

**PROGRAMME OF THE ROYAL HASHEMITE KINGDOM OF JORDAN**

**WITH**

**UNITED NATIONS DEVELOPMENT PROGRAMME**

**UNDP - Amman**

**Sustainable Development Networking Programme: Phase I**

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## Context

### 1. Description of Sub-Sector

#### i. Sustainable Development and Environment Management

Sustainable development in Jordan is typical of many developing countries. Problems that Jordan is facing include: water and air pollution; coping with toxic substances used in industry and agriculture that are causing health hazards; land use management in general, and waste management. Natural resource and socio-cultural issues are also a major concern.

A serious information gap exists in Jordan on issues related to sustainable development. Access to relevant information on the state of the environment, current trends and policies regarding sustainable development – in Jordan itself, in the region and throughout the world – is highly problematic.

Much of the information needed already exists in ministries, universities, research centres and elsewhere. These centres however, encounter difficulty in sharing information among themselves, and in making it available to others.

This project addresses this problem through computer / communication technology. There are currently about 175 computer dealers and agents in Jordan, providing sales and service in information technology. This availability of facilities and the level of computerization within Jordan are high, providing a receptive environment for this project.

#### ii. Telecommunications

Voice-grade telephone service of a quality suitable for data transmission, is available throughout the country. The Jordan Telecommunication Company (JTC) is in the process of modernizing its facilities and operations. Highlights of the current situation and forthcoming developments are presented following:

- Telecommunication laws and policies that came into effect as of October 1, 1995 call for transforming the Telecommunication Corporation – the former government-sanctioned monopoly, into a state owned company – the JTC. Within two or three years, JTC will be privatized. Meanwhile, JTC will be responsible for expanding Jordan's telephone network area coverage and increasing the basic penetration rate from its present level of 8%.

- The Telecommunications Regulatory Organization has been established to regulate, licence and organize telecommunication operations in the country.
- The private sector in Jordan can now use network facilities other than those provided by JTC. Licenses to provide these services have already been issued to several private sector organizations. Among those services are data communications, paging, mobile phones and public pay phones.
- The National Information Centre (NIC) has established an Internet link with an initial bandwidth of 64 Kbps. This link has since been upgraded twice, and is now at 256 Kbps.
- Five public universities are connected to the Internet through NIC using fibre optic cable at 2 Mbps. Other universities have set plans for Internet connectivity to be implemented this year or next year.
- Twelve governmental organizations are connected through leased lines and 35 others are connected using dial-up facilities. Private organizations and individuals can be connected through private Internet service providers (ISP). At present, there are five local ISPs in operation, and more are expected in the near future.

Internet users in Jordan have increased in number from near zero in 1995 to more than 4,000 today. Long-term subscriptions cost about US\$2.50 per hour and are falling.

### iii. Telecommunications Future Plans

The government's overall telecommunications policy is to expand the scope and coverage of data networks and make them fully available throughout the kingdom, paying due attention to economic and social development needs. This policy includes creating a competitive environment for service providers so that services are state-of-the-art and available at affordable prices. Based on current plans, the Jordanian telecommunication infrastructure will be substantially upgraded by the year 2000.

## 2. Host Country Strategy and Programs

Following the Earth Summit at Rio de Janeiro in 1992, Jordan ratified its Environmental Act, and established an independent environmental organization — the General Corporation for Environment Protection (GCEP) to establish environmental standards and regulate their implementation.

The Capacity 21 project, together with GCEP, are preparing a national plan for its Agenda-21. This plan will include a description of the priorities for sustainable development in Jordan. Based on these priorities, responsibilities will be assigned to ministries and private sector organizations in all sectors of the economy. NGOs that have interest in tracking these issues will likewise be identified. SDNP will support implementation of the Agenda-21 and GCEP programs and activities in two key ways:

- Providing data communications among stakeholders
- Providing access to sustainable development related information.

Jordan is in the process of establishing a National Information System (NIS) that is to link domestic information centres in both the private and public sectors, and co-ordinate their input and output to facilitate access to comprehensive and up-to-date economic, social and technological information. NIS is a decentralized network to which independent, collaborating information agencies and database centres subscribe, permitting co-ordinated access to data for multisectorial analysis.

The National Information Centre (NIC), founded in 1993, is a specialized institution affiliated with the Higher Council for Science and Technology (HCST). Its mandate includes establishing and managing the NIS and linking the various information-generating centres in a national network. NIC conducted studies, and set strategies and plans to establish the NIS.

Information has been classified into 17 sectors, as shown on page \*. Co-ordination committees have been established for each sector to co-ordinate efforts to establish an information sub-network for all sectors to link key institutions dealing with similar type of information to a focal point of that sector, and the focal point will be linked to NIC.

A still-current description of information requirements and information sharing between institutions can be found in the 1996 SDNP Feasibility Study:

- Annex 5 (2 pages), lists all sustainable development related information provided and/or needed by about 65 Jordanian institutions that are, in some way, involved in sustainable development
- Annex 6 (3 pages), cross-references information exchange between these same institutions.

### 3. Institutional Framework of Sub-sector

Several ministries and their affiliated bodies are involved with sustainable development issues. Other concerned national groups include academic and research institutions. Non-governmental organizations are particularly involved in

sustainable development and have demonstrated the capacity to form pressure groups on several occasions. Environmental education and awareness are the main assets of these groups, although some of them have been able to intervene in specialized matters such as wildlife and hazardous wastes. Community groups stand among the most powerful and efficient actors in this context.

Co-ordination among these various actors is tenuous at best, and information exchanges are limited. This has resulted in a severe lack of co-ordination among the different institutional activities and the absence of long-term management policies.

The more important government and non-governmental institutions are discussed following:

- The Ministry of Planning (MOP) prepares socio-economic development plans. Their latest five-year plan (1993-1997) mostly aims at restructuring the economy to face serious foreign debt and the trade balance that is unfavourable to Jordan.
- The Ministry of Water and Irrigation with its two main authorities, the Water Authority of Jordan and the Jordan Valley Authority. Water resource management, irrigation projects, water collection systems and protection of water resources are among the Ministry's main concerns.
- The Ministry of Municipalities, Rural Affairs and the Environment (MMRAE) is responsible for environmental protection, environmanagement and rural planning.
- The General Organization for the Protection of the Environment is a new organization established for environmental protection and management.
- The Department of Statistics which is responsible for producing the general statistics of the country. It established a new unit to produce environment statistics.
- The protection and promotion of health is the mandate of the Ministry of Health. Environmental health, environmental monitoring and food safety are some of the main SD efforts of this ministry.
- The Ministry of Public Works and Housing is responsible for road construction and housing for middle- and low-income people.
- The Ministry of Energy and Natural Resources includes the Natural Resources Authority and the Electricity Authority. It is responsible for energy production and exploitation of natural resources.
- The Ministry of Industry and Trade sets and implements industrial and trade policies, as well as industry licensing.
- The Jordanian Institution for Standards and Metrology sets the general and environmental standards. Environmental standards are also set by MMRAE.

- The Ministry of Agriculture (MOA) is responsible for agricultural policies and planning, soil protection, combating desertification and the control of pesticide usage.
- The Higher Council for Science and Technology sets policies and strategies for science and technology. They contribute to the Economic Development Plan (1993-1997) of the MOP in the Science and Technology and environment sectors. The council has several centres of excellence, notably the Royal Scientific Society (RSS) which carries out many environmental monitoring activities.
- The National Information Centre (NIC) is mandated to establish a National Information System linking all information generating centres together through sectorial networks.
- Amongst the NGOs in Jordan, the Jordan Environment Society, the Royal Society for Conservation of Nature, the Petra National Trust, the Queen Noor Foundation, and the Queen Alia Fund, are all very active in environmental protection and sustainable development activities.
- Jordanian universities offer a variety of courses in development and environment. Many of the faculty members supervise environmental research at the Master level.

Further information on the institutional framework of the sub-sector is contained in the 1996 SDNP Feasibility Study:

- Annex 9 of the Study lists 5-year plan activities, by (Jordanian) institution
- Annex 10 presents a summary of Agenda-21 activities, by institution
- Annex 11 is a review of environmental protection plans / activities, by institution
- Annex 12 contains a review of reforestation plans and activities, by institution
- Annex 13 is a listing of plans for the conservation of biodiversity, by institution
- Annex 14 is a listing of sustainable development plans, by institution, and
- Annex 15 is a listing of environmental awareness plans, by institution.

## B. Project Justification

### 1. Problem to be addressed

Current impediments in accessing relevant information on the state of the environment, and sustainable development trends and policies in Jordan, in the region, and world wide, adversely affect policy makers, legislators and others in defining priorities to be addressed, ways to address priority issues, and marshalling resources and expertise to resolve them.

What information is available in Jordan is neither widely known, nor easily accessible. The SDNP feasibility study identified some of the essential information resources, as discussed in the previous section.

The lack of participatory processes that would allow stakeholders a role in the development of appropriate policies and practices for sustainable development, means that policies and legislation may not reflect needs of all stakeholder groups, especially at the local and community level.

The lack of public awareness of the principles and practices of sustainable development as they relate to Jordan are a prerequisite for creating an enabling environment for sustainable development. A first step is to influence attitudes in order to change behaviour among stakeholders and the public in general. Enhancing connectivity is a way of helping this to happen.

The SDNP can help to increase awareness and capacity to use tools for computer-based applications such as World Wide Web pages, electronic mail and electronic conferencing, and other similar applications, as ways of facilitating collaboration and information exchange. The SDNP can accomplish this general objective in a phased approach, wherein the foundation for a long term sustainable development network is established in the first year, and the thus-established network monitored thereafter to ensure that it continues to respond to user needs.

## 2. Expected Results

The long term expected results of the Sustainable Development Networking Programme, based on the Development Objectives presented on page \*, are as follows:

0. Comprehensive and cost-effective access by all stakeholders to sustainable development related information — via the Internet — in databases both within Jordan and externally.
1. Comprehensive and cost-effective data communications available to all stakeholders within Jordan, regarding sustainable development related subject material.

The expected results of the first phase of this programme, based on the three Immediate Objectives, shown on page \*, are as follows:

2. Operational Pilot Phase of the Jordanian SDNP
3. Stakeholders familiarized with, and fully trained in, the operation of the Sustainable Development Network in Jordan

4. A comprehensive plan prepared for the expansion and subsequent development of the Sustainable Development Network in Jordan.
3. Beneficiaries

The Jordanian stakeholders that will benefit from this project, are those who, in particular deal with the following issues: indicators of sustainable development in general, and especially pollution levels and standards, both local and international; cleaner production technologies and practices; natural resources, energy, government policies, rules and regulations, information resources, including bibliographic references, news and calendar of events; identifying sources of funding for sustainable development.

SDNP Jordan is to be an inter-disciplinary facility, disseminating information at three levels as follows:

- Decision-making level: Demand at this level is mainly found in governmental institutions. Information needs at this level are specific and include mainly SD policies and regulations, pollution standards and abatement methods, and clean production technologies.
- Research level: demand at this level is mainly found in research and academic institutions and some NGOs. Information needs at this level are wider and include all issues related to SD, although pollution standards and abatement methods clean production technologies, population and energy show higher demand.
- Awareness level: demand at these levels is mainly found at the NGOs level. Information on activities undertaken by international NGOs is also important at this level.

4. Project Strategy and Institutional Arrangements  
Strategy

The strategy of the SDNP is to create an open structure for managing the SDNP that will foster consensus in decision making, and develop an effective SDNP node in Jordan. It will encourage support from government and other stakeholders, as well as ensure close co-ordination with on-going programs. The project will also seek to raise awareness among decision-makers of the need for sustainable development, and will focus on national networking. Overall, this strategy will lead to:

- Better ability to learn from existing experiences, especially at the local and community level
- Less duplication of effort
- Better use of existing – and sometimes limited – resources
- More timely interventions

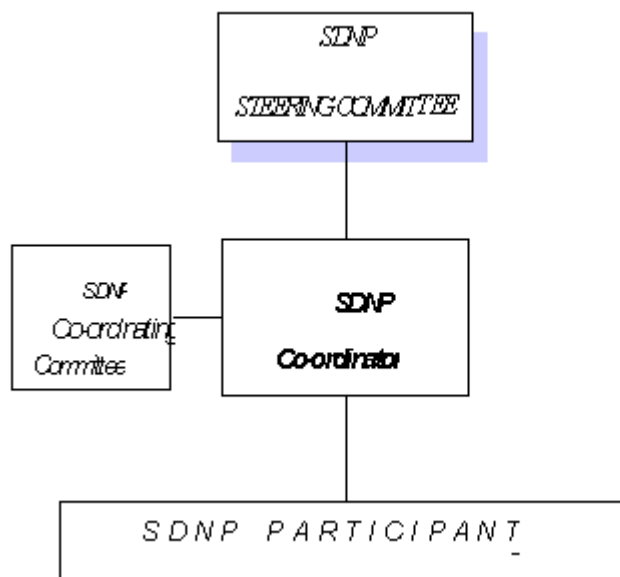
- More consensus.

These, in turn, will lead to better identification of needs and available resources, and hence, a better definition of priorities. Together these lead to better development plans and programs, and a more effective and efficient execution of plans and policies, as well as greater stakeholder support.

The SDNP will not participate directly in the creation of databases. Instead, the role of the SDNP is to enhance connectivity between database developers and users.

i. Institutional arrangements

In order to achieve the goals of Sustainable Development, proper guidance and planning of project implementation steps is essential. To this end, the following project organization structure is proposed:



**Steering Committee**

Overseeing the project will be a high level steering committee with representation from the highest levels of Government and society. This committee will play a major role in setting policy and the overall direction of implementation of the sustainable development network in Jordan.

## Co-ordinating Committee

A SDNP Co-ordinating Committee will be set up in order to provide policy input and functional guidance during implementation of the Project. This Committee will meet at least quarterly, and as and when needed to provide guidance and input on the project. Its membership will comprise senior level representatives from the following:

- Government
- Ministry of Municipalities and Rural Affairs
- Ministry of Planning
- General Corporation for Environmental Protection
- NGO community
- Academic community
- Private sector (Chamber of Industry)
- National Information Centre
- UNDP
- Other institutions as judged opportune for overall project guidance and direction.

At the first meeting of the Committee the assembly will elect a chairman from among the assembly. The SDNP Co-ordinator will attend all meetings of the Committee in the capacity of secretary.

## National Information Centre

The National Information Centre (NIC) will play a pivotal role of a National Co-ordinator. NIC is mandated to establish and manage an integrated information system at the national level, linking the various information centres in both the private and public sectors and co-ordinating their input and output to facilitate the provision of comprehensive and up-to-date economic, social and technological information.

An SDNP Co-ordinator will be nominated by the NIC. This nomination is to be ratified at the first plenary session of the SDNP Co-ordinating Committee.

## Location and Functioning of the SDNP

The involved institutions will decide on the appropriate choice for housing an SD focal point / node to take the initiative in establishing the contacts and working relationships needed with involved institutions to harmonize standards and formats, and to co-ordinate the exchange of data among participants in the project.

The NIC Internet node set-up will be used to provide national and international connection and technical support for the involved institutions.

An SD Analysing Unit will be established to utilize the information and analyse it in order to incorporate it within the current socio-economic planning efforts of the country, via the appropriate channels. The Steering Committee in co-ordination with the Ministry of Planning and the National Information Centre would decide on the appropriate choice for housing such a unit.

ii. Network configuration

The network configuration that has been proposed by

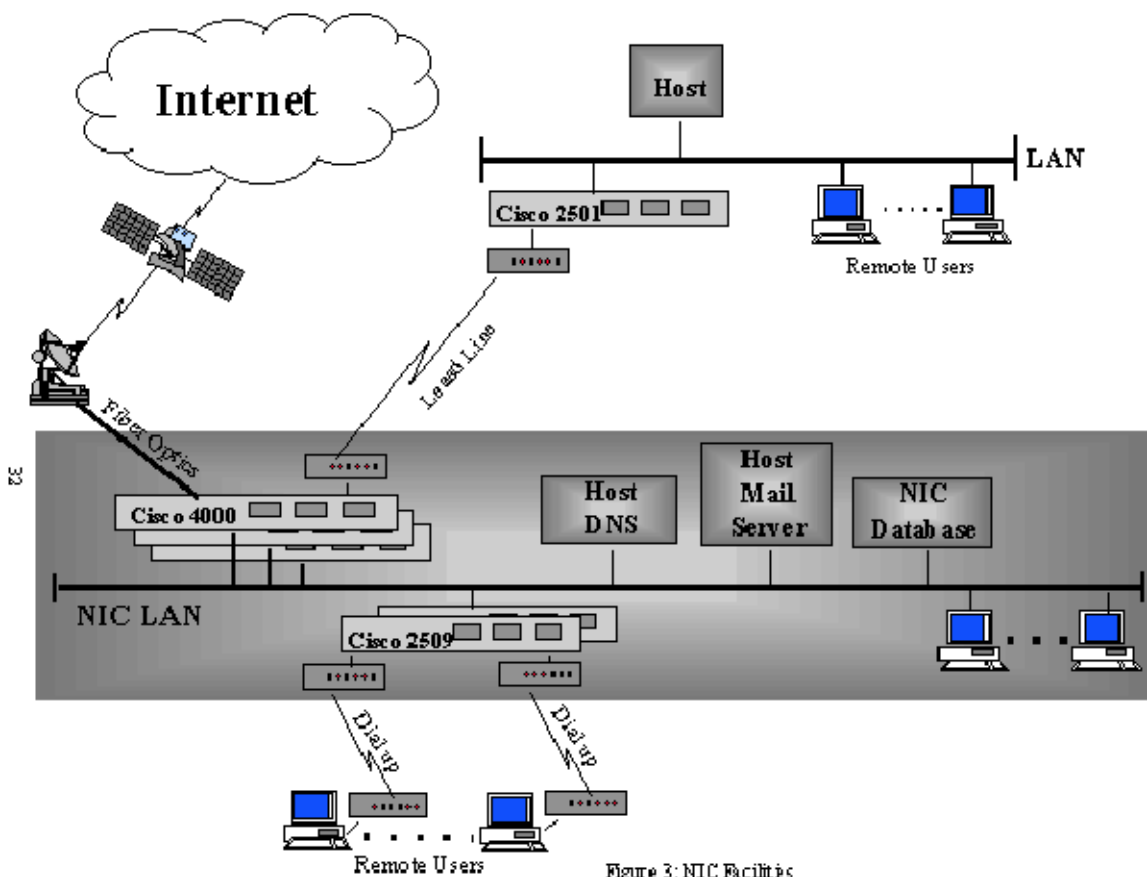


Figure 3: NIC Facilities

NIC is shown following:

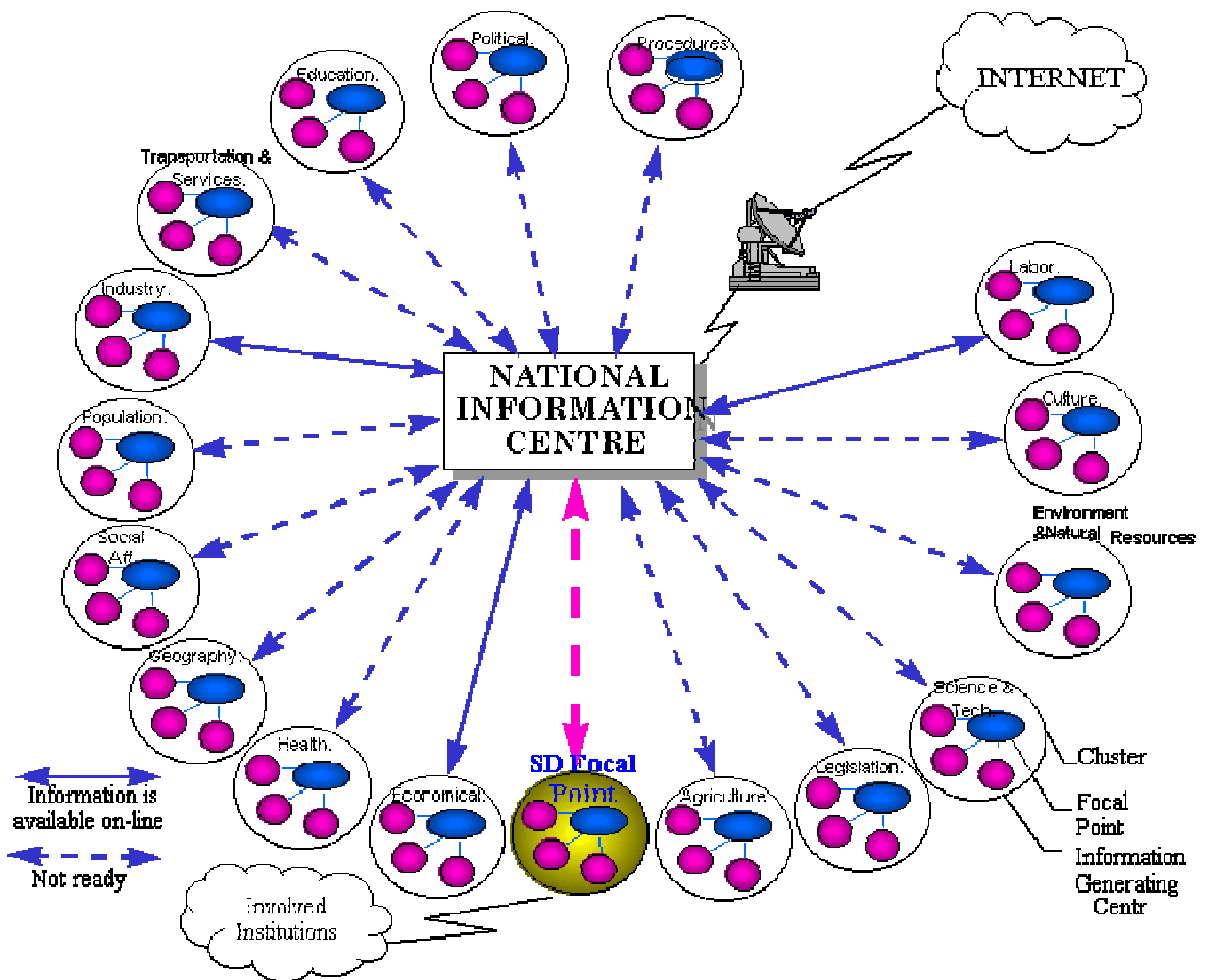
At the time of the feasibility study, it was envisaged that a total of about ten organizations (Government departments and key NGOs) could be provided with computer / communications facilities to enable SDNP

functional connectivity out of project budget funds. With the advent of UNDP purchasing power however, the number of institutions that can be outfitted rises dramatically. In order to ensure that as many deserving organizations as possible benefit from the SDN, the process of selecting and outfitting them will follow the following overall process:

1. NIC prepares a list of organizations – in descending order of priority – to be provided with computer / communications facilities. Factors to be taken into consideration include, not only the relative importance of the organization to Jordanian SDN efforts, but also the ability of the organization to fund the equipment acquisition from other sources.
2. For each organization on this list, NIC prepares a configuration schematic and bill of material (procurement list).
3. The SDNP Co-ordinating Committee ratifies the procurement agenda comprising the above. The SDNP Co-ordinator then forwards the procurement agenda to SDNP New York.
4. SDNP New York procures the computer / communications equipment to the extent possible within budget limits. SDNP New York makes all procurement “ready for use”, then packages and ships the material to NIC. Each box is clearly identified as to its intended recipient.
5. On receipt of the equipment from New York, the SDNCo-ordinator advises each recipient, and arranges for trans-shipment to the organization.

The installed equipment is to be compatible with the concept and overall architecture of the NIS, as illustrated following:

## National Information System Network



As noted above, the Jordanian SDN will be part of NIS where the involved institutions are linked to a SD node, which is in turn connected to NIC. SDN users will be able to access all available information in other sectors in Jordan and can access international databases through the Internet. Services – such as e-mail and ftp – will be available to all SDN users.

### 5. Reasons for UNDP Assistance

The United Nations Conference on Environment and Development (UNCED) resulted in Agenda-21, a comprehensive plan of action for sustainable development that Jordan adheres to in principle, having participated in UNCED.

UNCED identified UNDP as the lead agency in the United Nations system to help developing countries acquire the capacity to implement the recommendations of UNCED contained in Agenda-21, the global plan of action for sustainable development. UNDP responded with the Capacity 21 Program and with the Sustainable Development Networking Program (SDNP).

The SDNP is a Capacity-21 support program to help developing countries implement Agenda-21 by facilitating access to information to support decision making. SDNP also encourages stakeholder participation from all sectors in the steps leading to sustainable development.

### C. Development Objectives

To provide an enabling environment for:

- Promoting sustainable development and implementing Agenda-21 in Jordan
- Facilitating access to information, knowledge and expert advice and
- Encouraging increased collaboration and communications among stakeholders locally, nationally, regionally and globally.

### D. Immediate Objectives, outputs, and activities

Note: Activities are denoted in *Italics*, and follow the particular output they apply to.

#### 0. Objective 1

Set up and make operational the pilot phase of the Jordan Sustainable Development Network Programme

#### Outputs

0. Establishment and operationalization of the SDNP Co-ordinating Committee
  - . Appointment of Committee members by their representative institutions
  - i. Election of a committee chairman, by majority vote, by the assembly of committee members
  - ii. Review and approval of the modus operandi of the SDNP Co-ordinating Committee, as noted on page \*.
1. Establishment and approval of the organizational structure of the SDNP
  - . Preparation of a draft organizational structure
  - i. Review and comment by SDNP Co-ordinating Committee members
  - ii. Ratification of the organizational structure (amended as appropriate), by majority vote of the SDNP Co-ordinating Committee.

2. **Confirmation of the Sustainable Development Network Programme Co-ordinator**
  - . **Ratification of the nominee, (majority vote) by the SDNP Co-ordinating Committee**
  - i. **Completion of the Needs Assessment for computer/communications facilities**
  - ii. **Review and update of the needs assessment component of the feasibility study conducted in early 1996**
  - iii. **Ratification, of the update, if needed, by the SDNP Co-ordinating Committee.**
3. **Completion of procurement and installation of initial network and computer facilities**
  - . **Update of the SDNP Network Configuration presented in the feasibility study report**
  - i. **Submission of detailed procurement requirements to SDNP New York**
  - ii. **Procurement and software installation according to specifications, testing, run-in and any other specifically requested steps necessary for out-of-the-box operation**
  - iii. **Shipment of procured equipment to Amman.**
4. **Completion of all steps and activities necessary for installation of Internet connectivity**

#### **Installation and testing of equipment**

5. **Completion of all steps and activities necessary for the classification and indexing of databases and other information repositories available locally**

**Activities for this output are in progress and being done by NIC.**

6. **Operational status of the pilot phase of the Jordanian SDNP.**
  - . **Ongoing management and support of the pilot network and users of the network**
  - i. **Assessment of costs and revenues needed to cover costs**
  - ii. **Preparation of a Cost Recovery Plan to ensure long term sustainability of the network**
  - iii. **Review of the Plan and its approval by the SDNP Co-ordinating Committee**

### **1. Objective 2**

**Ensure adequate and appropriate development of human resources that are involved with and use the Sustainable Development Network**

#### **Outputs**

0. **Completion of the Needs Assessment for Training and Awareness**

- . Review and update of the needs assessment component of the feasibility study conducted in early 1996
  - i. Preparation of a familiarization and training program
  - ii. Ratification of the familiarization and training program, if needed, by the SDNP Co-ordinating Committee.
1. Awareness of all stakeholders of the capabilities and potential of the Sustainable Development Network

Conduct of familiarization courses in accordance with the familiarization and training program

2. Proven capability of all key users in the operation and use of SDN computer / communications facilities

Conduct of training courses in accordance with the familiarization and training program

3. Proven capability of key users in accessing sustainable development related information available locally

Conduct of training courses in accordance with the familiarization and training program

4. Proven capability of important users in accessing sustainable development related information available in selected international sites

Conduct of training courses in accordance with the familiarization and training program.

## 2. Objective 3

Plan for subsequent phases of the Sustainable Development Network Programme, with emphasis on ensuring the cost-effectiveness of service and self-sustainability of the network.

### Outputs

0. Completion of the assessment of future expansion needs
  - i. Preparation of the terms of reference for an independent evaluation of the pilot phase of the SDN project
  - ii. Approval of the terms of reference by the SDNP Co-ordinating Committee
  - iii. Conduct of the SDN project evaluation
  - iv. Assessment of evaluation results.
- i. Completion of SDNP project expansion plans

- i. Preparation of a costed and scheduled plan for expanding local access capabilities
  - ii. Preparation of a costed and scheduled plan for expanding international access
  - iii. Review and approval of both plans by the SDNP Co-ordinating Committee.
- ii. Completion of provisions for funding the immediate phase(s) of the expansion plan.
  - i. Definition – within the framework of the approved expansion plans – of small, discrete projects of potential interest to international donor agencies
  - ii. Submission of plans to interested donor agencies.

### 3. Inputs

#### 0. UNDP

UNDP will provide:

- Financial assistance through its Sustainable Development Network Programme, and through the representative office in Amman, in accordance with its budget commitments presented in Section G following.
- Procurement and set-up services for computer / communications equipment purchased for the project
- Guidance and advice – including consulting services – in management and operational matters.

The total financial contribution of UNDP is \$200,000.

#### 1. Jordan

The National Information Centre will provide, or arrange for the provision of:

- Housing and facilities for the SDNP
- Financial resources to cover:
  - Salary and support costs of the SDNP Co-ordinator
  - Full costs of the analysis and programming services needed to access databases in government departments and agencies
  - About 65% of the cost of International Internet access in accordance with bandwidth needs of the project
  - 40% of all training costs
  - Over 25 % of computer / communication equipment costs
  - Other items, not only in accordance with its budget commitments, but also in the interests of the success of the project.

The total financial commitment of Jordan is valued at \$470,000.

#### 4. Project Review, Reporting, and Evaluation

The project will be subject to an independent review prior to the end of Phase I of the project. This review, culminating in a Project Performance Evaluation Report (PPER) is to address the following:

0. Actual versus expected performance of all three objectives and their corresponding expected outputs
1. Lessons learned from the experience to date
2. Aof the proposed expansion / preparation plan, including marketing plans to elicit investment and/or participation by other donors
3. Assessment of long term sustainability prospects of the network itself, and
4. Other topics as may be requested by the SDNP Co-ordinating Committee

In addition, a Project Terminal Report will be prepared in draft sufficiently in advance to allow review and technical clearance before the above-noted PPER.

#### 5. Budget

The project budget is presented following:

Item	Budget	Jordan	UNDP
Needs assessment study	20,000	10,000	10,000
Information systems development	90,000	90,000	
Computer hardware and software	100,000	30,000	70,000
Communications equipment	50,000	10,000	40,000
International Link	300,000	250,000	50,000
SDNP personnel	60,000	60,000	
Familiarization and training	50,000	20,000	30,000
TOTALS:	\$670,000	\$470,000	\$200,000

#### 6. Sustainability

- The NIC has been providing full Internet services since October 1995, and will soon charge institutions for services provided. At this moment the number of subscriptions is not sufficient to cover the yearly cost of the international link, but this number will increase as:
  - NIS clusters are developed
  - More information is made available on the network, and
  - Internet services become more appreciated.

In addition to this, it should be noted that the NIC is supported by government.

- For non-government institutions, although they need support in the initial stage they should eventually be able to pay for the operating costs out of their own budgets plus other value added information services.
- Most donor agencies: UNESCO, UNDFW, WHO, UNDP, UNICEF, GTZ, JICA, and others may become part of the Jordanian SDN. Most of them are interested in sustainable development issues and have resources that could support the Jordanian SDN. The NIS should approach such donors and funds in later stages of the project.

## 7. RISKS

The risk of failure of this project is minimal. The Government of Jordan is committed to its successful implementation.

The risk of sub-optimal implementation of the project is attenuated by this commitment. It is also attenuated by the availability (albeit in short supply) of skilled technical personnel within Jordan. The technology used — although leading edge — is already in widespread use throughout the Kingdom.