Sustainable Development Networking Programme,

Report of an independent external assessment

February, 2004

EXECUTIVE SUMMARY

The Sustainable Development Networking Programme (SDNP) of UNDP lasted in the main from 1992 to 2000 and reached close to 80 countries in efforts to promote greater use of ICTs for sustainable and human development. The SDNP was one of the first initiatives focused on bringing the benefits of ICTs to people in the developing world. A small team at UNDP HQ in New York managed the corporate programme, but the essence of the SDNP's activities took place in about 40 partner countries located around the world. Developing and even more industrialized countries such as Korea participated.

The objectives of the SDNP were to facilitate access to information for decision-making and to strengthen the participation of various development actors such as CSOs in the development process. The SDNP was originally conceived as a support mechanism for Agenda 21 and up to 1998, had expended about USD 16 M from a variety of sources inside and outside UNDP. Today, there are still about 15 active national SDNPs and one inter-regional SDNP related initiative: SIDSNet.

SDNP projects were developed in collaboration with the governments of the countries concerned, but did not always focus their operations on government. CSOs were often times the main beneficiaries along with other non-governmental stakeholders. The project in most but not all countries included a Steering Committee that brought together representatives of different stakeholder groups as advisors and partners with a stake in the SDNP project. A local management group was established, and a manager was sought, preferably one with entrepreneurial skills and some understanding of local needs and of the potential of ICTs.

SDNP activities included initially promoting the use of email and basic connectivity as well as engaging in awareness promotion and training. Later, the project extended its focus to consider Internet connectivity and appropriate local models of connectivity, as well as content and Web portal development. In some counties, the SDNP also mobilized attention around the importance of ICT for development and lobbied governments to adopt more liberal telecommunications regimes. Several SDNP managers were involved in ICANN and related initiatives.

The report notes that the challenge of achieving sustainability was great and distracted the SDNP from achieving its basic objectives and in some cases pushed the initiative into becoming a commercial entity. The report concludes that the SDNP helped to raise awareness of the needs for greater access to information and of the benefits that accrue as a result, especially from a development perspective. Its main impact was in lobbying decision makers about the importance of information and access to information.

SDNPs had success in bringing affordable connectivity to many stakeholders and creating adequate local capacity to carry the effort on a sustainable basis; this was coupled with awareness promotion and training aimed at marginalized and more rural groups. SDNP fostered the introduction of Free/Open Source Software (FOSS), provided adequate governance mechanisms for the management of national Internet domain names and numbers, helped in the creation of national and regional Cisco Academies and contributed on a substantial basis to the emergence of e-governance networks that connected citizens and governments. Timing further advantaged the SDNPs: many of the technologies and applications were not readily available in developing counties and this favoured the SDNP as an instrument of change that introduced new technologies and ways of doing things.

The following factors underlined the success of the SDNP: their relative autonomy from government; their credibility and contacts with civil society; their distinctive combination of technical, policy and organizational skills; and their flexibility of operation and of response. The report recognizes that these very assets are ever so important, especially today.

For this reason and others, the report recognizes that the SDNP represents a significant asset to UNDP: SDNPs have extensive practice of implementing ICTs for development from national to community level and at the policy level and SDNPs have in some instances significantly influenced and enhanced understanding among government Ministries of Internet policy and regulation and sometimes of ICTs generally. SDNP activities have directly addressed the issues of poverty reduction, governance and inclusiveness as well as the MDGs

The report recommends that the experience of the SDNPs be leveraged in helping UNDP implement its governance and poverty reduction programmes and achieve the MDGs. SDNPs had a significant role to play in helping poorer communities and marginalized groups, including women take advantage of ICTs. SDNP represents a significant store of corporate experience and institutional memory that can readily be applied to fulfilling the mandate of the agency as its focuses on achieving the MDGs and mainstreaming ICTs. Several ways this could be done are documented in the report.

1. INTRODUCTION AND SDNP OVERVIEW

1.1 Scope of this Exercise

The Sustainable Development Networking Programme (SDNP) was launched in May 1992, a month before the UN Conference on Environment and Development in Rio de Janeiro. The Programme initiated a total of forty five country-level SDNP programmes and supported related feasibility studies in another thirty; it launched three sub-regional projects and provided managerial and technical support and conceptual inspiration to others; and over the years it was an advocate for the use of ICTs for sustainable development within UNDP itself and outside. Although new funding for the programme has not been secured at the global level since 2000, many SDNP projects continue to operate, and a significant legacy remains to be built upon.

This final assessment does not pretend to cover the entire programme. Two previous assessments in 1994 and 1997 covered a lot of ground and were very useful to this exercise. Apart than these, there is a notable absence of contemporary documentation of a reflexive nature that could have yielded valuable insights from the many people involved in SDNP over the years. A more detailed methodology statement is contained in Annex 1. But the main focus of this assessment is on national SDNP Projects – wherein can be found the main legacy of SDNP. Regional programmes and other non-national level activities of SDNP headquarters are considered only in passing, and indeed the adequacy of SDNP management at HQ is examined only in so far as it impinged on national level projects.

The focus is also forward looking, in the sense that the goal is to extract lessons[1], and to examine how extant SDNP projects might in the future contribute to areas related to sustainable development and information and communication technologies (ICTs).

1.2 Origins and Objectives of SDNP

The initial inspiration for the SDNP concept came during preparations for the 1992 Earth Summit[2], with the perception that many countries, especially poorer ones, lacked a reliable information base on sustainable development issues. The question was: How could countries take responsibility and be accountable implementing decisions at UNCED, in the absence of information needed to analyse and understand the current situation, and to monitor developments in the future?

The concept quickly deepened, and merged with other trends at UNCED. It was established as a programme by UNDP in 1992 as a support mechanism for Agenda 21, the UN action plan for sustainable development agreed at the Earth Summit. It emerged as a small programme with two objectives:

1. To facilitate access to information for decision making by development stakeholders;
2. To encourage greater participation by all development actors and stakeholders in the development process.

Its formal basis is found in Chapters 27, 37 and 40 of Agenda 21, respectively calling for a stronger role of NGO as partners, for participative forms of capacity building, and for the development of user-friendly information resources and services to encourage greater access to existing information , the strengthening of electronic networks, and the better use of indigenous knowledge[3].

Originally called the *Sustainable Development Network* (SDN), it was soon changed to *Sustainable Development Networking Programme*, the active verb reflecting the ongoing process of building consensus

1 Many of the lessons can be found in the national level assessments carried out as part of this exercise.

2 United Nations Conference on Environment and Development: UNCED, held in Rio de Janeiro in June 1992.

3 see http://www.un.org/esa/sustdev/agenda21text.htm, chapters 27, 37 and 40.

on the benefits of sharing information through the use of ICTs, and its design not as a single network but as many interlinked networks with gateways and linkages between them.

By 1994, the objectives – never fixed in stone – were described in a strategic evaluation report as:

> "To help countries to access sources of information and technologies that would enable and empower them to take care of their environments while improving economic growth for present and future generations. It was to be achieved through the creation of networks linking institutions working on environmental and development issues at the national level for the purpose of facilitating access to national and global sources of information and promoting consultative processes among different segments of society."[4]

By then, the key features had crystallized, tested on the experience of eleven national or regional SDNP that had already been established:

- It was to facilitate access to and dissemination of a broad range of information relating to sustainable development;
- It was to encompass the full range of sustainable development stakeholders, governments, NGOs, private sectors, institutions, academia and others, including promoting participation of stakeholders in decision-making process;
- It was to utilize information and communication technologies as an instrument to enable efficient, low-cost information processing and networking.

Though now conceptually mainstream, these were quite novel and exciting concepts for UNDP at the time, and their combination into a single programme was a real challenge. The idea that information and access to it could play a critical role; that networking and opening out to stakeholders the render the process and outcome of decisions on sustainable development more robust and effective; and that ICTs and especially the Internet were tools that could revolutionize information and networking; were also new to many countries, developed and developing.

1.3 SDNP Modus Operandi

SDNP as a programme thus came lightly (but in our view, adequately) equipped with strategies and concepts. Neither was it overburdened with institutional infrastructure and procedures.[5]

MANAGEMENT AND ADMINISTRATION

A small team based in UNDP Headquarters in New York ran the Programme. It had three staff in 1994, a director, a technical advisor and an administrative assistant, rising to a height of eight by 1997, with the addition of an evaluation officer, a network specialist, one staff each for African projects (based in Cotonou) and for SIDSNet (see further on), and a staff member to handle procurement and the testing and pre-configuration of computers. A consultant was also held on retainer for public relations and partnerships (for instance the partnership with Hewlett Packard: see below). It declined thereafter as resources coming to the programme ended. In addition, SDNP HQ could call on the services of several external consultants who supported the programme over the years, and in all cases had recourse to national consultants.

The team was flexible throughout, covering substantive, technical and administrative issues as they arose. Its main activities comprised:

- Identifying project opportunities, at national and regional level;
- Initiating pre-feasibility studies;
- Providing advice on technical, organizational and management issues;
- Preparing project documents;
- Backstopping on technical issues;
- Equipment procurement and pre-shipment installation, configuration and testing;

4 Kate Wild, SDNP 1994 Strategy/Evaluation Report, Paragraphs 19-20, UNDP 1994.

5 Much of the following is adopted from the Mid-Term Evaluation, which covers this ground well and in some depth, supplemented and updated as appropriate.

- Ensuring linkages and the sharing of information and experience among SDNP projects;
- Organising workshops and training programmes;
- Developing programme partnerships;
- Promoting the SDNP concept inside and outside UNDP;
- Preparing programme and project evaluations; and
- Developing the SDNP Web presence including a Web enabled information service that persist to this day (http://www.sdnp.undp.org/)

Formally speaking, United Nations Office for Project Services (UNOPS) was the executing agency for SDNP, meaning that it handled contractual arrangements, procurement, disbursement and financial monitoring of all activities funded from dedicated SDNP budgets. All funds for project implementation followed UNOPS regulations for fund disbursement from New York.

In practice, and with very few exceptions, most SDNP Projects were thus not, in formal terms, nationally executed. (Where additional national funding was secured, as in most cases, it was handled locally by the UNDP Country Office and used as cost sharing.) This could, and sometimes did, lead to administrative and bureaucratic delays. On the other hand, this arrangement could also be used by SDNP HQ and projects to bypass bureaucratic procedures that might have been imposed if the project had been administered nationally.

The fact that core SDNP funding came as a Global Programme also set it apart in other ways from projects initiated by UNDP national Offices.

Under a Global Programme, support for an SDNP initiative nationally was undertaken once a request from the government to the respective UNDP Country All equipment purchased with core funding could also be bought and shipped from New York often yielding considerable cost and time savings, and with better technical specifications.

INITIATING SDNP PROJECTS

The process of initiating a national SDNP was usually undertaken in a number of steps, led by SDNP HQ, as follows:

a) Initial interest was identified, and the UNDP Resident Representative undertook a preliminary exploration with government and others. A key requirement was agreement on a clearly defined problem or objective of relevance to several stakeholders from all sectors. Agreement had to come from the government. Necessary also was the identification of one or more potential host institutions or networks, whilst being careful to avoid the creation of structures that would compete or undermine existing entities. It was also important to be able to find a leader of the national SDNP with strong management and communication skills.

b) If national institutional interest was sufficient, an initial SDNP mission arrived to explain the concept in more depth and initiate the process of a feasibility study. This includes identifying and contacting potential members of a National Steering Committee or Working Group, comprising national stakeholders and interested donors and doing a preliminary assessment of the needs and specificities that the SDNP project will have to be concerned with. This also means meeting with potential beneficiaries of the SDNP as well as scoping out any potential host organizations, preferably CSOs, as well as trying to identify potential champions for the project.

c) An interim Steering Committee was formed bringing together representatives of key stakeholder groups, and a Feasibility Study put to tender, usually funded by SDNP. (In most cases, a pre-feasibility stage was undertaken first.)

d) The Feasibility Study was completed and (if positive) included a draft Project Document, firmed up the Steering Committee, identified a host organization, and included a list of donors and matching contributions also known as counterpart contributions made in kind.

e) A Project Coordinator was recruited independently, that is through open competition and the SDNP formally launched.

However, even with SDNP HQ and UNDP national support, implementing an SDNP project confronted national promoters with challenges beyond the norm for a development Project, often demanding innovation. As a result, the process of initiation and launch often took several years or more, as in the case of the India or Cameroon. Features preoccupying promoters included the following:

- SDNP promoted a participative approach, through management by a steering committee whose members are drawn from civil society as well as government and the private sector when possible;
- The SDNP office was often located *outside* government, or called for a *hosting* rather than an ownership role from government;
- Project 'management' involved a number of players: UNOPS, SDNP HQ, the country office and other donors, the national executing agency (in a few cases), the steering committee, and therefore needed careful definition;
- Projects had to develop business and sustainability plans, and revenue-generation strategies - not necessarily the bread and butter of non-profit/developmental programmes;
- With respect to both information use and participative, transparent governance, SDNP projects often challenged local cultures and approaches to 'doing business'.

SDNP HQ and the UNDP office were often called upon to play a key role in facing these challenges.

1.4 SDNP Funding

SDNP HQ and its activities were funded through a variety of mechanisms, which in the end allowed considerable flexibility.

Core funding, dedicated to SDNP came to a total of about US$9 million, an initial UN$4.7 million covering the period from 1992 to 1996 inclusive, and the remaining US$4.4 to cover the period until 1998 though the final amounts were not disbursed until late 2002[6]

Funding for the first two years of operations came from BDP Global Programme resources through the Division of Global and Interregional Programmes (DGIP), which provided close to $2.5 million and supported headquarters staff. In 1995, the Capacity 21 programme began supporting SDNP through Project INT/95/G81, an umbrella project that provided support to 15 countries where both SDNP and Capacity 21 were operating, and funded activities to the tune of $2.2 million. This excluded support for SDNP HQ staff, which continued to be funded from Global Programme resources. In 1997, SDNP secured an additional $4.4 million again from Global Programme resources through Project GLO/97/216. This was the last infusion of funds that SDNP received from UNDP. In 1999, SDNP started cost recovery operations by providing ICT services to both UNDP and UN agencies and allocating the additional resources into its existing programmes for additional SDNP support a the country level. SDNP was able to raise about $500,000 in this manner in a period of two years.

However, SDNP has leveraged considerably additional funding. On a project-by-project basis, additional UNDP contributions were received from Country and Regional PIFs (Indicative Planning Figures), TRAC (Targeted Resources Allocated from Core Budgets), Capacity 21, TCDC, ARC (Administrators Residents Coordinators Budget) and cost sharing.

Projects also benefited from other donors, including IDRC, CIDA and SIDA. SDNP also developed a partnership agreement with Hewlett-Packard that generated US$1.2 million in-kind contribution in the form of computers and equipment. Other private sector partnerships brought significant support to the SDNP. This included partnerships with Red Hat, the publisher of the Linux operating system distribution that bears its

6 Not all of this was spent since because delivery at national level did not always match allocations. The problem was only a certain proportion could be spent on salaries and administration, and the rest on implementation, such as workshops, training and equipment. Whilst salaries limits were invariable, implementation expenditure often fell short.

name. Red Hat made available to all operating SDNP offices its software version or distribution of the Linux operating system. The publisher O'Reilly made available many of its publications on networking and open source software to all SDNPs. Other private sector support is documented below.

Governments also contributed with 'in-kind' contributions, specified and quantified in each national project, often including premises and staff time. The latter, for logistical reasons and as proof of counterpart - usually government - commitment to the project, was a general feature of SDNP projects and was essential for the operation to succeed.

The 1997 Mid-Term assessment estimated that the inclusion of the above would have brought total funding spent or committed at that point to a figure of US$ 14.5 million.[7]

Since then, many national SDNPs started their own cost recovery operations and launched fund raising strategies that targeted donors at the local level. As SDNP's become independent operations from UNDP, it is difficult to estimate the amount of resources leveraged by local operations. But a good indicator is the number of SDNPs that have been able to keep operating beyond UNDP funding. Finally, SDNP HQ managed to secure a donation from Corel and Rebel.Com, Canadian IT companies, for hardware and software which, estimated at market prices, amounted to $1.5 million.

7 A breakdown can be found in Section 2.02.01 of the 1997 http://www.sdnp.undp.org/docs/evals/eval97.html.

1.5 Summary Table of SDNP Projects

The following table is compiled from a variety or sources, including documentation, interviews and Internet searches. It very briefly depicts the situation as of March 1 of all SDNP national and regional level projects.

Summary Table of Sustainable Development Networking Programme projects

Country	Began	Host	Website (spin-offs and comments in brackets)	Current Status
Angola	1994	National University	http://www.angonet.org/ (www.ebonet.net)	Funding ended 1998. Project merged with ANGONET; Project staff created Ebonet
Armenia	1996	UNDP	http://www.freenet.am/	Project 1999. Armenia Freenet part of the outcome.
Bangladesh	1998	BIDS/Government	http://www.sdnbd.org/	Funding continuing. Project still active with UNDP funded
Benin	1996	Government	www.agentic.bj	Funding ended 1999. Transformed into government supported agency for IT promotion
Bolivia	1993	Ministry of Sustainable Development	www.coord.rds.org.bo (closed)	Project closed in 1998, absorbed by government. Undertook Y2K project and Open Source, and ICT policy, including Dot Force focal point .
Bulgaria	1996	Centre for Study of Democracy (NGO)	www.online.bg	Closed 2000. Training focus. Mainly ARC funded. Website now commercial Portal.
Cameroon	1996	University	www.sdnp.undp.org/sdncmr	Funding ended 2001. Spun off as Schoolnet, independent from UNDP, active.
Chad	1994	Research Center	closed	Project closed 2000. First ISP in Chad.
China	1995	Government	www.acca21.org.cn	Funding completed 2002. Current status uncertain
Colombia	1996	Local NGO/APC	www.rds.org.co	Active with UNDP CO support, new partnership with Development Gateway
Costa Rica	1995	Research Center	http://www.rds.ucr.ac.cr/	SDNP support ended 1999. Development Observatory continues supported by University. Page not updated
Dominican Rep.	1998	Local NGO	www.rds.redid.org.do (inactive)	Project closed in 2000, no clear results
El Salvador	1997	National Centre for Science & Technology	www.rds.org.sv (inactive)	Project closed in 1999, no clear results
Estonia	1994	University	www.ciesin.ee (not updated – material archived)	Closed 1997. Regional Baltics, CIESIN partnership
Gabon	1996	Library, National Archives, Government of Gabon	www.primature.gouv.go	Closed 1998
Guatemala	1995	University	www.rds.org.gt (inactive)	SDNP funding ended 1998. Content and training based. Project active, now an NGO Red de Desarrollo Sostenible (RDS-GT)
Guinea		Isoc Guinee	http://www.snu-gn.org/CD-ENV/rdd-gn-ndx.htm	Inactive
Guyana	1998	UNDP	www.sdnp.org.gy	SDNP funding ended 2002. Recently founded an NGO called DevNet, with good

				prospects for the future.
Haiti	1997	Government	www.rddh.org	SDNP funding ended 2000. Project active, now an NGO with UNDP CO support.
Honduras	1993	Various	www.rds.org.hn	SDNP funding ended 1999. Successful NGO, starting large rural telecentre with IADB
Hungary	1997	NGO (REC)	www.omikk.hu/sdnp (inactive)	Part of HP Donation, limited SDNP activity.

Summary Table of Sustainable Development Networking Programme projects (continued)

Country	Began	Host	Website (spin-offs and comments in brackets)	Current Status
India	1995	Government	www.sdnp.delhi.nic.in	SDNP funding ended 2001. Continuing, revised, with World Bank funding until mid 2003.
Indonesia	1994	Government	www.sdn.or.id	Closed 1997. Limited results due to Government intervention. Web site now contains Open Source resources.
Jamaica	1998	University	www.jsdnp.org.jm	SDNP funding ended 2002. Active, major activity in telecentres with some IADB funding
Jordan	1998	University	www.sdnp.jo	Site not up to date although accessible..
Korea	1995	NGO (YMCA)	www.ksdn.or.kr (inactive 2001)	Closed 1998. Integrated into Korean APC node
Kyrgyzstan	1997	NGO	www.ecology.elcat.kg (sporadic)	SDNP funding ended 1999; continues precariously on voluntary basis
Latvia	1994	University	www.ciesin.ee	Regional Baltics, CIESIN partnership. Reference to the work undertaken before 1997 has been archived.
Lebanon	1996	Ministry of Env.	www.sdnp.org.lb (not updated)	Ended late 1999, active within Ministry
Lithuania	1994	University	www.ciesen.ee (not accessible)	Part of regional Baltics project, CIESIN partnership
Malawi	1997	University	www.sdnp.org.mw	SDNP funding ended 2000. Active, self-sustaining ISP. plus
Mauritania	1998	Government	www.iiardd.mr in no more.	Partnership with RBA IIA (no SDNP funding). Civil Society cyber café active. http://www.pnud.mr/cyberforum/index.html is an NGO e0forum that was developed as a result of the IIA/SDNP and is still active.
Mexico	1996	Ministry of Environment	www.rds.org.mx (inactive)	SDNP funding ended 1999. Active, now a national NGO.
Morocco	1994	Ministry of Environment	www.minenv.gov.ma (inactive)	Closed in 1997. Ministry took over the operation..
Mozambique	1997	Ministry of Environment	www.sdnp.org.mz	Closed in 1999
Nicaragua	1994	NGO	www.sdnnic.org.ni	Funding ended 1998. Active as national NGO, with ongoing funding difficulties.
Pakistan	1993	IUCN Pakistan	www.sdnpk.org	SDNP funding ended 2001. Active, successfully changing gear. Associated with the Pakistan Development Gateway. Although it exists as a separate entity as well.
Philippines	1993	Foundation	www.psdn.org.ph	Funding ended in 1998. Active, A foundation since its inception
Poland	1997	University	www.ciesin.ci.uw.edu.pl	SDNP was a junior partner in CIESEN; received HP Donation, limited SDNP work
Romania	1997	Research Centre	www.sdnp.ro	Continuing until at least December 2004 with LA 21 funding.
South Pacific	1994	South Pacific Comm.	Never developed.	Closed after funding ended, little impact
Togo	1996	Chambre de Commerce, d'Agriculture et d'Industrie du Togo	www.rdd.tg (inaccessible)	Continues to be associated with the Chambre de Commerce but no further details available.
Tunisia	1993	Ministry of Environment	Developed as intranet for Ministry	Funded end 1997. Ministry executed.
Ukraine	1993	UNDP	freenet.kiev.ua (inactive)	FreeNet, associated with SDNP. Limited SDNP funding.
SIDSNet	1996	UNDP	www.sidsnet.org	SDNP funding ended 1999. Moved to UNDESA in 2000, active. Now funded by the GEF

Note: Websites verified 9 January 2004.

2. MAIN FEATURES AND ACTIVITIES

A clear distinction can be drawn between SDNP activities pursued by headquarter staff, and those at national level working under an SDNP Project Document. The former supported the latter, but also engaged in direct activities unrelated to the national Programmes.

2.1 SDNP Headquarters

The small team located in New York at UNDP headquarters, and their supporting consultants, covered a wide territory, both geographically and functionally. Section 1.3 above listed their main activities, and presented in more detail the steps involved in initiating SDNP projects nationally. However, SDNP staff also turned their attention to other matters.[8]

First, were collective support actions for national SDNPs. The main ones comprised technical support, SDNP workshops, electronic lists and Web resources.

SDNP HQ provided technical support at the set up stage and on an ongoing basis. SDNP servers and other equipment was usually configured in New York before shipping to nascent SDNPs as a turnkey solution. And training, for instance in Open Source, was also provided nationally and at the international workshops, and ongoing support was given throughout the life of projects.

From 1993 in San Francisco, training was undertaken in collaboration with the Internet Society (ISOC) International Training Workshops **(**INet) for developing countries that were launched in 1992 by Randy Bush[9]. Working with organizations such as ISOC, several national officers and technicians working for SDNPs from around the world were trained at these and subsequent workshops. Many of these people went on to form the nucleus of what has become in Africa for example, a core of networking specialists and professionals dedicated to furthering the aims of the SDNP and helping to extend IP based network throughout the world. Many have gone on to serve on ICANN, ISOC or to otherwise mobilize support for ICT diffusion.

Separate from the INet training initiatives mentioned above, a series of six international Workshops were held, beginning in New York in 1992, followed by Ottawa (1993), Bombay (1993 and 1994), Mexico (1996) and Maputo (1997). Each had a theme and focus. The first in New York was to explore the information needs of developing countries, how SDNP could address them, and the principles to be pursued. The SDNP was created as a result of the recommendations that came out of that meeting. The last, in Maputo, was jointly organised with the UNDP's *Internet Initiative for Africa* (IIA), and brought together African SDNPs and other actors. In between were gatherings of SDNP coordinators from around the world, along with SDNP staff and resource people. Agendas were structured to cover issues of current interest, and ranged from demonstrating technology solutions to proposals for sustainability. Participants generally rated these highly, and those interviewed particularly valued the opportunity to compare notes and share good and bad experiences – often on the margins of the meeting.

An implicit agenda here was to build sentiment amongst SDNP coordinators as part of a larger network, and to encourage ongoing sharing between Workshops. To further bolster this and provide practical assistance a number of electronic lists were set up and Web resources developed. One list comprised all SDNP coordinators. A review of the archives reveals discussion ranging from long-term strategy to once off requests for information, and announcements of opportunities. At times, interaction was lively and continuous. The other main list covered technology aspects of SDNP, linking technical staff. Here technical fixes were sought and received, and the latest development in Open Source and other areas were circulated and discussed. Both lists continue in use. In addition, there are regional coordinator lists in Africa and in Central America, and the latter also had a dedicated technical list. All lists are supported by a search facility.

8 As noted, the assessment did not focus on these, except in so far as an impact was discerned during national level assessments.

9 See: http://www.psg.com/~randy/nsrc.html

Web resources are divided between technical, the most developed; training, containing a very limited set of materials; and management resources, the least developed. The SDNP Website also contains a large amount of material on SDNP around the world, links to national programmes and other resources.

Second were partnerships with the private sector, and donations and grants. Already mentioned is the Hewlett-Packard collaboration which yielded US$1.2 m in computers and equipment. A partnership with Corel Corporation and Rebel.com resulted in a donation of Corel's WordPerfect Office suites to forty SDNPs, and of Rebel.com's Netwinder programme to several more, both based on Linux. The total value came to over $1m.

Third were regional SDNP programmes that transcended individual countries. SIDSNet[10] (Small Island Developing States Network) was launched in 1998 as a follow up to the 1994 Barbados Programme of Action with the SDNP contribution of $200,000 matched by others. It connects forty three Pacific, Caribbean, Atlantic, Indian Ocean, Mediterranean and Africa island nations, and was developed with the Alliance of Small Island States. It goals are similar to those of national SDNPs – capacity building and advocacy in ICTs for sustainable development; generating and disseminating information (six themes have been identified); and enabling dialogue between stakeholders. An additional US$300,000 for training workshops in twenty one countries was soon forthcoming from Japan. The SDNP-funded phase ended in December 1999, but the project continues under the UN Department of Economic and Social Affairs. An active Web portal continues to this day.

SDNP was also active in other ways at regional level, identifying and taking opportunities to influence UNDP and broader initiatives and to construct collaborations with them. SDNP was subcontracted to undertake the national groundwork for the Internet Initiative for Africa in Niger, Burkina Faso and Mauritania and is credited with having introduced a participative stakeholder forum into these[11]. In Mauritania, the SDNP team succeeded against the odds in obtaining an MoU signed by government to launch the IIA, despite an initially difficult environment for the Internet. SDNP was then integrated within the implementation of the IIA, creating the first Cyber Café for civil society which is still in operation today.

2.2 National SDNPs

However, the bulk of SDNP resources, about 90% leaving aside staff costs, was devoted to national level projects.[12]

As we have seen, national level SDNPs were encouraged by SDNP HQ in two broad directions: information dissemination and exchange and stakeholder interaction and participation through dedicated networks. Adhering to the guidelines supplied and with direct support from HQ, each project was designed and launched (or not) taking into account specific national characteristics. These varied greatly, including for instance regarding the level of development of the Internet, the level and nature of interaction between stakeholders, the culture of information sharing, the level of interest and support from the UNDP office, the institutional and legal context, and the sustainable development challenges facing the country. As a result, SDNPs took a diversity of forms.

2.2.1 General Typology of SDNP Project Activities

Most SDNPs laid the main emphasis on one of two categories of action (sometimes alternating over the years), each of which can roughly be divided between basic and more advanced forms:

A: Connectivity and ICT Usage: (Access and technology focused)

Basic: 1) Provision of dial-up connectivity to sustainable development stakeholders, often with basic training and support;

10 www.sidsnet.org

11 Interviews with Richard Kerby, UNDP Strategic and Regional Initiatives Unit, Africa; and Anthony Woods: Regional Information Manager UNDP (RIMS).

12 A detailed table can be found of the sources and amount for each project at: http://www.sdnp.undp.org/docs/evals/eval97.htm#E10E17

2) Website creation, maintenance and hosting, also often with some training and support;

3) Awareness raising, advocacy, lobbying networking on Internet issues and use.

Advanced: 4) Supporting telecentres, community access centres or other collective forms of connectivity;

5) Training and capacity building in advanced Web and ICT use, and networking on these;

6) Provision of advanced ICT services to stakeholders.

B: Content and Stakeholder Interaction: (Information and networking focused)

Basic: 1) Sourcing, editing, producing and disseminating information to stakeholders, via the Internet;

2) Building a Web Portal;

Advanced: 3) Partnership, coalition, capacity and network building between sustainable development partners, that focus on generating and utilising often relatively sophisticated content.

The first group emphasises the technology and the capacity to utilise it to manage information; the second concerns more that information itself, on matching information to stakeholder needs, and on linking those stakeholders around the information. SDNP HQ usually considered basic activities, as core characteristics of an SDNP, or in practice were prerequisites to achieving SDNP goals. More advanced activities assume a reasonably high level of connectivity and ICT use, or sometimes depend on the existence or emergence of a supportive environment.

Of course, the two categories are intertwined – stakeholder interaction is achieved largely through the medium of ICTs; and the use of ICTs necessarily always involves information. The distinction between basic and advanced is also not unproblematic. Nevertheless, a meaningful distinction can be drawn between activities that provide or directly support access and use of ICTs for sustainable development stakeholders; and those that focus on identifying and manipulating information, on ensuring stakeholders can access it, and on bringing stakeholders together around this information for decisions and action.

Virtually all SDNPs were involved in some small way in all categories above, but usually with a clear difference of emphasis on each. For example, the Bangladesh SDNP, though well endowed financially, offers only limited, targeted, basic connectivity. But it is developing a series of Community Access Centres and other spaces where marginalized stakeholders can connect (commercial ISPs are beyond their reach). It has also both developed a very sophisticated high-content Portal, and is building numerous long-term partnerships for content development and other information activities. On the other hand, Malawi SDNP is currently the largest ISP nationally, but (partly as a result) is not significantly involved in other activities.

The table below indicates the emphasis of selected, recently evaluated, SDNPs.

Table 1: Emphasis of SDNP in terms of Activities

	Connectivity & ICT Usage		***Content & Interaction***	
	Basic	**Advanced**	**Basic**	**Advanced**
Bangladesh	**low**	**medium**	**high**	**high**
Guyana	**medium**	**medium**	**medium**	**low**
Benin	**medium**	**medium**	**medium**	**high**
India	**low**	**low**	**medium**	**high**
Malawi	**high**	**low**	**low**	**low**
Pakistan	**high**	**medium**	**high**	**high**
Romania	**low**	**low**	**low**	**high**
Colombia	**low**	**medium**	**high**	**high**
Honduras	**medium**	**medium**	**high**	**medium**
Nicaragua	**low**	**low**	**medium**	**low**

The different categories of action correspond somewhat to different national needs profiles. For instance, a heavy emphasis on achieving basic connectivity made sense only where such connectivity was very limited. Extending connectivity in the form of community access centres or cyber cafés was implemented usually where urban and middle-classes were already well served, but a gap was growing existed between them and

marginalized areas and groups. Similarly in terms of content. Creating a major Portal is usually a reflection of both the availability of significant volumes of data and the absence of an existing electronic dissemination source. Preconditions for building partnerships around content-based advanced applications would usually include a relatively advanced ICT infrastructure and applications, sophisticated content needs, and an environment and structures suited to collaboration.

There is also evidence of a historical progression among SDNPs, in parallel with the growth in Internet and diffusion of ICTs during the 1990s. Three stages can be discerned:

1. From 1992 to 1997, full Internet access was largely unavailable in poorer countries, and connectivity was based on store-and-forward technologies and telephone dial-up for e-mail and data. Many SDNPs had a significant impact though the provision of connectivity. (Malawi SDNP continues with this today, but this indicates the extent to which Internet provision is lagging there.) UNDP New York operated a fully automated telephone based file sharing hub that dialled into several SDNP hosts to upload and download data 24 hours a day. The Pakistan SDNP relied on this service for many years and over 10,000 were served at one time using this link.
2. From about 1997 to 2000, the Web came into its own and experimentation took off. The benefits of the Internet became apparent to decision-makers, resulting in efforts to liberalize Internet service provision and access to bandwidth. Most SDNPs began to shift away from connectivity and access, and focused on content delivery and capacity building in the use of ICTs. In most developing countries, the private sector began investing in connectivity and thus filled a gap that SDNP had previously addressed.[13]
3. Following this, from 2000, was a period of consolidation and adaptation that continues to this day. The availability of bandwidth and the exploitation of attendant applications have become more or less recognized as a contributor to national competitive advantage and an enabler of development. Many countries have developed national strategies and actions plans, and are beginning to invest in ICTs in a more coherent manner and consider their cross-sectoral implications. Although existing activities continue, some SDNPs seek new roles especially in sustainable partnerships and collaborations.

Yet the emphasis of a particular SDNP cannot entirely be explained by national needs or the historical stage of ICT development. Many circumstances determined the shape of an individual SDNP, some arbitrary in relation to needs and history. For instance, achieving general connectivity was omitted as a goal of the SDNP Project in India, first mooted in 1994, not because of an absence of need but because the resources available were miniscule in relation to the scale of the task of achieving connectivity. The final design and emphasis of an SDNP matched these macro-factors with the available resources and the specific circumstances within which an SDNP could in practice find a practical niche and suitable home.

2.2.2 REVIEW OF ACTIVITIES

Broken down into specific activities, the two categories of action are illustrated below with a few examples and relevant compilations. Factors on which success depended are also outlined.

A: Physical Connectivity and ICT Networking

Basic: Connectivity, WebPages and associated services.

Almost all SDNPs **provided dial-up connectivity**, the early ones and in poorly developed situations using store-and-forward technology and then evolving into an ISPs of some nature. In many cases, store and forward file sharing using uucp was provided by UNDP New York's dial up server. A number were pioneers in Internet connectivity, and became major ISPs. The Pakistan SDNP was the earliest provider of connectivity to many non-urban areas, and became for a time the largest ISP in the country with up to 20,000 subscribers generating a significant surplus of income over expenditure that enabled the subsidization of other activities. At the other end of the spectrum were Projects offering dial-up local connectivity to a small number of selected sustainable development stakeholders, many of whom would anyhow have subscriptions to a commercial ISP – is essence operating little more than a server with a few dial-in modems. Somewhere

13 As early as 1996, SDNP HQ was encouraging projects to move from ISP actions towards information based activities. See: http://www.sdnp.undp.org/docs/reports/mexico/rauldat.htm

in between were Projects who targeted larger numbers of stakeholders who could not for the foreseeable future afford commercial ISPs, such as NGOs, students and those in rural areas.

Box 1: Basic Connectivity, Web-development and related activity:

- By mid 1996, SDNP in **Pakistan** had up to 20,000 UUCP-based e-mail users, connected to about 5,000 host clients, making it the country's largest ISP. The original target was for 500 users. Most importantly, they went to considerable efforts to provide the service in remote and rural areas, and had low-cost access to NGOs and other SD stakeholders. At the time, it was generating income far in excess of costs. Despite this head-start, delays in bringing its full Web service to the market, and proliferation then consolidation of the Internet market, resulted largely in failure to make the transition to a full service ISP. SDNP still offers ISP services but has also successfully moved into others areas.
- **Malawi** SDNP launched its ISP service in August 1999, after many delays, but has managed to become the dominant ISP capturing 30% of a still nascent market. However, the need to establish a firm footing has resulted on the one hand in a deflection from its development purposes (it seeks users from all sectors) and on the other in accusations of unfair competition. The project can also be credited with having progressed the regulatory and policy environment for Internet in Malawi.

Most, though by no means all, connectivity was supplemented with initial **training**, on site or in groups, and with ongoing support.

SDNPs very often also **designed, constructed and hosted Website** for stakeholders, mainly government, institutions and NGOs. **Basic training** in maintenance, and sometimes design and hosting was again usually part of the package. And many undertook awareness activities, such as open Workshops and Seminars.

The development potential here depended on:

- Accurate targeting of and provision of services to stakeholders important to sustainable development, and significant barriers to obtaining such connectivity services by other means;
- Enhancing the capacity to use connectivity effectively, with training and support;
- The actual use of the connectivity by the stakeholders in achieving their development goals.

A third significant area of activity covered a spectrum from **raising public awareness** of the Internet and ICTs, through to **lobbying** governments (and even international organisations) to regulate for Internet proliferation and affordability. In general, this was seen as a prerequisite to the availability, expansion of or effective use of the Internet. A significant number became involved in Top Level Domain names, and in other aspects of Internet administration, in a few cases playing the key role in securing the HLD and enabling wider use of various domains.

Box 2: Internet Lobbying and Awareness Raising :

- In **Guyana**, SDNP has been active in establishing domain name administration nationally. Although the .gy high level domain name is held by the University of Guyana, it is administered (for historical reasons) from Puerto Rico University. SDNP obtained agreement from UofG to take over administration of the org.gy, edu.gy, and gov.gy domains, thereby reducing costs and delays.
- SDNP in **Bangladesh** is an active member of ICANN and successfully lobbied at their international gathering to secure funding for poorer countries in ICANN activities. With the ccTLD Secretariat, SDNP initiated a training programme for small ccTLDs to learn how to operate them efficiently. SDNP is also working with Government Ministries, the Regulator and others on how the .bd domain might be made available more widely and easily – until recently the domain was spuriously claimed by a pharmaceutical company; and collaborating with others to build a nationwide Internet exchange so that traffic within Bangladesh need not be routed via the USA, the usual default. The cost to ISP of such unnecessary international traffic is high.

Advanced: Telecentres, ICT Capacity Building and Advanced Services

Beyond simple connectivity, many SDNPs went further in an effort to deepen and extend connectivity geographically and in social terms; to develop and provide some advanced ICT services; and to draw stakeholders further up the chain of effective ICTs use. There were several distinct areas.

The **creation of physical access/networking nodes**, in the form of cyber-cafés and other group or community access centres was a focus for many SDNPs, amongst others, Bangladesh, Jamaica Mauritania and Pakistan and Benin. They always include a level of support. The development impact depends upon:

- Provision of connectivity and support for use in areas and to groups who would otherwise be excluded;
- The extent to which these services are used to support sustainable development goals.

Box 3: Cyber Café, Training/Capacity Building and ICT Service Activities

- The SDNP in **Mauritania** created an NGO Cyber Café or CyberForum. In country that had until very recently been opposed to Internet access at all, and where NGOs are not normally involved in the consultation mechanisms, this was a major achievement. Dozens of NGOs have set up accounts at low costs and a coordinator is employed. Training facilities, Website creation and hosting and related services are also provided. Premises have been secured in the Commission for Human Rights and the Fight Against poverty, and it is also used by journalists. It is managed by the users.
- In the north of **Benin**, SDNP was involved in the establishment of a Community Telecentre at Malanville. The goal is to create a technological "critical mass" in rural communities and urban neighbourhoods. It provides community access to the Internet, online learning, a youth and community centre, and business and agriculture resources, and training facility. UNDP, ITU, IDRC, OPT and UNESCO have all contributed.
- In **Jamaica**, six cybercentres or 'Community Focal Points' have been established and spread throughout the country, working with local partner organisations. As well as Internet access, training and Web services are given to enable communities to build their own information and knowledge bases. A contract is signed with the community development organisations, with SDNP offering equipment (typically three computers and peripherals), training and Internet connections. The model is designed to be sustainable.
- In **Pakistan** too, three Cyber Community Centres have also been opened in remote towns and villages, the first in March 2001. All are in remote towns, and more are planned. (SDNP has also separately supported the development of a District Website in them). Developed in collaboration with local organisations, they offer access to computers and the Internet at reasonable cost. Some act as a catalyst for the arrival of cyber-cafés in areas previously un-served. Services can target normally excluded groups, such as women, and illiterate people whose communications are written down, and translated, in both directions. Again, sustainability is central, based on grass-roots activities and community based organisations.

Advanced training and capacity building in ICT use was considered by some as an important part of their work. Pakistan was not alone in providing capacity building through internships, workshops on specific topics, and support groups to empower marginalized users. Areas of advanced training include the use of Open Source and Linux, database development, IP network management, and knowledge and information management systems. The contribution to sustainable development would depend on:

- The numbers involved in internships, in Workshops and advanced training and other activities;
- The extent to which these applied the skills and capacities to sustainable development.

Some SDNP provided **more advanced technical ICT services** to clients. These included the design and implementation of LANs and MANs; the development of GIS based databases; and e-commerce applications for small and medium sized enterprises. The development contribution of these activities relates to:

- The nature of the clients and its role in sustainable development;
- The impact of the ICT services on its capacity to realize this role;
- The extent to which the output is applied to this end.

B: Content and Stakeholder Interaction:

Basic: Web content and a National SD Portal.

Without exception, SDNPs engaged in at least some **sourcing, gathering, generation and dissemination of information** by means of a Website and the Internet (lists, e-mail etc.). It is a core characteristic of an SDNP, and a prerequisite to achieving its goals. But again, the variety of activities engaged in was enormous. For a few SDNPs, electronically collating and disseminating specific information was a useful, even essential, tool for the project to achieve its goals, though the volume of information and sophistication of applications could be low. A good example is Romania, where SDNP focused almost exclusively on supporting the creation of a multi-stakeholder *National Sustainable Development Strategy*. But the amount of information needed to do this, and the level of sophistication of the networking application, was low – electronic information networking was critical to success, but implemented only precisely to the level of sophisticated required and no further.

At the other extreme is the **Web Portal**, which attempts to bring together a comprehensive range of information on sustainable development, in a form suited to a range of stakeholders, sometimes with

significant interactive possibilities. The Portals in Pakistan and Bangladesh are comprehensive by any standards, perhaps meriting inclusion in the 'advanced' category below. Bulgaria, Colombia, Guyana, Honduras, Jamaica, and Philippines and are a few of many SDNP sites (and their successors) that offer significant amounts of updated information and systematic links to national and other resources of relevance, as well as hosting many Websites. Some specialise more: India, though not as comprehensive, has very significant interactivity through its on-line query system on a total of twenty six themes.

In terms of their development impact, the issue here are:

- To what extent has the strategy identified information of use to different sustainable development, and made it available in the appropriate form and in a timely manner?
- To what extent is this information accessed?
- To what sustainable development ends is it put?

Advanced: Partnership, coalition, capacity and network building.

SDNPs did not always provide support for NGOs on the effective use of technologies and content. A number, such as Honduras, Kyrgyzstan and Romania, worked with NGOs to enable them to participate in general development and policy-interactive processes, and some provided support to seek and apply for funding opportunities and other activities. In general, though, ICTs and electronic content were central to the activities undertaken by SDNPs.

This was the case for those SDNPs that actively and imaginatively pursued the creation of partnerships with and between key sustainable development stakeholders. Using ICTs, but based on the generation, dissemination and use of content, various configurations of actors are brought together around mutually beneficial actions, their agreement formalized in the form of contacts or Memoranda of Understanding. Some SDNPs were founded as partnerships; others developed them over time. What differentiates such collaborations is:

- They are joint efforts between SDNPs and other partners whose domain of activity (though not usually its primary goal) is at least indirectly relevant to sustainable development. But the focus of the partnerships is to enhance the sustainable development impact of the latter.
- Often, though not always, they formally involve one additional partner/stakeholder. But the partnership activity brings into contact in various ways many members within a stakeholder group, and frequently different stakeholders groups, through the medium of shared information and networking.
- Each side brings significant resources to the collaboration.
- They are of at least medium-term, and often open ended, duration.
- They are frequently evolutionary in nature, seeking sustainability beyond initial funding.

They cover a lot of ground. Collaboration is pursued in, amongst other areas: local government information systems, rural connectivity, schools connectivity, environmental awareness, computer recycling, distance education, training academies, GIS systems for sustainable development, e-commerce, telehealth and telemedicine, and promoting Open Source. From e-commerce tools to sell organic cheese in Honduras, to Cameroon's SchoolNet programme, this area of activity is still emerging and developing.

Their potential is enormous. A range of SDNP capabilities are brought to bear on an already existing institutional setting, transforming it by enhancing interaction, networking and sharing, or creating new activities that build on the strengths and scope of both. They can also contribute potentially to the sustainability of SDNPs, institutionally and financially, by embedding its activities more intimately into existing institutions, and by developing close relations of trust and mutual appreciation.

General criteria for measuring the contribution that SDNP partnerships made in support of sustainable development are difficult to define, since they can be so diverse in content. But they might include:

- The extent of resources and commitments leveraged from partners in support of sustainable development;
- The awareness created around sustainable development as a result of the networking and partnering that SDNPs encouraged;

- The body of local and other knowledge that was mobilized and made available to decision makers at all levels as a result of the operation of the SDNP, and especially of the newsgroups, mailing lists, media publications and communications, as well as Web pages and portals that SDNPs developed and published
- The actions that resulted from or impacts, results and outcomes that could be attributed to the networking, information sharing and partnerships the SDNP established. In SDNPs, which developed an information service on sustainable development, for example in Pakistan, Bangladesh, China and India, the impact of the information provided could readily be measured. In Pakistan, the SDNP made a strong impact when early on in its operation, the SDNP Pakistan marshalled the resources of the network to obtain expert evidence and information that proved instrumental in dealing with a major environmental catastrophe in the port of Karachi. The information obtained would not have been possible to obtain yet deliver had it not been for the SDNP and the telephone based store and forwarding networking scheme it had developed and relied upon. SDNP Karachi demonstrated the full importance of the network and laid the groundwork for its own success. In China, the SDNP resulted in the modification of laws that now permit greater access to environmental and related information;
- The clarity of focus on sustainable development issues that would not otherwise have been addressed. This can be measured in the number of media communications, articles, publications or pronouncements made about sustainable development;
- The extent and manner in which the partnerships have generated interaction between different stakeholders, especially those usually excluded from decision-making.

3. MANAGEMENT AND INSTITUTIONAL CONTEXT

Global SDNP guidelines identified a few essential features of national level management and the institutional context, including a multi-stakeholder Steering Committee, and an independently appointed Project Coordinator. But recognizing that no single blueprint was possible or desirable, national stakeholders could steer this model in directions most suited to the local characteristics, building in these features as appropriate and thus enhancing the national 'ownership' and maintaining UNDP as a neutral facilitator. The flexibility of the SDNP was essential to allow for adaptation to local specificities.

3.1 Institutional Context

SDNPs were institutionally constructed in an area of tension between two parameters: on one side, the autonomy required of a global project with its own ethos and objectives; on the other, the reassurances required by a government that such ethos and objectives would not stray beyond their own. SDNP, as many other UNDP projects, had to balance the needs of the projects with those of the government. UNDP/SDNP had the greatest influence and control over the project at inception, before the signature of the Project Document. UNDP required an existing and relatively autonomous organization to host the SDNP, one with the potential for innovation, that was credible and that had a proven capacity to work well with all partners. At the same time, the SDNP had to garner strong government support or else risk greater uncertainty and the possibility of being marginalized later on. This delicate balancing is a result of bringing organizations together, which sometimes may not have worked well with one another and/or which viewed each other with suspicion. A further complication arose from the need for projects to be sustainable. In some cases, the majority, income-generation was the norm. However, few CSOs brought the required business planning and income generating skills to the table.

The selection of an SDNP host was led by the UNDP Country Office, supported by and based on generic Terms of Reference supplied by HQ and adapted to local conditions by local stakeholders. It was in effect a bidding process, where likely candidates came forward or were identified and encouraged to participate although the pre-feasibility and feasibility studies as well as punctual missions from UNDP HQ specialists and consultants was meant to facilitate this process. The objective was to render the selection process as competitive as possible, while maintaining openness and transparency in the process. The UNDP country office weighed in with its own assessment based on its experience in situ. The UNDP country office was often times able to consult with others in the development an CSO community locally and draw on its own experience of having worked with some of these organizations.

Given these factors, SDNPs were often located (physically and institutionally) within – sometimes in partnership with – quasi-state or public institutions such as universities (e.g. Cameroon, Guatemala, Jamaica, Malawi and Jamaica), research centres and institutions (e.g. Bangladesh, Costa Rica Pakistan and Romania), or government agencies (e.g. China, Bolivia, Morocco, Tunisia and Lebanon). Some organizations were created de novo to serve the needs of the SDNP (Benin, Honduras, Nicaragua, the Philippines). These organizations were the result of discussion between various stakeholders working together through the Steering Committee or its equivalent. Many national SDNPs were established in partner organizations promoting information sharing and/or undertaking educational or environmental activities IUCN Pakistan). The aim was to open up government and to partner with government in helping people and other development actors to gain access to government and/or other information resources in the hope of encouraging greater awareness and action for sustainable development. The other objective was to gain access to key Ministries to influence development as well as telecommunications policy making.

There were some variations on this theme. Some SDNPs were constituted as autonomous projects more closely associated with UNDP than any specific Ministry (e.g. Guyana); others were part (sometimes small) of a larger Project which determined their institutional setting (e.g. Mauritania, Poland, Estonia); and quite a few were situated squarely within Ministries, either associated with an ongoing programme of relevance (e.g. India) or as a new activity (e.g. Tunisia, Lebanon).

The role of UNDP Country Offices (COs) is worthy of mention. When ICTs and the Internet were still something of a novelty and their development role was unclear, the response of COs varied. Many distanced themselves from SDNP, unsure of its potential or its impact. The high cost and limited results of the SDNP in the South Pacific regional programme based in Fiji was a factor that contributed to its discontinuation. Conversely, some SDNP projects, such as the one in Bangladesh, were initiated and funded in large part at the local or country level. Today, several activities funded by UNDP have mainstreamed the types of activities that set the SDNP apart at the height of its operation, in the SDNP as much as they might resulting in excessive bureaucracy and delays and missed opportunities for partnerships and other forms of collaboration. However, with the explosion of the Internet and the legitimisation of ICTs for development, fewer problems were encountered and several COs began to fund SDNP in a few cases launching them from their own resources.

UNOPS, formally the executing agency, also had some influence on institutional efficiency. The arrangement allowed SDNP HQ to optimally allocate resources to national projects by establishing clear rules and regulations for the disbursement of funds, including for staff recruitment and equipment purchase. National execution is sometimes promoted in the interests of national capacity building. In the case of SDNP, however, the argument can be made that this not so necessary given the large capacity building component already built into projects both nationally and internationally through Workshops and Internet Society (INet) training as well as related activities.

Overall, it can be stated that the institutional context was an important determinant of SDNP's success, through allowing ready access to vital information and resources, influencing policy, establishing credibility with stakeholders, and prescribing the practical constraints on Project initiatives and directions, and its future evolutionary trajectory.

In general, the evidence suggests that SDNPs were more likely to succeed in their goals when the host was a non-governmental entity. This appears to be the result of a combination of factors such as a greater likelihood of finding highly motivated, independently thinking and entrepreneurial individuals to manage and operate the SDNP; a greater possibility of establishing local ownership; fewer bureaucratic constraints on activities including charging for services; a lower likelihood of external interference; a perception of independence amongst stakeholders; more openness, transparency and sharing, which allowed many different groups the opportunity of meeting and eventually working together; and a higher likelihood of genuine multi-stakeholder participation. Many of these factors would have been less likely to develop in government.

But aspects of Project management could to some degree compensate for, or supplement, the circumstances of the institutional context. Such aspects were mainly the Steering Committee, and the internal management structures.

3.2 Steering Committee

The role mapped out for the SDNP Steering Committee was twofold:

- First, "to provide advice, direction and support to the SDNP Coordinator and the Coordination Unit staff on an ongoing basis"[14], which included everything from reviewing strategies, to supporting plans for cost recovery, to resolving conflicts. Financial responsibility was specifically excluded (though information was to be made available), understandably since this would be the preserve of the contracting parties, at a minimum, UNDP and the appropriate Ministry.
- Second "the Steering Committee is the vehicle for reflecting stakeholder participation in the management and operation of the SDNP", which included such matters as recommending the key information needs.

Broadly speaking, nearly all projects tried to follow these guidelines. An effort to ensure multi-stakeholder representation was acted upon in most cases (exceptions included Tunisia, Morocco and the South Pacific Regional Programme), but there were major variations in terms of how effectively each of the two roles was carried out. The main factors influencing the outcome included:

- The willingness and interest of the government to engage in genuine multi-stakeholder participation;
- The opportunities offered by the nature of the project for stakeholder inputs;
- The degree and nature of differences between the main contractors (donors and government);
- The calibre, level of interest, rank and commitment of individual members.

The two objectives did not always sit well together. Those best able to represent the needs of stakeholders were not always most suited to advising and adjudicating on management issues; and vice versa. But this was seldom the main issue. More often, Committees had representation from numerous government ministries, all with a legitimate interest in sustainable development, but leaving fewer seats for other interests especially civil society. This was especially true of SDNPs located within or close to government, with the sponsoring Ministry tending to have most influence. Furthermore, many appointees were often *ex officio*, whether in Ministries or outside, with little real interest in the Project. (In at least a few cases, this had an unexpected advantage: Initially disinterested Steering Committee members gained a deeper understanding and indeed education in the concept of sustainable development and the role of information and ICTs, and ended up as effective ambassadors for the project within their stakeholder groups.)

In terms of contribution to management, Steering Committees varied from highly interventionist to virtually non-existent. There were cases of Steering Committees being approached by project coordinators only with the greatest of trepidation, indicating a fraught and difficult relationship. However, it appears that the influence of Steering Committees was in all cases positive. There are reports of some suffering considerably from excessive intervention and interference, often those close to government. Furthermore, the Steering Committee of some of the most successful SDNPs, such as Pakistan and Honduras, operated with a very light touch.

In many SDNPs, the Steering Committee included a representative of the local telecommunications sector, sometimes bringing together both the national operator and representatives of the private sector. The national telecommunications operators in many smaller countries (Chad, Niger when the project was being negotiated and several other countries) viewed the SDNP as an interloper seeking to gain unfair advantage in terms of access to computer aided communications and eventually the Internet. In some of these countries, the SDNP as well as UNDP for its support were considered unfair competitors because of the provision of shared connectivity using store and forward technologies to a number of potentially paying customers. But at the same time, SDNP heavy focus on training and capacity building did de facto created a market of users for new national ISPs.

14 From SDNP Guidelines for Project Development.

The "Committee within the Committee" was usually comprised of the main donors; key ministries – especially the ministry responsible for executing the SDNP; any others directly involved in implementation (such as a host institution); and then other individuals whose influence was related to their evident level of expertise, commitment and general standing. As always, the powerbrokers were those who controlled the purse strings, and those who were unclear about what the SDNP stood for and who perceived the SDNP as a direct challenge to their activities. In the latter camp were representatives of the national telecommunications operator and representatives of the private sector working in the ICT sector, if they were represented in the inner circle. In smaller countries and jurisdictions, the former had a most important role to play. Invariably, the national telecommunications operators felt threatened by the SDNP and its idea of promoting cheap and public access to the Internet.

In several cases, a few key powerbrokers emerged. UNDP and other donors were usually strong advocates of reaching out to a broad range of stakeholders, especially civil society; they took a strong view on the creation of an independent institutional context for SDNP; and were actively raising the issue of sustainability at an early stage. Ministries, on the other hand, varied considerably in how much they wished to include other stakeholders; were occasionally keen to retain SDNP on a short leash, and were less concerned about sustainability. The national telecommunications operators, when they were involved in the Steering Committee, invariably had a strong presence and role to play. It is not the first time, nor the last, that such differences emerged. Yet the evidence suggests that, overall, governments acted in good faith and genuinely pursued SDNP goals within the given constraints – and it was often the case that one or more Ministries was the champion of SDNP inside and outside government.

The other influential (non donor, non-government) Steering Committee members, through their personal commitment and ability, often made crucial contributions to management, especially in providing the kind of 'mentoring' and advice needed by newly established SDNPs. Thus structural limitations, in terms of for instance representation of the main stakeholder groups, were sometimes overcome through significant contributions and huge commitment of individual members.

All the above suggests, accurately, that its second objective - to provide as a bridge between stakeholders interests and the project - was less successful overall. The Steering Committee seldom constituted the kind of integral link envisaged, either as an SDNP 'sounding board' with stakeholders, or as a means to convey their needs to the Project. However, some individuals on the Steering Committee did take up this role with at least partial success.

Much more important, however, the multi-stakeholder approach cannot be reduced to the effectiveness of Steering Committee, and projects developed other means to relate to stakeholders such as a 'membership' or associate structure, needs assessment Workshops, and mechanisms for electronic interaction. In this regard, the Steering Committee often added to the project's status and credibility, that could in turn contribute to project-level multi-stakeholder activities.

3.3 Internal Project Management

The SDNP Guidelines called for external recruitment and open competition in the selection of a Project Coordinator, and this was insisted upon in every case. Open and public recruitment was the norm and the local media the medium used for communicating employment opportunities at the SDNP. Selection criteria were established in several cases and selection was undertaken on the basis of an interview involving UNDP and representatives of the Steering Committee and of others as well, depending on the circumstances.

In a number of SDNP projects, candidates were scouted for during the pre-feasibility study if possible. So some candidates were being already being courted before the establishment approval of an SDNP; in others recruitment took some time. In the few cases were the Coordinator did not perform satisfactorily, procedures were applied to remedy this situation. Overall, however, external recruitment was a success. SDNP projects were often perceived as exciting and rewarding jobs, which attracted high quality candidates who brought enthusiasm, commitment, entrepreneurial skills, experience and ability to the job.

The quality and commitment of SDNP and the Coordinator were absolutely critical to success. The level of commitment of some was such that even where financial sustainability was not achieved, staff members continued working for much lower remuneration or on a voluntary basis. In a few projects, delays and suspensions also left staff in part-time employment for lengthy periods during which departures were surprisingly few. Conversely, the few coordinators who never extended their employment horizon beyond the duration of funding significantly reduced prospects for sustainability.

There were some constraints that negatively affected management, including;

- The combination of ICT, sustainable development and entrepreneurial experience required of coordinators was not always easy to find, sometimes causing significant delays in recruitment.
- The short duration and uncertainty of some projects led to a high turnover. Some coordinators and other key staff understandably accepted offers from the private sector, once technical or managerial training provided by SDNP was finalized.
- Occasionally, the Ministry or other agency in charge severely constrained the activities of the Coordinator and the project, leading to disillusionment, inaction and sometimes staff departure.

Projects varied in staff numbers from two or three up to fifteen or more, which generated different levels of complexity of management tasks. It is difficult to adjudicate on management effectiveness beyond considering results and achievement, but as a general rule, projects often had some difficulty with non-operational management tasks. Thus developing Business Plans and Strategies, communicating results, monitoring and evaluating progress and other 'secondary' matters were sometimes less well implemented than the main project actions.

4. SUSTAINABILITY

4.1 The SDNP Model of Sustainability

SDNP HQ took a strong line on sustainability[15]. From the outset, projects were conceived with sustainability at the fore. The model, slightly elaborated, saw the creation of an autonomous, income generating, entity (possibly with a private, non-profit, and/or public partners), achieving cost-recovery within a relatively short period of two to three years. It envisaged the supply of ICT-based services mainly to development actors, including connectivity services (as an ISP); online information services; and ICT support and consultancy activity.

What is surprising about this model is not that it should seek sustainability at the end of a period of donor support; rather it is the expectation of cost-recovery through the sale of services, that is, an expectation that the market – albeit a niche 'sustainable-development market' - could support these activities. Whilst sustainability has become something of a mantra for funders grown tired of projects' sometimes limitless expectations of funding, and of the closure of projects leaving little trace, SDNP proposed quite a specific form of sustainability that strongly suggested a market-driven logic i.e. that an initial period of donor funding is sufficient to allow market mechanisms to take over its continuing functioning. Put another way, it was felt possible to overcome 'market failure' in this area (supporting the dissemination of information and the inclusiveness of decision-making in sustainable development) through an initial donor investment of 'seed capital' that would bring it to a stage of self-sustaining existence.

Such a restrictive perspective embedded within a relatively enlightened UNDP programme must have an explanation. Why was this not viewed as an activity worthy of ongoing public and donor support, that might be integrated securely with national and even international entities? Why from the outset were there not mechanisms installed in HQ and in projects that might generate the kind of information needed to justify such a position?

The answer is probably to be found in the expectations of the Internet at that time, coupled with the perceived role of SDNPs. Significant growth had taken place in the Internet within the non-profit sector, not just universities but amongst NGOs. Members of *Association for Progressive Communication* (APC) were generating significant income as ISPs targeting the development and NGO sector. Many were pioneers in connectivity. SDNP projects, unlike most development projects, were conceived from the beginning as tangible service providers to various development communities, from connectivity through to information and training, which in principle could be charged for (though were often initially free). Furthermore, early SDNP experience in some countries bore out this possibility. Colombia (through Colnodo), Honduras (which has operated the ccTLD for several years), Guyana, Malawi, Nicaragua, Pakistan and Philippines were all nationally important ISPs, generating surpluses from the provision of services, many initially from UUCP and later from e-mail and Web services. If it could be shown to work, the model had huge attractions and indeed there is some evidence that those SDNPs that began some cost recovery early thereby enhanced their survival prospects. The creation of (mostly) non-profit, sustainable, development-oriented enterprises would represent a major success for SDNP, and for UNDP – an example of the 'third way' that was in vogue in the middle 1990s.

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[15] The *Feasibility Study Manual* proposed that the following should be covered in a Feasibility Study:
"Potential Long-term sources of Funding:

- To identify possible partners in the private sector, and including NGOs, as well as public sector or other non-profit actors, to carry forward an eventual SDNP with a view to making it self sustaining. This applies especially to the provision of computer networking services, and especially the Internet, for the benefit of actors for sustainable development in the country or jurisdiction in question;
- The elements of a business plan need to be elaborated to justify the project. A description of the market outlook for the SDNP given the existing level of telecommunications services needs to be documented. The SDNP must quickly become self sustaining. The study will determine the opportunity for cost recovery of an eventual SDNP operation. Where possible, this should include quantifying these opportunities through a preliminary market survey or rapid assessment."

In the long term, it did not work out that way, largely because it was ultimately dependent on a specific stage of Internet sectoral development.

The Internet became rapidly commercialised during the 1990s, and mirrored the commercial dynamic of other sectors. Early pioneers were relatively small, and innovative in creating initial services. The regulatory road was then cleared by a strong national and global push for liberalisation and the elimination of barriers, aimed at satisfying pent-up demand. Early innovators lost their semi-monopoly advantage and were faced with a proliferation of competitors, driving tariffs and profits down and reducing effective cross-subsidisation. Larger investors then moved in, many from abroad through the purchase of local market leaders, and they had the capital to develop advanced services and to force competition out of the business through predatory pricing. Barriers to entry become insurmountable as the iron laws of concentration and centralised take hold. Further consolidation continues as global corporations establish oligopolies or monopolies and move to increase tariffs and profits, often in a virtual regulatory vacuum.

Several SDNPs first attempted to follow the market. Thus in Pakistan, significant investment was devoted during the later 1990s to set up a series of ISP national nodes. But timing and swift action was critical, and investment demands escalated. SDNPs were (usually for understandable reasons) prone to delay in major decisions relating to commercial markets, and as not-for-profit organisations, the investment needed could not readily be obtained from usual external commercial sources. Nor could SDNPs engage in the kind of labour market and other practices characteristic of firms in a rapidly evolving sector. In Pakistan, SDNP closed several of its nodes and refocused its sustainability efforts towards the higher end of ICT services and into building long-lasting partnerships through leveraging its government relationships, good reputation, and extensive capabilities.

A second hope for market sustainability was through the sale of electronic information services, but this also proved problematic. In the commercial sector, the idea of charging for online information services originated in the pre-Internet days, with a number of national and international database companies. As a business model, paradoxically, it became less and less attractive as the Internet grew, even for the private sector. Furthermore, those willing to pay for information are usually the wealthiest and most powerful sectors – legal professions, private corporations, and various consulting sectors. Sustainable development information feeds not into major the profit centres of society, but into the sustainable development community. And charging for information runs against the grain of the SDNP ethos – it immediately set access barriers to those with the least resources and the poorest buying power. Thus the information road implied selling commercially useful information, as distinct from sustainable development information; to high profit entities, as distinct from sustainable development stakeholders. Having different target information and different target users, SDNPs were unable to generate income from their information activities. Of course, there are some exceptions – for instance, international donors may be willing to pay for information, and there is some overlap between commercially useful information and sustainable development information, which one or two SDNP have managed to capitalise upon. But it was insufficient to comprise a credible part of an SDNP business plan.

Thus the model of an autonomous market-oriented revenue-generating ISP, though (sensibly) not abandoned, in practice became one element among several for SDNP sustainability.

4.2 Emerging Models of Sustainability

Flexibility in sustainability models was forthcoming in the SDNP HQ approach, dictated by the reality facing projects. Ultimately, the idea of sustainability shifted towards enabling ongoing pursuit of the principles behind SDNP – sustainable development information dissemination and stakeholder participation. The structural aspects of the original model were still considered optimal since they eliminated dependence on donors and government, and could place the entity in an institutional space acceptable to all stakeholders. But as the revenue-generation limitations became evident, variations and alternatives were presenting themselves. As projects evolved, compromises and reconfigurations were agreed, in the interests of maintaining at least some core SDNP goals.

Thus sustainability was not always about becoming self-financing, even about retaining the SDNP 'brand' (although it held a certain attraction for SDNP HQ, as well as some potential to evolve as a global brand) or about pursuing the full array SDNP activities. Rather it was about finding a means to sustain the guiding principles of SDNP, expressed in some activities, and possibly a context in which those principles could evolve with changing circumstances.

Several implicit models of sustainability therefore emerged, each with advantages and disadvantages.

1) The original one: The creation of a more or less autonomous entity, relying on **revenue-generating services** to cover costs and cross-subsidise non-revenue generating SD activities;
2) The creation of an autonomous entity, but existing mainly on a mixture of **donor/government support, and partnership arrangements,** or supported by an endowment or other benefactor;
3) '**Mainstreaming' of SDNP** within a government Ministry, programme or other public entity, without losing its identity or abandoning its driving principles.

Indeed a combination of the three models became a likely contender, and was attempted with some success.

SDNP HQ was in close contact with most SDNPs, usually for a period after the initial funding. Advice and support was offered in relation to sustainability, and in a few cases (Colombia, Honduras, Pakistan, Philippines and Mozambique), funding was provided to undertake an evaluation and/or develop a business plan. However, the main responsibility fell on projects themselves, on the Steering Committees, often with significant support from UNDP and other donors and occasionally with support from governments. Governments, however, were ambiguous on the question.

4.3 The Challenge: From Project to Institutional Entity

Sustainability involves a transition from the status of a donor-funded project guided by an initial set of prescribed objectives, to an entity with the capacity to support itself by attracting the necessary resources, capable of autonomous strategic thinking and flexible adaptation to a changing environment.

In the best of circumstances this is a difficult transition to navigate since it can demand an inversion in approach. From being driven by concrete finite *goals*, sustainability means evolution towards a more abstract and ongoing *process*. From an initially secure (and hence ignored) resource base, it must learn to tap into ongoing resources as a critical survival tactic. The skills required to implement a project are sometimes quite different, even contradictory to, those needed to build institutional sustainability. Thus, achieving sustainability comprises two parallel processes that sometimes come into tension. The task for project management at every level is to steer this process such that tension is minimised, and the optimal balance is maintained during the lifetime of the project between capacities essential to effective project implementation and those essential to institution building and sustainability.

The pressure to generate income, in itself, also raised tensions within Projects, and continues to, in terms of a trade off between maximising income and keeping the focus firmly on development. For some, the issue became how much the project would have to forego its original mission on the grounds of financial survival – especially where there was doubt over the development value of the income-generating activity such as the provision of conventional ISP services. In practical terms, it could come down to how much time and resources were devoted to each – a zero sum game in which a gain for one meant a loss for the other.

But even an apparently effortless transition, moving from a project within a Ministry to a mainstreamed activity or programme (option 3 above), can in practice be the most problematic. Although funding may be secured through mainstreaming, the challenge facing an SDNP in retaining a clear identity and a focus on the principles and *modus operandi* is probably only just beginning. (This was not helped in many countries where governments could not, for legal reasons, allow SDNP as a UNDP funded project to adopt a cost-recovery strategy – which might have helped to secure its identity and character.) Maintaining a responsive and flexible approach to ongoing needs, innovating in a dynamic environment, remaining transparent and inclusive, and sustaining credibility and interaction with non-governmental stakeholders can be difficult while operating within a government environment and without the corrective influence and support of external donor agencies. Much depends on whether the government has understood the concept, the value it has placed on it, and the benefits it believes can be derived. This in turn is likely, initially at least, to rely on a

few 'champions' to take it to secure moorings within the governmental complex, and on constructing a credible internal institutional context.

However, the record is not good. Some success may have been achieved in China due to strong emphasis on Agenda 21, and Bolivia offers hope where SDNP is a platform for the Ministry for sustainable development to influence national ICT policy. But other examples, such as India where SDNP rapidly lost its identity when SDNP funding ended, highlight the challenge.

Public institutions or programmes at one remove from government, such as universities or environmental agencies, might offer the most benign environment for this option, though perhaps at a price in terms of security and volume of funding. Malawi and Costa Rica offer examples here.

Projects striving towards a more autonomous existence (options 1 or 2 above) face a huge a set of interrelated internal and external hurdles. Yet overall the survival prospects of SDNP projects appears to be better where they have had from the outset one foot, at least, firmly planted outside of government.

Internally (including the Steering Committee), the transition referred to above means that basic objectives must be reformulated in the light of the experience of the project, and the requirements of sustainability. No longer can it be guided by finite goals. On the business side, the development of Business Plans and management information systems is essential, but not enough. A psychological transition towards maturity and self-sustainability is very often a critical part of this. And management and staff must take control and responsibility for the future of the project, changing the entire culture.

Most obviously, new sources of income must be found. As mentioned, this could involve a combination of income-generation, donor funding, government programme support and other elements.

A number of projects (e.g. Bangladesh, Pakistan, Jamaica) have moved to span a spectrum of activities, one end of which is fully commercial (though compatible with sustainable development) and generates a significant surplus; the other comprising key actions for sustainable development that generate no revenue at all. They are still at an early stage of development, but look hopeful.

But even if successful in terms of income generation, this model can also result in severe strains to the development approach or policy of SDNP. It demands a constant balancing act between the incentive to maximise revenue generation, and the need to remain true to clear development goals and address currently marginalized groups. Partnerships and collaborations may offer something here, by both contributing to long-term income generation (as originally envisaged by SDNP HQ), and ensuring continuity in development aims and context.

As noted above, most partnerships during the funded period are net resource consumers. For project sustainability purposes, they develop a number of contacts, demonstrate their capacities and build a reputation, and generate widespread sectoral/horizontal experience. Furthermore, the benefits of ICTs in some partnerships have translated into lower costs, better services, and/or higher income, which in turn can potentially yield an income from continuing paid for participation in the SDNP. Some partnerships may seamlessly evolve in the short to medium term from a net cost, to a net income earner, for SDNPs.

Finally, and related to this, a number of governments have recently or will soon develop and implement ICT strategies. SDNP is playing a supporting role in some of these countries and is poised to assist in others.

5. CONCLUSIONS AND LESSONS

In considering whether SDNP was a valid concept and a worthwhile Programme, it is best to work backwards – looking first at the measurable impacts on the ground, and them moving to management nationally and internationally, and ending with the original idea behind the SDNP. In this way, the concept behind the SDNP can be measured against concrete achievements.

We begin by considering what seems to have worked particularly well, and not so well, measured in terms of SDNP outputs and development impacts at national level.

5.1 SDNP Objectives, One by One

Two overarching objectives were common to all SDNP Projects:

1) Facilitating access to, and encouraging the use of, information relevant to sustainable development, including building the capacity of institutions to ascertain and meet their own information needs.

2) Improving the quality of decision-making for sustainable development, by enhancing interaction between all major sustainable development stakeholders, and by promoting participatory mechanisms to include all stakeholders, and especially those in civil society.

These objectives may have been expanded in given countries, sometimes to five or more, but these two capture the essence of the SDNP initiative. Project sustainability was conceived as a means of pursuing the above over a longer term than that originally envisaged, i.e. after funding had lapsed. ICTs and especially the Internet, were considered enablers, not ends in themselves, and means to help achieve sustainable development goals.

The progressive logic of these, from an implementation perspective, can be restated as follows:

A: Sustainable development stakeholders must first have **access** to these technologies and the **ability to use** them, as a prerequisite to any action.
B: A second step is to encourage and facilitate their use **to disseminate and exchange information in a manner that supports sustainable development.**
C. Beyond this, means must be found to enhance concrete interaction, as peers, between these stakeholders such that the **decision-making become more inclusive** of marginalized groups especially within civil society, and hence more effective.

Stakeholders must be able to access and use the technologies, before they can exchange information for sustainable development purposes, and further on, before decision-making can be rendered more inclusive and participative.

How well did SDNP succeed in each of these steps?

A: Enabling *access to and ability to use* the technologies

To what extent, and in what ways, did SDNP succeed in supporting access and the ability to use these technologies, as a prerequisite to information exchange and stakeholder interaction? This can be seen as a sequence of actions, each with a cumulative effect on access and capacity to use:

i. Creating an environment conducive to Internet growth and take-up;
ii. Enhancing Internet connectivity and content for sustainable development stakeholders;
iii. Training and building capacity to use it effectively, with courses, workshops, materials, technical and other forms of support such as help desks etc.;
iv. Providing more advanced technical services (design and development of LANs) and building ICT capacity with development potential (Open Source etc.).

How successfully have SDNPs achieved these?

i. In many countries, SDNPs had little or no impact on the regulatory and political environment of the Internet. But in a few, success was spectacular; and in many more SDNP is credited with having made a significant, or at least a discernible, difference. In the first category would be included Mauritania and possibly Pakistan, Guyana and Honduras; in the second Benin, Haiti, Malawi, Nicaragua and Bolivia. A somewhat larger number has benefited from a proactive approach of SDNP in relation to Top Level Domain names and in Internet administration in general. These include Bangladesh, Guyana, Haiti, Honduras and Malawi in which SDNP administers the Top Level Domain or specific domains within it, and Benin as an active ICANN member internationally. In the case of Bangladesh international influence was achieved through ICANN, and they played a key role in winning concessions to benefit all less developed countries.

   SDNPs often had to invest considerable energy and effort in lobbying and negotiating with Ministries and the telecommunications operators regarding the introduction of the Internet, at a time when much suspicion and opposition was still to be found. In many cases, the emergent ISP sector as a whole benefited. In Haiti, the SDNP served as the rallying point for all ISPs intent on ensuring an open and competitive market place in the light of the poor telecommunications infrastructure in place. The telecommunications regulator also participated and so did the national operator. The SDNP was an important actor in trying to counter the efforts of some operators who wanted monopoly control over the provision of Internet services and access to the Internet especially.

   Activities to promote awareness of the development potential of ICTs, through public meetings, workshops, and exhibitions and so forth, were also undertaken by quite a few projects. Later on, that is after 1997, these activities were less necessary as public awareness of the Internet increased. SDNPs did have an important role in this process and in countries such as Pakistan, an active writing and lobbying campaign in the national press and otherwise was maintained by the SDNP Coordinator and his staff.

ii. Similarly, in disseminating Internet connectivity, initially through the use of UUCP for store and forward file exchanges and then using the Internet, the impact varied from one country to another. In several cases, especially in smaller jurisdictions – with Pakistan and the Philippines notable exceptions, the SDNP became the largest or a significant Internet access provider and supplier of electronic content on sustainable development. In many countries, a large number of targeted users were connected, and in almost all at least some were provided with connectivity. In many countries, this went beyond providing dial-up access to individuals or organizations. Several put infrastructure in place, negotiating access or sometimes building it, in either case often after tortuous regulatory and access negotiations with government and telecommunications operators and regulators. This infrastructure permitted many users to dial-in directly to an SDNP server in order to upload and download stored email messages, participate in electronic bulletin board systems (BBSs) to access archives, stored files, live chat groups, newsgroups and mailing list archives. The newsgroups and other BBS services were especially important in the early SDNPs as a precursor of the Web in that information on subjects of common concern to SDNP members or users were developed and organized and accessed as subject thematic newsgroups and discussion or electronic mailing lists. In Pakistan and the Philippines, these newsgroups were important in developing content on issues related to sustainable development. They were also important in helping to strengthen and/or build a community of practice dealing with sustainable development. In Pakistan, several thousand users accessed the newsgroups using their telephones from around the country. Benefits flowed in terms of wider and better access in areas otherwise poorly served. An important development was the creation of group access centres, such as Cyber Cafés and Community Access Centres, addressing the needs of marginalized groups.

   In very few cases was connectivity offered on the same terms as conventional ISPs: either stakeholders for sustainable development were targeted (which in some instances meant just excluding the private sector and individual householders); or connectivity was offered at reduced tariffs or no cost. As mentioned, some SDNPs offered value added services such as BBSs.

   In many countries, SDNPs can thus claim to have brought connectivity *earlier* to many users than would otherwise have been the case, including in remote areas, and to some marginalized groups who might

otherwise *never* have been connected. it. Through the use of BBS and like applications, a local knowledge base and sustainable development information server were created that would help introduce the idea of local content as being important to solve local issues. Indeed, one of the founding principles of the SDNP that guided the development of electronic resources including electronic knowledge and information resources was the importance of using BBS and SDNP servers as a server of local knowledge, wisdom and resources in dealing with issues of local concern. In this way, SDNP contributed to building up local content, capacity, resources and confidence in dealing with local issues instead of solely relying on information from abroad. The SDNP Pakistan was at the fore of this effort, but the Philippines SDNP also developed appropriate servers and content. In some respects, these BBS were precursors of Web pages.

iii. Training in e-mail, Web development and ICT use, amongst government, institutions, agencies and NGOs, was carried by most SDNPs – a fact which further differentiated them from commercial ISPs. It was a useful and sometimes necessary adjunct to connectivity. Although the skills imparted were mostly quite straightforward and such training is available through commercial and other means, SDNP made it available at affordable rates (often bundled into the connectivity charge, or free), and such training was tailored to the needs of sustainable development stakeholders.

    Training in group access centres could be especially effective. The combination of access, training and support received by schools, third level students, journalists and NGOs, even farmers and micro-businesses, reaped identifiable benefits in a number of very different contexts.

Thus several SDNP activities combined to give a considerable boost to the development of the Internet. Training often involved hundreds of beneficiaries[16]; a range of ICT promotion measures; content development; policy lobbying and operational level lobbying in several instances stimulated the Internet users market, and indeed contributed to the development of the ISP sector – often in areas or to groups that ISPs had, until that time, been reluctant to serve. At the same time, the approach adopted by the SDNP made it easier for governments and UNDP country offices to recognize the relationship between ICTs and sustainable and human development.

At the individual level, the SDNP provided connectivity, content and training. The balance differed from country to country. This yielded some development benefit (even without the sustainable development follow-though discussed below), to the extent that it enabled beneficiaries to learn how to use ICTs to increase efficiency and productivity and establish contacts with like-minded organizations.

iv. In the provision of more advanced technologies (as distinct from ICT applications, which are considered further on), contribution of the SDNPs was more modest. Few SDNPs were themselves sufficiently sophisticated to offer advanced technology services. Sometimes LAN, MAN or database design and support were offered to key stakeholders such as governments. A few took the technical training seriously, with placements and advanced workshops – sometimes comprehensive and sufficiently in-depth to be termed capacity building. But their development impact overall was limited and the applications to which they ultimately contributed sometimes had little or no bearing on sustainable development. But then again, such advanced ICT technologies were never a core aspect of the SDNP concept and arose as a secondary benefit occasionally called upon by key stakeholders. The exception was in those countries, such as Benin, where SDNP forged an important partnership with Cisco, a major producer of Internet routers and other hardware essential to the operation of the Internet. In collaboration with a variety of actors at the local and international level, Cisco established local and regional Cisco Academies to help train network engineers, and especially women, for work in the developing world.

    Another advanced technical area was also of great interest: the use of Open Source applications such as the Linux operating system. Open Source software, more than most technologies, is not development-neutral in relation to its impact or use. Because of its pedigree as a reliable and robust operating system

16 According to SDNP HQ is was calculated at one point that SDNP projects globally had provided training to over 15,000 people on computer and Internet use.

and because it is available free of charge and supported by a large online community, it is widely acknowledged as having significant potential in general and in the developing world especially.

Open source saves money, fosters self reliance and reduces external dependence. Open source offers a development-friendly approach to intellectual property. SDNPs utilize Linux, an important open source operating system. Several SDNPs also use Open Source software for database management, and several SDNPs advocate the use of Open Source solutions and offer training.

Most significantly, in a few cases, SDNP became a strong national advocate with significant knock-on influence. Several, including Pakistan, Jamaica, Honduras, Cameroon and Malawi, set up Linux User Groups (LUG), providing mutual technical support and engaging in promotion and advocacy activities.

In short, the impact of SDNP's in enabling the development of a regulatory and technical environment that encourages greater access to the Internet and to ICTs may have been localized, but it was significant in helping to raise awareness of the needs for greater access to information and of the benefits that accrue as a result, especially from a development perspective. Significant success can be claimed by SDNP in bringing connectivity to stakeholders for sustainable development in a large number of countries, and in almost all, it led to some additional access to the Internet. The provision of training and occasionally capacity building to stakeholders was also widespread, and facilitated more effective use of ICTs and of the Internet.

But the development impact of SDNPs was appreciably magnified over for instance conventional ISPs by their strong bias towards providing *affordable* connectivity coupled with awareness promotion and training aimed at marginalized groups, including those located outside urban centres. In terms of more advanced services, fostering the introduction of Open Source and the limited association with Cisco Academies were the only areas in which a perceptible contribution was achieved in more than one country.

***B: Encouraging and facilitating the* creation, dissemination and utilization of information related to sustainable and human development through the use of ICTs**

The next step in realizing the goals of the SDNP is to translate the connectivity and skills provided into enhanced generation, exchange and utilization of information *that specifically relates to sustainable development*. The goal is to encourage the creation of this information and knowledge and to foster greater exchange and access to this through the use of ICTs and of the Internet especially. As a result, development actors will be better informed and better able to participate in and influence decision making for sustainable and human development.

Again, this can be divided into a set of activities.

i. Designing, developing and maintaining BBSs (originally and before 1997-8) and later on, Web pages for development actors, on which they present their sustainable development information and where they can interact accordingly with other like minded organizations and development actors.

ii.
Encouraging (assisting, facilitating, lobbying) stakeholders to create local content and especially to publish online locally available as well as other relevant information in the public interest. The focus here especially, but not exclusively, is to encourage governments to contribute and publish online, information for the public good and that, which is directly related to sustainable and human development. An important part of this is also to encourage exchanges online between development actors. Preference is given to locally produced and relevant information, especially that which is available in local languages as appropriate.

iii. Entering into partnerships with agencies and others to produce and disseminate information more widely to targeted audiences.

iv. Generating, collating and presenting information using BBSs (earlier on) and lately on the Web (such as a Web portal), and regularly disseminating information via the Internet and Web.

All SDNPs engaged in information activities, varying according to their overall emphasis, available resources, and the circumstances facing them. But how successfully did they translate these into more effective use of information *in the interests of sustainable development*? And what types of information would this imply?

The concepts of "information for sustainable development" and of "sustainable development" itself are not self-explanatory. Indeed, neither the concept nor the domains of information relevant to sustainable development were clarified within the context of SDNP. It was the broader UNDP mandate of Agenda 21 that had the task of defining the content and priorities for sustainable development, not SDNP.[17] Similarly, as this mandate evolved, related and more appropriate concepts were also included under the heading of the SDNP. Along with sustainable development, the concept of sustainable human development and lately, human development were also included as core messages of the SDNP.

Thus those SDNP projects linked to Agenda 21 articulated a coherent vision of sustainable development (as distinct for instance from environmental development or development *per se*) and went to considerable lengths to get the principles across. In these cases, specific information needs could be derived. But most information disseminated via SDNP was made up of a combination of what stakeholders themselves choose to disseminate in order to achieve their (development related) goals; and what additional information SDNP could reasonably identify as useful and could actually obtain. This apparently *ad hoc* approach should come as no surprise. In practice, it is not possible to define what "information relevant to sustainable development" actually constitutes in terms of domains of knowledge.

However, many SDNPs used the uncertainty of what constituted sustainable development to good advantage. It provided an 'entry point' for SDNP into virtually any domain precisely because it was such a general and 'fuzzy' concept. Issues of empowerment and civil society participation could be raised that would normally be sidelined either in 'environment' initiatives or in relation to technology implementation. In a sense SDNP's invitation card was the technology, but the sustainable development remit then gave it the freedom to focus on key issues that it identified.

The task of identifying the needs for information on sustainable development was worked out locally using broad guidelines and definitions referred to in Agenda 21. This was the responsibility of the stakeholders and of the SDNPs. Was this sufficient? First let us consider the efforts devoted to this activity.

i. Creating BBSs as well as creating and hosting Web pages for stakeholders was a major emphasis. Much of this never was very local and never went beyond textual information in the case of the BBSs or 'online brochures' on the web pages. The latter, though providing a presence in 'cyber-space', did little for their capacity to achieve their goals. This was especially true when the Web was a novelty and it seemed that a Web presence was in itself both necessary and useful. However, a large number of government departments, agencies, NGOs and others did have an idea of what they could do through the Web. SDNP helped them follow-through with their intentions. Numerous examples were found of tangible benefits accruing to sustainable development organizations, in terms of new or better service delivery, cost savings, revenue generation, enhanced networking and greater visibility. Pent-up demand was evident in many cases: stakeholders were aware of the potential of the Web but for various reasons had not previously had the opportunity or resources to harness it.

ii. Behind the offer to develop and host BBSs and later Websites was the desire of SDNP to publish as much relevant information in the public domain and to do so in as accessible and affordable a manner possible. This meant more than designing and hosting web pages. It also required making existing databases storing information for the public good, databases that exist in government departments and in public agencies as well as from other public sources, available online. The goal to enhance transparency and to make information on sustainable development more available. This demanded proactive effort by SDNPs, beyond offering technical Web support, and often requiring lobbying, negotiations, and the provision of additional assistance and resources. Often the challenge was to overcome institutional/ cultural resistance to sharing information, in which information means power and the procedural default is to withhold information unless otherwise instructed by a superior. The institutional positioning of SDNPs, in terms of exerting influence on the relevant bodies, was often the critical factor in achieving success here, but in a considerable number of cases the efforts of SDNP resulted in the release of a

17 SDNP contributed to the Rio+5 conference, and afterwards assisted UNDP in several countries in its mandate to create Sustainable Development Councils and follow-up actions. In Romania, SDNP continues today with a central role in implementing Agenda 21 at local level.

significant volume of information for general use by SD stakeholders. This was the case in China for example.

iii. Collaboration in the production and dissemination of information often took the form of a Memorandum of Understanding (MoU) or contract between the parties. These partnerships reduced the risk of going it alone and sometimes led to the creation of significant volumes of information related to sustainable development. As a rule, this was possible only for those SDNPs with a sizeable budget, since such partnerships could consume considerable resources. In a few cases, they also generated income by charging users for information.

iv. The efforts of the SDNP itself in generating, collating and presenting information using BBSs and more recently on the Web, sometimes through the creation of a national Sustainable Development Portal, are worthy of mention. Some SDNPs went little beyond bringing together stakeholder Websites they had assisted in developing, adding some readily available information and often numerous links deemed to be relevant. More modest SDNPs included the goal simply of making government material more readily available. But quite a few went further in making information both accessible and usable by annotating links; sourcing, gathering and collating large volumes of information; and by generating new information as part of the project. The value of information was enhanced through its timeliness and its interactivity: although resource intensive, monthly, weekly or even daily e-bulletins summarizing current materials from newspapers, research bodies, internal online sources and elsewhere were usually well subscribed to. On-line query services for information relating to sustainable development, in a few cases backed up by comprehensive information sources and analysis, were also valuable and where available, in demand. Behind a few SDNP Websites, sophisticated database query/search facilities could be found.

    As already mentioned, many SDNPs also set up BBS and discussion groups. Before the advent of the Web, these were especially successful. Later on, perhaps because of substitution effects of the Web, their success varied. Most had a limited lifespan, some associated with an event, or were very lightly utilized. This is unfortunate since these potentially introduce a high degree of interactivity between the stakeholders.

There is no doubt that the *volume* of information generated, 'liberated' and circulated by SDNP was high. But did this provide a return in terms of contributing to sustainable development? Were partners themselves in a position to determine needs; and had SDNPs sufficient insight and intuition into national sustainable development dynamic to contribute a useful input?

The use to which widely disseminated information is put is difficult to evaluate, often even beyond the immediate appreciation of user organizations. The evidence available from the volume and characteristics of Website usage, the (limited) direct feedback received during this assessment and at other times, and the occasional attempts at surveys by projects suggests that much of the information was widely accessed and used to good effect. Two types of information delivery performed particularly well. There are examples of SDNP Websites dedicated in whole or in part to addressing very specific information needs aimed at clearly identifiable target users that clearly and unambiguously fed into ongoing development processes. These include unexpected environmental crises, alleviating social problems, major national or regional consultation or planning efforts, or enhancing governance. Beneficiaries, in terms of organizations and social groups, could come from all social strata and include civil society organizations. At the other extreme, several major and comprehensive national portals had established a high profile and high levels of usage. They have achieved a status that strongly suggests a concrete return for users. In these cases, the contribution to development was clear.

Not all SDNP Websites were used as much as they might be, and there were often shortcomings in publicizing the service. Access, of course, was also limited to those who had Internet connections.[18] Available evidence concerning many SDNPs – especially those lacking a specific target group and identifiable information niche, and unable to provide a comprehensive source of information – is largely

18 A number of projects also produced published materials, but this was never more than a supplement to the online material.

anecdotal. Even those SDNPs which had developed a haphazard approach to information dissemination because they focused their efforts elsewhere, had an impact.

It is worth noting, finally, that very few projects undertook systematic information needs assessments (or encouraged stakeholders to do so) or tried to determine the extent to which the information made available was used or useful and what if any benefits derived from the use of the information acquired.

C. **Enhance interaction, as peers, between SD stakeholders such that the *decision-making becomes more inclusive* of marginalized groups especially within civil society.**

Facilitating the dissemination and exchange of information by all stakeholders does not in itself bring those excluded from decision-making closer to the table. It may equip them to better undertake their own activities, and perhaps be more effective within existing the existing decision-making environment. But it does not necessarily lead to an acknowledgement of, or to the possibility of exerting influence in decision making related to sustainable development. Governments are by far the greatest locus of decision-making given their responsibilities. The key issue here is: how can governments be encouraged and induced to be more inclusive in decision-making? How can excluded stakeholders be brought closer to the seat of power?

This area is the most difficult to define since no clear strategy was developed by SDNP strategists at HQ or elsewhere. As a result, this objective had a particularly low profile, in practice, among national SDNP projects. It was broached through management structures and the institutional form of the SDNP sometimes more than through specific identified goals. With the exception of trying to be as inclusive as possible in the management of the SDNP and by encouraging as many different representatives of key stakeholder to work together through the Steering Committee and otherwise in the day to day operation of the SDNP, little else was done. A few SDNPs include an objective relating to, and a set of actions targeted at, creating more inclusive decision-making processes. Beyond the number of different stakeholders involved in the Steering Committee, other quantitative indicators of success were virtually invisible. Nevertheless, it was explicit among global programme goals, and implicit throughout many Project Documents, and few could have been in doubt as to its existence as an objective.

Several actions were cited as contributing to more inclusive decision-making:

i. The built-in participation of all stakeholders in SDNP management, specifically steering committees, with a view to using this as a means to enhance interaction and trust;
ii. An SDNP 'membership' or SDNP 'constituency' structure, designed to bring a large number of stakeholders together into an interactive SDNP forum;
iii. Building the capacity of NGOs and civil society, as a group, to analyse and articulate their views, and mobilizing them effectively to influence decisions;
iv. Creating partnerships between civil society, government and other actors;
v. Creating or supporting fora in which the Stakeholders could enhance mutual understanding and trust, consult on issues, develop strategies, and even make decisions.

Thus a certain progression can be argued, moving from enhancing interaction and trust through to the creation of formal fora for shared decision-making.

i. SDNP Steering Committees were constructed to represent major stakeholders, though there was (unsurprisingly) a general bias towards government and government institutions. Even where representation was broader, however, the burden of other Steering Committee tasks (or perhaps sometimes disinterest) would invariably reduce its capacity, in practice, to include the concerns of all stakeholders within the ambit of project strategy. The Steering Committee could never realistically have operated as a *representative* structure, in the sense that, for instance, civil society members could *represent* civil society interests – mechanisms to ensure true representation would have been burdensome and overblown for the context. In practice (as noted above), the contracting parties – governments, executing agencies and donors – had most influence on the Steering Committee, and some chose to exercise this in what they saw as the interests of other stakeholders. The level of influence of actors on the Steering Committee flowed from their general standing or contribution i.e. their personal capacity. So Steering Committees overall did attempt to ensure the interests of all stakeholders were

raised, if only indirectly, and in some cases did enhance interaction between the individual stakeholder groups present. A further management issue – that of employing the Project Coordinator through an open competitive process – often also contributed to a certain openness, since the successful candidate (as well as other staff) was very often, given the combination of experience required, from a civil society or NGO background.

ii. The burden of representation, if ill suited to a Steering Committee, could be taken up by an SDNP membership structure. Several SDNPs pursued the notion of 'membership', whereby all stakeholders could join SDNP as equals, enjoying its services, contributing as appropriate, and engaging in various fora for interaction and cooperation. For some, this was seen as a kind of Assembly with a role in future management and sustainability of the project. The model, however, seldom found fertile ground. Some abandoned the notion early on, scuttled by a major stakeholder. For others, the absence of a clear goal and focus – a *raison d'etre* for the group beyond a general and sometime weak desire to cooperate and interact – prevented the emergence of a clear and motivated group. Though services were availed of, and support offered to SDNP, interaction and networking between the parties often remained rudimentary.

iii. Building the capacity of civil society organizations to use ICTs was an SDNP goal in itself, but more general capacity building in terms of research, collective organization and advocacy could also have been regarded as means to influence government (or other) decision-making processes, ultimately leading to greater acceptance of the legitimate claim of these actors to more formal means of input. As already noted, NGOs were significantly assisted in some cases by SDNPs in achieving their goals. In the area of exerting influence, there is also evidence that SDNP contributed. A number of CSOs understood the potential of the Internet for coalition building and networking, and the SDNP in several countries helped with this process.

iv. Collaborations and partnerships around specific issues and joint concerns were often most successful in instigating genuine sharing of responsibility and decision-making, though within a carefully demarcated domain. This applied especially to partnerships between NGOs and governments or their agencies, but sometimes included all kinds of partners, from community-based organizations to large private sector concerns. Mutual interdependence and a common goal, led by the SDNP as an intermediary and partner, created conditions in which trust developed, interaction and consultation deepened, and in many cases shared decision-making processes became the accepted norm. However, although the partners might engage in other mutual activities, such sharing did not normally develop beyond their specific area of concern.

vi. In just a few cases was SDNP involved in creating new fora for stakeholder interaction, consultation and shared decision-making of an ongoing or nationally relevant stature. In one, Romania, it focused on developing a national strategy for sustainable development, linked subsequently to deepening the process through Local Agenda 21.

This most difficult and least clear-cut of objectives was thus achieved to quite a modest degree. Though there was no clear pattern of success, the exceptions were important in themselves and in terms of the lessons learned.

5.2 Sustainability

Sustainability, conceived loosely as the capacity of the project to maintain its activities indefinitely after the initial period of SDNP funding, was required of all national SDNPs. It was an enabling objective, in that its ultimate purpose was to ensure the project continued to achieve its sustainable development goals into the future. How successful was this?

The summary table at the end of Section 1 demonstrates a degree of success. Although comparisons with other programmes are difficult to draw, up to twenty SDNPs are extant, pursuing under the SDNP banner or another at least some of the SDNP objectives, and a few have almost a decade behind them. Many of these have taken a more appropriate and permanent structure as an NGOs or other legal entity. Several are at a key

transition stage, facing into an uncertain future but with reasonable prospects of securing significant sources of revenue and support. Others have left a tangible 'legacy' project or activity, which cannot be regarded as the direct continuation of the original project in that the motivating principles have evolved in a different direction. The latter have picked up on and pursued various SDNP activities in revised form – they pursue development, or 'sustainable development' activities, but not in the manner that SDNP envisaged.

SDNP HQ did provide some support to projects in their efforts to become sustainable, but it was somewhat arbitrary. Additional funding was occasionally granted from the SDNP budget, though quite often the need for this was obviated as another UNDP budget, such as Agenda 21, and other donors stepped in. Additional time was usually granted when the money had not fully been spent. SDNP HQ also occasionally provided direct staff support, or a grant, for completing a Business Plan; and successive SDNP Workshop, in India in 1994 and in Mexico in 1996 among others, discussed the issues at some length. But in other projects, no assistance was forthcoming, and indeed in a few cases insufficient time was allowed for the project in the first place, as in Kyrgyzstan where a promising two-year project was deprived of additional funding before it could consolidate its activities.[19]

SDNP HQ did not appear to significantly develop and further evolve its conceptual thinking in this area; nor did it plan for material or technical support that *might* have assisted projects in confronting the challenge that for most SDNPs was complex and multi-faceted. Perhaps initial successes, based on the provision of ISP services in the early days, led to some complacency. Although there was discussion at one point of an international dimension to sustainability, through linking several SDNPs, this was never pursued. Building links to parallel international or global programmes was also a possibility, and considered, though the obstacles to such partnerships are often insurmountable. Thus an opportunity may have been missed here.

Part of the explanation may also relate to funding constraints on SDNP HQ which hoped for additional funding from UNDP to extend the Programme forward into sustainability. But this was not to be. The challenge facing project sustainability was anything but straightforward. Simply providing additional funding to projects could have exacerbated the problem, since in some cases (as outlined earlier) a 'culture change' was needed, from one of being a donor-funded project to one capable of identifying and generating income from a diversity of sources. Furthermore, some barriers to sustainability were as much political as anything else, and funding would require creativity to find ways around these. Nevertheless, in common with their national counterparts, it seems likely that tight resources may have led SDNP HQ to sacrifice future potential for present exigencies.

Perhaps the largest question is whether *any* concept of sustainability would have worked in many cases, or *even whether it is reasonable to have an expectation that it should.*

Earlier the question was raised of whether a market-oriented model of sustainability has any place here, and the question stands. Utilizing the market to solve problems that result from 'market failure' (itself often a euphemism for inherent negative tendencies of markets and capital in relation to sustainable development, not a mere exception or aberration) involves an obvious contradiction that concepts such are 'pump-priming' may be incapable of resolving. Furthermore, it can also be argued that ongoing donor support for sustainable development is sometimes justified, even where governments are unwilling to take them into the fold of mainstream activity. That is, governments, for reasons that range from extreme poverty to corruption, external pressures or inadequate understanding, may sometimes be unwilling or unable to provide ongoing mainstream support for actions that are demonstrably in the national (and indeed international) interest. In such cases, ongoing donor support from the international community may be justifiable. SDNP is not being held up here as worthy of such special ongoing support, especially in view of competing priorities. But in specific instances, this possibility might have been included alongside others in an expanded notion of 'sustainability'.

A convincing case can also be made that a number of SDNPs have in fact *fulfilled and completed* their mission, at least in large part, and that the core objectives were not so much 'formally' mainstreamed, as

19 This project has struggled to continue since its funding ended in October 1999, though on a very small and hence relatively ineffectual scale, based largely on the voluntary commitments of its staff. It should also be stated that this example was caused by an SDNP funding crisis at HQ level, the cause of which was not investigated during this assessment.

integrally incorporated into the fabric of everyday activities of sustainable development actors and in the relationships between them. Thus, in at least some cases, it can be argued that SDNP had a *catalytic* effect and that the process continued thereafter in a more self-sustaining manner. Thus its role may have come to a natural conclusion, for instance, when an SDNP had wrought a culture change towards greater transparency in Ministries, agencies and others; where it had established trust between stakeholders, and especially with civil society; or where it had empowered civil society to act more effective collectively and individually.

In short, SDNP has a record of some considerable success, and some failure, in relation to sustainability – precisely whether the balance tips more in favour of one or the other may become clearer in a few years. In some cases too, its *impact* is sustained, though institutionally, its task completed, it no longer exists. But more attention might have been focused on the concept and substance of different models of sustainability, its nature, forms, viability and ultimately its utility and desirability as a concept. Had this been done, *and had resources been available to follow through*, it is possible that new models might have more clearly emerged, and certain that we would at least have a deeper understanding of the lessons from SDNP.

But it may not be too late to act on this insight. We return to this in the final section.

5.3 The SDNP Concept and Approach

The SDNP concept has been repeated several times in this report already. Rendered into questions, it can be reformulated again as:

1. Was timely access to appropriate information a key to supporting sustainable development activities by various stakeholders?
2. Could networking between stakeholders, and ultimately more open and participative decision-making, make a significant contribution to sustainable development?
3. Was the SDNP, especially the focus on ICTs, an appropriate means to address these problems, and did it succeed sufficiently to justify the funding allocated to it?

Here, these are addressed only on the evidence of the programme itself. Wider debates surround the first two, receiving tangential and inconclusive attention at the recent World Summit on Sustainable Development. To claim the issues have moved on is not to say that answers have been found or the problems resolved. Actions of international agencies and of many governments reveal their practical response to these, and sometimes a desire to avoid them altogether. But our narrow concerns need not consider these global issues.

We conclude as follows.

1. First, SDNP demonstrated again and again, from local to national level, that the provision of information in itself is not enough. *Information becomes valuable only when activated within a specific dynamic, and the challenge for a given SDNP was how* ***it could effectively articulate with its unique national dynamic****.*

   Information is useful to stakeholders to influence this dynamic in a number of ways:

- Individual stakeholders use information to further their specific goals. Thus NGOs might engage in research and analysis of their area of action; lobby to achieve their goals; develop a dissemination strategy to assist fund-raising and motivate membership; become an information agent or provider in the domain; and so forth. Such information-based activities reached a point of sophistication with several sustainable development 'query systems' that SDNP developed.
- Working together and sharing information through peer networking can be an effective instrument to address issues of common concern; and can lead onto empowerment, coalition building and advocacy activities. SDNPs supported this, and sometimes themselves engaged in such activities.
- Ready availability of government or other official information can also have ripple effects in the sustainable development dynamic. Enhancing transparency and releasing information, often for the first time and usually by ministries or agencies in relative isolation from other stakeholders, creates openings

in bureaucracies and processes hitherto quite closed. It some cases it was possible to bring about 'culture-change' in relation to information transparency in bureaucracies.

Thus SDNPs, in addition to simply collating and disseminating information, engaged in examining specific NGO information needs, in advocacy and supporting advocacy, in negotiating and enabling access to governance information, and in a range of other activities that allowed them to relate, via information provision, to ongoing social and sustainable development processes. *It is these actions,* which demanded an understanding and relationship with the development dynamic, *that made the difference*, not the volume or even of the nature of the information *per se*.

SDNP's success in this was underpinned, though not assured, by a number of factors.

- Their relative autonomy, where it was achieved, often enabled them to view the dynamic from both government and civil society perspectives;
- Again in ideal circumstances, they had both credibility with civil society and access to government;
- The considerable flexibility allowed in the modalities and activities to be pursued by SDNPs, and to SDNP project management;
- The timing of SDNP's launch was, in many countries, ideal since the technology they had to offer was either unavailable elsewhere or expensive and difficult to obtain. This alone made them appealing even to many governments, and gave them considerable leverage over their terms of existence. The support offered by SDNP in implementing the technologies, as a quasi-government entity, was often more attractive than going to the private sector.

Other factors also made a critical difference: Crucial support was sometimes forthcoming from 'champions' in government, who shared SDNP goals or identified other benefits. The understanding and support of UNDP could also be vital, both positively in expending some of its 'political capital' on promoting SDNP, and negatively, in not undermining it.

2. Influencing the power relationship between stakeholders is a wholly different matter. More participative decision-making structures at national (or sub-national) level are not substantially furthered by information dissemination, by multi-stakeholder networking around specific topics, or even by enhanced transparency. Our second conclusion is that SDNPs successfully brought together stakeholders in a range of contexts, *but only rarely did it comprise, or did it lead to, a shift in the process of decision-making, or to an appreciably more open general approach to decision-making around sustainable development*. And these exceptions were where SDNP was twinned with another programme or effort also moving in that direction. Nevertheless, in more modest contexts, the parameters of decision-making were influenced.

- SDNP instigated many partnerships, collaborations and joint projects, bringing together stakeholders around specific issues and applications. In these goal-oriented, usually finite processes, decision-making was frequently a genuinely shared activity, and NGOs in particular were afforded opportunities to influence development outcomes that otherwise would have been unavailable. There is some evidence that this also led on to broader mutual trust and deeper interaction.
- A number of SDNPs were designed around an existing or flanking sustainable development process or project, as in Romania. Some introduced innovation in participative consultation processes, and ultimately in decision-making. In the examples available, the evidence strongly suggests that the enhanced participation of NGOs and community based organizations, as well as agencies and institutions, did produce a better result. Resultant plans, policies and strategies appear to be more robust; decisions more likely to be acted upon; and the ultimate impact (though here the evidence is stretched most thinly) more likely to be deeper and more sustained.

ICTs, it might be added, were important, often vital, tools in realizing these goals in terms of the logistics of cooperation as well as in the substance of the applications.

3. Thus our third conclusion, concerning whether decision-making on sustainable development issues is enhanced through participation of all stakeholders and especially of civil society and marginalized

groups, is in the affirmative. *SDNP was correct in identifying the need to build wider avenues into decision- making as potentially significant assets for promoting sustainable development.* While SDNP made some modest progress through developing collaborations and partnerships in specific domains based on shared decision-making, with the exceptions above, it failed to influence wider decision-making processes.

Why was this?

The exceptions point to the answer. The SDNP concept in itself contained no means or mechanisms to gain access to policy or strategy development processes. Whereas it could sometimes enhance transparency, and could certainly support extensive information dissemination and networking, none of its concepts or tools could take it to the heart of the key decision arenas of sustainable development. Only when coupled with such a mechanism, like Local Agenda 21, could it really make the leap into a decision-making arena and exploit the potential of ICTs in this direction.

4. Our fourth conclusion is that ICTs, and networking technologies such as the Internet, *were indeed a critical tool in addressing both the information networking and in more participative decision-making*. *As enabling tools, they were necessary, but not of course sufficient*. SDNP identified their potential early, and capitalized on it to good effect in relation to certain of their objectives.

Having addressed these questions, and claimed qualified success for SDNP in terms of its concept and realization, a further important conclusion can be drawn.

The decade of the SDNP Programme was also the decade of the coming of age of ICT technologies and applications. While SDNP began with connectivity, and moved to information provision and networking, many moved on further to create a diverse portfolio of ICT applications. In Section 2 and 3 above we see that many actions comprised applications, with partners that went beyond identifying, collating and disseminating information. *They reached outside the role of information in the dynamics of national development, into the development of applications to be used for general development purposes.* In other words, the SDNP Programme had recognized from the outset that ICTs were the ideal tool to support their goal of information dissemination and networking. But as the decade progressed, they further realized that they had significant additional potential for development in general. Many SDNPs developed and implemented applications, ranging from e-commerce to tele-education, to school computer programmes and health applications. Some of the strongest evidence of development benefit comes precisely from these applications, and many also exhibit, in the context of collaborations through which they were constructed, strong potential for sustainability in their own right.

Of course, not all SDNPs were in a position to, or chose to, go in this direction. It demanded considerable resources, and usually implied a higher level of general ICT and telecommunication development, thus favouring SDNPs launched later on.

5. Our fifth conclusion is therefore that *SDNP was a pioneer in what is now known as ICTs for development (ICTD), at applications level and even to a small extent at policy level*. This went beyond the original remit of the SDNP programme, in that it concerned issues outside information networking and participatory decision-making, and related to a range of social, economic and even cultural objectives, all generally under the rubric of development. Whatever the uncertainties around the concept of sustainable development, it could cover these activities only by stretching its perimeters to the point of redundancy. Thus SDNP in one sense exceeded its remit, but in another pursued the logic of the instruments, ICTs, it had selected to achieve its original goals. This should be considered as an additional gain, and to the credit of the SDNP programme.

What were the factors that facilitated this achievement?

An underlying factor was the philosophy of SDNP regarding ICT technologies. From the outset, SDNP insisted that ICTs were a means, not ends in themselves. Although easy to forget at a distance, this insight went against the grain of international institutional thinking in the early to mid 1990s, which was fixed resolutely on deregulating to replace the stultifying monopolies of national telecommunications

operators which precluded any competition or taking advantage of the benefits thereof, stimulating the flow of (mainly international) investment in ICTs in order to bring the requisite expertise and resources to the marketplace for ICTs and for telecommunications services especially to countries which desperately needed it, to deregulate the telecommunications sector, to privatise state interests to increase the efficiency of their operations, with a concern for promoting growth and the introduction of better and more varied services for users. The distinction drawn between promoting *the ICT sector* and promoting the effective use of ICTs *across sectors* was barely acknowledged. Concepts even of universal service were given little more than lip-service. The SDNP programme always implicitly understood ICTs as a tool for development, and the evidence suggests strongly that SDNP HQ brought this not just to national level applications, but also to the policy level and to international actions and programmes with which it came into contact and collaborated.

For instance, SDNP projects that engaged in lobbying for appropriate legislation for Internet expansion did so in a nuanced fashion. Rather than simply calling for liberalization and commercialisation of the sector *per se*, their concern was with extending it to rural areas and to excluded groups through tariff policies, investment and so forth. It was not driven by the perceived need for liberalization for its own sake, but by needs it identified on the ground in pursuit of its development objectives. And where SDNP succeeded in influencing Internet policy, they were, as pointed out earlier, not just creating an environment that enabled SDNP to move on with its own networking goals; they were also releasing a key instrument to assist civil society and other development actors to achieve their goals. This may have been incidental as far as SDNP was concerned, but still contributed to development.

At international level, the influence of the SDNP approach, especially in terms of its emphasis on broad stakeholders participation in strategy development, was felt in the design and implementation of the Internet Initiative for Africa. In this sense it anticipated the later UNDP approach to ICTD.[20]

In more concrete terms, the facilitating factors overlap with those identified above.

- The flexible, non-prescriptive approach of SDNP HQ in terms of objectives and actions of national SDNPs, and the follow-up support in enabling the development of such applications;
- The high degree of autonomy of some SDNPs, facilitating a broad scope of action and the development of different types of collaborations and partnerships;
- Ironically, the very vagueness of the concept of sustainable development as employed within SDNP, allowing fluid interpretation by projects that could spill over into broader development opportunities presenting themselves;
- The emphasis on sustainability, often sending projects in directions not anticipated by their core objectives.

Overall, then, the evidence from this assessment suggests that the concept behind SDNP was valid. Enhanced information availability and networking, and broader participation in decision-making, were, and remain, key contributors to sustainable development, however defined. Furthermore ICTs were a key tool in achieving these.

But the approach adopted was in one respect inadequate – it largely failed to connect into the policy and strategy development domain nationally in sustainable development. In another respect it exceeded expectations. As implementation proceeded, the potential of ICT applications to contribute to more general social, economic and cultural development became apparent in quite a number of countries, and the approach adopted was well suited to taking advantage of these.

20 As enunciated for instance in *Developing a Development Dynamic: Final report of the Digital Opportunities Initiative*. July 2001. (Accenture, Markle, UNDP) The similarity is that both insist on the deployment of ICTs as an enabler of development goals, as distinct from (or alongside) a sector in itself, and the emphasis on participation in strategy development and implementation.

6. BUILDING ON THE LEGACY: SDNP AND GLOBAL ICTD POLICY

The development contribution of SDNP can be distinguished from its legacy. The latter refers less to past development impact and continuing reverberations than to what can be picked up from here and built on for the future, deepening existing actions and moving in new directions. We proceed below with a quick summary of the SDNP legacy at the institutional level.

We then turn in Sections 6.2 to 6.4 to a lengthier consideration of the UNDP policy context and of ICTD more generally. Here the main initiatives in ICTD in recent years are reviewed, and some shortcomings highlighting.

This sets the scene for our proposals. Section 6.5 links the previous discussion to the experience and legacy of SDNP. And we conclude in Section 6.6 with a proposal for the future.

6.1 The Legacy

The SDNP legacy currently exists in a number of forms, and in some areas is still dynamic and evolving.

In institutional terms, what SDNP carried forward may be divided into three groups.

1) A dozen to fifteen SDNPs are well established (though not to say secure) with significant capabilities in several dimensions. Numbered among them are: Bangladesh, Colombia, Guyana, Haiti, Honduras, Jamaica, Pakistan, the Philippines and the special case of SIDSNet

2) A further group numbering approximately less than ten continues with a more limited range of activities and in a more uncertain environment. For some, the Website is the main focus, or ISP activities. This group includes China, Malawi, Mauritania and Nicaragua

3) A final group comprising about nine countries has evolved in directions related to but different to SDNP. These include Angola, Benin, Chad, Gabon, Guinea, India, Romania, South Korea and Togo.

In terms of building on the SDNP principles, in original or evolved form, the first group has the greatest potential. Most in the second are unlikely to maintain a useful critical mass of expertise and experience to enable it to take on a new role, though they may move into other areas. Those in the third have developed in different, sometimes diverse, directions.

Members of the first group still retain coherence with the SDNP philosophy, to the extent that they can recognize commonalities and potential complementarities between themselves. But importantly also, many have maintained contact with each other over the years since originally brought together in SDNP workshops and through the general mailing list. Nor does the legacy end with their continuing existence. The factors that underlined their success so far will continue to be an asset in the right circumstances. These include:

- Their relative autonomy from government;
- Their credibility and contacts with civil society;
- Their distinctive combination of technical, policy and organizational skills;
- Their flexibility of operation and of response.

We return to the significant of these further on.

6.2 UNDP Activities in ICTD

UNDP has long supported the use of information and communication technology for development. Even before SDNP, early forays included the Alternex project, developed with UNDP support by IBASE in the late 1980s and Brazil's first and only independent ISP until 1994; and the Freenet in the Ukraine in 1993. UNDP, in what is considered one of the most successful projects ever implemented by UNDP, was a partner of the Government of India in the development of ERNET, the Educational and Research Network that had

an important role to play in helping to develop the human and technical expertise that laid the foundation for the impressive research base in IP networking that exists today in that country. But SDNP can reasonably lay claim to be the first systematic programme backed by a coherent rationale, and for some time was a strong advocate of what later became known as ICTD within UNDP. As already noted, SDNP also influenced various subsequent activities such as the IIA (the Internet Initiative for Africa) and APDIP (Asia Pacific Development Internet Programme) as well as recent the efforts of UNDP and of the international community to encourage countries to develop a strategic approach to the roll out of ICTs as tools for national development. Currently, SDNP's experience is an important resource in mainstreaming ICTs as tools in the fight against poverty and in support of efforts to promote good governance and the Millennium Development Goals (MDGs). During the 1990s, UNDP also began to support individual projects and initiatives at country level, based on ICTs or with a significant ICT component, building up a significant portfolio over the years. These continue until the present time. In more recent years, they are supported by a total of five ICT regional experts, four located in UNDP SURFs and one in APDIP[21], who also implement some regional ICT programmes.

But with the arrival in 1999 of the new UNDP Administrator, Mark Malloch Brown, key changes were put in place. "Moving upstream" became the motto, meaning that UNDP would focus more on providing assistance to develop strategy, policies and institutions at national level, and less on programmes and projects. In relation to ICTD, this meant that support would move towards "helping to achieve a policy environment that encourages domestic and international provision of information technology and other services and away from the actual delivery of those services, which is what we are currently doing."[22] Project level activity will, of course, continue but:

> "Overall, priority must be given to programmes and projects likely to have a significant impact on the kinds of policies and institutions that will help most to eradicate poverty. Our projects must be policy-driven rather than our policy advice being project-driven." …
>
> The important point is that the greatest impact of UNDP on poverty eradication is upstream, at the level of policies and institutions, rather than in the stand-alone projects, which are often relatively expensive and reach only a limited number of beneficiaries." (p8)

Among its implications were "a much greater emphasis on partnerships, and the adoption of a catalytic, brokering role".

With the ICTD paradigm, UNDP was not just moving up to policy level; it was promoting a new approach to policy. UNDP argued the need to go beyond conceiving of ICTs as a specific sectoral issue, a position that had characterized the major global thrust during the 1990s to break up the monopolies of national telecommunications operators and make telecommunication markets more efficient. Now UNDP was seeking to draw a clear distinction between ICT policy that was geared towards creating an advanced ICT sector and services, and an ICTD policy that was to maximize the positive overall impact of ICTs on development. This shift from ICT as sector to ICTs as horizontal enabler, as well as a belief in partnerships and in stakeholder participation, was reflected in the initiatives that flowed.

First was participation in major international partnerships to address development and ICTs.

- At the global level, UNDP took an important role as co-host of the Digital Opportunity Task Force (DOT Force) secretariat, created at the G8's Okinawa meeting in July 2000[23]. It brought together government, industry and civil society in G8 countries, and some developing countries, to design an action plan to expand the use of ICTs and universalise its benefits. It delivered its final report in June 2002 to the G8 meeting in Kananaskis.

21 There are a total of nine UNDP Sub-Regional Resource Facilities, and APDIP which covers the Asia region.

22 *The Way Forward: The Administrator's Business Plans 2000 – 2003* (unedited draft, no date) UNDP. Page 7.

23 The G8 Summit in Okinawa agreed the *Charter on Global Information Society*, in which the leaders agreed to establish the DOT Force. It was actually formed and first met in November 2000. Its key strategy document was *Digital Opportunities for All: Meeting the Challenge,* July 2001 presented and approved at the G8 meeting in Genoa. See www.dotforce.org

- The UN ICT Task Force was launched by the Secretary General of the UN in November 2001, with an initial three year mandate and UNDP as a co-chair. It has even broader representation, and claims to be a "cooperative effort to identify ways in which the digital revolution can benefit all the world's people". Its work is ongoing.[24]

Other international collaborations were undertaken with a more programmatic focus and modest UNDP input. With CISCO and United Nations Volunteers, a partnership was formed to set up Training Academies for Internet skills in least developed countries (some of which linked to SDNPs, for instance Haiti and Benin), UNDP is also a partner in NetAid, and with a cash grant from the Coca Cola Foundation also supports e-learning activities in Malaysia (2000) and Bolivia (2002).[25]

More strategically significant was UNDP's own initiative in this area, the Digital Opportunity Initiative (DOI), in collaboration with Accenture and the Markle Foundation. Launched at the G8 in July 2001 with the publication of their strategy manifesto *Creating a Development Dynamic*[26], it offers a coherent generic approach at country level to designing and implementing an ICT strategy aimed specifically at contributing to development and social, as well as economic, goals. It underlines the need to involve the "full range of stakeholders in international development - governments, both industrialized and developing, the business and non-profit sectors, multilateral agencies, and community organizations on the ground."[27] Drawing on selected case studies, the initial goal was to use Tanzania, South Africa, Romania and Bolivia as test cases, providing extensive consultancy support free-of-charge to deploy the concept[28].

For funding, the DOI was to look to the DOT Force, and also to UNDP's Thematic Trust Fund (TTF). UNDP manages several TTFs, an instrument to attract government money to co-finance the Multi-Year Funding Framework. In October 2001, the ICT TTF was launched with a commitment of $5 million from the Government of Japan, which recently topped it up with a further $2 million. The DOI was not to be the only beneficiary, and donors could elect to support specific regional and country level applications[29]. Projects could be chosen from five 'Service Lines', encompassing the diversity of UNDP's activities at regional and country level: 1) National and Regional ICTD Strategies; 2) Strategy implementation and capacity development; 3) E-governance actions; 4) Grants focused NGO and community digital initiatives; and 5) National awareness, promotion and stakeholders campaigns.[30] Additional regional actions could also be funded by the TTF, such as tools kits and workshops for ICT integration into poverty reduction strategies, production of thematic Human Development Reports, promoting South-South cooperation in ICTD and so forth. The DOI, therefore, had by no means exclusive access to these funds.

6.3 Review of Recent Progress in Global ICTD

A current review of progress reveals a mixed picture.

DOT FORCE

The DOT Force claims an array of achievements. Its Report Card[31] says that it has "generated more than 20 major bilateral and multilateral initiatives, operating across a broad range of areas crucial to balanced

24 UN ICT Task Force was set up in response to a request of ECOSOC in Resolution 2000/29. Its mandate is covered in the Secretary General's response approved in March 2001 (E/2001/7) www.unicttaskforce.org

25 Provide Websites

26 *Creating a Development Dynamic:* Final Report of the Digital Opportunity Initiative, July 2001. In February 2002, the Global DOI was launched (GDOI), adding a Steering Committee mainly comprising institutions and an International Partners Group comprising mostly private corporations. However the DOI seems to remain the most active vehicle.

27 DOI Press release.

28 Bolivia and Mozambique became priorities under the GDOI.

29 The Irish government committed a further $350,000, earmarked for DOI work in Lesotho, Mozambique and Kenya.

30 Currently, these five service lines are being refined, which will include a reduction to four.

31 "Leadership for Change", a Report Card presented to G8 meeting in July 2002, http://www.dotforce.org/reports/documents/64/General-Report_e.pdf

development", and cites the importance of the Genoa Plan of Action accepted by the G8 in July 2001 and a succession of initiatives on a *DoT Force Entrepreneurial Network (DFEN),* an *Open Knowledge Network (OKN),* a set of Projects in Africa and indeed the DOI itself. However, how many of these would have proceeded in the absence of Dot Force, and how many of the newer ones will be implemented, is open to question given that the DoT Force had limited success in attracting financial resources. In part this was due to the downturn in the ICT sector.

A more considered summary might conclude that behind the plethora of plans published and initiatives announced, a few new projects with potential have got underway although more needs to be done to ensure local buy-in.[32] Some participants believe that NEPAD (New Partnership for Africa's Development) also owes much to the DOT Force. But as the developing country members concluded, "expectations regarding scope and magnitude of programmes, partnerships and funding were raised too high initially and were not followed through as subsequent steps of the process".[33]

Certainly the process deserves attention. It facilitated closer linkages between government and corporate participants, including at national level in some G8 countries; it helped focus the attention of some governments more firmly on ICTs; and it offered a forum for G8 countries to compare notes, knowledge and strategies. A total of eight governments from developing countries were included alongside the G8.[34] The developing countries singled out the "multi-dimensional and multi-stakeholder model of participation and representation as an extremely positive development". They expressed concern that "bilateralism, through G8 country led working teams in a post DOT Force context would hamper the multi-dimensional and multi-stakeholder characteristics" and would result in the fragmentation of the global ICT agenda into "separate non-communicating specific issues".[35] They called for any Dot Force follow up to continue this approach, suggesting the UN ICT Task Force as a forum. From their perspective, it raised the profile of ICTs to the highest level within their own government, as well as bringing some global coherence to the bilateralism of previous G8 activities. However, at least one member of the DOT Force felt that the ultimate failure to attract significant funding was in large part due to the reluctance of governments to relinquish the bilateral approach.

At the final meeting in May 2002, the DOT Force *per se* was stood down, and the Implementation Teams agreed to continue their work as autonomous entities focused on the Action Points from the Genoa Plan of Action. Coordination was to be through a DOT Force Implementation Network. Thus networking continues within projects that are underway, though these are accountable only to partners *per se* and not to any larger group. But the ICT Task Force also took a role (see below).

The inclusion of civil society was also an innovation for G8 that offered government and business a useful and welcome window into this sector. Each G8 country included one not for profit organization (NPO) and these included academics, statutorily funded agencies, foundations, and industry associations. Civil society *in the form of development oriented NGOs or civil society networks* was entitled to one representative: OneWorld for the UK. Other 'non-profit' organizations included in their own right were all private-sector focused. Some countries took the trouble to engage in significant consultation with civil society, such as the UK through national meetings convened by OneWorld; and Japan through Glocom's consultations in Japan, Malaysia and Australia. Greater inclusion of CSOs should be sought in the future.

One of the more interesting outputs related to the issue of developing country participation in ICT global policy making. Two useful reports were completed,[36] both concluding that there exist very serious barriers to effective participation of developing country actors, governments and NGOs. Both proposed a set of actions that the DOT Force might take up. Barriers identified by *Louder Voices*, the more substantive of the

32 The following comments are based on personal communications with members of, or those attending, DoT Force meetings, as well as available documentation.

33 DOT Force: *Statement from Developing Countries,* Canada, 20th May 2002.

34 Bolivia, Brazil, Egypt, India, Indonesia, Senegal, South Africa and Tanzania. China chose not to participate.

35 Ibid.

36 *Louder Voices: Strengthening Developing Country Participation in International ICT Decision-Making,* Commonwealth Telecommunications Organisation and Panos London, for DFID and DOT Force, 2002 and the later *Global Policymaking for Information and Communication Technologies: A Roadmap,* Implementation Team on Global Policy Participation, DOT Force, 2002.

two, included a lack of awareness of the role of ICTs and of the importance of international decisions for national level; weaknesses in policy processes, capacity and institutions at national level; as well as mention of some of the perceived hurdles and shortcomings that the international institutions themselves have to come to terms with. Proposed solutions included a global network of independent policy/technical institutes based on regional or national affiliations; an authoritative, Web-based source of independent information; small scale research activities; enhanced flows of information within countries and wider stakeholder participation at all levels; and a set of proposals to ensure ICT policy fora are more open. The UN ICT Task Force is acting on these. In one of its more far-reaching conclusions, it also noted that:

> "there is clearly a need for the international community to re-think the basis of ICT global governance in light of the dramatic changes that have taken place in the structure of the ICT sector in recent years, and to make the link between ICT and sustainable development"[37]

UN ICT TASK FORCE

In some respects the ultimate 'Report Card' on the Dot Force will depend on progress in the ICT Task Force. Part of the rationale for terminating the Dot Force was to avoid duplication of effort, and the two successfully integrated their Working Groups.

The UN ICT Task Force has also been buffeted by global trends in the ICT industry, but is still moving ahead and operates on a longer timescale. It may yet become the kind of catalytic vehicle it aspires to be, bringing ICTs to poor people. So far[38], it claims considerable success in both putting in place the necessary structures and in undertaking initiatives. A Bureau has been set up, a Secretariat, Working Groups; and Regional Nodes or networks. A Panel of Advisers is also to be maintained.

It has pursued a number of partnership initiatives – including a global inventory of almost a thousand ICTD activities in partnership with the Development Gateway Foundation, a *Digital Diaspora Network for African (DDN-A)*, an ICT policy awareness and training programme, and (again) the launch of the DOI. It has also launched a *Global Partnership for Policy Participation* in mid 2002 to follow up on developing country participation in global policy arenas[39]. It is unclear how many of the initiatives follow the tradition of rounding up existing projects to be nudged forward or embraced under a new umbrella, though, in fairness, this is employed as a means to build impetus in a short time.

As a very broad effort, and involving many actors, it will take some time to achieve significant results. Furthermore, since its goal is to provide "a focal point for establishing strategic direction, policy coherence and advocacy in relation to the global, ICT-based development agenda"[40], it should judged at this level – which will take time to achieve perceptible results.

However, this also means that the process is extremely important, even more so than for the DOT Force. To become such a focal point, it must establish strong and credible links with all stakeholders. Unfortunately, in relation to civil society participation the Task Force is in practice very limited. Of the 47 members, only a single organization, the Association for Progressive Communication (APC) can be clearly identified as a development oriented NGO, another (Grameen Bank) as a 'corporate NGO' albeit with a strong development focus and a good track record in supporting the deployment of ICT solutions to fight poverty in rural settings, and the Markle Foundation. Currently, the Task Force is proposing to take a major role in the WSIS, based in part on its multi-stakeholder approach[41], and although it can claim some measure of CSO involvement through the APC, which is an international network of national CSOs promoting networking for social development, greater participation by CSOs may broaden the reach of the task force.

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37 Ibid p 28

38 *Strategic Plan*, UN ICT Task Force, November 2002.

39 UN ICT Task Force: *First Annual Report*, January 2003. "An implementation strategy for the recommendations contained in these documents [the two reports] has been developed and a Global Partnership for Policy Participation was established this summer. The Partnership, or GP3, is a multi-sector organization of governments, industry, foundations, non-profit organizations, and international policy-making bodies dedicated to inclusive global policy-making on ICT issues. "

40 *Strategic Plan*, ibid 6.

41 *UN ICT Task Force Contribution to the WSIS*, January 2003.

DOI AND THE TTF

The DOI is the UNDP's conceptual showcase, as it embodies all the features of the ICTD approach – its core understanding of national strategies for ICTD; the Partnership approach at global level in devising and implementing the DOI initiative; the idea of UNDP as a 'knowledge organization', harnessing its expertise in the interests of strategy development; and the stakeholder approach at national level, which is built into strategy development and implementation. The basic argument is as follows.

The DOI report identifies several options for national ICTD strategy development, illustrated by country examples. The first choice is whether to focus on ICTs as a sector, or as a horizontal enabler of many sectors. If the former, a further choice must be made between an export market focus (examples given are Costa Rica and India), or developing national capacity and domestic markets (as in Brazil). For the latter – ICTs as a multi-sectoral enabler - the next choice is between using ICTs to improve the positions of multiple sectors in the global economy by putting in place a world class infrastructure and skills for both domestic and international investment (Malaysia); or using ICTs to target the full range of social and economic development goals (South Africa and Estonia). These four are not always mutually exclusive. Though blending them will have strategic and resource implications, some combination is likely to suit each national situation best. This initial analysis reaches the conclusion that:

> "making development goals the primary focus [i.e. the final option] has greater impact than any of the other three strategies in isolation because it ensures that the latter are aligned with meeting development goals."

Pursuing ICTs as an enabler, especially with a focus on development goals, does however demand a holistic and more comprehensive approach that poses challenges across many policy areas and sectors. It is thus not the easiest or necessarily the quickest option, but the one with the greatest potential to yield benefits.

Five components are identified as necessary targets of strategic intervention focused on development: policy, infrastructure, enterprise, human capacity and content and applications (though these may be added to or subtracted to in individual countries). Whilst each can produce some valuable results, together they can reach a critical mass and create a development dynamic, by means of feedback, multiplier and network effects. Reaping the synergies – essential to achieving a virtuous cycle - depends critically on getting the interactions between different strategic components right such that they are mutually reinforcing. But there is no single blueprint: Which approach to emphasize and at what stages, and the specific form of the interventions, will depend on national circumstances.

The novelty of this approach is less in specific strategic insights than in emphasis and process. The distinction between the different possible routes to development and their consequences, and the potential to combine them, is important conceptually. But the report acknowledges that the five components, and the need to address each of them, are typically included in many earlier ICT strategies. Rather, maximizing the development impact of ICTs depends on a number of factors:

1. The pervasive emphasis on development as the goal and ICTs – as technology and even as a sector – merely the means, which is worked through all levels of the process;

2. The close attention not just in planning but during execution on the linkages and cross-impact between components, and the focus on gaining synergies;

3. The meaningful inclusion of a wide range of stakeholders in planning and execution.

UNDP cites Mozambique as a good example of strategy development[42]. The DOI joined with the UNDP Country Office to support the government in the development of this plan, including funding a total of ten external consultants. It was approved by the Mozambique Council of Ministers in June 2002, and bears all the hallmarks of the DOI strategy, although the extent of its ultimate success is too early to judge. UNDP

42 *Information and Communication Technology Policy Implementation Strategy: Towards the Global Information Society,* Approved by the Council of ministers 27th June 2002.

has proceeded with support to Tanzania, Jordan, Uzbekistan, Azerbaijan, Jordan, Bolivia, with the collaboration of Markle on the latter three which is also developing a strategy in South Africa. Nevertheless, progress with the DOI has been slower than expected.

It is difficult as yet to judge the success of the DOI, partly because it has been implemented in just a few places and only in its first stages. On the admission of UNDP, the process of actually implementing the approach in these countries has also not so far been well documented, the available evidence being in the form of strategies themselves.

Although UNDP actions always require government approval, project and programme level initiatives can in practice empower other actors at various levels even in ways unanticipated by government – as demonstrated by SDNP and is well appreciated by UNDP. Thus a long-term empowerment and capacity building component is essential in national ICT development strategies, going well beyond formal 'consultation' mechanisms.[43]

Finally, as noted, the Thematic Trust Fund was never expected to focus exclusively on the DOI, but it was hoped that the fund would grow and thus increase resources available for every level of activity. The initial TTF donation was for a total of $5 million. A second contribution from Japan for $2 million has since been received. The Government of Italy has also contributed 2.5 M. These funds are earmarked to support e-government initiatives. It is expected that more funding will become available.

6.4 Limitations of Global Fora

From our perspective, a few key characteristics of the above broad policy environment, that limit the impact and reach of global collaborative efforts, may be noted.

Much has been made of the participation of civil society in all these initiatives. Indeed, there seems to be general acceptance that this is an essential ingredient to success. The rationale for this needs to be explored or made explicit. While the role of governments and of the private sector is taken to be clearly understood, the actual and potential role of civil society may be less so. It appears that it is seldom critically examined and spelled out, but instead repeated as a mantra. Furthermore, the mechanisms to enable civil society to embrace and implement its role are seldom fully thought through and even more rarely implemented. In the work of the DOT Force, the ICT Task Force, and the DOI strategy, the role of civil society needs to be made explicit.

This raises a number of related questions.

Why is the role of civil society so important to governments, institutions, donors and even the private sector?

- Is the implication of civil society merely a way of placating vocal elements of society, or is it the expression of a belief that the contribution of these elements in society is crucial? Is the implication of civil society a political requirement or a practical need?
- On the other hand, is the implication of civil society genuine but hindered by a lack of clarity about the way to implicate civil society?

Affirmative answers to each of these probably coexist, held by different actors. But there is another factor that may explain this situation.

Civil Society is a heterogeneous and sometimes far less coherent stakeholder in terms of its composition and self-awareness when compared to other stakeholders. The capacity of civil society to understand and to participate in policy development at national and especially international will often be limited as a result. Currently, most civil society organisations lack the capacity to assume a role in global and national policy development. This weakness is of great concern to the development process and to the need for public

43 Although it does not appear in the documentation, the DOI does, according to interviews, attempt to do precisely this in practice. What is required at the very least is a deeper and more explicit consideration of the means adopted.

participation and consultation .. This limits the impact of public participation and of the multi-stakeholder consultative process in general.

What is largely lacking is effective civil society organisations or networks, well informed at the international policy level, with genuine links to and credibility with civil society organizations operating at ground level, and engaging in significant horizontal and vertical networking in all directions.

Similarly, the limited capacity of many poorer and developing counties explains their sometimes limited participation in global policy fora. As a result, many developing countries have a limited understanding of the issues.

Together, these factors help explain the failure of global efforts to harness ICTs for human development.

As a result, the following impacts can be identified.

1) One immediate impact is that the participation of civil society, and sometimes that of less developed countries in global policy fora are often limited. The civil society organisations selected are articulate and at ease in these policy fora, . They fit in, and their views can readily be accommodated. However, the relationship of these organizations to civil society organizations and NGOs at ground level may sometimes be tenuous.

2) It may be that there is little capacity or will to innovate in global policy fora. However, innovative thinking backed up by experience and grass roots involvement is precisely what civil society organizations can bring to the table. The presence of civil society organizations with the capacity to design, advocate and implement alternative proposals could invigorate the current complacent orthodoxy.

   Those who can benefit most from policy innovation – in this case poorer countries and civil society who represent the majority – are also those who are in the best position to come up with such innovation. Unfortunately, they are also currently the worst equipped to do so. Examples of the types of innovation that civil society organizations have contributed to in the past can be found in areas such as Open Source software and new approaches to IPRs, in creating global spectrum commons for development and social purposes, in considering targeted taxes on profitable ICT interactions to support universal service, and so forth. The absence of these actors as bona fide participants means that proven people focused solutions will be harder to come by.

This situation can lead to a top down approach to policy design and implementation. Consultation with organizations and people working at the local and community level may therefore be meaningless. Civil society organisations and networks are more attuned to the empowerment approaches that also work from the ground up. However, civil society organisations, and indeed many poorer countries, are limited in their capacity to scale up to national and global level in an effective manner.

6.5 Relevance of SDNP

What SDNP brings to this – and here we are referring especially to those in the third category described in section 6.1 above - is as follows.

1) **SDNP projects have extensive practice of implementing ICTs for development from national to community level.** In some countries they can reasonably claim to be among the most experienced actors in their area, covering an extensive breadth and depth.

2) **Perhaps more important, SDNPs have established formal and informal networks and interactions with numerous civil society and government actors at all levels.**

   This report and the associated national assessments have documented a very diverse range of NGOs, coalitions, institutions, advocacy groups, and community based organizations who, with the help of the

SDNP, use ICTs to support the key role they play in their country's development process. The nature of their contribution is also distinct – they bring empowerment principles to play, they intimately involve stakeholders and users, and they focus on real outputs and benefits. However, civil society entities thus defined are active mainly at the micro and meso level, a few nationally, but rarely internationally.

3) **At the policy level, SDNP projects have in some instances significantly influenced and enhanced understanding among government Ministries of Internet policy and regulation and sometimes of ICTs generally.**

SDNP was conceived at an opportune time, in that the Internet was just appearing on the radar of many less developed countries – and disinterested, experienced advice was useful, and used. But some SDNPs retained an interest in emerging policy issues especially around the Internet, Open Source software, ICANN (to which some countries were first introduced by SDNP) and related areas. SDNPs have not been slow to propose innovations in policy, drawing not on current imported conventional wisdom, but based on their experience as actors and the feedback obtained from their users and constituency from community to national level.

4) The ICT/PANOS study noted **the need to build a global policy and strategic link between ICTs and sustainable development**. SDNP has focused on this from the outset and, though mostly at the micro-level, the link is deeply ingrained in their thinking.

5) **SDNPs have always maintained an international and outward perspective,** through their contacts with HQ, through their own Workshops and participation in other events, and through the electronic networking list.

6) The **SDNP has introduced Open Source Software (OSS) as a viable option** for consideration by development actors, including governments. At a time when there is less and less choice of which software to choose to operate PCs and networks, the SDNP has demonstrated that there are options. Countries around the world are now moving to choose OSS solutions instead of being trapped with sole source and costly operating systems and applications. This is a major consideration for countries around the world. Significantly, for commercial and other reasons, major trading nations such as China and France and even technologically savvy countries such as Israel are opting for OSS.

In all of these, the important aspect is not so much the stock of knowledge built up *per se*, but the fact that the SDNPs retain *the capacity to act on that knowledge*. SDNP comprises a set of institutions and entities that *embodies* this knowledge, and that continues to work in the national contexts in the pursuit of ICTD practice and policy. SDNPs are nodes of knowledge and action, located in less developed countries, with a conscious understanding and practical experience of both implementation and policy issues. It is above all this aspect of the SDNP legacy that UNDP can build upon.

But it should not be overstated. Few SDNPs (but there are a few) have a good grasp of policy at national and even international level, and at the same time engage a wide range of ICTD projects and programmes on the ground. These few are in the privileged position of being able to view, at least potentially, the interface and interaction between the various components that are identified in the DOI strategy, and the synergies that emerge. But all SDNPs have some insights into ICTD in practice, and/or an understanding of the policy formulation and implementation policy in their respective countries. Many also have developed windows into areas of global policy such as Internet governance.

Thus as a group, their collective understanding is varied and significant. Conceived as a networking entity, SDNP as a whole could potentially exhibit many of the features of a 'distributed knowledge base', linked to practice, being implemented in many international organizations including UNDP. It would be premature to claim they have attained that stage, but the potential is there.

6.6 A Proposal

A fundamental principle of development is that excluded groups, very often comprising the majority, must build their own power and knowledge-base within policy development structures if they are to exert influence that coincides with their long-term needs. We argue that civil society, as well as governments and other institutional actors in most less developed countries, continue to need to be supported in their efforts to partake in ICTD policy making at all levels. CSOs along with the international community are growing more aware of this need. With more support, CSOs could become important partners in the process.

THE CONCEPT

We see the future of SDNP as part of a UNDP effort to **build capacity in global and national ICTD policy development and implementation, particularly among less developed countries and with a special focus on civil society,** based on the perspectives and needs of these constituencies. In this context, **its vision might usefully be repositioned in the context of the Millennium Development Goals**[44] implying a renewed mandate to focus on excluded and marginalized groups in rural and urban areas, where the limitations of the market approach are apparent, and to take empowerment as a key paradigm for development.

At a minimum, the operational goal would be to **build a network of centres and experts, nationally, regionally, globally** that could realistically span the distance between local level ICT implementation and global policy, encompassing national policy as a key arena for activity. SDNP would join with several key players to create nodes rooted in less developed countries, in a UNDP programme directed at building the policy development capacity of civil society and NGOs, and institutions and governments in poorer countries, on their own terms not those of the major players.

Such a network would be built from existing independent civil society entities, already active at local, national and/or global level. The knowledge base, experience and networks of existing entities would be supplemented to enable them to become part of a network. Many of these and related activities can be considered a part of poverty reduction or a way of mainstreaming ICT under the heading of poverty reduction activities. Such a network can be seen as a way of helping and of building the capacity of the poor to make beneficial use of ICTs.

POSSIBLE ACTIVITIES

An initially broad range of activities could be considered that might include:

- Undertaking independent research on ICT global governance and policy, and disseminating it through its networks;
- Advocacy of innovative approaches to policy and implementation, directed towards existing fora and at various levels;
- Investigating or experimenting with various technologies and how they might be disseminated, such as Open Source software, ‘smart’ spectrum sharing and wireless technologies, appropriate models of local and community based access to the Internet and related ICTs, as well as other innovative technologies for Internet access;
- Providing targeted advice and capacity building at local level for ICT applications;
- Supporting national ICT strategies, but in a manner that valorises SDNP’s independence and direct relationship with civil society, by enhancing the capacity of civil society to participate in ICT strategies and better governance nationally, regionally and internationally.
- Bringing a human rights perspective to bear on international ICT and related institutions
- Enhancing the use of ICTs as tools that encourage greater efficiency and transparency in government and among other development actors, especially among national level CSOs

44 This is line with the WSIS and the UN ICT Task Force.

- Strengthening the capacity of poor and marginalized groups and communities, as well as women, to use ICTs in support of their efforts to fight poverty. The benefits that could be provided include empowerment through increased knowledge and more possibilities to influence decision makers and to mobilize support at many levels and from different quarters.
- Strengthening the capacity of marginalized communities to participate in economic activity and to be part of the mainstream economic, social and other activities of the jurisdiction or country concerned.

Strategically, a further unique contribution could be to establish the policy link between ICTs and sustainable development, as proposed in the CTO/PANOS Study, a goal that is not alone an imperative in the current global circumstance but neatly dovetails with SDNP experience.

Some of these may overlap with activities of for instance the UN ICT Task Force. If so, the initiative could enhance the work of the Task Force by bringing policy expertise from CSOs in developing countries or with a good understanding and links to the needs of CSOs in the developing world. Similarly, it could act as a resource to the DOI or similar initiatives. Such an initiative could significantly contribute to the DOI approach, to the efforts of the UN ICT Task Force, as well as more generally at global, national and local level.

PARTNERS AND FUNDERS

The SDNP legacy could not undertake this follow-up activity on its own, and UNDP would first look internally for some of the additional building blocks. SDNP HQ and the ICTD team, though small, obviously have unique and valuable contacts at the regional and national levels. The network of Regional Policy Advisers, though already stretched between Country Office demands and Regional Programmes, are a key resource. UNDP's mainstreamed ICTD activities in poverty reduction and governance are obvious beneficiaries of the SDNP experience. Non UNDP partners would include civil society networks, notably but not only APC with its extensive global network and international policy experience. Several other civil society groups focus on ICTDs and related areas. Organisations such as the Third World Network might also have a role. Ideally just a small number of core partners could develop and run the concept, with others involved in their areas of expertise and interest.

Potential co-funders, such as Ford Foundation, DFID, and the European Union, would be required. Initiatives such as those that were committed to by governments as part of the Dot Force initiative (ePolNet and other activities) are also logical partners. Others could be natural collaborators, such as the Development Gateway Foundation with its remit to support civil society. The WSIS, whose second Summit will be in late 2005, could also offer a platform for building and implementing the concept. The ICT Task Force is another initiative that is consistent with the SDNP. As mentioned below, these two activities have common objectives and proposed actions.

IMMEDIATE STEPS

A number of issues would require attention before such a proposal could take the next step towards a project concept.

First, the concept would have to be examined in the context of the imminent revision of UNDP policy on ICTD. Given the recent mainstreaming of the ICT Practice area at UNDP, there would obviously be a need for considering how these recommendations would support poverty reduction and promote good governance.

Consider the important role of ICTs in governance and poverty reduction.

6.7 ICTs and governance

The SDNP contributed to better governance by enhancing the role of NGOs and CSOs in general as development actors and partners in the countries where the project operated. More important, the SDNP helped many NGOs attain a level of acceptance by government. In South Korea, the SDNP was instrumental

in helping NGOs in general and community based NGOs especially become known to government officials and taken seriously as partners in development. At the time, support from the SDNP and by extension, from UNDP, helped overcome the reluctance of the newly elected and democratic government of South Korea to partner with people and organizations they had sometimes been at odds with.

SDNP also helps connect development actors in general, and in some cases, poorer and marginalized communities to become better informed and more engaged in development. In this way, the SDNP has contributed to strengthening the development process and the way its manager by helping to make it better informed and more inclusive.

In China as one example, the SDNP helped promote greater access to certain government documents and helped establish the principle of access to some documents as a public right. In many ways, the SDNP helped increase the free flow of information and ideas that are the cornerstone of good governance and informed and participatory decision making.

THE SDNP LEGACY

Within the context of UNDP's mainstreaming on ICTD, there is clearly a role for an expanded SDNP inspired or "*SDNP like*" activity aimed at enhancing the capacity of development actors to take advantage of ICTs, to be informed and to participate in the development process and in decision making as well as in government. Indeed, the importance of ICTs as enablers of many of the essential ingredients of good governance combined with the need to build the capacity of governments and of other development actors to take advantage of these technologies and management practices are reasons to seriously consider supporting an ICT for governance initiative or activity at UNDP.

The SDNP created many bridges between government and NGOs as mentioned above. In some cases, the Steering Committees were useful in bringing key decision makers together, people that would otherwise not meet. In Haiti, the SDNP Steering Committee was a forum for dialogue on matters related to the governance and management of the Internet especially.

SDNP's experience in many countries of working closely with government and especially with civil society organizations is a model upon which UNDP may want to build as a way of delivering the benefits of ICTs in support of good governance. Given the agency's strong corporate experience as a result of the SDNP and other successful ICT for development initiatives, this would seem as a logical consideration.

As a result, UNDP is in a very good position, given the expertise and corporate experience that the agency has acquired through the SDNP, to support endeavours to use appropriate information technologies and management practices in support of more transparent, inclusive and informed decision making in government and in general and in support of human development especially.

SDNP, more than most other development agencies, has a track record that UNDP can leverage to the benefit of the countries, development actors and other partners it works with internationally.

One of many possible future directions that UNDP could move in, would be to work closely with governments and other development actors in pushing for a model of governance for development that uses ICTs to best advantage in order to encourage greater participation, access to and exchange of information and knowledge in development decision making and activities.

UNDP could be involved with other partners in documenting best practices of ICT use for managing the development process in a fashion consistent with the principles of human development. This could form the base for activities and/or a practice area that focuses on helping countries and development actors to apply appropriate ICTs and appropriate management practices in support of good governance and human development. This practice area could draw on the extensive corporate experience of UNDP and help apply the lessons learned as a result of over 10 years and several millions of dollars of work undertaken and experience gained by the SDNP.

ICTs and the Millennium Development Goals (MDGs)

It is quite clear that ICTs can have an important role to play in the fight against poverty. In support of the MDGs, it has been recognized that using or accessing ICTs per se is not the development goal or outcome looked for in ICTD projects, programmes or activities. The development goal is not to bridge the digital divide per se. The goal is to promote human development and to reduce and eliminate poverty as a result[45]. To achieve this goal, it will be necessary to bridge the digital divide.

Within given countries, the SDNP has raised awareness among marginalized groups and helped CSOs that work closely with these groups to better take advantage of the Internet. This occurred at a time when people in the developing world were beginning to develop an appreciation of the potential of PCs and of the Internet.

The SDNP has also focused on marginalized groups and sought to bring these into the mainstream. Several of the initiatives pioneered by the SDNP, including subsidizing access to the Internet via free modems, training and awareness promotion activities as well as the provision of low cost access solutions and public access sites, were instrumental in helping raise awareness of and access to the Internet, PCs and related resources among those that did not have the resources and human support to be able to exploit the Internet and PCs. While the SDNP acted more as a catalyst, the model has merit, as this report attests.

It cannot be said that the SDNP contributed directly to job creation and the renewal of communities. However, the SDNP did set the stage for ISPs and some entrepreneurs to take advantage of the business opportunity represented by the provision of ICT related goods and services. CSOs and some politicians and government decision maker were also made more aware of the potential of ICTs and as a result, they were able to influence activities that did benefit poorer communities. However, the SDNP in those countries where the project has persisted could be leveraged to help job creation and could be used to focus on this aspect of poverty reduction.

The SDNP in Honduras had an important role to play in helping mitigate the impact of Hurricane Mitch and in the emergency response that followed. Initiatives such as community access centres (CACs) which the SDNP was sometimes associated with are solutions where people could be supported to help them access relevant health and nutritional information could be especially important in this area. Evidence from assessments undertaking in poor communities have demonstrated that access to heath information is nearly always a priority for people. SDNPs and UNDP have much experience that could be leveraged in helping the establishment of such endeavours. Indeed, if UNDP's experience with the SDNPs is not used in this fashion, it would represent a significant lost opportunity.

Similarly, the SDNP initiative in several countries focused on environmental management and in the case of Honduras in relation to Hurricane Mitch, and thus dealt with emergency preparedness, management and mitigation.

The SDNP in some countries has experience in helping marginalized groups, including women and children to make use of ICTs. By focusing on marginalized groups, the SDNP has sought to bring these into the mainstream. Several of the initiatives pioneered by the SDNP, including subsidizing access to the Internet via free modems, training and awareness promotion activities as well as the provision of low cost access solutions and public access sites, promoting the use of open system software (OSS) such as the Linux operating system were instrumental in helping raise awareness of and access to the Internet, PCs and related resources among those that did not have the resources and human support to be able to exploit the Internet and PCs.

In some countries, the SDNP collaborated with international efforts to provide second hand computers from industrialized countries to schools and other users who would not otherwise have been able to afford or take beneficial advantage of them. While the SDNP acted more as a catalyst, the model has merit, as this report attests.

45 Marker, P. McNamara, K. and Wallace, L. 2002. *The significance of information and communication technologies for reducing poverty*. Department for International Development. London. 64 pp.

SDNP has raised awareness of the potential of ICTs in government and among NGOs and other development actors, including the private sector. UNDP could jumpstart these aspects of ICT mainstreamed governance and/or poverty reduction activities by working closely with those SDNP projects that persist to this day and by adapting and applying the experience gained and lessons learned from the SDNP.

Indeed, this may already be the case in countries such as Pakistan and Bangladesh where the SDNP is well established and operating. In so doing, the legacy of the SDNP and more important, the assets represented by the SDNP legacy could better be leveraged in support of the goals of achieving the MDGs. As SDNP like initiatives were considered important tools to accompany the work on UNDP in support of Agenda 21 and the promotion of sustainable development, so it is now with the achievement of the MDGs.

Consider that most of even the most secure group of SDNPs are still in a state of transition. Institutionally, many are in flux and long-term sustainability is still beyond their reach. A realistic assessment of the current status of this group of perhaps a dozen to fifteen SDNPs, and future directions, would be required, with a view to an assessment of which of them are capable and are willing to further an idea such as this. (This and other recent assessments provide current information on perhaps half a dozen.) At the very least, support would be required thereafter for institutional adaptation and evolution. However, how this fits with the national environment and government's understanding of the ICTD needs might also be important.

Further exploration would be required on the side of the international ICTD community, including those described above, and of the donor community. There would be little point to launching an initiative into an atmosphere of indifference or even hostility. Again, conceptual as well as operational refinements might be needed.

Similarly, the role of others potential partners would be important, and early consultation with them would be critical.

THE SDNP EXPERIENCE , THE DIGITAL OPPORTUNITIES INITIATIVE, THE ICT TASK FORCE AND WSIS

In relation to all of the above, the SDNP legacy is directly relevant to the work on the ICT Task Force. The existing SDNP as well as the corporate assets and experience that have been gained as a result of this flagship enterprise should be leveraged directly to help achieve some of the Task Force objectives as well as generally help the Task Force extend its reach and influence. Indeed, the SDNP experience dovetails very nicely with the ICT Task Force goals, objectives, priorities and actions.

For example, the SDNP is a ready-made network that can further be associated with the Task Force. The SDNP partners could be co-opted to help the ICT Task Force achieve all of the activities listed under its short-term action plan. These include the resource mobilization and communications activities mentioned. Where there are no SDNPs, the approach used by the SDNP can serve the ICT Task Force well. Similarly, the SDNPs can be closely associated with many of the medium term action planning action points set by the ICT Task Force. Many of these action-planning points are similar if not identical to those the SDNP had set for itself.

It is largely as a result of the SDNP and like experiences such as the Internet Initiative for Africa (IIA) as well as the Asia Pacific Development Information Programme (APDIP), that UNDP has been able to rapidly develop an ICT for D practice.

The Digital Opportunities Initiative (DOI) report and approach confirms what UNDP learned through the SDNP and these other projects. The observations that countries that adopt an integrated approach, a mainstreamed approach to or strategy for ICT development and deployment have had more success serves to further strengthen the conclusions arrived at here in this report. The SDNP promoted a holistic all-inclusive approach to ICT deployment as a tool for human development and the success of this approach has been confirmed in the DOI Final Report. UNDP needs to build on the lessons learned here because the needs remain and the gap between countries and communities of haves and have-nots continues to deepen and become more significant, to the greater detriment of the poor and marginalized communities concerned. As

mentioned previously, the alleviation of poverty is the main goal of development efforts, but to achieve this goal, it will be necessary to reduce and eventually eliminate the digital divide.

Finally, SDNPs' efforts in promoting Open Source Software as an option for operating computers and networks have resulted in users around the developing world having more of a choice in the deployment of PCs and related ICTs. The support that SDNP has given continues to benefit poorer communities and countries. As awareness of OSS as an option to commercially dominant operating systems and applications increases, as the market for OSS grows and as the number of experts with OSS skills grows, poorer countries, communities and schools are benefiting. The SDNP can lay claim to being one of the actors that have most influenced the success of OSS in developing countries. Development actors now have a choice of software to use that, with a bit effort and much less cash, can help them take full advantage of the information economy.

WSIS confirmed the importance of ICTs and in many ways also confirmed and reinforced the conclusions that were reached at UNCED and expressed in Agenda 21. The WSIS process demonstrated once again the power of ICTs for mobilizing discussion and resources around issues of common concern. Many of the action planning components under discussion at WSIS are the same as those that have motivated the SDNP over the years.

Annex: Methodology

The research for this study was carried out between out between July 2002 and December 2002, with additional documentary analysis undertaken until March 2003. It was completed by a team led by Sean Ó Siochrú, and comprising also Carlos A. Afonso and Philip Esselaar, with contributions from Deirdre Collings, Richard Labelle and Kate Wild. Further additions were made between October 2003 and January 2004 in consultation with Richard Labelle.

The methodology was relatively straightforward, and comprised the following.

Eight extensive national assessments were carried during 2002 out as follows, based on a generic Terms of Reference developed by the Team:

Guyana (Report delivered September 2002 by Seán Ó Siochrú)
Malawi (Report delivered November 2002 by Philip Esselaar)
Colombia (Report Delivered November 2002 by Carlos A. Afonso)
Honduras (Report Delivered November 2002 by Carlos A. Afonso)
Nicaragua (Report Delivered November 2002 by Carlos A. Afonso)
Romania (Report Delivered December 2002 by Seán Ó Siochrú)
Bangladesh (Report Delivered December 2002 by Seán Ó Siochrú)
India (Report Delivered February 2003 by Seán Ó Siochrú)

Follow up was also undertaken on the assessment of Pakistan SDNP, originally completed in October 2001.

All the above are available in full at the SDNP Website.

A short report on Kyrgyzstan was written based on a visit by Seán Ó Siochrú. Brief partial reviews were also undertaken of Jordan, Beirut, Benin, Mauritania and Haiti based on interviews with UNDP staff. Extensive documentary sources were consulted: Project Documents, mission reports, assessments and numerous Websites were accessed. Further documentary sources are noted in the text.

In addition, a series of interviews was conducted at UNDP Headquarters in New York during December 2002. These were with: Dimia Al-Khatil, Ove Bejerregaard, Stephen Browne, Fernando Hiraldo del Castillo, Denis Gilhooly, Richard Kerby, Radhika Lal, Sarah McCue, Claudio Providas, Anthony Woods, Lawrence Yeung and Raul Zambrano.

The Team Leader would like to acknowledge the fine work completed by team members, and also the full support afforded by SDNP in New York, especially by Raúl Zambrano who gave very generously of his time and whose extensive experience proved invaluable.

Although the methodology implemented was thus straightforward, the author would also like to acknowledge the excellent work undertaken by Deirdre Collings, as consultant on methodology development. A more elaborate and sophisticated methodology was developed for this assessment by the team, and tested during several national assessments. It was designed to enable direct comparative of the qualitative outcomes of SDNP Projects. Unfortunately, limited resources meant that the number of national assessments carried out was insufficient to deploy the approach to full effect. However, it provided many insights into the analysis of the final report, as well as in national report. The methodology is available at the SDNP site: http://www.sdnp.undp.org/.