development Bureau (http://www.itu.int/ITU-D/Overview.htm) of ITU encourages and enables ITU Member States, especially emerging markets, to draw maximum benefit from technical, financial and regulatory changes in the telecoms environment. It provides infrastructure support for a comprehensive and collaborative development programme for the enhancement of telecommunication systems and services.

United Nations Development Programme (UNDP)
http://www.undp.org

The Sustainable Development Networking Programme (http://sdnhq.undp.org) is part of the UNDP's effort to address the issues of the increasing information gap between industrialized countries and developing countries. The Sustainable Development Networking Programme (SDNP) operates at the country level, launching and supporting local Internet sites and building national capacities and knowledge resources.

Asia-Pacific Development Information Programme (APDIP) http://www.apdip.net/
APDIP assists developing countries in bridging the digital divide and benefiting from the global information infra-structure in numerous ways. It provides advice to nations formulating national IT policies and offers hands-on techni-cal assistance. APDIP is funded by the United Nations Development Programme (UNDP) and implemented by the United Nations Office for Project Services (UNOPS), Asia office.

Canadian International Development Agency (CIDA)
http://www.acdi-cida.gc.ca

The Canadian International Development Agency (CIDA) is the lead player in delivering Canada's official development assistance programme. CIDA sees information technology as an increasingly important tool in achieving sustainable development as it can provide an enabling environment for economic growth and poverty reduction by modernizing the business environment.

International Development Research Centre (IDRC)
http://www.idrc.ca

The International Development Research Centre (IDRC) is a public corporation created by the Canadian Government to help communities in the developing world find solutions to their social, economic and environmental problems. IDRC connects people, institutions, and ideas to ensure that the results of the research it supports and the knowledge that research generates are shared equitably among all its part-ners, North and South.

IDRC launched the Acacia Initiative (www.idrc.ca/acacia/ acacia_e.htm) to empower sub-Sahara African communities to apply information and communication technologies to their own social and economic development. Bellanet (www.bellanet.org) is a Secretariat hosted by IDRC and governed by the Bellanet International Steering Committee, whose membership is drawn from the institutions that provide core funding. Bellanet's mission is to foster inter-agency collaboration through more effective use of information and communication technologies (ICTs). IDRC is also supportive of ICT research through its PAN Networking programme initiative (www.idrc.ca/pan) focusing on Asia and Latin America.

Institut de Recherche et de Développement (IRD)
http://www.ird.fr

The "Institut de Recherche et de Développement" (IRD) is a French research and development organization focusing on sciences and technologies and operating under the guidance of the Ministry of Research and the Ministry of Cooperation. IRD conducts research mainly on tropical issues.

ICASO
http://www.icaso.org

ICASO is a network of community-based AIDS organizations that brings together all those groups throughout the world, which have arisen out of community efforts to control the spread and impact of HIV/AIDS. The ICASO network is an interactive global focus point in the international HIV/AIDS world, gathering and disseminating information and analysis on key issues, coordinating the development of CBO/NGO positions on these issues, and

working as partners with key international agencies to ensure that the concerns and interests of CBOs and NGOs around the world are articulated and represented at all levels. Of particular note is the ICASO networking guide available on the website in English, French and Spanish.

The Netherlands International Institute for Communication and Development (IICD)
http://www.iicd.org/index.ap

The International Institute for Communication and Development (IICD) was established by the Netherlands Ministry of Development Cooperation in 1997. IICD assists developing countries to utilize the opportunities offered by information and communication technologies (ICTs) to realize sustainable development.

U.S. Agency for International Development (USAID)
http://www.usaid.org

The U.S. Agency for International Development (USAID) is the U.S. federal government agency that implements the United States' foreign economic and humanitarian assistance programmes. As the distribution of information has become a very important aspect of global development, USAID has dedicated itself to empowering developing countries with the knowledge and technology to not only survive but to thrive in the global networked economy. Many USAID initiatives on information technology aim to facilitate access to the Internet by improving connectivity, increasing access to information for sustainable development and promoting policy reform to reduce barriers to open connectivity.

The Leland Initiative (www.info.usaid.gov/regions/afr/leland/project.htm) is an effort to extend full Internet connectivity to over 20 countries in Africa to promote sustainable development.

Asia Pacific Networking Group (APNG)
http://www.apng.org/html/about.html

Asia Pacific Networking Group (APNG) is an Internet organization dedicated to the advancement of networking infrastructure in this region as well as the research and development of all associated enabling technologies. Its mission is to promote the Internet and the coordination of network inter-connectivity in the Asia Pacific Region.

Association for Progressive Communications (APC)
http://www.apc.org

The Association for Progressive Communications (APC) is a global network of NGOs whose mission is to empower and support organizations, social movements and individuals in using information and communication technologies to build strategic communities and initiatives for the purpose of making meaningful contributions to equitable human development, social justice, participatory political processes and environmental sustainability.

Bamako 2000 – Internet: Bridges to Development
http://www.bamako2000.org

This site provides useful links to information from the Bamako 2000 meeting held in February 2000. In addition, there is a searchable database of 150 programmes from

around the world that use Information Technology for development.

Electronic Development and Environment Information System (ELDIS)
http://www.ids.ac.uk/eldis/eldis.html

Electronic Development and Environment Information System (ELDIS), is a gateway, or one-stop tool, for easy access to information on development. ELDIS provides an ever-increasing number of descriptions and direct links to a variety of information sources, including web sites, data-bases, publications, research project information, library catalogues, bibliographies, e-mail discussion lists and news sources.

FUNREDES
http://www.funredes.org

FUNREDES is an NGO dedicated to the dissemination of New Information and Communication Technologies (NICT) in developing countries, especially in Latin America and the Caribbean.

NETAID
http://www.netaid.org

Netaid is a long-term effort, created through sponsors from public and private sectors, to utilize the unique networking capabilities of the Internet to promote development and alleviate extreme poverty across the world. UNDP is one of the key organizations that helped bring Netaid to life. Netaid

serves as a global exchange point to link people to success-ful agents and agencies of change.

OneWorld

http://www.oneworld.org

OneWorld was established in January 1995 as a global gate-way for development issues. It provides multiple views on information resources contained in the home pages of more than 350 partner organizations. The site is generated from a massive database that itself is created by "spidering" and indexing the websites of its partners.

SATELLIFE and HealthNet

http://www.satellife.org

SATELLIFE is an international non-profit organization that uses satellite, telephone and Internet technology to serve the communication and information needs of the health sector of developing countries. Its mission is to improve health by enhancing connectivity among professionals in the field via electronic communications and exchanges of information in the areas of public health and medicine. SATELLIFE focuses on areas where poor communications, economic conditions or natural disasters limit access.

The Information for Development Program (*info*Dev) is a global programme managed by the World Bank to help developing economies fully benefit from modern information systems. The primary functions of the programme are to:

- share worldwide experience with, and disseminate best practices to, governments and key decision-makers on the economic development potential of communications and information systems;

- channel policy advice and other technical assistance to governments in developing economies on privatization, private entry and competition in the communications and information sectors, and on improving the policy, regulatory and business environment for investment;

- conduct feasibility and pre-investment studies, and prepare experimental applications in communications and information systems.

*Info*Dev works through consensus building, information infrastructure development strategies, telecommunications reform and market access and demonstration projects. All activities are designed to support workable strategies and include workshops, assessments, demonstration projects and feasibility studies in one or multiple countries in a variety of sectors.

For more information contact:

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Fax: 202-522-3186
E-mail: infodev@worldbank.org
Website: http://www.infodev.org/

The Joint United Nations Programme on HIV/AIDS (UNAIDS) is the leading advocate for global action on HIV/AIDS. It brings together seven UN agencies in a common effort to fight the epidemic: the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP), the United Nations Population Fund (UNFPA), the United Nations International Drug Control Programme (UNDCP), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Health Organization (WHO) and the World Bank.

UNAIDS both mobilizes the responses to the epidemic of its seven cosponsoring organizations and supplements these efforts with special initiatives. Its purpose is to lead and assist an expansion of the international response to HIV on all fronts: medical, public health, social, economic, cultural, political and human rights. UNAIDS works with a broad range of partners – governmental and NGO, business, scientific and lay – to share knowledge, skills and best practice across boundaries.

Over the last decade developed countries have experienced a transformation in the scope and reach of information technologies and infrastructures. However, this digital revolution has been slow to materialize in developing countries, further marginalizing them and creating a digital divide. Innovative ways must be explored to leverage these new technologies for a range of development opportunities in the HIV/AIDS field from distance learning to bringing basic HIV/AIDS prevention information to patients and practitioners. Harnessed to its full potential, basic e-mail and Internet facilities can serve as a powerful tool in the prevention of HIV/AIDS. In South-East Asia, UNAIDS has coordinated an *info*Dev project, a global grant programme funded and managed by the World Bank to promote innovative projects on the use of information technologies with a special emphasis on the needs of the poor in developing countries.