SUB-REGIONAL MEETING

07 - 08 FEBRUARY, 1994

UNEP/GRID-BANGKOK

Asian Institute of Technology
Bangkok, Thailand

Regional Environment and Natural Resources Information Centre

SUB-REGIONAL MEETING
06 - 08 February, 1994

OBJECTIVES AND OUTPUTS

Objectives:

1. To review overall concept of the programme and generate a comm understanding of the concepts of networking and capacity building as well as t processes involved in and expected outputs from the project;

2. To make an update on the progress of the inventory exercise;

3. To provide an opportunity for the exchange of experiences, problems encounter and actions taken;

4. To discuss actual and potential problems in the implementation of the program and come out with solutions;

5. To develop a common strategy for the effective and efficient implementation the programme;

6. To establish rapport within the network and generate a team spirit; and

7. To come out with a plan of activities and outputs for 1994/95 with corresponding budget.

Outputs:

1. A page brief on each sub-regional institution.

2. A detailed plan for 1994/95 for each institution with the objectives, activit outputs, schedule and budget.

3. Agreed layout and schedule for the directory of experts and environm institutions and proposals.

4. An inventory of hardware and software used and agreement to use compati softwares and hardware.

5. A mechanism of reporting on the progress of the implementation of programme.

6. A file/directory of experts within the network

Regional Environment and Natural Resources Information Centre

SUB-REGIONAL MEETING
06 - 08 February, 1994

PARTICIPANTS

ICIMOD

1. Mr. Pramod Pradhan, Coordinator, MENRIS

Mekong Secretariat

2. Dr. Phadej Savasdibutr, Director, Technical Support Division
3. Ms. Sein Mya

SACEP

4. Dr. V.P. Jauhari, Director
5. Mr. P.K. Kotta

SPREP

6. Mr. Wes Ward, Information Officer
7. Mr. Udai Pradhan

GRID

8. Mr. Surendra Shrestha
9. Ms. Elizabeth Solidum

LIST OF DOCUMENTS

1. **RENRIC: A Network Strategy**

2. **Guidelines for the Inventory Exercise Needs Assessment and Project Proposa**

3. **Questionnaire for the Directory of Institutions on Environment**

4. **Questionnaire for the Preparation of Directory of Environmental Experts**

5. **Proposal for the Establishment of GIS Training Facility for Asia**

6. **Report of Expert Consultation Meeti on Global and Regional Reporting Functions of UNEP**

7. **Data Catalogue GRID-Bangkok**

Draft

REGIONAL ENVIRONMENT

AND

NATURAL RESOURCES

INFORMATION CENTRE (RENRIC)

A NETWORK STRATEGY

17 August 1993

REGIONAL ENVIRONMENT AND NATURAL RESOURCES INFORMATION CENTRE (RENRIC) - A NETWORK STRATEGY

CONTENTS

1. Rationale
2. Objectives and Scope
3. Some Guiding Principles and Strategies
4. The Structure of the Network
5. Action Planning Process and Major Functions
6. Financial Arrangements
7. Relationship with Funding Agencies
8. Roles and Responsibilities
9. Some Critical Issues

REGIONAL ENVIRONMENT AND NATURAL RESOURCES INFORMATION CENTRE (RENRIC) - A NETWORK STRATEGY

1. Rationale:

Chapter 38 of UNCED's Agenda 21 challenges and encourages UNEP to assume a much greater responsibility and closer partnership with countries and institutions to facilitate world decision-making and action towards sustainable development. Tackling environmental issues at a global level, however, makes the task too broad and abstract with its attendant problems of unwieldiness and difficulty in follow-through. Recent trends indicate that in order to come to terms with diversities across the world and efficient handling of critical issues of environmental concern among the countries, a regional and sub-regional approach through a networking strategy among groups of countries is necessary with its underlying spirit of cooperation, which is what networks are all about.

In pursuance of the above aim, UNEP has established a Regional Environment and Natural Resources Information Centre (RENRIC) at Bangkok to bring about inter-country cooperation among the countries in the Asian and Pacific region. This is the first venture of its kind to bring together diverse skills and common perceptions on environmental issues across geographical boundaries involving both regional/sub-regional institutions and countries in the region. It is an important step in the new direction and must be deemed as an essential regional mechanism in our transition to a sustainable society. Based on this experience, establishment of similar networks in other regions might be undertaken (e.g. Africa, West Asia, Latin America, North America and Europe). This will help build strong regional coalitions and to bring countries in the regions together in a committed effort to tackle the common problems of the environment.

In our policy imperatives for the 90's, the need for addressing environmental and development issues within a regional perspective is obvious and pressing. It stems primarily from three major considerations:

(i) To ensure access to aggregate environmental data and information in order to gain a realistic picture of what is happening where and with what regional and global implications;

(ii) To ensure access to environment-friendly technologies and the funding of research and development into such technologies; and

(iii) To assist the countries in the region in exploring and implementing environmentally benign policies of development.

All the above considerations call for bringing various stakeholders in the region together in a collective regional mechanism and work with them in order to move towards the path of sustainable development. No such regional forum with a plan of action for environment and development exists in the Asia and Pacific region and none

that we know of in any part of the globe. RENRIC proposes to fill this vacuum for the Asia and Pacific region.

2. Objectives and Scope:

The primary mission of RENRIC is to facilitate the provision and exchange of environmental information to support decision-making and action towards sustainable development. More specifically, the tasks are:

- capacity building;
- environment sensing; and
- catalyzing government response.

Countries in the Asian and Pacific region share many common problems (intra-regional environmental concerns) concerned with environmental degradation, the solutions to which must be based on common principles and rules of collaboration among sovereign states backed up by three ingredients, viz. data inventory, assessment and capacity building. RENRIC aims to do all these. The intra-regional environmental concerns include:

a) Some common regional problems like trans-boundary pollution, including acid rain and management of river basins or regional seas as well as desertification;

b) Problems relating to certain global environmental shared resources (global commons) such as the atmosphere and the deep oceans, leading to the build-up of green houses and the thinning of the ozone layer caused by the emission of CFC's; and

c) Problems arising from resources that clearly belong to one country, but have values for the inter-regional community which are not reflected in the market. Examples are tropical rainforests, biodiversity, other special ecological habitats and individual endangered species.

RENRIC has to play a special coordinating role and function in the amelioration of the above problems, besides being the major focal point for not merely building up a data base on intra-regional environment concerns but also for establishing legal regimes for the intra-regional environmental issues. Developing an environment information network in the region will, of course, be the first priority task of the Centre. This is to be complemented by an assessment of developmental and conservation needs, particularly for capacity-building activities to develop and enhance national EIS capacities through the establishment of training facilities in selective sub-regional and national institutions.

In the first phase of its operation, RENRIC has identified five sub-regional institutions for focussed attention, namely, ICIMOD, the Mekong Committee, SPREP, SACEP and ASOEN, along with the countries with whom they have established contacts and linkages. ICIMOD covers the countries of China, Bangladesh, Nepal, India, Bhutan,

Pakistan, Afghanistan and Myanmar. The Mekong Committee operates within the Indo-China region, namely, Laos, Cambodia, Viet Nam and Thailand. SACEP has countries of South Asia including Sri Lanka and Maldives, while SPREP services the South Pacific islands. ASOEN covers the ASEAN countries, namely: Indonesia, Malaysia, Singapore, Philippines, Thailand and Brunei. Among these countries, there are quite a few, whose national institutions are weak and whose capacities need to be built up and strengthened (e.g. Pakistan, Bhutan, Maldives, Sri Lanka, Laos, Cambodia, South Pacific Islands). The development and enhancement of capacities will be attempted through the establishment of national EIS centres in selected and prioritized countries. Capacity-building activities also include the establishment of training facilities and development of EIS curriculum.

3. Some Guiding Principles and Strategies:

RENRIC functions on the principle that the effective development cooperation among its regional members is the key to the collective survival of all. Its success will depend on the active participation of its partners and their ability and willingness to lift their vision beyond the narrow bounds of national frontiers and individual scientific disciplines and come to terms with regional issues demanding a common approach for the effective and durable management of our fast dwindling natural resources. Its principal strength and efficient performance will depend upon the complementary (and not competitive) way of its working with its various partners and through learning from one another. Its processes must be open, visible and participatory. While regional environmental assessment and reporting will be one of its key activities, it would not seek any data from national governments of a sensitive or confidential nature. In this context, a distinction has to be made between "private and confidential" data that should stay with the governments and the "public" information that can be shared. RENRIC would strictly respect "confidentiality" and "intellectual property rights" of individual countries and will in no way encroach into these realms. More specifically, RENRIC would build its collaborative process based on the following principles or "building blocks":

* Build on existing institutional base on a complementary and non-competitive basis;

* Integrate scattered institutions, experts and data to avoid duplication of efforts;

* Build data on compatible format systems and classification to facilitate aggregation;

* Build incountry capability for human resource development and institution building; and

* Build national/regional networked and decentralised environmental resource information systems.

The term "aggregated data" needs some elaboration. It specifically means that RENRIC's interest will not be on collecting data at the sub-national levels in the country, i.e., local and regional (in the sense intra-country) data and information. Its interest

would be primarily on obtaining aggregate national level information of a non-confidential nature that will enable it to analyse and disseminate a broad-brush picture of the state of the environment of the region. In cartographic terminology, it will not seek the detailed information contained in cadastral scale maps. The information base it seeks will be the less detailed information that are commonly conveyed through maps at 1:250,000, 1:1 million or 1:5 million scales. This is especially emphasized here in order to bring home the basic idea that RENRIC would be primarily interested in data and information of a broad and generalised character which are intrinsically regional (or transnational) in nature and which are meant to produce position papers, guidelines for RENRIC's work, proposals for the next biennium and contributions to inter-agency activities and to international conferences like UNCED.

In the context of the above guiding principles, the operational strategies of RENRIC to address the entire range of critical environmental concerns of an inter-country character would be as follows:

* To help build or strengthen existing national capabilities for human resource development through training, institution building, and provision of hardware/software;

* To foster inter-institutional cooperation and coordination with users/donors to minimise duplication and to get people and institutions connected;

* To operate with sensitivity to needs of users, following a top-down as well as bottom-up approach and keeping in view the needs at national, regional and global levels; and

* To remain in forefront of technology, eliciting the participation of vendors and aiming at outreach through network.

4. The Structure of the Network:

The network that RENRIC seeks to establish will be an enduring one, which will evolve through a "process", as opposed to networks which are conceived as transient mechanisms for implementing specific projects in a time-bound manner. The core of the structural edifice of the network will be RENRIC, which will establish links with sub-regional institutions and their constituent countries and will assist in the utilization of the financial resources committed to it. It will have a small secretariat, including a modicum of multi-disciplinary technical personnel comprising information scientists, computer specialists, environmental planners as well as planners from socio-economic disciplines. It will draw its other specialised experts for implementing specific action plans from the countries of the region, except in rare circumstances, where expertise on a particular specialization is not readily available in any of the countries in the region. For this purpose, a "Directory of Institutions, Experts and Data" will be prepared and maintained by the RENRIC Secretariat. In this way, the National capabilities available in the region will be used to the greatest possible extent and mutual exchange of regional expertise will be facilitated. Similarly, the agreed programme will be executed primarily through existing national and sub-regional institutions.

In order to operationalize the network concept, the Regional and National focal or contact points must be identified in the first instance. In our present context, the Regional Focal Points are the five sub-regional institutions that were referred to earlier, namely. ICIMOD, MEKONG, SPREP, SACEP and ASOEN. So far as the national governments or countries are concerned, they are expected to designate the concerned Ministry, which will function as the nodal point for systematically interacting with RENRIC and also be the coordinating centre for several associated or affiliated centres within their countries, which are the basic data and information gathering and processing institutions. When seen in operation at country level, the concept of a single government-designated nodal point will prove to be a very superficial link both for purposes of environment information reporting as well as for implementing any action plans drawn up by RENRIC. It is difficult to conceive of a designated one-institution to take on all the functions and responsibilities envisaged for the network. Hence, in order to reinforce and strengthen the government designated body, a National Advisory Group (NAG) should be formed with selected (key) associated or affiliated centres. It could consist of key departments or agencies concerned with environmental data (e.g. institutions dealing with land degradation, wasteland development, drought-prone areas, water resources development, water and air pollution, remote sensing information, socio-economic information, science and technology information, etc.). Thus, the Nodal Point Ministry, the National Advisory Group and the associated centres or affiliates will constitute the 'orgware' of the "Internal Network" in the country. (See Fig. 1)

At the regional level, RENRIC, as the coordinating institution, will constitute a Regional Advisory Group (RAG), consisting of the designated official national nodal points and the sub-regional institutions. RAG will be primarily responsible for policy-setting, directing, guiding and approving the work programme of RENRIC and for reviewing its progress. For implementing specific technical programmes of research and case studies through identified national institutions, RENRIC may constitute separate "Regional Technical Committees" (RTCs), in which technical experts from the concerned institutions in the countries will be represented. Their performance will be reported to the RAG. Apart from this, RENRIC will undertake, on its own through its multi-disciplinary staff, some issue-based research and specialised training programmes as well as case studies, formulation of guidelines and development of software for computer applications in planning. The above constitutes in brief, the various structural elements of the proposed network. (See Fig. 2)

NETWORK MECHANISM

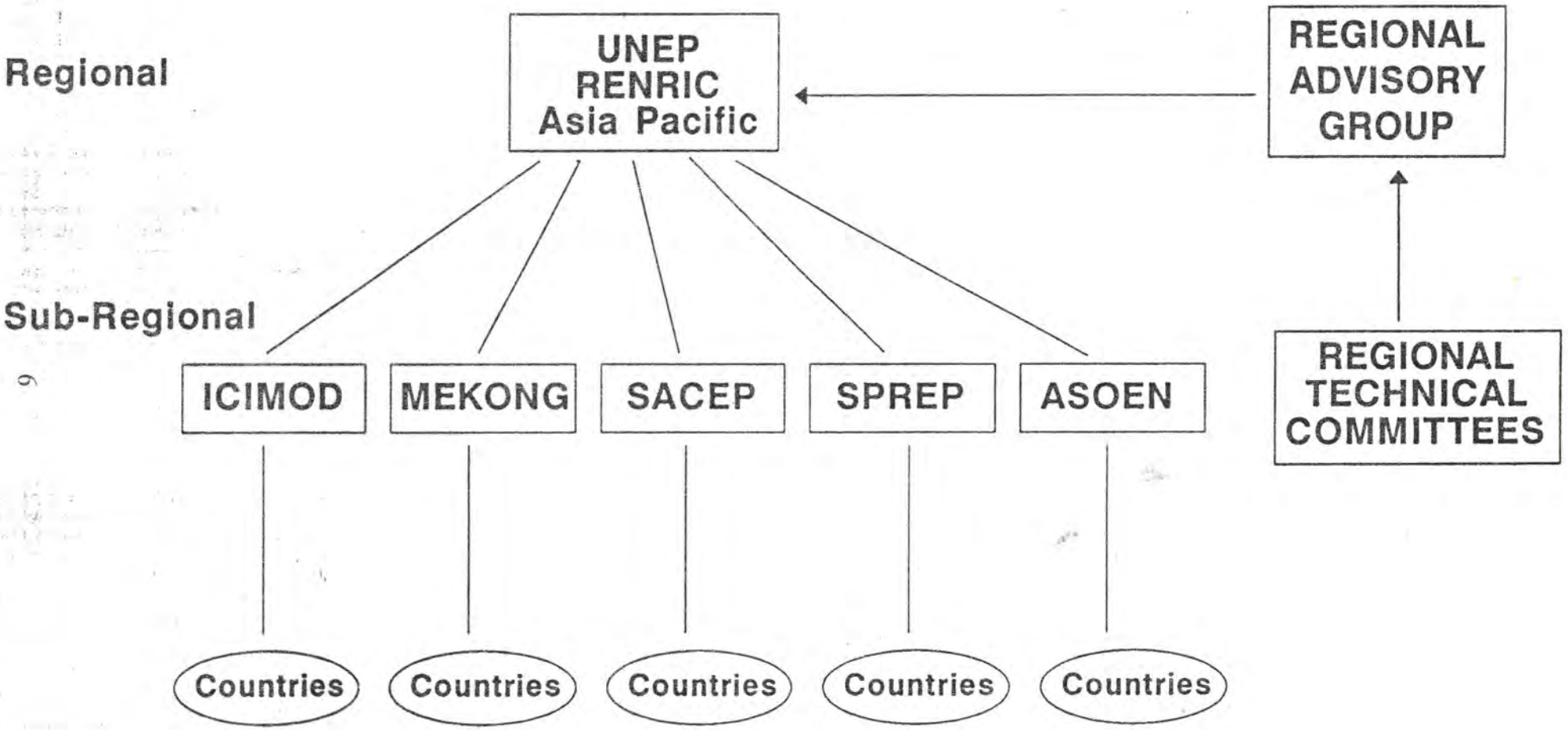


Figure 1

Figure 2

INTERNAL NETWORK - COUNTRY LEVEL
NODAL MINISTRY
NATIONAL ADVISORY GROUP (NAG)
KEY DEPARTMENTS AND AGENCIES CONCERNED WITH ENVIRONMENT
ENVIRONMENTAL DATA FLOW

5. Action Planning Process and Major Functions:

As stated earlier, one of the principal aims of RENRIC is to strengthen existing ties with sub-regional institutions and to establish collaborative relationship with country-level institutions, which have a keen interest in the use of data and information for decision-making using technology as a tool for integration and analysis of bio-physical and socio-economic data. The bio-physical and socio-economic data will emerge from the decentralized national network and will be captured by the nodal ministry in the country (the Environment Ministry). Such data will be integrated through the modern scientific tools of Geographic Information System (GIS) and Remote Sensing (RS). The net result of such an exercise would be the conversion of data into critical information by way of indicators, indices and emerging issues. Further processing of this information through sophisticated tools and techniques by experts and systems analysis, the information could be rendered useful for decision-making, policy analysis and prescription. The potential contributions of this approach will be in three crucial directions, namely:

* Provision of critical indicators to assess the state of the environment;

* Formulation of appropriate legislation for legal and regulatory matters relating to copyright, transborder data flow, software export/import, etc.; and

* Formulation of action plans.

This process of progression from data to information and decision-making is illustratively shown in Fig. 3.

Meetings of the RAG and RTC's and interaction and information flows will constitute the effective mechanism for promoting and pushing the activities of the network. The RAG should meet annually and also as and when necessary to provide broad directions and policy guidance to RENRIC on the following matters which constitute its major functions:

(i) To determine the priorities in the Programme/Action Plans;

(ii) To decide on the individual country contributions to a common pool of resources, called "Trust Fund";

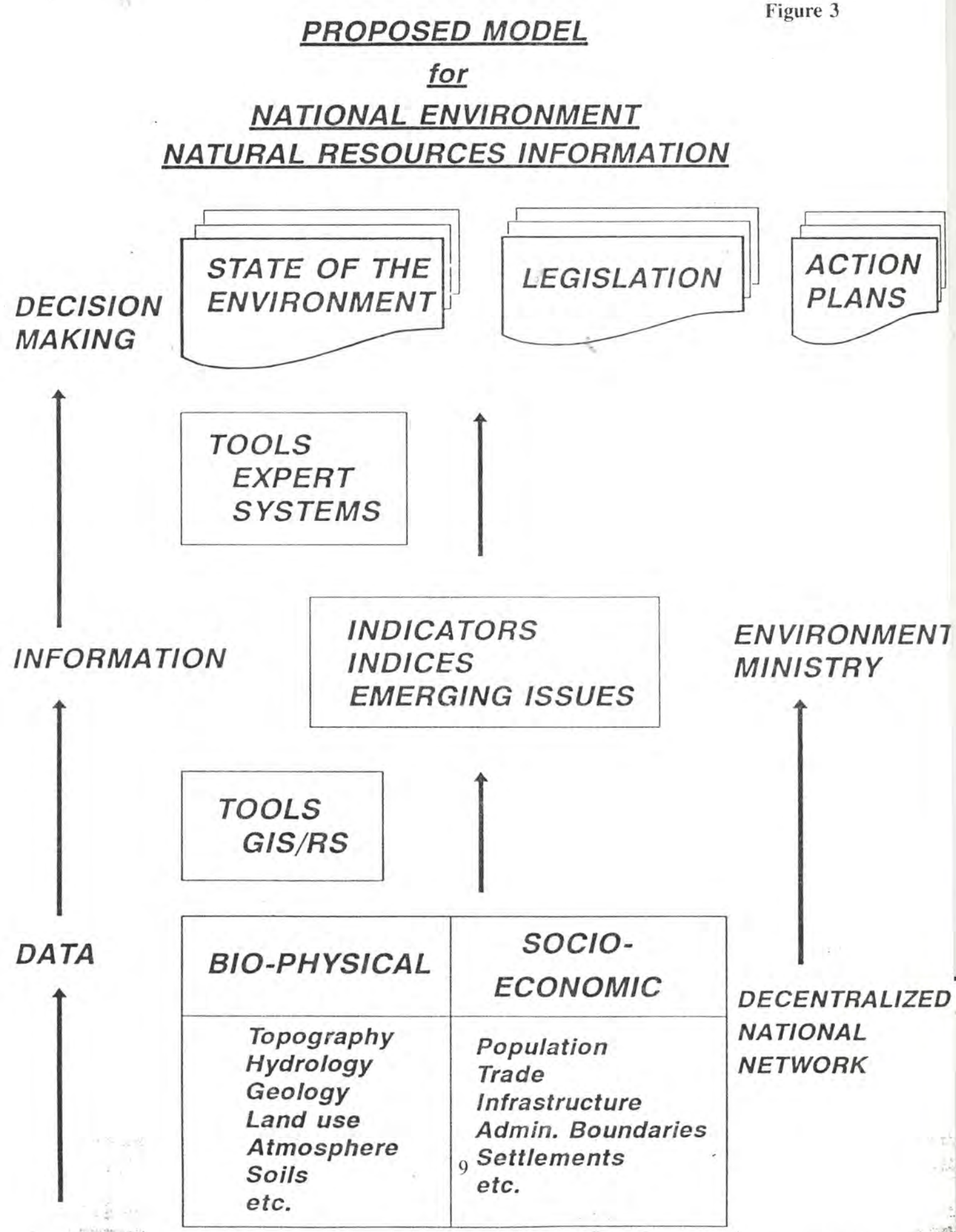
(iii) To determine the critical minimum information to be collected and shared with the countries and the RENRIC and the timing and modalities of transmission of such information;

(iv) To determine the financial allocations to the various activities of the network;

(v) To encourage consultations and promote technical cooperation among the countries of the region;

(vi) To identify regional projects of mutual interest to the whole region;

Figure 3


PROPOSED MODEL
for
NATIONAL ENVIRONMENT
NATURAL RESOURCES INFORMATION
DECISION MAKING
STATE OF THE ENVIRONMENT
LEGISLATION
ACTION PLANS
TOOLS
EXPERT SYSTEMS
INFORMATION
INDICATORS
INDICES
EMERGING ISSUES
ENVIRONMENT MINISTRY
TOOLS
GIS/RS
DATA
BIO-PHYSICAL
SOCIO-ECONOMIC
Topography
Hydrology
Geology
Land use
Atmosphere
Soils
etc.
Population
Trade
Infrastructure
Admin. Boundaries
Settlements
etc.
DECENTRALIZED NATIONAL NETWORK

(vii) To mutually share the lessons of successful experiences in the countries and the factors contributing to them;

(viii) To ensure compatibility within the network by requiring various constituents to adopt a common format for collection of information and a single set of standards, definitions and guidelines for the management and control of domestic agricultural and industrial wastes, including treatment and discharge of such wastes. (An Expert Group may be set up to decide these issues.)

(ix) To evolve common principles for developing appropriate legislation for the protection and development of the environment at the national and regional levels;

(x) To encourage and strengthen, through increased regional collaboration, the activities of institutions within the region involved in the study of various ecosystems;

(xi) To promote training in GIS and computer applications for priority and relevant aspects of environmental planning and natural resource data management system;

(xii) To make a realistic assessment of the state of the environment of the region from time to time based on environmental reporting by countries, and the sub-regional institutions and the support of other international organisations like the ESCAP, FAO and the Regional Office of UNEP;

(xiii) To stimulate the growth of public awareness of the value, interest and vulnerability of the region's environmental resources;

(xiv) To prevent the pollution of the ecosystems within the region originating from activities within the countries of the region or from operations primarily subject to the jurisdiction of extra-regional states;

(xv) To make an assessment of national and sub-regional capabilities to investigate and manage environmental processes;

(xvi) To harmonize policies on the management of wildlife, genetic resources and natural habitats;

(xvii) To harmonize national legislation intended to conserve, maintain and develop the environmental quality of the countries constituting the region and to encourage the adoption of regional and existing global agreements, wherever relevant; and

(xviii) To generally act as a clearing house of information pertaining to environmental issues in the region.

The above 18 points constitute the framework for an Action Plan for RENRIC. These broadly fall under six major rubrics or components:

* Environmental assessment
* Environmental management
* Environmental legislation
* Technical assistance and advisory services
* Training
* Information collection, processing and dissemination.

Undoubtedly, the above tasks constitute a tall order and all of them cannot be tackled almost immediately or simultaneously. RENRIC would attempt to tackle these functions by setting priorities and following a 'stages approach' and in conformity with the expressed needs and preferences by its constituent member countries and sub-regional institutions.

It is to be noted from the above discussion that RENRIC is not intended merely as a transfer mechanism for some essential environmental data and information of international concern, but primarily as a decision-support system and as a technical resource for the 'think-tank' on environment-related issues in the region. The information shared with RENRIC and the countries and sub-regional organisations within the region should be a basis for informed decision-making by countries and sub-regions within the region as well as by RENRIC and other global agencies and thus keep all of them aware of the current developments and problems of the region as well as the policies, programmes and projects pursued by governments in the direction of sustainable development. In this way. RENRIC will enable the countries of the region to compare notes, to develop sound methodologies, to avoid duplication of effort, build upon what has already been done and to make effective utilisation of the available resources in the region, both financial and personnel. To keep the information exchange activity alive and dynamic, RENRIC will initiate a 'Newsletter', which will gradually blossom into a "Regional Environment and Resource Development Dialogue", disseminating not merely information on the state of the environment in the region and the progress of the network's activities, but also some seminal research contributions from experts within the region. With all these functions materializing and the envisaged mechanisms and support systems becoming operational, RENRIC will assume the character of a Development Cooperation Network, an inspirational guidepost as it were, seeking to mobilize and increase the potential and capacities of countries and sub-regional organisations to promote and achieve sustainable development.

5. Financial Arrangements:

From the numerous functions expected of RENRIC, it would be obvious that the Centre has to gradually evolve and expand its financial and personnel resource base in due course of time to discharge its onerous responsibilities. Even in the short-term, when RENRIC is establishing itself as a viable entity with an identity of its own, there are several costs to be met. Broadly, these are:

1. Administrative costs of the secretariat

2. Salaries and allowances of the personnel outfit

3. Travel and living (DSA) costs of staff

4. Honoraria and living costs of consultants and resource persons

5. Travel and living costs of consultants and resource persons

6. Administrative costs of various programmes, e.g., seminars, workshops, training, research, case studies, etc.

7. Publication costs of the network newsletter, information series papers and reports of meetings, seminars, etc.

8. Subventions to sub-regional organisations and country focal points as a support measure to sustain the activities of the network

9. Costs of technical assistance - equipment, material and experts

10. Costs of production of training materials and engagement of consultancy/advisory and dissemination services.

The above costs associated with the development, implementation and on-going operation of the network are proposed to be met from the following sources:

a) From funds provided by UNEP;

b) From funds provided by donor agencies, particularly for specific programme activities;

c) From contributions from participating governments and sub-regional agencies to a common pool, which may be called the "Trust Fund", whose quantum may be determined from time to time by the Regional Advisory Group (RAG);

d) From contributions, in cash or in kind, made in addition to (c) above from participating governments and sub-regional agencies;

e) From contributions by other governments supporting the Action Plan of RENRIC, but not participating in it;

f) Support from other United Nations organisations on a project-funding basis; and

g) Support from the regional and international organisations which are not part of the UN System (e.g. ASEAN) in most cases on a project-funding basis.

6. Relationship with Funding Agencies:

Because of the magnitude of its tasks and functions and the wide spectrum of activities involved in its work programme, RENRIC will seek to establish a diversified funding base involving a multiplicity of donors. This, in turn, would mean the need for increased accountability to its donors and cost-effectiveness in expenditure performance, both of which are the quid pro quo aspects, while attracting funding from any source. In order to ensure transparency in its operations, RENRIC would seek to involve the donors in overall work programme design and other strategic decisions bearing upon the directions of the network. Similarly, while evaluating the performance of RENRIC from time to time, the funding agencies will be closely involved. In this way, RENRIC would strive to establish with the donors, a relationship of mutual trust and confidence, which alone will ensure its financial stability and functional continuity.

7. Roles and Responsibilities:

We now turn to the roles and responsibilities of RENRIC's member countries and sub-regional organisations. These are to be clearly spelt out and understood by all concerned, as they tend to determine the organisational effectiveness of the network in relation to its goals and objectives. We have earlier presented two figures to indicate the organisational configuration of the network. It is necessary to emphasize in this context that no hierarchical distinction among its members is implied in the network in terms of leadership or functions and responsibilities. All constituent countries and sub-regional organisations are assumed to be equal, although they may exhibit, for reasons of their own, varying degree of interest, response and initiative in regard to some specific activities of the network. We stress in this context, the seminal idea that RENRIC is a 'collective institutional entity' with its members assuming important roles and responsibilities aimed at a common goal. To clarify and sharpen these roles and responsibilities, we isolate its organisational elements primarily into four components, namely, the national (country) members, the sub-regional members, the secretariat and the advisory group.

(i) The National Members:

They are the vital implementing arms of the network for specific activities of the Action Plan. This would mean assuming considerable professional responsibilities and providing inputs. They are expected to provide substantial resources to RENRIC, both financial and personnel. They should assume the responsibility for national and regional training and research activities by becoming co-sponsors as well as implementers for such activities. The other functions envisaged are:

* Contributing training materials and faculty resources to the national and regional training activities of the network;

* Mobilizing supplementary materials and faculty resources from their associated and affiliated institutions;

* Establishing and promoting links between RENRIC and other national institutions in their country;

* Ensuring a regular flow of environmental information for systematic environment reporting about the region; and

* Contributing to the extent possible towards the costs of the activities of the network.

(ii) Sub-regional Organisation Members

During the initial phase of the network, the specialised sub-regional organisation members must play a very prominent and constructive role. In order to obtain the best results, they should involve adequately the national institutions of the region. In this way, the 'net benefit' of the network could be considerably enhanced. Their specific contributions to the network could be in terms of staff, training materials and financial resources. They could generate supplementary funding from donor agencies and other organisations. They could, in rotation, host the various activities of the network such as seminars, workshops and training programmes. In this way, they could make significant contribution extending across the network's work programme as a whole and lending positive and dynamic support to RENRIC's secretariat in implementing the various programmes.

(iii) The Secretariat

The Secretariat of RENRIC, which is the core of the structural edifice of the inter-country network, has to assume responsibility for the overall coordination of both substantive and administrative matters. In terms of specific tasks, it would imply the following responsibilities:

* Preserving and promoting the collective identity of the network through various formal documentation and fora through active communication, including Newsletter;

* Providing communication channels and cooperative opportunities among members within the context of the network;

* Initiating and assisting the development of work programmes and their implementation including the specification of task adoption by countries and sub-regional organisations. This is to be achieved through a participatory mode;

* Establishing and fostering links between RENRIC and other institutions;

* Securing the core funding of the network;

* Expanding and diversifying the funding base of the network on a continuing basis; and

* Administering funds of the network.

(iv) The Regional Advisory Group

To ensure the active participation of client governments and sub-regional organisations in the process of work programme development and evaluation, the Regional Advisory Group has a vital role to play. Its members are nominated by the countries and the organisations concerned. They have the onerous responsibility of determining, guiding and steering the activities of the network and giving the stamp of clientele endorsement to the work programme of RENRIC. It is suggested that the membership of the group be varied from time to time, with a certain element of overlap for the sake of continuity in order to facilitate the association of as many senior officials as possible from the nodal ministry and its affiliates in the network. Decisions taken in the RAG meetings will be through consensus. For example, it is necessary to determine the basic subset of data elements useful for exchange and then to develop guidelines or standards for the representation and exchange of that data. The decisions in this regard should be achieved through consensus. The RAG meetings should be presided over by one of the senior officials from the member countries. This could be by rotation following the alphabetical order. The country from which the chairman is elected should normally host the annual and other meetings of the RAG during the year. Such healthy conventions should prevail in order that the regional network can become an effective mechanism for information exchange and development cooperation.

8. Some Critical Issues:

In terms of institutional development and establishment of relationships between and among the member countries, RENRIC is bound to encounter a number of difficulties and obstacles. To lessen these impediments and to forge ahead with determination, the whole task must be seen as a flexible and evolutionary process, which needs a sustained and well-concerted effort. While this may seem to be a statement of the obvious, it must be admitted that the achievement of the 'collective spirit' in practical rather than rhetorical terms is a real problem. For best results, RENRIC should become a mechanism for channeling into the larger context of conservation and development, a constant stream of ideas and innovations and thereby play a meaningful role in shaping country policies, programmes and projects and thus moving closer to the decision-making process of the real world. Firstly, the members of the network must be convinced that there has been a mutual benefit from the affiliation to the collective. This may include institutional gains in terms of improved capabilities and relationships as well as a sense of belonging to an identity over some tangible accomplishments of RENRIC, of which the member countries can be proud of. If RENRIC is to exist merely as a name, funneling some funds for certain limited activities, it will not succeed in any long-term duration in the eyes of its own members, since the stress would only be on what can be taken from it. On the other hand, the validity of RENRIC as a network should be dependent on a reciprocity of interests and realization of these in terms of tangible benefits to both the collective and the individual. That is to say, the aspect of client relations of RENRIC should be seen as a two-way process in which the elements of research, training, experience-sharing, information exchange and advisory services will

constitute, an integrated approach for regular communication flow between the network and its clientele, yielding benefits to all partners.

In its operational strategy, RENRIC would emphasize the demand side of the information network, i.e., on users, applications of information and the use of information in decision-making. More often, the "supply side" of the information - i.e., collecting, storing and dissemination of data - has been overemphasized at the expense of the "demand side". This imbalance will be corrected. Methodologies and approaches will be devised for re-orienting information specialists to user needs.

In this paper, we have highlighted the new imperatives for development cooperation in the area of environment and sustainable development and the need for breaking a new ground through a regional institutional mechanism called RENRIC. The objectives, scope, functions and instrumentalities of RENRIC have been elaborated. The approach indicated here has great potential for initiating a collaborative process, which is capable of yielding synergistic result for the collective survival of our region. The imperatives for regional cooperation are compulsive. The directions are clear. There is not much time left for the developing countries.

United Nations Environment Programme (UNEP)
Regional Environment and Natural Resources Information Centre (RENRIC)

GUIDELINES FOR THE INVENTORY EXERCISE, NEEDS ASSESSMENT AND PROJECT PROPOSALS

1.0 Introduction

The present state of the environment demands that informed decision making for sustainable development needs to be improved and should be based on sound information. This is more concretely emphasized in Chapter 40 of the Agenda 21 document of UNCED.

Sustainable development is not an issue alone of environment. The achievement of sustainable development requires the integration of environment and development. Man's environment problem has become so complex such that both the bio-physical and socio-economic data have to be taken into consideration and integrated for a holistic and multisectoral analysis to enhance decision making processes.

However, the lack of capacity, particularly in developing countries, for the collection and assessment of the bio-physical and socio-economic data, for their integration and transformation into useful information and for their dissemination has been noted. There is a need to improve the availability and utilization of information for sustainable development policy formulation. Coordination among the various institutions engaged in these activities either at the regional, sub-regional or national levels needs to be established and strengthened.

Presented with this challenge, UNCED and Agenda 21 had enjoined UNEP, the principal body within the United Nations System in the field of environment, to assume greater responsibility and a more proactive role in sustainable development decision making and action. To help bridge the data gap and improve the availability of information, UNEP's major task is to assist in building up and strengthening capacities of national environment ministries towards formulation of environment policies based on an integrated and multisectoral analysis of bio-physical and socio-economic data. It is envisaged that a decentralized network of key sub-national agencies/institutions individually involved in the collection and maintenance of these data will be established at the national level for a more coordinated information acquisition and dissemination.

As an initial step towards this capacity building endeavor, UNEP is undertaking an inventory exercise of institutions, experts and data on environment information in each country. This will be implemented in close coordination with sub-regional and national institutions. The inventory will assist national governments in identifying and determining what data are being gathered by what institutions and by whom, and whether they need some assistance for further training or capacity building. The inventory exercise will also assist in the in-country needs assessment and in the development of capacity building proposals to be funded by donors.

2.0 Directory of Institutions, Experts and Data

The first output of the inventory exercise is a directory of institutions, data and experts at the national, sub-regional and regional levels. This will be completed through the aid of a questionnaire. The questionnaire is of two kinds. The first is a questionnaire for the institution which aims to gather information regarding the general functions and activities of the institution and what information and data they collect and process. The second questionnaire is for the environmental professionals of the respondent institution which aims to determine the human resource capabilities and needs of these institutions.

The administration of the questionnaire in the sub-region will be carried out by UNEP's partner institutions, namely: ASEAN, ICIMOD, MEKONG Secretariat, SACEP and SPREP, to be referred to as "partners" in the subsequent paragraphs. The following are some considerations and suggested steps in administering the questionnaire:

2.1 Identification of the Respondent Institution

The partners will have to identify the institution to which the questionnaire will be administered. To do this, the following series of steps may be followed:	Outputs	Time-frame
a) In consultation with the national contact institution (nodal point), identify and list down the various sectors in each country (e.g., agriculture, communication, natural resources, fisheries, etc.). The sectoral divisions/classifications vary from country to country. Any policy documents or official environment reports would serve as reference materials.	List of sectors	1 day
b) Review the available relevant materials, official documents and reports found in the contact institution's library, and for every material, fill in the blanks below: Sector (e.g., Agriculture) _____ Title of Document: _____ Author: _____ Major Issues: (e.g., land degradation, salinization of land, etc) _____ Publisher: _____ Place of Publication: _____ Date of Publication: _____ Location of the Book: _____	Literature review	2 weeks

The purpose of this exercise is to come up with a list of environmental issues in each country.

c) List alphabetically all the environmental issues for each country. (Attachment-1 is a sample matrix of the various issues confronting the countries in Asia-Pacific Region.) — Environmental Issues — 1 day

d) Identify the data needed for each environmental issue, as follows: (See Attachment-2) — List of Data — 1 day

Issues	Data
Air pollution:	atmosphere, land use, population
Deforestation:	land use, population, infrastructure
_____,	_____, _____, _____, _____
_____,	_____, _____, _____, _____

e) Prepare a matrix showing the data on the left-most column and the issues on the top-horizontal line. List the data and issues alphabetically. Mark an x in the corresponding cell where a datum is used in a particular issue. — Matrix — 1 day

Example:

ISSUES / DATA	Air Pollution	Deforestation	Depletion of Energy Resources	Land Degradation	Salinization of Land
Atmosphere	X			X	
Geology					X
Hydrology				X	X
Land use	X	X	X	X	
Topography				X	

f) Based from the matrix above, list the key institutions which have the mandate to collect, store and disseminate each specific datum.

Example:

Data	Institution
Geology	Dept. of Geology, Ministry of _____
Land Use	Dept. of Forestry, Soils Dept.
_____	_____
_____	_____

2.2	Make appropriate number of copies of questionnaire.	Copies of Questionnaire	1 day
2.3	After identifying the institutions, either the partner or the national contact institution prepares a letter addressed to the head of each key institution seeking his/her assistance in completing the questionnaire. Enclose a copy of the questionnaire for his/her information. (See Attachment-3)	Letter	1 day
2.4	Identify and establish contact with a key/contact person in each institution. You may do this through previous association with the institution concerned, or through referral from other colleagues, or through the letter addressed to the head of the institution requesting him/her to appoint somebody to be responsible for this. It is preferred that the contact person should be the onedesignated by the head of the institution. It has been observed that, in most institutions, we always have to get the approval of the head for this type of exercise.	Contact Person per Institution	1 week including follow-up
2.5	Make an appointment with the contact person. See him/her personally. Interview him/her using the questionnaire as the guide. Do not forget to ask for a copy of the institution's brochure or annual report, whatever is available. For the questionnaire on experts, seek the assistance of the contact person. Ask him/her for the names of professionals in their institution who can be the respondents for the questionnaire. See these professionals personally, interview them, and fill up the questionnaire simultaneously. Kindly ask for a copy of the expert's CV, if possible.	Filled-up Questionnaire	3-4 weeks
2.6	Data entry and processing. Compile all the questionnaires together for data entry and processing. Common codes and formats will be used to facilitate integration and consolidation at sub-regional and regional levels.	Print out of data	3 weeks
2.7	Lay-outing and printing of the directory. Each directory will contain summary statistics and indexes.	Sub-regional Directory of Institutions, Experts and Data	2 week

3.0 Needs Assessment

3.1 It has been noted that many countries, particularly the developing countries, lack the capability to collect, assess, integrate, analyze and transform bio-physical and socio-economic data into timely and useful information for sustainable development policy formulation. Hence, there is a need for capacity building.

3.2 Capacity building for environment information involves the utilization of new technologies tools for faster and more accurate data integration and the development and enhancement of the skills of the institution's personnel in using these technologies. Geographic Information Systems (GIS), remote sensing and experts systems are some of the new technologies that have been identified as appropriate and effective tools towards this aim. Determining the needs for capacity building of the various institutions, therefore, will be based on the availability/absence of facilities and skills required to use these technologies.

3.3 Shortlisting and identifying the institutions in each country which need assistance for capacity building will be done by UNEP's partner institutions, i.e., the sub-regional institutions. Priorities will be given to institutions with:

a) no computer facilities;
b) no GIS facilities; and
c) personnel having no or limited computer and/or GIS knowledge and skills.

3.4 From the inventory exercise, fill in the following tables to facilitate the shortlisting of institutions.

a) Indicate the number of available units of the following hardware in each institution.

H A R D W A R E

Country:							
Institutions	P C			Workstation	GIS Facilities		
	286	386	486		Digitizer	Plotter	Color Printer

b) Put a check in the appropriate column to indicate availability of software in each institution.

S O F T W A R E

Country:										
Institution	Wordprocessor	Spreadsheets	Database	G I S			Remote Sensing			Expert System
				ArcINFO	IDRISI	Others	ERDAS	Micro Brian	Others	

After (a) and (b), prepare a list of institutions that need computer hardware and software.

Institutions	Hardware		Software	
	Particulars	Quantity	Particulars	Quantity

c) Indicate the number of personnel in each level with the characteristics defined below.

TRAINING NEEDS

Country:

Institutions	No Basic Knowledge					Needs Further Training					GIS Applications	Level
	WP	SS	DB	GIS	RS	WP	SS	DB	GIS	RS		
												Top Mgmt.
												Mid. Mgmt.
												Prof.
												Technical
												Top Mgmt.
												Mid. Mgmt.
												Prof.
												Technical
												Top Mgmt.
												Mid. Mgmt.
												Prof.
												Technical

4.0 Project Proposals

The data gathered in the inventory exercise as well as in the needs assessment provide information regarding the status of technology and human resources of each country as far as environment information processing and dissemination is concerned. From such information, the sub-regional institutions will be able to determine the nature of intervention the particular country needs, in terms of training and technology transfer. The partners will then develop and prepare project proposals for each country based from these requirements for submission to and funding by bilateral and multilateral donors. The individual country project proposals will be compiled and consolidated into a sub-regional compendium of project proposals. This compendium will contain, among other things, the project proposals for each country plus a project proposal by the sub-regional institution itself. Consolidation at the regional level will be done by UNEP/GRID in Bangkok.

Project proposals for capacity building should indicate the type of training to be given, level and estimated number of persons to be trained, venue of the training, type and quantity of hardware and software. An example would be the provision of two PC 486 for every institution with no computer facilities, plus one PC ArcINFO with one additional key. Training would then consist of one basic GIS training for technical people (3 months) up to the top management (one day).

Below is a proposed outline that may be followed by all partners for uniformity and to facilitate consolidation, both at the sub-regional and regional levels.

a) Cover Page (one page)
b) Project Identification Page (one page)
c) Introduction (one page)
d) Objectives (one-half to one page)
e) Outputs (one-half to one page)
f) Project Implementation (two pages)
g) Project Management and Organization (one page)
h) Project Timeframe (one page)
i) Budget (one to two pages)

Some details are furnished in the following pages.

a) **Cover Page:** *Contains the title of the project*

PROPOSAL FOR THE _____

OF

_____

_____

b) **Project Identification Page:** *Presents basic information about the project.*

Title of the Project :

Project Number : *(if any)*

Country :

Implementing Organisation: *(the sub-regional institution undertaking the proposed activities contained in the proposal, including the address)*

Project Duration : *months/year(s)*

Commencing :
Completion :

Project Cost : (expressed in US dollars)

c) **Introduction:** *An introduction or background in a project proposal usually presents the statement of the problem and rationale of the project, the circumstances and bases for the project. This may include a brief description of the country's state of the environment, some reference to UNCED and Agenda 21, and a summary of the processes/activities that have been undertaken so far (i.e. inventory exercise, need assessment, etc.) that led towards the conceptualization of this project. A brief description of the organisations involved in the project may also be included.*w

d) **Objectives:** *Should define both the long-term/general and short-term (or immediate)/specific objectives, what the project hopes to achieve related to capacity building. These should be stated in terms of ends, not means. Objectives describe what changes or improvement are expected to effect in the target group: individuals, organisation, or country. Objectives should be specific, result-oriented, measurable, and attainable within the given timeframe.*

3) **Outputs:** *These are the products of activities completed by the project. At the end of the project, completion of these outputs may serve as one of the measurement indicators in determining the success of the project.*

f) **Project Implementation:** *This is where the activities that need to be undertaken to achieve the defined objectives are listed and described. For each activity, the responsible unit for implementation (i.e., person or organisation) should be identified.*

The following table may be used:

ACTIVITIES	*RESPONSIBLE UNIT*
Activity 1 *Activity 2* *Activity 3, etc.*	

For training activities, the table below may be followed:

Type of Training	GIS Application	No. of Training	Duration	Venue	Est. No. of Participants by Level			
					TM	MM	Prof.	TP

For purchase and procurement of hardware and software, indicate the kind of hardware/software needed.

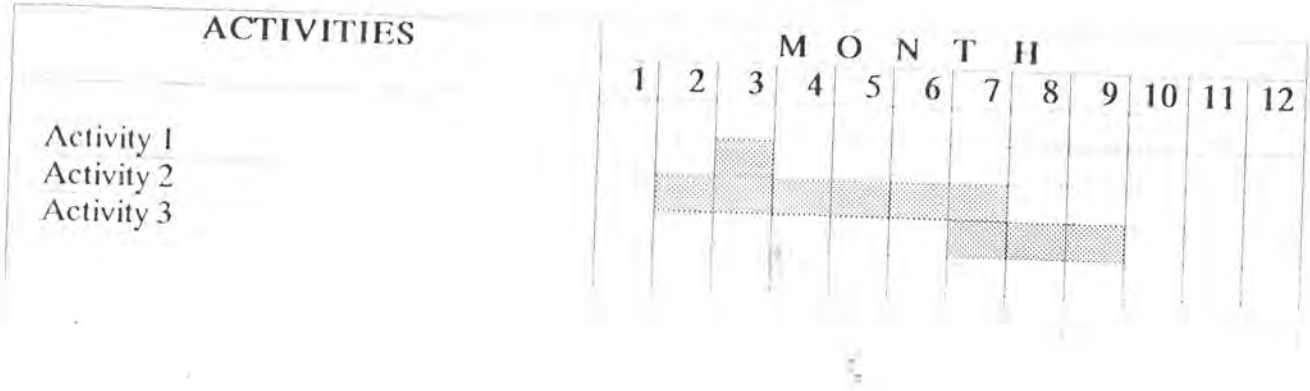
Institution	Types of GIS Software (quantity)		
	Software 1	Software 2	Software 3

Institution	Hardware (quantity)				
	PC	Digitizer	Plotter	Laser Printer	etc.

g) **Project Management and Organisation:** *Defines the roles and responsibilities of the persons involved in the management of the project, the people responsible for ensuring the successful implementation of the project. Usually, an organisational chart is shown in this section.*

The reporting mechanism is also presented here, i.e., progress report every six months and terminal report to be submitted 30 days or 60 days after project completion.

h) **Project Timeframe:** *State the length of time the project is expected to be completed, indicating the date of commencement as well as the date of completion. A Gantt Chart of Activities is presented here showing when a specific activity is expected to be accomplished.*



9.0 Budget: *Below are some cost items that may be included in the project proposal:*

	Amount *(expressed in US$)*
Training Component	
Group training (participation in seminars, training courses, study tours, etc.)	
Meetings/conferences	
Sub-total	
Equipment	
Expendable equipment (property or equipment with an original cost of under $500 for which inventory records are not maintained, including softwares, etc.)	
Non-expendable equipment (property or equipment valued at $500 or more a unit and with a serviceable life of 5 years or more, e.g., computers)	
Sub-total	
Miscellaneous	
Operation and maintenance of equipment (includes operation & maintenance of equipment, repair & rental of computer equipment)	
Reporting costs (for editing, translation, printing & distribution of reports & publications, including case studies, training mats.)	
Sub-total	
Grand Total	

Emerging Issues / Countries	Deforestation	Land Desertification	Land Degradation	Destruction of Bio-diversity	Pollution of Inland Water	Marine Water Pollution	Air Pollution	Health Hazzards	Noise Pollution	Population Growth	Depletion of Ocean & Coastal Resources	Depletion of Energy Resources	Land Slides	Loss of Aquatic Fish	Salinezation of Land	Low Agric. Production & Fertility	Rural-Urban Migration	Flood	Drought	Cyclone	Earthquake	Waste Disposal
Afganistan		X						X														
Australia			X		X				X													
Bangladesh		X	X	X	X	X		X		X			X		X	X			X			
Butan								X														
China	X	X	X		X	X	X								X	X		X	X	X		
India	X	X	X	X	X	X	X	X							X	X		X	X	X		X
Indonesia	X				X	X		X	X	X						X		X	X	X	X	X
Iran		X			X			X														
Japan					X		X		X									X		X	X	
Lao PDR	X		X	X			X									X						
Malayasia	X				X	X																
Cambodia	X		X	X	X						X	X		X								
Myanmar	X							X							X	X		X	X	X		
Pakistan	X		X		X	X		X							X	X		X	X			X
Phillipines	X				X	X				X					X	X		X		X	X	X
DPR Korea					X		X			X						X		X		X		
Nepal	X	X	X	X				X		X			X			X		X	X			
New Zeland					X																	
Thailand	X		X		X	X	X	X	X	X			X		X	X	X	X				X
Sri Lanka	X				X			X					X		X	X						
Vietnam	X		X		X	X	X		X	X					X	X		X	X	X		
Hong Kong									X													X
SPREP Countries																						
Cook Islands			X	X	X	X								X								X
Micronesia	X				X	X				X				X								X
Fiji	X	X	X	X	X	X								X								X
Kribati				X	X	X				X				X								X
Marshall Islands					X	X				X				X								X
Niue	X		X	X	X	X																X
Papua New Guinea	X			X		X		X						X								X
Solomon Islands	X			X		X				X				X								X
Tokelau				X	X	X				X				X								X
Tonga	X		X	X	X	X								X								X
Tuvalu	X			X	X	X				X				X								X
Vanuatu	X				X	X				X				X								X
Western Samoa	X		X	X	X	X								X								X
TOTAL	22	7	15	15	27	22	7	12	6	14	1	1	4	13	9	13	1	12	9	8	3	19

Attachment-1

EMERGING ISSUES	BASELINE DATA	
Land desertification	1) hydrology 2) Land use 3) Drainage 4) Soil	1) population 2) Infrastructure 3) Education 4) Trade 5) Administrative boundary
Deforestation	1) Land use	1) Population 2) Infrastructure 3) Education 4) Trade 5) Administrative boundary
Land slides	1) Geology 2) Land use 3) Soil 4) Hydrology 5) Topography	1) Population 2) Infrastructure
Depletion of energy resources	1) Land use 2) Oil	1) Infrastructure 2) Population 3) Trade 4) Education
Loss of aquatic fish	1) Soil 2) The atmosphere 3) Land use	1) Population 2) Trade 3) Infrastructure
Destruction of Bio-diversity	1) Land use 2) The atmosphere	1) Population 2) Infrastructure 3) Education 4) Trade 5) Tourism
Salinization of Land	1) hydrology 2) Geology 3) Drainage 4) Soil	1) Infrastructure

Attachment-3

Sample Letter

_____(Date)_____

Dear (Hon. Minister/Secretary or whatever the title is),

The United Nations Environment Programme (UNEP) has committed itself to the development and strengthening of capabilities of national governments and institutions on environment information towards sustainable development policy formulation. This is also UNEP's contribution to the implementation of UNCED's Agenda 21.

Sharing the same goal of achieving sustainable development, (sub-regional institution or national focal point) enters into partnership with UNEP in the implementation of a programme designed to strengthen national level environment agencies. The initial activities of this programme consist of conducting an inventory exercise of environment institutions, experts and data in each country within the Asia and Pacific region. A directory is expected to be produced which would contain basic information about the institution, its projects and activities, the data it collects, and the human resources it has. Dissemination of this information is expected to facilitate exchange and access to data for wider use especially by decision makers towards sustainable development.

Through the inventory exercise, needs of the institution for capacity building will also be assessed and identified. This will form the basis in the preparation of project proposals for each country which will be submitted to bilateral and multilateral donors for funding.

It is in this connection that we are writing your good office to enlist your assistance towards the successful implementation of this programme. As mentioned above, the first activity is an inventory exercise to be completed through a questionnaire, a copy of which is enclosed for your information. We specifically seek your assistance in completing this questionnaire. Would be very grateful if you could designate somebody who could personally meet with our programme officer and fill-out the questionnaire. Our fax number is _____, or I could be contacted by phone through tel. no. _____. May we also inform you that a copy of the directory will be supplied to you upon its completion and publication.

Would highly appreciate hearing from you the soonest time possible.

Our Best Wishes.

Respectfully yours,

_____
(Director of the Sub-regional institution or chairperson of the national focal point/contact inst.)

Name of Addressee
Minister/Secretary/Director/Head
Address

QUESTIONNAIRE FOR THE DIRECTORY OF INSTITUTIONS ON ENVIRONMENT

- If possible, please provide a copy of your organisation's brochure and/or annual report for further information.
- Additional information may be furnished on extra sheets.
- If additional copies are required, please make photocopies.
- Please do not use abbreviations.

For office use only

Date received:

File No:

Ref Proj. No:

PART A: INSTITUTION

1. **Name and Address of Implementing Organisation/Agency:** _____

_____

_____

2. **Acronym:** _____ 3. **Year of Establishment:** _____

4. **Name of Parent Organisation:** _____

5. **Head of the Implementing Organisation:**

5.1 **Name:** _____
5.2 **Designation:** _____

6. **Telephone:** _____ 7. **Telex:** _____

8. **Fax:** _____ 9. **E-Mail:** _____

10. **Organisational Status:** */Tick appropriate box(es)/*

[ ] Government
[ ] Semi-autonomous (quasi-government)
[ ] Non-governmental
[ ] Private
[ ] International
[ ] Others (please specify)

_____

11. **Functions of the Organisation:** */Tick appropriate box(es)/*

[ ] Regulatory/Administrative
[ ] Education/Training
[ ] Information Dissemination
[ ] Research
[ ] Consultancy
[ ] Others (please specify)

_____

12. **Level of Functioning:**

[ ] Global
[ ] Regional
[ ] Continental
[ ] National
[ ] Sub-national

<quest_5>

13. Services Offered

[ ] Consultancy
[ ] Training
[ ] Mapping/Digitizing
[ ] Research
[ ] Publication
[ ] Information Dissemination
[ ] Others (please specify) _____

14. Facilities

[ ] Image processing facilities
[ ] Photolaboratory
[ ] Cartographic facilities
[ ] GIS facilities
[ ] Ground truth equipment
[ ] Aerial photographic capabilities
[ ] Training facilities
[ ] Others (please specify) _____

15. Equipment/Hardware *[Please indicate the quantity for each type of equipment.]*

[ ] Workstation

Computers
[ ] 486
[ ] 386
[ ] 286
[ ] minicomputer
Make and year:
[ ] mainframe
make and year:

Printers
[ ] Dot matrix
[ ] Laser printer
[ ] Color printer

GIS
[ ] Digitizer
[ ] Plotter

16. What computer applications are available and used in your organisation, if any? *[Please tick appropriate box(es).]*

[ ] Wordprocessor
[ ] Spreadsheets
[ ] Database
[ ] Remote sensing
[ ] Expert system

GIS
[ ] ArcINFO
[ ] IDRISI
[ ] ERDAS
[ ] Others *(please specify)*

_____

17. Archives

a. Does your Organisation archive digital satellite images?

[ ] Yes [ ] No

b. What type(s)?

[ ] Landsat [ ] SPOT
[ ] NOAA [ ] Others (please specify) _____

18. What is the approximate number of satellite images in your archive?

[ ] 1 - 10 [ ] 51 - 100
[ ] 11 - 50 [ ] over 100

19. Projects *[Please do not hesitate to add extra sheets for other projects.]*

Title: _____
[ ] Ongoing [ ] Completed
Date of Commencement: _____ Date of Completion: _____
Project Leader: _____

20. **Total number of staff:** _____

_____ Top Management
_____ Middle Management
_____ Professionals
_____ Technical People
_____ Administrative

21. **Qualifications of staff: [In the table below, indicate the number of staff possessing the following qualifications.]**

PERSONNEL	WITH MASTER OR HIGHER DEGREE	WITH BASIC COMPUTER KNOWLEDGE						WORKING SKILL LEVELS																								TOTAL
								Wordprocessor				Spreadsheets				dBase				GIS				RS				Expert Sys.				
		WP	SS	DB	GIS	RS	ES	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	
Top Management																																
Middle Management																																
Professionals																																
Technical People																																
Administrative																																
TOTAL																																

CODE:

Computer Applications
WP = Wordprocessor
SS = Spreadsheets
DB = dBase
GIS = Geographic Information System
RS = Remote Sensing
ES = Expert Systems

Levels of Skills
0 = No skills
1 = Needs further training
2 = Moderately skilled
3 = Highly skilled

22. **On GIS training, what specific GIS application(s) does your organisation need the training for?**

_____
_____
_____

<inv/quest17.wk1>

Part B: ISSUES AND DATA

23. What environment issues your organisation is concerned with?

[ ] Deforestation
[ ] Depletion of oceans and coastal resources
[ ] Depletion of energy resources
[ ] Destruction of biodiversity
[ ] Loss of aquatic fish
[ ] Air pollution
[ ] Marine water pollution
[ ] Pollution of inland water
[ ] Noise pollution
[ ] Land degradation
[ ] Land desertification
[ ] Salinization of land
[ ] Low agricultural production/fertility
[ ] Landslides
[ ] Drought
[ ] Floods
[ ] Earthquake
[ ] Cyclone
[ ] Health hazards
[ ] Waste disposal
[ ] Population growth
[ ] Rural-urban migration
[ ] Others (please specify) _____

_____

24. The table below is a listing of data/parameters.
Kindly tick and fill the appropriate boxes for each data being collected and utilized by your institution for your project.

DATA	AREA OF COVERAGE					DATA COLLECTION TECHNIQUES								DATA FORMAT						SCALES USED (i.e. 1:1 m., 1:50 K, 1:250,000, etc.)	FREQUENCY OF UPDATE	AVAILABILITY					
																Geo-Ref										
	1	2	3	4	5	1	2	3	4	5	6	7	8	1	2	3	4	5	6			1	2	3	4	5	6
Bio-physical Data																											
The atmosphere																											
Drainage																											
Geology																											
Hydrology																											
Land use																											
Oil spill																											
Soil																											
Topography																											
Others (pls. specify)																											
Socio-economic Data																											
Administrative boundary																											
Demography																											
Education																											
Infrastructure																											
Per capita income																											
Tourism																											
Trade																											
Transport																											
Others (pls. specify)																											

Codes:

Area of Coverage
1 = Country
2 = Province
3 = District
4 = Municipality
5 = Village

Data Collection Technique
1 = Ground survey
2 = Remote sensing
3 = Aerial photo
4 = Combined
5 = Statistics
6 = Census survey
7 = Sample survey
8 = Rapid rural appraisal

Data Format
1 = Tabular-statistical
2 = Satellite image
3 = Vector
4 = Raster
5 = Photo image
6 = Maps

Availability
1 = Free access/Unrestricted
2 = At cost
3 = Exchange
4 = Conditional
5 = Restricted
6 = Inhouse

<inv/data.wk1>

QUESTIONNAIRE FOR THE PREPARATION OF A DIRECTORY OF ENVIRONMENTAL EXPERTS

- Additional information may be furnished on extra sheets.
- If additional copies are required, please make photocopies.
- Please do not use abbreviations.
- Kindly ask for the expert's CV, if possible.

For office use only
Date received:

File No:

Ref. Proj. No:

1. **NAME:** _____ (Last Name) _____ (First Name) _____ (Middle Name)

2. **SEX:** [ ] Male [ ] Female

3. **NATIONALITY** _____

4: **BIRTH DATE** ___/___/___ day month year

5. **FIELD OF EXPERTISE ON ENVIRONMENT:** *[You may select from keywords given on the second page (only one key word per speciality.)]*

Main specialty:
Sub-specialty A:
Sub-specialty B:
Sub specialty C:

6. **SKILLS**

[ ] Professional [ ] Adviser
[ ] Education [ ] Analyst
[ ] Research [ ] Consultant
[ ] Technologist

7. **PRESENT EMPLOYMENT** Position: _____

Level: [ ] Top Management [ ] Middle Management
[ ] Professional [ ] Technical

Organisation: _____
Address: _____
_____ Tel: _____ Fax: _____

8. **FLUENCY IN LANGUAGES:** _____

<ques_exp>

9. **Educational Qualification Including Training in GIS and/or Remote Sensing**

Year of Graduation	Degree/ Diploma	Institution and Country	Major Field of Study

10. **EXPERIENCE IN THE FIELD OF ENVIRONMENT**

Year		Position	Organisation and Country
From	To		

11. **TOTAL NUMBER OF PUBLICATIONS:** _____

Please attach or mail separately full bibliographic references for inclusion in our bibliographic data base.

12. **COMPUTER KNOWLEDGE AND LEVEL OF SKILLS** */Please indicate the number only./*

0 = No skills
1 = Needs further training
2 = Moderately skilled
4 = Highly skilled

[ ] Wordprocessor
[ ] Spreadsheet
[ ] Dbase
[ ] Geographic Information System
[ ] Remote Sensing
[ ] Expert Systems

13. **On GIS training, what specific GIS application(s) do you need the training for?**

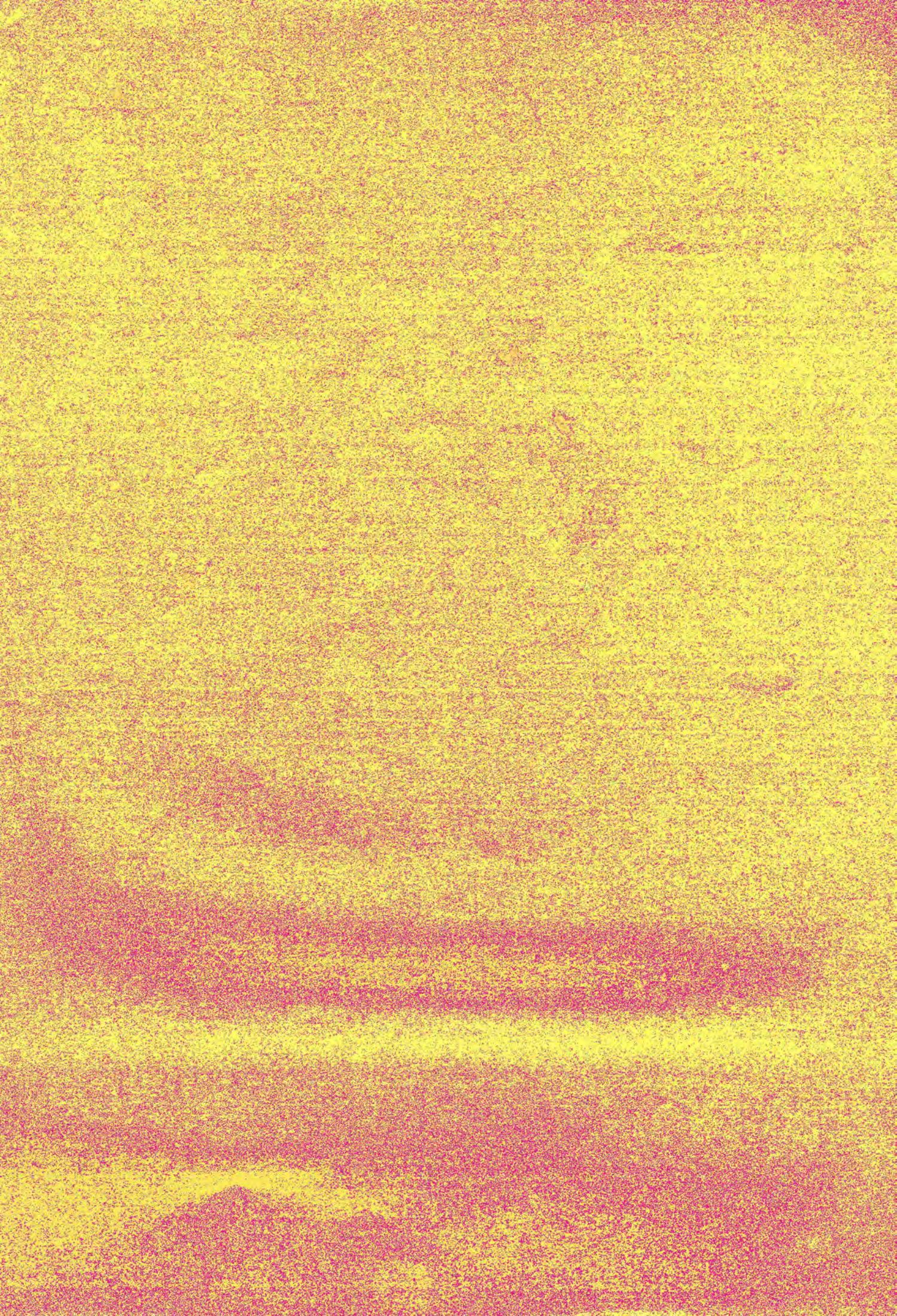
_____

_____

_____

LIST OF POSSIBLE KEYWORDS ON SPECIALTY

Aerial Photography
Agric: Agronomy
Agric: Horticulture
Agric: Plant Pathology
Agriculture
Bathymetry
Botany
Cartography
Chemistry
Climatology
Communication
Computer Mapping
Computer Science
Conservation
Coral Reefs
Dendrothermal Prog.
Digital Processing
Disaster Management
Ecology
Economics
Education
Energy Planning
Environmental Plng
Envt. Health & Sanitation
Fisheries
Flood Monitoring
Forestry
Geobotany
Geochemistry
Geodesy
Geography
Geog: Demography
Geog: Rural
Geog: Urban
Geology
Geology: Base Metals
Geology: Economic
Geology: Engineering
Geology: Exploration
Geology: Marine
Geology: Mineralogy
Geology: Planetary
Geology: Quaternary
Geology: Sedimentary
Geology: Structural
Geology: Volcanics
Geomorphology
Geophysics
GIS
Hydrogeology
Hydrology
Image Processing
Information Systems
Instrumentation
Landcover
Landuse
Lineament Analysis
Mapping
Marine/Freshwater Ecology
Modelling
Meteorology
Mineral Exploration
ResourceManagement
Oceanography
Optics
PetroleumExploration
Photogeology
Photogrammetry
Photography
Photointerpretation
Planning: Urban
Planning: Regional
Planning: Rural
Plant Ecology
Rangelands Mgmt
Remote Sensing
Soil Science
Space Technology
Spectroscopy
Statistics
Surveying
Transportation
Vegetation Mapping
Water Resources
Watershed Mgmt
Wildlife Management
Zoology
Others (please specify)



PROPOSAL FOR THE ESTABLISHMENT

OF

GIS TRAINING FACILITY FOR ASIA

ASIAN INSTITUTE OF TECHNOLOGY

MARCH 1993

(As of 02/06/93)

1.0 Executive Summary

1.1 Man's present environment demands immediate and urgent action, an action that is based on an integrated analysis of multisectoral data. Sectoral data need to be consolidated, analyzed and disseminated for sound environmental planning towards sustainable development. Geographic Information System (GIS) provides the mechanism for integrating these sectoral data in a single system for storage, retrieval and analysis.

1.2 Sharing a common concern for the environment, the Asian Institute of Technology (AIT) and United Nations Environment Programme (UNEP) established a partnership, pooling their resources and expertise together to promote and disseminate new technologies within the Asia - Pacific region. Specifically, the Global Resource Information Database (GRID), a Programme Action Centre of UNEP, proposes to assist with the establishment of a Facility of training and research that can become a 'Centre of Excellence' in GIS technology for Asia. This forms part of the three strategies formulated to fulfill GRID's mandate.

1.3 In congruence with Agenda 21 of the United Nations Conference on Environment and Development (UNCED), the Facility aims to develop and increase the capacity of the planners and decision makers to use and apply GIS technology in the different eco-zones in the Asia - Pacific region and facilitate the dissemination of its application to the region's different eco-zones.

1.4 As a Facility of training and research, 'hands on' activities shall be provided and training will be tailored to the needs and requirements of each eco-zone in the region.

1.5 To be located at AIT, all vendors, donors and other international and regional institutions shall be invited to participate in the Facility. Its users include international/regional institutions, bilateral projects, national governments and regional projects. The Facility will be furnished with three laboratories equipped with a total of 20 PC units and 5 UNIX workstations. Under the guidance of AIT management, GRID will coordinate the operations of the Facility during the first two years of its establishment. A personnel complement of six will be directly responsible for the daily operation of the Facility.

1.6 The Facility needs a total amount of US $ 1.145 million for the first two years of its establishment to cover costs for personnel, hardware/software, training materials, operational expense and overhead. Funds will be mainly sourced from donors, vendors and other participating institutions. The Facility, however, is expected to generate its own income through its training activities. Based on its projected income statement, the Facility will start to gain income on its second year of operation.

2.0 Introduction

Environmental issues have been on the top agenda of most national governments as well as international and regional institutions since the last decade. There are varied and complex issues that are involved in environment, both human and bio-physical. An integrated approach to action is necessary. Action towards sustainable development which will protect the environment and at the same time achieve economic development is the desired objective. Such action hinges on the availability of timely, reliable and usable data not only on environmental issues but also socio-economic variables. An integrated, multisectoral analysis of these data becomes imperative.

Existing data remain sectoral in nature. More often, they are erroneous and incompatible across sectors, areas and time. There is a need to improve data collection methods and consolidate these data for multisectoral analysis. A computerized GIS serves an appropriate and effective tool towards this aim. It offers the facility for storing, retrieving, manipulating, displaying and integrating environmental, economic and social data in a single system.

The benefits gained from the use of GIS have been recognized by most institutions including the Asian Institute of Technology (AIT). AIT is a post graduate academic institution which aims to meet the growing need for advanced technical education in the Asia - Pacific region. It is a well-respected regional institution which engages not only in academic activities but also in the promotion, utilization and dissemination of new technologies and expertise throughout the region. AIT has more than 30 years of cooperating with different countries in the region in academic training and national projects. It is equipped with facilities and equipment to support its varied endeavors. AIT is very much concerned with environmental issues and sees the need to include well founded environmental policies and practices in all its technical curricula.

UNEP is the international agency responsible for initiating and catalyzing environmental action and awareness at all levels of society worldwide. It coordinates Earthwatch, the UN system-wide effort to coordinate assessment of the environment and its operating Programme Activity Centres which include GRID. GRID provides access to timely, usable environmental data primarily through GIS, remote sensing and telecommunications technology for global science application, wise resource management and sustainable development planning.

Agenda 21 of UNCED noted the general lack of capacity for collecting and assessing data, and even where data are available, there is lack of financial resources and technology including trained manpower to make these data accessible. The same can be said of the Asia - Pacific region. Both GRID and AIT are aware of such limitation. In particular, there is lack of advanced technical usage and application of GIS technology in the region.

Thus, responding to this need, GRID proposes to assist in the establishment of a Facility that will be the first 'Centre of Excellence' in GIS technology for Asia. This Facility will provide 'hands on' training and research on the technology. Expertise and resources of institutions, both regional and international, as well as of vendors will be pooled together to help develop and increase the capacity of the region towards sustainable development.

3.0 Objectives

In Agenda 21 of UNCED, the need for timely, reliable and usable information for a sound decision making towards sustainable development has been emphasized. Two programmes were identified to respond to this need: bridging the data gap and improving information availability. In general, these programs aim to develop and strengthen local, provincial, national, regional and international capacity and mechanism to collect, analyze, use and disseminate multisectoral data and information for decision making in a more cost-effective means.

It is towards this aim that the objectives of the Facility for Asia-Pacific region are anchored. The Facility seeks to:

- assist planners and decision makers towards sustainable development by developing and increasing their capacity to use and apply GIS technology in the different eco-zones of the region; and

- disseminate different sectoral applications in different eco-zones.

Towards these two objectives, the activities of the Facility will include:

- develop 'hands on' training packages with relevant case studies aimed at different levels of audiences. Training materials would be developed and tailored to the needs and requirements of different sectoral applications and eco-zones.

- conduct training for the trainers in GIS technology. The trainers would be provided access to all the training materials for replication of training at the sub-regional and national levels.

- develop advanced technical and analytical applications support to International and Regional institutions in Asia.

- ensure the quality of the training programmes in the Facility by having the curriculum, training materials, data and applications that have been developed critically reviewed by qualified and independent experts at regular intervals.

- provide AIT faculty with research opportunities in the field of GIS and its applications through identification of technology and methodology gaps.

- provide vendors access to relatively low cost research facility at AIT and a readily available market in Asia for their products through the network of institutions participating in the Facility.

- provide participating bilateral and multilateral donors access and use of the Facility for dissemination of the technology as a decision support tool for sustainable development.

4.0 Organization

The Facility for GIS technology for Asia-Pacific region shall be located at AIT, Thailand. GRID will assist in its establishment, after which, AIT will manage the Facility as a regular outreach activity with focus on capacity building for sustainable development.

4.1 Participating Institutions

The Facility will have the participation and support of several institutions whose resources and expertise shall be pooled together to help ensure its effective delivery of service. Within AIT, there are its Divisions and Centres, e.g., INRDM, CS, ET, AFE, WRE, HSD, RCC, CEC, ADPC, LRDC which can extend support in terms of curriculum design and GIS application. Also to assist in curriculum design are international institutions like UNITAR, ITC and NCGIA who have the experience in the dissemination of GIS technology. The Facility will be open to the participation of all vendors for their technical support in hardware and software. Current potential participants include ESRI, NEC, Clark University, ERDAS, EROS, IBM, SUN, etc. They can conduct training and research through the Facility with faculty and students from all over Asia. Financial support will be solicited from donors like GTZ, ADB, UNDP, World Bank, Japan, etc.

4.2 Users

Aside from providing support to the Facility, the AIT community, vendors and the international and regional institutions (e.g. ICIMOD, SACEP, MEKONG, SPREP, IRRI, ICRISAT, IIMI, CGIAR, RRSP) will be able to use and benefit from the Facility. It will provide training to three levels of management: executive level, middle management and professional level. Access to the Facility will likewise be provided to national governments, regional and bilateral projects (e.g., ADB, GTZ, World Bank).

4.3 Training Facility

To address the training needs of the different sectors and eco-zones within the Region, three laboratories will be set up for GIS training and research. Furnished with 15 units of 486 based PCs configured with digitizers, the first laboratory will be the venue for basic training in GIS applications. Sessions on how to use the software programs such as ARC/INFO, IDRISI, ERDAS will be conducted with the assistance of the vendors themselves. The training will last from one week to three months depending on the needs and requirements of the participants. This laboratory will also be utilized for routine training by participating vendors.

Training in advanced sectoral applications which includes urban utility application, specific data base design, cadastral, housing development, wildlife, etc. will be conducted in the second laboratory. The training will be conducted with the assistance of participating international and regional institutions which have the experience and the expertise in these fields. This laboratory will be furnished with 5 PC platforms.

The third laboratory which will be furnished with 5 networked workstations will be the venue for basic and advanced training on UNIX platform. Coordination with AIT Centres such as CEC, ADPC and LRDC will be done so as to have a one to five day GIS training included as a component in their respective training programmes.

4.4 Implementation Activities

The Facility is expected to be completed within a two-year time period. During this establishment phase, the activities would include the following:

* needs assessment of users
* facility location identification and physical arrangement
* establishment of linkages with participating organizations and role clarification
* resource generation
* identification and procurement of hardware/software
* curriculum design aimed at four levels of management: executive level, middle management, professional and technical levels
* preparation of training manuals and materials
* preparation of case studies for training
* pilot training and research programmes

4.5 Management

The initial operation of the Facility will be coordinated by UNEP through its GRID office under the guidance of an Advisory Board. The Board will be composed of representatives from GRID, Office of the Vice-President for Development, Divisions of Computer Science and Interdisciplinary Programme for Natural Resource Development and Management of AIT. It shall formulate policies and guidelines for the operation of the Facility as well as plan and coordinate the programmes and projects it will execute. For the daily operation of the Facility, it will have a personnel complement of six full time staff consisting of three professionals who will manage the three laboratories with the support of an administrative assistant, system assistant and a secretary.

5.0 Financial Consideration

5.1 Expenditure

Over a period of five years, the Facility requires a total budget amounting to US $ 2.351 million which covers personnel, hardware/software, operational cost, training materials, and AIT overhead (Table 1).

Table 1: Proposed Budget for Five Years ($ '000)

EXPENDITURE	Year I	Year II	Year III	Year IV	Year V
Personnel	75	120	179	175	159
Hardware/Software	250	250	225		
Operational					
Rent/Furniture	85	45	50	55	60
Communications	5	5	5	5	5
Travel	10	10	10	10	10
Maint., Supplies	10	10	10	10	15
Printing	5	5	5	5	5
Others	5	5	5	5	5
Training Mats., Manuals, Case Studies	50	50	10	12	14
Contingency 13%	75	75	75	41	41
TOTAL	570	575	574	318	314

Staffing the Facility on a gradual basis, an amount of US $ 75,000 is needed to cover the personnel cost in its first year of establishment. This increases to US $ 120,000 on the second year and US $ 179,000 on the third year. With the objective of developing the Facility into an independent unit, the management and coordination support extended by UNEP and GRID reduces over time and that it is expected that budgetary requirements for personnel decrease accordingly. (See Annex B1 for supporting tables.)

The Facility will be equipped with a total of 20 PC and 5 UNIX hardware and software. These will be procured gradually starting with only 10 PC units during the first year (Annex B2). A total amount of US $ 725,000 is needed to fully equip the Facility.

As a training center, the Facility has to provide its trainees with materials like manuals and case studies to facilitate the learning process. The operational expenses are necessary for the implementation of its day-to-day activities. AIT overhead would provide for any contingency that may arise in the overall operation and management of the Facility

5.2 Income

The income of the Facility will come from two major sources: income from training activities and contributions from the participating institutions in the initial phase (Table 2).

Table 2: Estimated Gross Income/Contributions ($ '000)

CATEGORY	Year I	Year II	Year III	Year IV	Year V
VENDORS					
Personnel	30	30	30	30	30
Hardware	15	15	25		
Software	150	150	150		
DONORS					
Personnel	15	45	45	45	45
Hardware	15	15	25		
Software	50	50	25		
AIT					
Personnel		15	80	76	72
Rent/Furniture	70	45	50	55	60
UNEP	150	50	20	20	20
TRAINING	72	172	280	400	500
TOTAL	567	587	730	626	727

The Facility will initially give training for a total period of at least 18 weeks in its first year of establishment. The number of training is expected to increase in the succeeding years. The training fee is costed at US $ 500 per person per week. (Annex C).

Contributions from vendors, donors and AIT will be distributed to cover the cost of the Facility's personnel. The cost for hardware/software will be shared both by vendors and donors. Expenses for rent/furniture will be a contribution of AIT, the Facility's host institution. Contributions from UNEP will cover all the other expenditures of the Facility.

5.3 Expenditure and Income

Understandably, in its first year of operation, the Facility would not be able to gain any profit. But as more training activities will be conducted in the succeeding years and the hardware and software component have been completely installed, the Facility is expected to profit and become self-sustaining. Table 3 summarizes the projected net income of the Facility for five years.

Table 3: Projected Net Income ($ '000)

CATEGORY	Year I	Year II	Year III	Year IV	Year V
Estimated Gross Income	567	587	730	626	727
Estimated Expenditure	570	575	574	318	314
INCOME OVER EXPENDITURE	(3)	12	156	308	413

The income of the Facility will be equally shared by AIT and UNEP-GRID. To further strengthen the Facility, this income will be reinvested for the upgrade of personnel, programmes and equipment, and for assistance to conduct more advanced GIS applications in Asia and Pacific.

ACRONYMS

ADB	Asian Development Bank
ADPC	Asian Disaster Preparedness Center
AIT	Asian Institute of Technology
AFE	Agricultural and Food Engineering
CGIAR	Consultative Group on International Agricultural Research
CEC	Continuing Education Center
CS	Computer Science
EROS	Earth Resources Observation Systems EROS Data Center, USA
ESRI	Environmental Systems Research Institute
ET	Energy Technology
GRID	Geographic Regional Information Database
GTZ	Deutsch Gesellschaft fur Technische Zusammenarbeit
HSD	Human Settlements Development
IBM	International Business Machines Corporation, USA
ICIMOD	International Centre for Integrated Mountain Development
ICRISAT	International Crop Research Institute for the Semi-Arid Tropics
IIMI	International Institute for Management of Irrigation
INRDM	Interdisciplinary Natural Resources Development and Management
IRRI	International Rice Research Institute
ITC	The International Institute for Aerospace Survey and Earth Sciences
LRDC	Library and Regional Documentation Center
MEKONG	Interim Committee for Co-ordination of Investigations of the Lower Mekong Basin
MENRIS	Mountain Environment and Natural Resources Information Analysis
NCGIA	National Centre for Geographic Information and Analysis
NEC	NEC Corporation, Japan
RCC	Regional Computer Center
RRSP	Regional Remote Sensing Programme
SACEP	South Asia Co-operative Environment Programme
SPREP	South Pacific Regional Environment Programme
SUN	Sun Microsystems, Inc., USA
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
UNITAR	United Nations Institute for Training and Research
WRE	Water Resources Engineering

1.0 Personnel

Table b1.1: Personnel Requirements (Man Years)

PERSONNEL	Year I	Year II	Year III	Year IV	Year V
AIT Management			0.5	0.4	0.3
UNEP Coordination	0.5	0.5	0.4	0.4	0.2
Professional Staff One lead person for each laboratory	1.0	2.0	3.0	3.0	3.0
Support Staff Adm. Assistant Systems Assistant Secretary	1.0	2.0	3.0	3.0	3.0
TOTAL	2.5	4.5	6.9	6.8	6.5

Table b1.2: Personnel Cost ($ '000)

PERSONNEL	Year I	Year II	Year III	Year IV	Year V
Management $ 40K per annum			20	16	12
Coordination $ 60K per annum	30	30	24	24	12
Professional $ 30K per annum	30	60	90	90	90
Support $ 15K per annum	15	30	45	45	45
TOTAL	75	120	179	175	159

2.0 Hardware/Software

Table b2.1: Hardware/Software

CATEGORY	Year I	Year II	Year III
Hardware			
PC Stations	10	10	
UNIX Stations			5
Software			
PC Stations	10	10	
UNIX Stations			5

Table b2.2: Hardware/Software Cost ($ '000)

CATEGORY	Year I	Year II	Year III	Total
Hardware				
PC at $ 5K	50	50		100
UNIX at $ 10K			50	50
Software				
PC at $ 20K	200	200		400
UNIX at $ 35K			175	175
Total	250	250	225	725

1.0 Training

Table c1.1: Projected Trainees (in weeks)

CATEGORY	Year I	Year II	Year III	Year IV	Year V
Donors					
ADB	1	2	4	8	10
GTZ	1	2	4	8	10
Others		2	4	8	10
Regional					
ICIMOD		1	2	4	6
MEKONG	2	4	8	10	12
SPREP	1	2	4	6	8
SACEP		1	2	4	6
CGIAR	1	2	3	4	6
RRSP	1	4	6	6	6
AIT					
ADPC	1	2	3	4	5
LRDC		1	2	2	2
CEC	2	4	6	8	10
INRDM	4	8	10	12	14
Vendor	4	8	12	16	20
TOTAL	18	43	70	100	125

Table c1.2: Projected Training Income ($ '000)

CATEGORY	Year I	Year II	Year III	Year IV	Year V
Donors					
ADB	4	8	16	32	40
GTZ	4	8	16	32	40
Others		8	16	32	40
Regional					
ICIMOD		4	8	16	24
MEKONG	8	16	32	40	48
SPREP	4	8	16	24	32
SACEP		4	8	16	24
CGIAR	4	8	12	16	24
RRSP	4	16	24	24	24
AIT					
ADPC	4	8	12	16	20
LRDC		4	8	8	8
CEC	8	16	24	32	40
INRDM	16	32	40	48	56
Vendor	16	32	48	64	80
TOTAL	72	172	280	400	500

EARTHWATCH

GLOBAL ENVIRONMENT MONITORING SYSTEM

GEMS
REPORT SERIES
NO. 22

NAIROBI
OCTOBER 1993

REPORT OF EXPERT CONSULTATION MEETING ON GLOBAL AND REGIONAL REPORTING FUNCTIONS OF UNEP

Nairobi, 5-9 July 1993

UNEP

United Nations Environment Programme

REPORT OF EXPERT CONSULTATION MEETING ON GLOBAL AND REGIONAL REPORTING FUNCTIONS OF UNEP

Nairobi, 5-9 July 1993

UNEP/GEMS (1993). Report of the Consultation Meeting on Global and Regional Reporting Functions of UNEP. Nairobi, 5-9 July 1993
Nairobi: United Nations Environment Programme
Ref. GEMS REPORT SERIES No. 22

TABLE OF CONTENTS

1	Background and rationale	1
2	Meeting structure	1
3	Discussions' focus	
	3.1 UNEP's environmental reporting role	2
	3.2 Users of information	3
	3.3 Products to be delivered	3
	3.4 Issues to be dealt with	
	3.4.1 General	6
	3.4.2 Links between global/regional/national issues	6
	3.4.3 Global issues	7
	3.4.4 Regional issues	7
	3.4.5 National issues	7
	3.4.6 Issue selection	8
	3.5 Reporting tools	
	3.5.1 General	9
	3.5.2 Indicators	10
	3.6 The process underlying environmental reporting	11
4	Specific follow up activities to this meeting	
	4.1 Users	14
	4.2 Indicators	14
	4.3 UNEP environmental assessment & reporting strategy	15
Table 1	Targeting of products to users	5
Figure 1	The iceberg theory of reporting	12
ANNEX I	Acronyms used	
ANNEX II	List of participants	
ANNEX III	List of background documentation included in the background information folder of the meeting	

REPORT OF THE EXPERT CONSULTATION MEETING ON GLOBAL AND REGIONAL REPORTING FUNCTIONS OF UNEP
Nairobi, 5-9 July 1993

1 BACKGROUND AND RATIONALE

As a follow up to UNCED and to the 17th UNEP Governing Council (GC) UNEP is in the process of refocussing its entire programme. In the framework of this UNEP reprogramming, an expert consultation meeting was called to assist in developing a strategy for UNEP's global and regional reporting functions (see Annex I for acronyms; Annex II for participants).

2 MEETING STRUCTURE

A set of background material was prepared (listed in Annex III), which included brief descriptions of the UNEP restructuring process and of the current reporting activities; some proposals; and relevant GC documents and decisions.

Within a flexible agenda the participants were asked to:

(i) review existing reporting products and approaches;

(ii) discuss possible changes and make proposals for future reporting; and

(iii) make recommendations for the further development of a strategy and methodologies for UNEP's global and regional reporting (the meeting focussed most on this point).

The invited experts gave presentations on the reporting work they were involved in, elaborating on the experience gained through their activities.

RIVM presented a RIVM/University of Cambridge consultant report on environmental indicators (see 3.5, p.11) and gave an illustration of their modelling work, using the land use component of the IMAGE II model. The model is used mainly for forecasting future climate changes and impacts of policy decisions related to the greenhouse effect.

IIASA illustrated their approach to information handling, through an application for the Mekong Secretariat. A brief description was given of the CLIMEX model, a GIS impact assessment and expert system. In the CLIMEX set-up an information system (the data and GIS) interacts with an analytical system (models and expert statements).

Presentations were given on the approach followed and experience gained in the Pan-European SOE, the SOE-Canada and the SOE-Norway reporting processes. Based on the lessons learned an attempt was made to describe the optimal process underlying reporting activities (see 3.6, p. 11-13).

3 DISCUSSIONS FOCUS

1 UNEP's environmental reporting role
2 users of information
3 products to be delivered
   - o general
   - o some specific GC and other reporting requirements
4 issues to be dealt with (global/regional/national)
5 reporting tools
   - o general
   - o indicators
6 the process underlying the reporting

3.1 UNEP's ENVIRONMENTAL REPORTING ROLE

The UN System-Wide Earthwatch is responsible for global assessment of environmental problems and early warning of environmental degradation. Sectoral assessments are carried out through specific intergovernmental mechanisms, and each UN specialized agency collects data and makes assessments in its area of competence.

UNEP and the rest of the UN system have an international role in catalyzing the collection, interpretation, analysis, integration, distribution and archiving of the best available data, assuring validation and objectivity, as well as stimulating harmonization activities. Harmonization can assure a two-way flow of environmental information. Countries can use information on the situation outside their territory that may affect their own country or explain what is happening internally, while at the same time contributing data as appropriate to building the larger picture.

The environmental reporting niche lies between scientists, data managers and the policy and decision makers. Environmental and socio-economic data and scientific findings and analyses are converted into information useful for decision makers through interpretation, assessment and integration. This conversion of technical, scientific data into accessible information is the real focus and value of environmental reporting.

UNEP's special contribution to the reporting process is its global and regional perspective, and its ability to interpret, assess and integrate sectoral information into a comprehensive whole. UNEP reporting activities should focus on policy and decision making processes which it can influence, such as:

- o spending by the GEF and other bodies;
- o setting priorities within the UN system;
- o general awareness of priority issues;
- o setting priorities by the donor community (bilateral and groups like the G7);
- o agenda formation through the GC, CSD etc.;
- o recognition and adoption of management measures (i.e. ozone);
- o recognition and filling data gaps.

3.2 USERS OF INFORMATION

It was generally agreed that a real difficulty lies in the specific identification of users of information. Client groups are extremely complex, and they are often not very specific on their information needs. UNEP does have an overall perception of its clients: the UN system and UNEP are responsible to governments and the people of the world. These are the two principal groups of users. In addition there are intermediate users such as the scientific community, specific parts of the UN system and other international and (sub-) regional organizations, often representing groups of countries. Thus UNEP's mandate for environmental reporting is to ensure that technical, scientific data are indeed interpreted, assessed and integrated into information which reaches States (both policy makers, and planners/managers at the technical level) and the general public, either directly or through intermediate bodies and the media.

Specific global and regional UNEP reporting should address the following groups of users:

- policy makers in international fora (both staff in international secretariats and government representatives in international bodies), in the GC, CSD, etc.;
- national level policy makers, to assist them in putting their national policies in an international perspective;
- planners and technical staff in UN agencies, donor institutions and other international bodies who prepare, fund and implement development and capacity building programmes, and technical assistance programmes;
- the general public who stimulate action for change (they can be reached through the global media as well as through NGOs, a wide range of special groups and pressure groups and through direct distribution of publications);
- scientists working on issues and international programmes who require data and information outside their own fields for studies of relationships and interactions.

Reporting activities should be demand driven and information should be tailored to specific users. The broad groups of potential information users need to be consulted at an early stage in the reporting process.

3.3 PRODUCTS TO BE DELIVERED

3.3.1 General

Information needs range from scientific material, to products for people who may for instance have poorly developed reading skills (the latter appears to be very relevant both in developing and in developed countries). For some, simple graphical presentations may well be most effective. If a product is meant to be good for

everybody it is often good for nobody. Rather an entire family of products needs to be designed: hardcopy sectoral scientific reports, integrated state-of-the-environment reports, popular summary reports, map based products, atlases, abridged reports for educational purposes, newsletters, factsheets, posters, videos and digital information products. The latter could be databases on CD-ROM or diskettes with simple software giving illustrations on certain issues. All these reporting formats complement each other.

Whichever format is chosen, the data should ideally be well structured in a simple, accessible way, which will make up-dating easier and will let the data holders retrieve specific products when responding to specific requests. The entire reporting process can be much more service oriented by developing a well structured, flexible database so that a variety of user groups can be targeted using one and the same data structure.

Outputs should be based on data with the highest possible standards of scientific accuracy. They should be objective and honest/open about uncertainties. Data quality and reliability should be well described and data and outputs should be peer reviewed. Data should be confirmed by Governments as much as possible and negative messages should be cautiously balanced.

3.3.2 Specific GC and other reporting requirements

- The Executive Director's Statement on the Environment to GC regular sessions

First, the ED's Statements should address the magnitude of major existing global and regional environmental problems, in relation to policy measures which have been taken so far. Referring to the underlying driving forces, the most cost-effective next steps for the mentioned issues can then be identified. The statement would thus pin point the actual position in relation to the ultimate goals to be achieved. The sequence of ongoing two yearly statements would thus also indicate progress, and possibly negative developments, in the respective issues.

Secondly, the ED Statements represent a strategic opportunity for UNEP to influence policy development processes. UNEP's interest must be placed within the context of the policy development cycle. Emerging issues of relevance to UNEP are those that have been identified and defined scientifically, and are at a stage where an interpretation and analysis would lead to international policy intervention. Emerging issues to be addressed would be of a global or broad international scope. Reference to Stress-Response, Pressures-State-Response, Ecosystem based interpretation models etc. would clarify the relationships and linkages to be covered by any particular assessment. The significance of the issue would need to be emphasized from a sustainable development perspective and it could be indicated where policy and programme development would be most effective.

The above implies that the ED Statements would also indicate priorities for UNEP's funding. This would have to be reflected in proposed UNEP programmes.

Agenda 21 provides a starting point for setting immediate priorities for issues relevant to UNEP, but this source needs to be supplemented by other screening activities in the future to retain momentum on a continuous basis. Partnerships with appropriate international institutions enables UNEP access to a wide net of contacts, but the net could be widened even further. Also UNEP's regional offices have a major role to play here in flagging regional issues.
As the statement-reporting methodology develops over the years, the basis is laid for the 10-year reports UNEP has to prepare (next one in 2002).

- 2002 report (see also most other sections)

The 10 year reports will be very much directed by the biennial ED Statements and by other sectoral and regional reports produced in the decade. The objectives are the same as those listed above for the ED Statements. It will be a comprehensive, reflective report, stressing interlinkages of the many environmental and socio-economic related issues.

The report would interpret and assess the state of the global environment for a general audience, relating it to the underlying driving forces (stresses and effects). The integration exercise is dependent on whether the global scale character is set by an issue (e.g. greenhouse gasses, ozone) or at the driving force level (e.g. energy policies, trade regulations). Recommendations for policy action can be derived.

In Table 1 below, the link between products and users/clients is illustrated.

Table 1 Targeting of products to users

PRODUCTS	USERS
TEN YEAR REPORTS (2002) Tools: approaches, frameworks, indicators	General public, International NGOs, policy and decision makers
REGIONAL TOPIC REPORTS Tools: approaches, frameworks, models, indicators	(Sub-) regional groups of governments, International organizations, incl. the donor community
EMERGING ISSUE ANALYSIS Tools: approaches, models, forecasting, GIS	GC, International organizations, incl. the donor community
ED STATEMENT ON THE ENVIRONMENT Tools: indicators, models, forecasting	GC, CSD
OUTREACH Tools: approaches, forecasting, indicators, GIS	Governments, NGOs, General public
TOOLS Approaches, frameworks, templates, models, indicators, GIS	UN System (incl.UNEP), CSD, Governments, International Partners
DATA (aggregated, integrated) Tools: GIS, management/communication systems	UN System (incl. UNEP), CSD, NGOs, Governments, International Partners

3.4 ISSUES TO BE DEALT WITH

3.4.1 General

Problems and information needs must be clearly defined to guide a well-targeted and cost-effective environmental information and assessment programme. Agenda 21 is the most recent and comprehensive overview of priority problems on environment and development, as seen by most nations, also listing actions needed to address them. There is a clear need to combine and integrate information on environment and development as a basis for policy and action on sustainable development. UNEP's reporting should focus on the question how to influence policy and decision processes.

3.4.2 Links between global, regional, and national issues

Issues can be defined at many geographic scales, ranging from the local and national levels through the sub-regional and regional levels to the global level. Each issue will need to be tackled at the relevant level(s), and reporting should be directed to the level at which the problem must be solved or where action must be taken. Stratospheric ozone depletion is a global problem and must be addressed internationally; water pollution in major rivers is a (sub-) regional problem which needs (sub-) regional policy agreement and decisions; decisions on coastal construction are often made at local level, but can have serious regional implications; soil conservation must be addressed at national and local level.

National information can often be aggregated for regional reporting and regional information for global reporting. However, not all national issues will be of regional and global relevance and not all global or regional issues may be considered as being of direct national relevance. Also, mere aggregation of national information will not necessarily lead to the right information. Information needs at higher levels (especially global) should ideally be defined a priori for their own sake and then integrated into data collection at lower levels. In practice often incompatible classifications and reference systems exist. Harmonized, international "bridge" reference systems need to be developed for (often sectoral) information, so that national systems can link up to these harmonized "bridge" systems. This would facilitate translation of data while aggregating.

Integrating regionally-focused reports into a global framework for assessment and presentation is one of the challenges of UNEP's reporting activities. This integration can be accomplished in several ways, depending on the respective issues, eg.:

- Using core indicators: generic indicators can be used for the same issue across regions, and to summarize universal problems.

- Analogies and extrapolation: using a specific regional or even local issue as an example, to be extrapolated to other regions with similar conditions and thus to a global scale.

- Processes as linkage between issues and regions: processes can link issues through cause-effect and feedback relationships into a global framework; this can be done with conceptual models, and through numerical or computer models.

3.4.3 Global issues

Global issues are now far more important than say 10 to 20 years ago. The entire UNCED process is a clear illustration. For instance many Governments signed the two global conventions on climate change and on biological diversity, while in Rio. Also the general public more and more recognizes the significance of global issues, as the enormous NGO interest and involvement in UNCED clearly indicates.

At global level, information is required both on global issues (climate change, ozone, etc.) and on the whole range of regional issues that have a global dimension, including both recognized high priority issues and new, emerging issues that need to be brought to the attention of the international community.

3.4.4 Regional issues

Many issues concern particular regions or geographic entities such as regional seas, large mountainous regions etc. Well focused reporting at (sub-) regional scales can provide sufficiently detailed information useful for planning purposes in a (sub-) regional context and it can improve the political climate for joint action on shared concerns of adjacent countries. A variety of regional commissions, conventions, programmes and other structures have been created at the regional or sub-regional level. These are the groups in principle responsible for the regional assessment and reporting activities. It was recommended that UNEP could focus on offering support eg. in the form of assistance in developing reporting tools, such as models for forecasting and scenario development, GIS, indicators, and the like, so enhancing regional capacities. Cooperation between UNEP and those operating at the regional level would form an important and necessary link in the reporting chain.

Note that 'regions' can be defined in several ways in the context of reporting activities: major geographic regions as applied in the UN, geographic regions or groups of countries on the basis of common issues or eco-zones.

3.4.5 National issues

Issues of national relevance will differ considerably between countries. National level data collection, assessment and reporting are a responsibility of the national government, often with additional contributions by scientific bodies and non-governmental organizations. The international community can assist with capacity building and technology transfer to ensure that each country can collect and use the information it needs to manage its own environment and to plan its development in a sustainable way. At the same time improved national reporting will contribute to

relevant global and regional reporting activities. National reporting (and the underlying data for this) is the "bedrock" of global reporting.

Data ownership needs to be considered carefully here. Whichever data are provided, they need extensive peer review and analysis before use. Data should only be used when confirmed by the owner (usually governments).

3.4.6 Issue selection

Given the comprehensive range of issues addressed by Agenda 21, and the focus on a regional approach of relevance to individual countries and regions, in addition to a global perspective, the number of issues versus regions that UNEP could address in its reporting activities becomes very large. Thus, a method to prioritize and provide focus is required to guide UNEP's reporting activities.

A possible screening method for setting priorities for UNEP reporting is to build a matrix of issues against regions, with the ecosphere as one region. Agenda 21 could be the initial source for the issues.

For each cell of this matrix screening criteria for the selection of priority issues could address technical, methodological and institutional feasibility, the estimated amount of effort (e.g. are there basic research needs), political desirability, potential support, the state and urgency of priority (are issue urgent/ potential/or not applicable to a region). Criteria for evaluation could be:

- spatial and temporal scales (e.g. regional/national/local, short term/long term, also reporting frequency);
- development and trends (emerging, getting worse, getting better, stable);
- data: availability, coverage, continuity, quality, ownership, sensitivities;
- institutions involved (is someone doing this already, is there a potential partner, opportunity for a network);
- users (related to scales, but also to issues per se) like UNEP's GC, CSD, UN agencies, donors community, governments, policy advisers and analysts, scientists, media, general public;
- socio-economic relevance, relation to sustainable development.

To make the basic set of issues from Agenda 21 tractable, and to determine the value for the decision criteria listed above, the issues can be refined and further disaggregated. Several ways are possible:

(i) in terms of indicators: Each issue would have a defined set of generic, core indicators, common to all regions (it would form the basis for global summaries and comparison) and a set of region-specific indicators to address specific, regional aspects. Interrelationships between common core indicators should then be considered.

(ii) in terms of "life cycles": To demonstrate linkages and interdependence, a "life cycle" could be described for each issue considered. Such a "break-down" of issues makes comparison and linkage analysis easier. With stratospheric ozone depletion, for example, four stages can be recognized, namely domestic supplies, atmospheric concentration, radiation, and health impacts.

3.5 REPORTING TOOLS

3.5.1 General

The main objective is to enable countries and regional institutions to undertake environmental reporting and at the same time develop compatible information blocks for UNEP's global reporting activities. Tools and prototypes could be prepared as examples. They would constitute a set of methods and approaches to choose from or to develop region-specific implementations. Such illustrating techniques would enable countries or regional institutions to undertake issue and region-specific environmental reporting. Using a common set of tools and formats across regions, and promoting the use of (and where necessary develop) harmonized information reference systems, would also ensure that regional results can be integrated and summarized at the global level, within the framework of UNEP's global reporting activities.

Tools could include:

- organizational and spacial frameworks for reporting;
- guidelines and templates for state-of-the-environment reporting, including sets of issues and related indicators that could be based on individual country experiences;
- an updated version of the UN Statistical Office guidelines for the development of environmental statistics - UN 1994 (better linking environment and development);
- harmonized information reference systems (bridge systems) and classifications;
- basic computerized tools for environmental data processing for report generation: eg. GIS and data analysis visualization systems.
- meta-information on data bases, sources of information and expertise.

Other methods could include (involve substantial investment, training, etc.)

- a checklist-driven expert system for issue identification, indicator definition, and simple process analysis;

- expert systems and related tools for regional/global assessment, such as CLIMEX and GAIA at the global level or MEXSES and derivatives at the local scale;

- regional simulation models that look at simple socio-economic processes or material/energy budgets (with a view to sustainable functionality) and at their environmental impacts in terms of emissions and resource consumption (eg. recently completed World Bank project for Central Europe); or global/regional models such as IMAGE II, BIOME, Globesight, World IV, etc.;

- other environmental models suitable for data interpretation, assessment, integration and forecasting, usually addressing sectoral issues.

3.5.2 Indicators

The development of indicators started in the 70-s and is increasingly becoming recognized as a useful tool and an integral component of various forms of environmental reporting, even though no internationally agreement exists yet on which indicators to use. Environmental indicators can not only help in reducing large volumes of parameters to a few succinct measures, but they also help bring out the essence of state-of-the-environment reports. They can have many purposes especially aiding policy-making and meeting the public right to know. Often the "Stress-Response" approach is applied: human activities (stresses) which impact on (components of) the environment and the subsequent human and natural responses to these impacts are examined. Also the "Pressure-State-Response" framework of OECD is used regularly: "response" usually refers to the measures taken to tackle the problem, while the environmental response is described in the "state" part.

More recently, voices are heard who state that the value of indicators is somewhat limited in the sense that indicators represent a linear, reductionist approach in trying to link cause and effect, while in reality it is not really possible to find one optimum path, since there are many paths, may feed backs in a system (both in ecosystems and in human systems). They try to overcome the indicator limitations by following a more holistic, interactive and dynamic approach. Models are used to compare existing paths with other possible paths (a learning process). Once the systems/concepts are clear, indicators can be selected and defined, rather than starting with defining indicators (there are many) before the concepts are understood.

Through a consultancy contract RIVM and the University of Cambridge prepared a report for UNEP on environmental and sustainability indicators and on the role of and needs for indices. A general review of ongoing work and existing definitions is followed by an analysis of specific environmental issues, and by conclusions and recommendations from the consultants on possible UNEP involvement. It was agreed that the report should be seen as a first step towards the preparation of a UNEP position paper later this year.

3.6 THE PROCESS UNDERLYING ENVIRONMENTAL REPORTING

Following presentations and discussions, recommendations were formulated for an optimal reporting process applicable to UNEP's entire family of reporting products. Figure 1 illustrates the process.

The pyramid is to scale: it is often not realized that the final outputs are only the tip of the iceberg. When preparing global and regional level reports, it is important to identify and budget for all activities and information needs. The required time and funds usually turn out to be at least twice what was programmed.

All important information sources should be involved from the start and their contributions should be well coordinated. Such a systematic approach avoids an ad hoc reporting and feeling.

An iterative rather than linear progression is needed in preparing these reports and must be programmed for.

The intellectual development, particularly of the concept, should be kept in-house or within a small, well defined group of selected experts who would be involved throughout the entire process. Ideally contracting out should be kept to a minimum. Independence in writing and preparing the reports within UNEP should be maximized (also to improve UNEP's institutional memory).

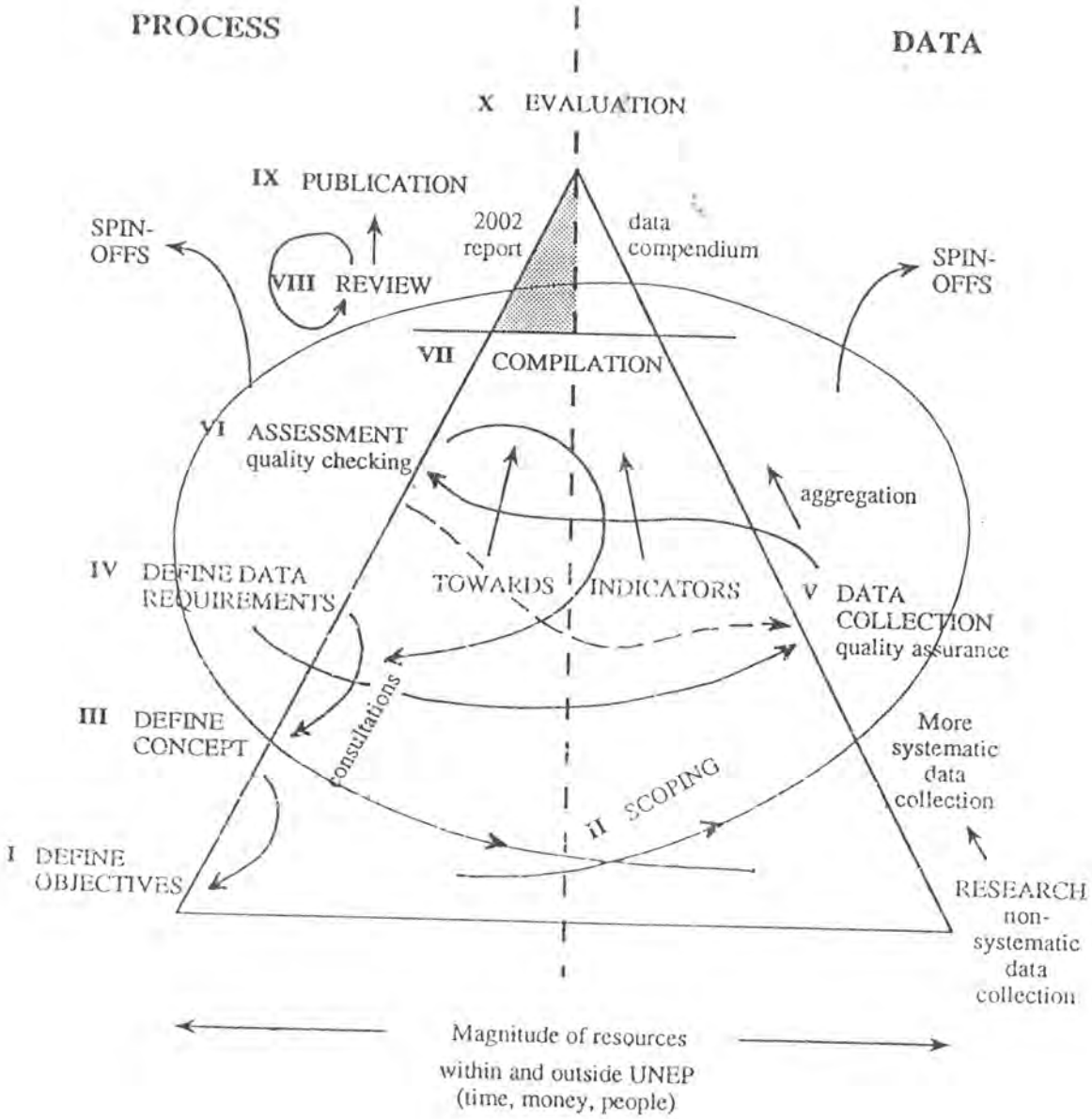
The following steps can be highlighted:

I Define target audience(s) and objectives - First target audience(s) must be clearly identified at this early stage. Then the report's objectives must be clarified to ensure linkage and support between products. Avoid producing one product which tries to do all things (streamlining).

II Scoping - On the basis of a set of objectives, begin to assess/scope the problems, activities, data, and processing involved. This has a managerial dimension (project planning), and a technical dimension (what/who is involved scientifically). Initial approaches and end results should be defined at this stage. Users should be consulted and kept informed, but, to ensure independence and maintenance of the overall viewpoint and concept of the whole effort, they should not be involved in the actual production of information material. This scoping process continues throughout the life of the reporting cycle.

III Define Concept - The scoping results are developed into a concept for the final product. This includes coverage (temporal and spacial resolution), design, issues, integration, etc. and requires a considerable intellectual effort which continues to the end. A good foundation for the reporting process will facilitate later steps and will improve the quality of the reporting.

Figure 1 **THE ICEBERG THEORY OF REPORTING**



THIS DIAGRAMME IS TO SCALE

IV Define data requirements - A core data structure needs to be developed. The data need to be well structured so that they are easily accessible for a variety of requests, products and services. This could eventually be standardized, but never fossilized.

V Data collection - This should be an on-going process, rather then initiating new data collection. Along the way rapid inventory techniques could, for instance, be applied/developed for estimating missing data. If it is decided to collect new data, it should be ensured that they fit into a longer term data collection strategy (value-added). The choice of a data collection strategy very much depends upon the stage of development of an environmental problem (eg. currently emerging --> about to be understood --> being tackled --> under control).
Data checking and quality assurance is an integral part of this activity. Data quality needs to be well documented. This would facilitate data sharing (most data is being collected by others).

VI Data assessment - towards information. This is guided by the objective 'What is it you would like to say - hypothesis'. The data processing aspects are of relevance here (scenario modelling, findings analysis etc.): how can the basic data be best 'translated' into accessible information. This phase is usually greatly underestimated in the time and intellect required. This process will feed back to all the previous phases and in particular to data collection.

VII Compilation and report writing/Making the product - the only task normally recognized. Again, this will also feed back into the previous phases.

VIII Peer review and appraisal of results in order to ensure the whole concept has survived the writing and compilation:
- ensure scientific integrity
- ensure it indeed addresses and entangles the political process (including implementation).

IX Publication - Decide early on the format (see also II - Scoping above, and 3.3.1, p.4 - family of products).

X Evaluation - Through questionnaires, reviews etc. the final product must be evaluated so that lessons can be learned for future reporting.

The entire process has to be dealt with in a flexible way so that changes can be incorporated as experience grows.

4 SPECIFIC FOLLOW-UP ACTIVITIES TO THIS MEETING

4.1 USERS

As a follow up to this expert consultation, regional users meetings will be organized later this year to reach agreement on which issues to deal with, which methodologies to follow, which product formats to use etc. Meetings of three days each are envisaged for major geographical regions, organized in collaboration with leading (sub-) regional institutions. Several examples of possible tools and prototypes for reports on specific topics will be presented on the basis of which it should be decided how to continue in the (sub-) region. Focus will be on priority issues and reporting needs and formats.

In parallel, efforts are under way to assist in structuring the information handling process at the (sub-) regional level through environmental information networks and environmental assessment and reporting support systems. By linking relevant institutions and assisting them in structuring their information handling activities, the reporting capacity in the (sub-) regions can be enhanced and catalyzed. Often institutions and infrastructures already exist but are not used efficiently. By stimulating existing networks these still potential capacities will be brought to the surface.

During the UNEP in-house working group discussions on UNEP's 1994-95 programme the sectoral issues to be dealt with and the mode of integration need to be seriously considered (both at the global and the regional level). GEMS, GRID, SOE and MARC are the groups in-house with the broadest expertise when it comes to environmental reporting, together with IPA when addressing the general public. These groups should be used more effectively to service other parts in the house. The same applies for the regional user meetings, where the issues relevant to specific (sub-) regions need to be agreed upon. Further UNEP involvement in reporting in the regions needs then to be discussed in-house.

4.2 INDICATORS

The meeting participants were requested to put factual comments and minor suggestions for the RIVM and University of Cambridge consultant report on environmental indicators on paper which can then be incorporated in the final version. The same has been asked from the members of the in-house UNEP Task Force on indicators. The consultant report is expected to be finalized and printed in September/October, well in time for the UNEP/UNSTAT Consultative Expert Group Meeting on Environmental and Sustainable Development Indicators (December 1993).

4.3 UNEP ENVIRONMENTAL ASSESSMENT & REPORTING STRATEGY

Towards the end of 1993 an official UNEP position paper will be produced for consideration by UNEP's senior management, based on, inter alia, in-house consultations and through discussions and meetings with relevant institutions. A more detailed strategy will be developed in the first half of 1994, based, inter alia, on the outcome of the regional consltations, on the indicator report, on the outcome of the UNEP/UNSTAT Consultative Expert Group Meeting, on cooperation with centers of excellence, and on initial consultations with agencies. Such a strategy will not only focus on what needs to be done, but will also elaborate on how a good UNEP environmental assessment and reporting programme for decision making can be set up and implemented.

ANNEX I ACRONYMS USED

BIOME	A global vegetation and carbon budget model
CD-ROM	Compact Disk-Read Only Memory
CLIMEX	Climate Impact Assessment Expert System
CSD	Commission for Sustainable Development
ED	Executive Director
EDR	Environmental Data Report
GAIA	Conceptual philosophy about the earth
GC	Governing Council
GEF	Global Environment Facility
GEMS	Global Environment Monitoring System
GIS	Geographic Information System
GRID	Global Resource Information Data base
IIASA	International Institute for Applied Systems Analysis
IMAGE II	Integrated Model to Assess the Greenhouse Effect
IPA	Information and Public Affairs
MARC	Monitoring and Assessment Research Center
MEXSES	Mekong Expert System for Environmental Screening
NGO	Non-governmental organization
OECD	Organization for Economic Cooperation and Development
RIVM	National Institute for Public Health and Environmental Protection
SOE	State of the Environment
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
UNSTAT	United Nations Statistical Office
WRR	World Resources Report

ANNEX II LIST OF PARTICIPANTS TO THE EXPERT CONSULTATION MEETING ON GLOBAL AND REGIONAL REPORTING FUNCTIONS OF UNEP, 5-9 July 1993, Nairobi.

Mr. Jan BAKKES
Information Manager for Environment, RIVM
Antonie van Leeuwenhoeklaan 9
P.O. Box 1
3720 BA BILTHOVEN, The Netherlands
Tel: +31 30 749 111
Fax: +31 30 250 740

Ms. Cristina BOELCKE
Deputy to Director, GEMS PAC
United Nations Environment Programme
P.O. Box 30552
NAIROBI, Kenya
Tel: +254 2 623517
Fax: +254 2 226491

Mr. Arnt BROX
Assistant Director - System Manager
UNEP, GRID-Arendal
TK Senteret, Longum Park
P.O. Box 1602, Myrone
N-4801 ARENDAL, Norway
Tel: +47 41 35650
Fax: +47 370 35050

Mr. Dan CLAASEN
Coordinator, Environment Information Networks, GEMS PAC
United Nations Environment Programme
P.O. Box 30552
NAIROBI, Kenya
Tel: +254 2 623518
Fax: +254 2 226491

Mr. Harvey CROZE
Director, GRID PAC
United Nations Environment Programme
P.O. Box 30552
NAIROBI, Kenya
Tel: +254 2 623511
Fax: +254 2 226491

Mr. Arthur DAHL
Deputy Coordinator
UNEP - Earthwatch Secretariat
CH-1211 GENEVA, Switzerland
Tel: +41 22 979 9207
Fax: +41 22 797 3471

Mr. Paul C. RUMP
Director, Strategic Planning
State of the Environment Reporting
Environment Canada
OTTAWA, Ontario K1A OH3, Canada
Tel: +613 941 9582
Fax: +613 941 9646

Ms. Miriam SCHOMAKER
Programme Officer, GEMS PAC
United Nations Environment Programme
P.O. Box 30552, NAIROBI, Kenya
Tel: +254 2 623499
Fax: +254 2 226491

Mr. Surendra SHRESTHA
Facility Manager, UNEP, GRID-Bangkok
Outreach Building
Asian Institute of Technology
P.O. Box 2754, BANGKOK 10501, Thailand
Tel: +66 2 516 2124
Fax: +66 2 516 2125

Mr. David STANNERS
Coordinator Pan European - State of the Environment
European Environment Agency Task Force
Commission of the European Communities
DG XI - Environment, Nuclear Safety & Civil Protection
200, Rue de la Loi, B-1049 BRUSSELS, Belgium
Tel: +32 2 296 8810
Fax: +32 2 296 9562

Ms. Anne SUTTON
Associate Programme Officer, GEMS/PAC
United Nations Environment Programme
P.O. Box 30552, NAIROBI, Kenya
Tel: +254 2 623250
Fax: +254 2 226491

Mr. Gert Jan VAN DEN BORN
Global Change Department, Environmental
Forecasting Bureau, RIVM
Antonie van Leeuwenhoeklaan 9
P.O. BOX 1, 3720 BA BILTHOVEN, The Netherlands
Tel: +31 30 749 111
Fax: +31 30 250 740

Ms. Veerle VANDEWEERD
Programme Officer, GEMS PAC
United Nations Environment Programme
P.O. Box 30552, NAIROBI, Kenya
Tel: +254 2 623527
Fax: +254 2 226491

ANNEX III LIST OF BACKGROUND DOCUMENTATION INCLUDED IN THE BACKGROUND INFORMATION FOLDER OF THE MEETING

1) GC documents

a) UNEP/GC.17/9: "Note by the Executive Director: Executive summary of the Comprehensive State of the Environment Report."
b) UNEP/GC.17/Inf.11: "Note by the Executive Director: Future State-of-the-Environment Reporting" (includes overview of UNEP's mandate related to SOE reporting).
c) GC decision 17/6: "State-of-the-Environment Reports."
d) GC decision 17/15: "Proposals for an update of the list of selected environmentally harmful chemical substances, processes and phenomena of global significance."
e) GC decision 17/22 on Environmental Indicators
f) GC decision 17/32 on the Environment Fund and Agenda 21
g) GC draft decision (not adopted): "Agenda item 7: Programme matters, including the implementation of the plan of action to combat desertification: Development of a strategy for Earthwatch."

2) Background papers on SOE and other UNEP reporting activities

a) Brief overview of some current national, regional and global environmental reports.
b) Note by Dr. C.C. Wallen on WRR and EDR
c) Draft report of the Secretary General on follow-up of GA res. 44/224 (overview of UNEP and UN monitoring and assessment activities - 1991)

3) Earthwatch

a) Historical overview of Earthwatch: draft paper prepared by C.C. Wallen.
b) Detailed terms of reference for the in-depth review of Earthwatch.

4) Proposals

a) GRID/Arendal paper: Proposed UNEP/Earthwatch/GRID project: State of the World - Green PC-Info.
b) GRID/Arendal paper: Environmental Indicators -An overview of approaches and works by 1990-1993.
c) Fax from MARC on State of the Environment reporting.
d) RIVM proposal
e) Proposal of Edward Arnold (publisher) to prepare a series of atlasses.

5) Miscellanous

a) Executive summary of the Result Model paper.
b) Agenda 21, para 38.22
c) Draft UNEP Indicator report

DATA CATALOGUE

GRID - BANGKOK

Global Resource Information Database
3rd Floor, Outreach Building
Asian Institute of Technology
G.P.O. Box 2754, Bangkok 10501
Thailand

January 1994

PREFACE

UNCED and the Agenda 21 document have provided a broad new context to UNEP's work, expanding its mandate towards the achievement of sustainable development. More specifically, Chapter 40 of Agenda 21 stresses the importance and urgency of bridging data gap and improving the availability of reliable and useful information for sound decision making. Towards this end, UNEP's GEMS/GRID has identified three key priority objectives in the field of environment information, namely: (a) capacity building; (b) environment sensing; and (c) catalyzing government response.

The enormity of the above functions requires UNEP to implement programmes on a collaborative mode. After consulting with partners in the region, UNEP, through the GEMS and GRID Programme Activity Centres of Earthwatch, embarks on a programme designed to strengthen national level environment agencies complementing the efforts of regional and sub-regional institutions. A Regional Environment and Natural Resources Information Network in the Asia-Pacific region is being established to facilitate the acquisition, storage, analysis and dissemination of environment information for improved informed decision making. The activities are coordinated from the Regional Environment and Natural Resources Information Centre (RENRIC) which is currently based at the Asian Institute of Technology in Bangkok, Thailand.

It is within this framework and through the network that this compilation of catalogue of available datasets found in the region has been completed. By providing information on what data are available, where they could be found and how they can be acquired, access to the data can be made much easier and faster for use, most especially, by decision makers either at the national or regional level. The data listed in the catalogue are archived and maintained in digital form, which makes data integration and multisectoral analysis possible. Access to these data constitutes a building block towards building the data gap and improving the availability of information for sustainable development policy formulation.

The first issue of this compilation contains datasets catalogue from five institutions: ICIMOD, Landcare Research, Mekong Secretariat, SPREP and UNEP/RENRIC itself. These datasets can either be distributed unconditionally, free of charge or with source approval depending on the classification of the data. There are also some datasets that are for in house use only. Data requests, complete with the required information, should be sent directly to the respective institutions. Further inquiries on the data and any feedbacks may be coursed to UNEP/RENRIC, or more appropriately, should be directed to the concerned institution. The originator and supplier of the data that have been used should be properly acknowledged in all output products and reports.

Data acquisition is a continuing process. Likewise, compiling datasets catalogue will be a continuing activity of UNEP/RENRIC. **Every six months, this compilation will be updated to include new data acquisitions as well as new datasets. Other institutions, similarly engaged in archiving and maintaining digital datasets are, therefore, invited to share their list for wider dissemination and use of their data.**

TABLE OF CONTENTS

Dataset Catalogue

GRID - Bangkok

Mekong Secretariat

SPREP

MENRIS/ICIMOD

Landcare Research NZ Ltd.

GRID Data Release Policy

GRID - Bangkok Data Request Form

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Free Access

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
ASI 0001	World Boundary Database II - ASIA & Australia	Vector	Asia and Australia	Unknown	1:3,000,000	124.1 MB
ASI 0002	World Boundary Database II with Subnational Boundaries - ASIA	Vector	Asia and Australia	Unknown	1:3,000,000	> 60 MB
ASI 0003	Asian Soils map from FAO/UNESCO soils map of the world	Vector	Asia	1973	1:5,000,000	1 mag. tape
ASI 0004	Vegetation and Ecofloristic maps of ASIA by FAO	Raster	Continental Asia	Unknown	1152 meters	600 kB
ASI 0005	NOAA Weekly Global Vegetation Index (GVI) - Asia - 1982 to 89	Raster	Asia	April 1982 - December 1989	4 km (16km2)	760 kB for each file
ASI 0006	NOAA Monthly Global Vegetation Index (GVI) - Asia - 1982 to 89	Raster	Asia	April 1982 - December 1989	4 km (16 km2)	760 kB for each file
ASI 0007	NOAA Seasonal Global Vegetation Index (GVI) - Asia - 82 to 89	Raster	Asia	1982 - 1989	4 km (16km2)	760 kB for each file
ASI 0008	NOAA Annual Global Vegetation Index (GVI) - Asia - 1982 to 89	Raster	Asia	1982 - 1989 (annual)	4 km (16 km2)	760 kB for each file
BAN 0001	National & Provincial Boundaries map of Bangladesh from WBD II	Vector	Bangladesh	Unknown	1:3,000,000	224 kB
BAN 0002	Hydrology (Rivers and Lakes) map of Bangladesh from WBD II	Vector	Bangladesh	Unknown	1:3,000,000	230 kB
BAN 0003	Transportation (railroads) map of Bangladesh from WBD II	Vector	Bangladesh	Unknown	1:3,000,000	30 kB
BAN 0004	Elevation map of Bangladesh from Global Elevation data ETOPO5	Vector	Bangladesh	Unknown	5 minutes	130 kB
BUR 0001	National & Provincial Boundaries map of Burma from WBD II	Vector	Burma	Unknown	1:3,000,000	741 kB
BUR 0002	Hydrology (Rivers and Lakes) map of Burma from WBD II	Vector	Burma	Unknown	1:3,000,000	263 kB
BUR 0003	Transportation (roads, railroads) map of Burma from WBD II	Vector	Burma	Unknown	1:3,000,000	212 kB
BUR 0004	Elevation map of Burma from Global Elevation dataset ETOPO5	Vector	Burma	Unknown	5 minutes	1.37 MB
CAM 0001	National & Provincial Boundaries map of Cambodia from WBD II	Vector	Cambodia	Unknown	1:3,000,000	236 kB

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Free Access

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
CAM 0002	Hydrology (Rivers and Lakes) map of Cambodia from WBD II	Vector	Cambodia	Unknown	1:3,000,000	660 kB
CAM 0003	Transportation (roads, railroads) map of Cambodia from WBD II	Vector	Cambodia	Unknown	1:3,000,000	464 kB
CAM 0006	District map of Cambodia - 1971	Vector	Cambodia	1971	1:200,000	115 kB
CAM 0007	Elevation map of Cambodia from Global Elevation dataset ETOPO5	Vector	Cambodia	Unknown	5 minutes	480 kB
CAM 0008	Basemap of Cambodia	Vector	Cambodia	1968	1:2,000,000	257 kB
CAM 0009	Geology map of Cambodia	Vector	Cambodia	1968	1:2,000,000	162 kB
CAM 0010	Surface Configuration map of Cambodia	Vector	Cambodia	1968	1:2,000,000	222 kB
CAM 0011	Engineering Geology map of Cambodia	Vector	Cambodia	1968	1:2,000,000	135 kB
CAM 0013	Soil Moisture Regimes map of Cambodia	Vector	Cambodia	1968	1:2,000,000	162 kB
CAM 0014	Hydrogeology map of Cambodia	Vector	Cambodia	1968	1:2,000,000	146 kB
CAM 0015	Engineering Soils map of Cambodia	Vector	Cambodia	1968	1:2,000,000	225 kB
CAM 0016	Precipitation map of Cambodia	Vector	Cambodia	1968	1:2,000,000	32 kB
CAM 0017	Climatic Zones map of Cambodia	Vector	Cambodia	1968	1:2,000,000	258 kB
CAM 0018	Roads, Railroads map of Cambodia	Vector	Cambodia	1988	1:1,000,000	273 kB
CAM 0019	Rivers, Lakes, Islands map of Cambodia	Vector	Cambodia	1988	1:1,000,000	330 kB
CAM 0020	Provincial map of Cambodia from Mekong Secretariat	Vector	Cambodia	1968	1:2,000,000	81 kB
CAM 0021	Drainage (Flooded area) map of Cambodia	Vector	Cambodia	1968	1:2,000,000	233 kB

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Free Access

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
CAM 0038	Landuse Map of Cambodia	Vector	Cambodia	1988-1989	1:2,000,000	1.7 MB
CAM 0041	Vegetation Map of Cambodia	Vector	Cambodia	1971	1:1,000,000	603 Kb
GLB 0001	UNESCO / FAO Global Soils Database	Raster	Global	1973	2 minutes	56 MB
GLB 0002	Major World Ecosystem Complexes - Olson Vegetation	Raster	Global	1985	0.5 degree	260 KB
GLB 0003	Holdridge Life Zones (Land covers) - normal & doubling of CO2	Raster	Global	1990	0.5 degree	260 KB
GLB 0004	Global Elevation map "ETOPO5"	Raster	Global	Unknown	5 Minutes	19 MB
GLB 0005	Global Vegetation Data base by Matthews	Raster	Global	1983	1 Degree	65 KB
GLB 0006	Global Cultivation Intensity by Matthews	Raster	Global	1983	1 Degree	65 KB
GLB 0007	Global Seasonal Integrated Albedo by Matthews	Raster	Global	1983	1 Degree	65 KB
GLB 0008	Global Natural Wetlands - Distribution & Environmental Chracters	Raster	Global	1987	1 Degree	65 KB - each file
GLB 0009	Global dataset of Climate (Precipitation & Temperature) Anomalies	Raster	Global	January to December, 89	1 Degree	65 KB for each file
GLB 0010	Surface Crustal Temperature - Monthly day, night time averages	Raster	Global	January 1979	1/8 Degree	3.9 MB
GLB 0011	NOAA Weekly Global Vegetation Index (GVI) - 1982 to 1989	Raster	Global	April 1982 - December 1989	4 km (16km2)	2.3 MB for each file
GLB 0012	NOAA Monthly Global Vegetation Index (GVI) - 1982 to 1989	Raster	Global	April 1982 - December 1989	4 km (16 km2)	2.3 MB for each file
GLB 0013	NOAA Seasonal (4 seasons) Global Vegetation Index (GVI), 82-89	Raster	Global	1982 - 1989	4 km (16km2)	2.3 MB for each
GLB 0014	NOAA Annual Global Vegetation Index (GVI) - 1982 to 1989	Raster	Global	1982 - 1989 (annual)	4 km (16 km2)	2.3 MB for each file
GLB 0015	World Vegetation Map 1987 by Murai and Honda	Raster	Global	1987	12.7 km2 (nominal)	4.1 MB

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Free Access

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
GLB 0016	World Vegetation Map 1987 by Murai and Honda - resampled	Raster	Global	1987	4 km (16km2)	2.6 MB
GLB 0018	IIASA Climate Database - Temperature , Precipitation & Cloudiness	Raster	Global	1930-1960	1/2 Degree	15.6 MB
GLB 0019	Global dataset of Methane Emission from Animals - FAO / GISS	Raster	Global	Unknown	1 Degree	455 kB
GLB 0020	Gobal Assessment of Human-Induced Soil Degradation (GLASOD)	Vector	Global	1990	1:10 million	1 mag. tape
GLB 0021	PC World Boundary Database (PC WBD) by ESRI	Vector	Global	Unknown	1:25 million	2 .7 MB
GLB 0022	Updated PC World Boundary Database (WBDTEMP1)	Vector	Global	Unknown	1:3,000,000	4.5 MB
GLB 0023	Updated PC World Boundary Database with Socio Economic data	Vector	Global	Unknown	1:3,000,000	5 MB
GLB 0024	Updated PC World Boundary Database (WBDTEMP3)	Vector	Global	Unknown	1:3,000,000	1.44 MB
GLB 0025	Global Monthly Mean Precipitation	Raster	Global	1978,1981	1/6 Degree	4.7 Mb each file
GUL 0002	AVHRR 5 band Image of Kuwait region - 10 February 1991	Raster	Kuwait region, Persian Gulf	10 February 1991	1 km at nadir	70 MB
IND 0001	District Boundaries of India dataset	Vector	India	Unknown	1:25 million	700 kB
IND 0002	India and Pakistan Boundaries	Vector	India& Pakistan	1990,1985	1:3,000,000	1.3 Mb
INO 0001	National & Provincial Boundaries map of Indonesia from WBD II	Vector	Indonesia	Unknown	1:3,000,000	789 kB
INO 0002	Hydrology (Rivers and Lakes) map of Indonesia from WBD II	Vector	Indonesia	Unknown	1:3,000,000	215 kB
INO 0003	Transportation (railroads) map of Indonesia from WBD II	Vector	Indonesia	Unknown	1:3,000,000	81.7 kB
INO 0004	Elevation map of Indonesia from Global Elevation dataset ETOPO5	Vector	Indonesia	Unknown	5 Minutes	2.7 MB
LAO 0001	National & Provincial Boundaries map of Laos from WBD II	Vector	Laos	Unknown	1:3,000,000	195 kB

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Free Access

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
LAO 0002	Hydrology (Rivers and Lakes) map of Laos from WBD II	Vector	Laos	Unknown	1:3,000,000	225 kB
LAO 0003	Transportation (roads) map of Laos from WBD II	Vector	Laos	Unknown	1:3,000,000	237 kB
LAO 0004	Elevation map of Laos from Global Elevation dataset ETOPO5	Vector	Laos	Unknown	5 Minutes	420 kB
LAO 0005	Basemap of Laos	Vector	Laos	1968	1:2,000,000	20 kB
LAO 0006	Geology map of Laos	Vector	Laos	1968	1:2,000,000	270 kB
LAO 0007	Surface Configuration map of Laos	Vector	Laos	1968	1:2,000,000	250 kB
LAO 0008	Engineering Geology map of Laos	Vector	Laos	1968	1:2,000,000	200 kB
LAO 0009	Agricultural Soils map of Laos	Vector	Laos	1968	1:2,000,000	120 kB
LAO 0010	Soil Moisture Regimes map of Laos	Vector	Laos	1968	1:2,000,000	55 kB
LAO 0011	Hydrogeology map of Laos	Vector	Laos	1968	1:2,000,000	250 kB
LAO 0012	Engineering Soils map of Laos	Vector	Laos	1968	1:2,000,000	85 kB
LAO 0013	Precipitation map of Laos	Vector	Laos	1968	1:2,000,000	28 kB
LAO 0014	Climatic Zones map of Laos	Vector	Laos	1968	1:2,000,000	34 kB
LAO 0015	Roads, Railroads map of Laos	Vector	Laos	1988	1:1,000,000	330 kB
LAO 0016	Rivers, Lakes, Islands map of Laos	Vector	Laos	1988	1:1,000,000	500 kB
LAO 0017	Provincial map of Laos	Vector	Laos	1968	1:2,000,000	32 kB
LAO 0019	Landuse Map of Laos	Vector	Laos	1972 - 73	1:1,000,000	740 Kb

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Free Access

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
MAL 0001	National & Provincial Boundaries map of Malaysia from WBD II	Vector	Malaysia	Unknown	1:3,000,000	221 kB
MAL 0002	Hydrology (Rivers) map of Malaysia from WBD II	Vector	Malaysia	Unknown	1:3,000,000	92 kB
MAL 0003	Transportation (roads, railroads) map of Malaysia from WBD II	Vector	Malaysia	Unknown	1:3,000,000	133 kB
MAL 0004	Elevation map of Malaysia from Global Elevation dataset ETOPO5	Vector	Malaysia	Unknown	5 Minutes	536 kB
NEP 0001	National & Provincial Boundaries map of Nepal from WBD II	Vector	Nepal	Unknown	1:3,000,000	116 kB
NEP 0002	Hydrology (Rivers and Lakes) map of Nepal from WBD II	Vector	Nepal	Unknown	1:3,000,000	130 kB
NEP 0003	Transportation (roads, railroads) map of Nepal from WBD II	Vector	Nepal	Unknown	1:3,000,000	43 kB
PHI 0002	National Boundaries map of Philippines from WBD II	Vector	Philippines	Unknown	1:3,000,000	450 kB
PHI 0003	Elevation map of Philippines from Global Elevation data ETOPO5	Vector	Philippines	Unknown	5 Minutes	986 kB
PHI 0004	Hydrology (Rivers and Lakes) map of Philippines from WBD II	Vector	Philippines	Unknown	1:3,000,000	70 kB
PHI 0005	Transportation (railroads) map of Philippines from WBD II	Vector	Philippines	Unknown	1:3,000,000	17 kB
SEA 0002	AVHRR Daily Images of SEAsia, Nov 90-May 91, May 92-Current	Raster	South East Asia.	Nov 90-May91, May 92-now	1.1 km at Nadir	70-80 MB (each)
SEA 0003	AVHRR Daily Images of SEAsia - Nov 90 to May 91 - Preprocessed	Raster	South East Asia.	Nov 90 to May 91	0.01 degree	12 MB (each)
SEA 0004	AVHRR 4 band Monthly Composites - SEAsia - Nov 90 to Apr 91	Raster	South East Asia.	November 90 to Apr 91	0.01 degree	40 MB (each)
SEA 0005	AVHRR SEAsia 4band Mosaic from Nov 90- Mar 91 daily images	Raster	South East Asia.	November 90 to March 91	0.01 degree	15.22 MB (each)
SEA 0006	AVHRR SEAsia Poster	Raster	South East Asia.	November 90 to March 91	0.01 degree	15.6 MB (each)
SEA 0008	IUCN forest map of South East Asia and Individual Countries	Vector	SEAsia & Pacific	1985 - 1989	1:500,000	62.88 MB (total)

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Free Access

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
THA 0020	Forest Classification Map of Thailand	Vector	Thailand	1985	1:1,000,000	900 kB
THA 0021	National & Provincial Boundaries map of Thailand from WBD II	Vector	Thailand	Unknown	1:3,000,000	556 kB
THA 0022	Hydrology (Rivers and Lakes) map of Thailand from WBD II	Vector	Thailand	Unknown	1:3,000,000	327 kB
THA 0023	Transportation (roads, railroads) map of Thailand from WBD II	Vector	Thailand	Unknown	1:3,000,000	620 kB
THA 0025	Provincial Boundaries of Thailand from WBD II	Raster	Thailand	Unknown	1:3,000,000	1.23 Mb
THA 0028	Forest-Nonforest of Thailand 1991	Vector	Thailand	1991	1:1,500,000	800 Kb
VIE 0001	National & Provincial Boundaries map of Vietnam from WBD II	Vector	Vietnam	Unknown	1:3,000,000	567 kB
VIE 0002	Hydrology (Rivers) map of Vietnam from WBD II	Vector	Vietnam	Unknown	1:3,000,000	294 kB
VIE 0003	Transportation (roads, railroads) map of Vietnam from WBD II	Vector	Vietnam	Unknown	1:3,000,000	588 kB
VIE 0004	Elevation map of Vietnam from Global Elevation dataset ETOPO5	Vector	Vietnam	Unknown	5 Minutes	607 kB

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Inhouse Permission

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
BUR 0005	Landsat-5 TM Image of Tak, Burma (29 January 1990)	Raster	Tak, Burma	29 January 1990	30 m	40 MB each band
CAM 0004	Landsat-5 MSS Image of Phnom Penh, Cambodia (25 Nov 1984)	Raster	Cambodia	25 November 1984	79 m	Two 1600 BPI Tapes
CAM 0005	Landsat-5 MSS Image of Phnom Penh, Cambodia (27 Dec 1984)	Raster	Cambodia	27 December 1984	79 m	One 6250 BPI Tape
CAM 0037	Landsat-5 TM Image of Cambodia (25 January 1992)	Raster	Cambodia	25 January 1992	30 m	40 MB each band
GLB 0017	Weekly NOAA AVHRR Solar Zenith Angle & Scan Angle - 85 to 89	Raster	Global	1985 - 1989 (Selected	4 km (16km2)	2.3 MB for each file
GUL 0001	AVHRR False Color Composites, Kuwait region, 21 Jan-1 Mar, 91	Raster	Kuwait region, Persian Gulf	21 January to 1 March, 1991	1 km	10 MB (each)
NEP 0004	Landsat-5 TM Image of Nepal (18 Dec 1989)	Raster	Nepal	18 December 1989	30 m	40 MB each band
PHI 0001	NOAA AVHRR LAC Data for the Philippines (Date unspecified)	Raster	Philippines	Unspecified	1.1 km at Nadir	1 mag.tape (6250 bpi)
SEA 0001	NOAA AVHRR GAC Images of South East Asia - 8, 9 November 89	Raster	South East Asia	8, 9 November 1989	4 km (16 km2)	3 MB (each file)
SEA 0007	UNESCO/FAO soils map of South East Asia	Raster	South East Asia. See quick	1973	30 Seconds (lat./long.)	29 MB
THA 0003	Landsat MSS Image (14 Feb 1973) of Thailand - Path 141 Row 47	Raster	Thailand	14 February 1973	80 m	1 mag.tape (6250 bpi)
THA 0004	Landsat MSS Image (18 Mar 1979) of Thailand - Path 141 Row 47	Raster	Thailand	18 March 1979	80 m	1 mag.tape (6250 BPI)
THA 0005	Landsat MSS Image (27 Oct 1984) of Thailand - Path 131 Row 47	Raster	Thailand	27 October 1984	80 m	1 mag.tape (6250 bpi)
THA 0006	Landsat MSS Image (5 Apr 1985) of Thailand - Path 131 Row 47	Raster	Thailand	5 April 1985	80 m	1 mag.tape (250 bpi)
THA 0007	Landsat MSS Image (25 Dec 1985) of Thailand - Path 131 Row 47	Raster	Thailand	25 December 1985	80 m	1 mag.tape (6250 bpi)
THA 0008	SPOT XS image - flooded area (89) - Nakhon Si Thammarat	Raster	Nakhon Si Thammarat,	9 Feb., 1989	25 m	1 MB (each band)
THA 0009	DEM of Nakhon Si Thammarat, Thailand from SPOT XS (9 Feb 89)	Raster	Thailand	9 February, 1989	25 m	2 MB

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Inhouse Permission

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
THA 0010	Landsat-5 TM image of Bangkok (9 Dec 87)	Raster	Bangkok, Thailand	9 Dec, 1987	30 m	10.6 MB each band
THA 0011	Landsat-5 TM Image of Thiland - Burma border (14 Feb 1990)	Raster	Thailand - Burma border	14 Feb., 1990	30 m	40 MB each band
THA 0012	Landsat-5 TM 7band Image of Thailand (1 June 1990)	Raster	Thailand	1 June, 1990	30 m	40 MB each band
THA 0013	Landsat-5 TM Image of Thiland - Burma border (25 Mar 1990)	Raster	Thailand - Burma border	25 March 1990	30 m	40 MB each band
THA 0014	Landsat-5 TM Image of Thiland - Burma border (3 Apr 1990)	Raster	Thailand - Burma border	3 April 1990	30 m	40 MB each band
THA 0015	Landsat-5 TM Image of Thiland - Burma border (3 April 90 - No 2)	Raster	Thailand - Burma border	3 April 1990	30 m	40 MB each band
THA 0016	Landsat MSS Image of Songkhla region, Thailnd (28 Feb 1973)	Raster	Lake Songhla Thailand	28 February 1973	80 m	1 mag.tape (6250 bpi)
THA 0017	Landsat MSS Image of Songkhla region, Thailnd (27 June 1991)	Raster	Lake Songkhla Thailand.	27 June 1991	80 m	1 mag. tape
THA 0018	Classified Landsat MSS image (30 March 1976) of Lake Songkhla	Raster	Lake Songhla Thailand	30 March 1976	30 m	7.6 MB
THA 0019	Classified Landsat TM Image (20 Sept. 1991) of Lake Songkhla	Raster	Lake Songhla Thailand	20 September 1991	30 m	6.4 MB
THA 0026	Landsat-5 TM Image of Suratthani, Thailand (4 March 1990)	Raster	Suratthani, Thailand	4 March 1990	30 m	40 MB each band
THA 0027	Landsat-5 TM Image of Thailand - Cambodia border (27 March 92)	Raster	Thai - Cambodia	27 March 1992	30 m	40 MB each band

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Source Approval

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
CAM 0022	District Centers map of Cambodia	Vector	Cambodia	1992	1:500,000	29 Kb
CAM 0023	Provincial Centers map of Cambodia	Vector	Cambodia	1992	1:500,000	8 Kb
CAM 0024	District map of Cambodia	Vector	Cambodia	1992	1:500,000	227 Kb
CAM 0025	Provincial Boundaries Map of Cambodia	Vector	Cambodia	1992	1:500,000	81 Kb
CAM 0026	National Boundaries map of Cambodia from USAID	Vector	Cambodia			35 kB
CAM 0027	Provincial Boundary map of Thmarpouk province, Cambodia	Vector	Cambodia			16 kB
CAM 0028	Administrative Districts map of Thmarpouk province, Cambodia	Vector	Cambodia			19 kB
CAM 0029	Agricultural Soils map of Thmarpouk province, Cambodia	Vector	Cambodia	1968		25 kB
CAM 0030	Dams and Reservoirs map of Thmarpouk province, Cambodia	Vector	Cambodia			17 kB
CAM 0031	Hydrology (rivers) map of Thmarpouk province, Cambodia	Vector	Cambodia			160 kB
CAM 0032	Infrastructure (roads) map of Thmarpouk province, Cambodia	Vector	Cambodia			108 kB
CAM 0033	Land Use map of Thmarpouk province, Cambodia	Vector	Cambodia			71 kB
CAM 0034	Mine fields map of Thmarpouk province, Cambodia	Vector	Cambodia			26 kB
CAM 0035	Map of proposed new villages of Thmarpouk province, Cambodia	Vector	Cambodia			21 kB
CAM 0036	Map showing settlements of Thmarpouk province, Cambodia	Vector	Cambodia			51 kB
CAM 0039	Phnom-Penh Road	Vector	Phnom-Penh	1992	1:10,000	770 Kb
CAM 0040	Phnom-Penh Building	Vector	Phnom-Penh	1992	1:10,000	529 Kb

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Source Approval

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
CAM 0042	Rice Ecosystem of Cambodia	Vector	Cambodia	1992	1:500,000	800 Kb
GLB 0026	Global Climatic Base Data	Vector, Raster	Global	1930-89	2.5 degree, 5 degree	1.2 Mb.
GLB 0027	Global Landuses & Landscapes	Vector	Global	1988	1:15000000	1 mag.tape (6250 BPI)
LAO 0018	Provincial Boundaries of Laos	Vector	Laos	1990?	1:500,000	0.1 Mb
MAL 0005	Soil Map of Malaysia	Vector	Malaysia	Unknown	Unknown	2.3 Mb.
NEP 0005	Nepal National Datasets of 11 parameters - Geology, River etc	Vector	Nepal	Unknown	1:2,000,000	621 kB (total)
NEP 0006	Datasets of Sindhupalchok District, Nepal - 14 parameters	Vector	Nepal	Unknown	1:125,000	1.44 MB (total)
NEP 0007	Elevation Contour map of Bagmati Zone, Nepal	Vector	Bagmati Zone, Nepal	1985	1:125,000	680 kB
NEP 0008	Land Utilization and Land Capability maps of Bagmati Zone, Nepal	Vector	Bagmati Zone, Nepal	Unknown	1:50,000	5.8 MB (total)
NEP 0009	Nepal Land Capability	Raster	Nepal	1979	100 M	32 Mb
NEP 0010	Nepal Population	Raster	Nepal	1979	100 M	32 Mb
NEP 0011	Nepal Land Utilisation	Raster	Nepal	1979	100 M	32 Mb
THA 0001	Historical Landsat MSS datasets (4) - Chiang Mai deforestration	Raster	Chiang-Mai Thailand	1975, 1979, Oct.1984, 1985	100 m	8.2 MB each file
THA 0002	Demonstration images of Mae Klang Watershed, Thailand	Raster	Mae Klang, Thailand	Unknown	Unknown	1 mag.tape (6250 bpi)
THA 0029	Landuse Map of Thailand	Vector	Thailand	1990?	1:500,000?	11 Mb.
WSA 0001	Western Samoa Datasets (Many parameters; soil map, roads etc etc)	Vector	Samoa, Savaii, Upolu	Unknown	Unspecified	11 MB (total)
WSA 0002	Ecosystem Dataset of Western Samoa	Vector	Western Samoa	Unknown	1:20,000	381 kB

GRID-Bangkok

Listing of AVHRR Daily Images of SEAsia

Dataset No : SEA 0002

(As of 12 October, 1993)

Tape No	Date	Tape No	Date
G00042	08 November 1990	G00073	22 December 1990
G00043	12 November 1990	G00074	24 December 1990
G00044	13 November 1990	G00075	26 December 1990
G00045	14 November 1990	G00076	27 December 1990
G00046	15 November 1990	G00077	30 December 1990
G00047	15 November 1990	G00081	01 January 1991
G00048	17 November 1990	G00082	02 January 1991
G00049	21 November 1990	G00083	04 January 1991
G00050	22 November 1990	G00084	07 January 1991
G00051	23 November 1990	G00085	08 January 1991
G00052	24 November 1990	G00086	09 January 1991
G00053	28 November 1990	G00087	11 January 1991
G00054	30 November 1990	G00088	14 January 1991
G00055	02 December 1990	G00089	16 January 1991
G00056	03 December 1990	G00090	17 January 1991
G00057	06 December 1990	G00091	19 January 1991
G00058	07 December 1990	G00092	20 January 1991
G00059	08 December 1990	G00093	25 January 1991
G00060	09 December 1990	G00094	26 January 1991
G00061	10 December 1990	G00095	26 January 1991
G00066	11 December 1990	G00096	28 January 1991
G00067	12 December 1990	G00097	29 January 1991
G00068	14 December 1990	G00098	30 January 1991
G00069	17 December 1990	G00099	31 January 1991
G00070	18 December 1990	G00100	02 February 1991
G00071	19 December 1990	G00101	03 February 1991
G00072	20 December 1990	G00102	04 February 1991

Listing of AVHRR Daily Images of SEAsia

Dataset No : SEA 0002

(As of 12 October, 1993)

Tape No	Date	Tape No	Date
G00103	06 February 1991	G00141	06 March 1991
G00104	07 February 1991	G00142	07 March 1991
G00105	08 February 1991	G00143	08 March 1991
G00106	09 February 1991	G00144	09 March 1991
G00107	10 February 1991	G00145	10 March 1991
G00117	11 February 1991	G00146	13 March 1991
G00118	13 February 1991	G00147	18 March 1991
G00119	14 February 1991	G00148	19 March 1990
G00120	15 February 1991	G00149	21 March 1991
G00121	16 February 1991	G00150	21 March 1990
G00122	17 February 1990	G00151	22 March 1991
G00123	18 February 1991	G00152	23 March 1991
G00124	19 February 1991	G00153	24 March 1991
G00125	20 February 1991	G00154	25 March 1991
G00126	21 February 1991	G00155	26 March 1991
G00127	22 February 1991	G00156	27 March 1991
G00128	23 February 1991	G00157	28 March 1991
G00129	23 February 1991	G00158	29 March 1991
G00130	24 February 1991	G00159	01 April 1991
G00131	25 February 1991	G00160	02 April 1991
G00132	27 February 1991	G00161	03 April 1991
G00135	28 February 1991	G00162	05 April 1991
G00136	01 March 1991	G00163	09 April 1991
G00137	02 March 1991	G00164	10 April 1991
G00138	03 March 1991	G00165	11 April 1991
G00139	04 March 1991	G00166	12 April 1991
G00140	05 March 1991	G00167	15 April 1991

Listing of AVHRR Daily Images of SEAsia

Dataset No : SEA 0002

(As of 12 October, 1993)

Tape No	Date	Tape No	Date
G00168	16 April 1991	G00214	23 May 1992
G00169	17 April 1991	G00215	25 May 1992
G00170	17 April 1991	G00216	29 May 1992
G00171	18 April 1991	G00217	05 June 1992
G00172	19 April 1991	G00218	10 June 1992
G00173	20 April 1991	G00219	11 June 1992
G00174	21 April 1991	G00220	14 June 1992
G00175	23 April 1991	G00221	01 July 1992
G00176	24 April 1991	G00222	02 July 1992
G00177	26 April 1991	G00223	03 July 1992
G00178	27 April 1991	G00224	04 July 1992
G00179	28 April 1991	G00225	05 July 1992
G00180	29 April 1991	G00226	06 July 1992
G00181	30 April 1991	G00227	07 July 1992
G00182	01 May 1991	G00228	08 July 1992
G00183	03 May 1991	G00229	09 July 1992
G00184	05 May 1991	G00230	13 July 1992
G00185	06 May 1991	G00231	14 July 1992
G00186	07 May 1991	G00232	15 July 1992
G00187	08 May 1991	G00233	16 July 1992
G00188	09 May 1991	G00234	19 July 1992
G00189	11 May 1991	G00249	21 July 1992
G00190	12 May 1991	G00250	22 July 1992
G00191	13 May 1991	G00251	23 July 1992
G00192	15 May 1991	G00252	27 July 1992
G00212	13 May 1992	G00253	28 July 1992
G00213	22 May 1992	G00254	28 July 1992

GRID-Bangkok

Listing of AVHRR Daily Images of SEAsia

Dataset No : SEA 0002

(As of 12 October, 1993)

Tape No	Date	Tape No	Date
G00255	31 July 1992	G00294	12 October 1992
G00256	01 August 1992	G00295	13 October 1992
G00257	03 August 1992	G00296	14 October 1992
G00258	04 August 1992	G00297	19 October 1992
G00259	05 August 1992	G00298	20 October 1992
G00260	05 August 1992	G00299	21 October 1992
G00261	06 August 1992	G00300	22 October 1992
G00274	02 August 1992	G00301	23 October 1992
G00275	08 August 1992	G00302	25 October 1992
G00276	27 August 1992	G00303	27 October 1992
G00277	28 August 1992	G00304	29 October 1992
G00278	02 September 1992	G00305	30 October 1992
G00279	03 September 1992	G00306	01 November 1992
G00280	14 September 1992	G00307	02 November 1992
G00281	17 September 1992	G00308	04 November 1992
G00282	18 September 1992	G00309	05 November 1992
G00283	20 September 1992	G00310	07 November 1992
G00284	21 September 1992	G00311	10 November 1992
G00285	22 September 1992	G00312	12 November 1992
G00286	23 September 1992	G00313	13 November 1992
G00287	24 September 1992	G00314	15 November 1992
G00288	25 September 1992	G00315	17 November 1992
G00289	26 September 1992	G00316	19 November 1992
G00290	28 September 1992	G00317	21 November 1992
G00291	29 September 1992	G00318	22 November 1992
G00292	05 October 1992	G00319	24 November 1992
G00293	09 October 1992	G00320	27 November 1992

Listing of AVHRR Daily Images of SEAsia

Dataset No : SEA 0002

(As of 5 January, 1994)

Tape No	Date	Tape No	Date
G00321	29 November 1992	G00341	06 November 1992
G00322	29 November 1992	G00341	24 November 1992
G00323	30 November 1992	G00341	17 November 1990
G00324	01 December 1992	G00342	13 December 1987
G00325	02 December 1992	G00343	19 November 1990
G00326	04 December 1992	G00344	12 December 1990
G00327	06 December 1992	G00345	13 December 1992
G00328	09 December 1992	G00346	24 December 1992
G00329	01 February 1990	G00347	05 March 1993
G00329	12 February 1990	G00348	12 May 1993
G00330	30 January 1993	G00349	06 November 1990
G00331	07 February 1993	G00349	08 December 1990
G00334	05 February 1993	G00350	21 December 1990
G00335	20 February 1993	G00350	26 January 1991
G00339	12 May 1993	G00351	05 November 1992
G00339	18 December 1992	G00351	15 December 1992
G00339	15 November 1990	G00352	06 November 1985
G00339	17 December 1990	G00352	28 January 1986
G00339	31 December 1990	G00352	13 April 1986
G00339	10 November 1987	G00353	02 May 1986
G00340	25 January 1993	G00353	12 December 1985
G00340	13 May 1993	G00353	29 December 1985
G00340	04 November 1992	G00354	06 February 1986
G00340	07 November 1992	G00354	15 February 1986
G00340	09 November 1987	G00354	13 February 1986
G00340	26 November 1987	G00355	30 December 1985
G00341	05 November 1992	G00356	29 December 1990

GRID-Bangkok

Listing of AVHRR Daily Images of SEAsia

Dataset No : SEA 0002

(As of 5 January, 1994)

Tape No	Date	Tape No	Date
G00357	20 December 1992		
G00358	12 May 1993		

GRID-Bangkok

Listing of Datasets on Magnetic Tapes

(As of 12 October, 1993)

TAPE No	DENSITY	CODE	TITLE
See attached list	6250 BPI	SEA 0002	AVHRR Daily Images of SEAsia, Nov 90-May 91, May 92-Current
G0001	6250 BPI	GLB 0001	UNESCO / FAO Global Soils Database
G0001	6250 BPI	GLB 0002	Major World Ecosystem Complexes - Olson Vegetation
G0001	6250 BPI	GLB 0003	Holdridge Life Zones (Land covers) - normal & doubling of CO2
G0002	6250 BPI	GLB 0004	Global Elevation map "ETOPO5"
G0002	6250 BPI	GLB 0005	Global Vegetation Data base by Matthews
G0002	6250 BPI	GLB 0006	Global Cultivation Intensity by Matthews
G0002	6250 BPI	GLB 0007	Global Seasonal Integrated Albedo by Matthews
G0002	6250 BPI	GLB 0008	Global Natural Wetlands - Distribution & Environmental
G0002	6250 BPI	GLB 0009	Global dataset of Climate (Precipitation & Temperature)
G0002	6250 BPI	GLB 0010	Surface Crustal Temperature - Monthly day, night time averages
G0003 to 4 & 28 to 41	6250 BPI	GLB 0011	NOAA Weekly Global Vegetation Index (GVI) - 1982 to 1989
G0003 to 4 & 28 to 41	6250 BPI	GLB 0012	NOAA Monthly Global Vegetation Index (GVI) - 1982 to 1989
G0003 to 4 & 28 to 41	6250 BPI	GLB 0013	NOAA Seasonal (4 seasons) Global Vegetation Index (GVI), 82-89
G0003 to 4 & 28 to 41	6250 BPI	GLB 0014	NOAA Annual Global Vegetation Index (GVI) - 1982 to 1989
G0005	6250 BPI	THA 0001	Historical Landsat MSS datasets (4) - Chiang Mai deforestration
G0005	6250 BPI	THA 0002	Demonstration images of Mae Klang Watershed, Thailand
G0006	1600 BPI	THA 0003	Landsat MSS Image (14 Feb 1973) of Thailand - Path 141 Row 47
G0007	1600 BPI	THA 0004	Landsat MSS Image (18 Mar 1979) of Thailand - Path 141 Row 47
G0008	1600 BPI	THA 0005	Landsat MSS Image (27 Oct 1984) of Thailand - Path 131 Row 47
G0009	1600 BPI	THA 0006	Landsat MSS Image (5 Apr 1985) of Thailand - Path 131 Row 47
G00010	1600 BPI	THA 0007	Landsat MSS Image (25 Dec 1985) of Thailand - Path 131 Row 47
G00011 to 13	1600 BPI	THA 0008	SPOT XS image - flooded area (89) - Nakhon Si Thammarat
G00014	1600 BPI	THA 0009	DEM of Nakhon Si Thammarat, Thailand from SPOT XS (9 Feb 89)
G00015 to 17	6250 BPI	NEP 0004	Landsat-5 TM Image of Nepal (18 Dec 1989)
G00018	6250 BPI	THA 0010	Landsat-5 TM image of Bangkok (9 Dec 87)
G00019 to 21	1600 BPI	THA 0010	Landsat-5 TM image of Bangkok (9 Dec 87)
G00022 to 24	6250 BPI	THA 0011	Landsat-5 TM Image of Thiland - Burma border (14 Feb 1990)
G00026	1600 BPI	SEA 0001	NOAA AVHRR GAC Images of South East Asia - 8, 9 November 89
G00027	1600 BPI	PHI 0001	NOAA AVHRR LAC Data for the Philippines (Date unspecified)
G00062 to 64	6250 BPI	THA 0012	Landsat-5 TM 7band Image of Thiland (1 June 1990)
G00065	6250 BPI	THA 0016	Landsat MSS Image of Songkhla region, Thailnd (28 Feb 1973)
G00078 to 79	1600 BPI	CAM 0004	Landsat-5 MSS Image of Phnom Penh, Cambodia (25 Nov 1984)
G00080	6250 BPI	CAM 0005	Landsat-5 MSS Image of Phnom Penh, Cambodia (27 Dec 1984)

GRID-Bangkok

Listing of Datasets on Magnetic Tapes

(As of 12 October, 1993)

TAPE No	DENSITY	CODE	TITLE
G00108 to 110	6250 BPI	THA 0013	Landsat-5 TM Image of Thiland - Burma border (25 Mar 1990)
G00111 to 113	6250 BPI	THA 0014	Landsat-5 TM Image of Thiland - Burma border (3 Apr 1990)
G00114 to 116	6250 BPI	THA 0015	Landsat-5 TM Image of Thiland - Burma border (3 April 90 - No 2)
G00133 to 134	6250 BPI	ASI 0001	World Boundary Database II - Asia & Australia
G00193 to 195	1600 BPI	GUL 0001	AVHRR False Color Composites, Kuwait region, 21 Jan-1 Mar, 91
G00196	6250 BPI	GLB 0015	World Vegetation Map 1987 by Murai and Honda
G00197	6250 BPI	GUL 0002	AVHRR 5 band Image of Kuwait region - 10 February 1991
G00198	6250 BPI	THA 0017	Landsat MSS Image of Songkhla region, Thailnd (27 June 1991)
G00199	6250 BPI	ASI 0002	World Boundary Database II with Subnational Boundaries - ASIA
G00200	1600 BPI	SEA 0007	UNESCO/FAO soils map of South East Asia
G00201	6250 BPI	THA 0019	Classified Landsat TM Image (20 Sept. 1991) of Lake Songkhla
G00202	6250 BPI	ASI 0003	Asian Soils map from FAO/UNESCO soils map of the world
G00203 to 207	6250 BPI	GLB 0017	Weekly NOAA AVHRR Solar Zenith Angle & Scan Angle - 85 to
G00208	6250 BPI	GLB 0016	World Vegetation Map 1987 by Murai and Honda - resampled
G00209	6250 BPI	GLB 0018	IIASA Climete Database - Temperature , Precipitation &
G00210	6250 BPI	GLB 0019	Global dataset of Methane Emission from Animals - FAO / GISS
G00210	6250 BPI	GLB 0020	Gobal Assessment of Human-Induced Soil Degradation (GLASOD)
G00211	6250 BPI	THA 0018	Classified Landsat MSS image (30 March 1976) of Lake Songkhla
G00262 to 264	6250 BPI	CAM 0037	Landsat-5 TM Image of Cambodia (25 January 1992)
G00265 to 267	6250 BPI	THA 0026	Landsat-5 TM Image of Suratthani, Thailand (4 March 1990)
G00268 to 270	6250 BPI	THA 0027	Landsat-5 TM Image of Thailand - Cambodia border (27 March 92)
G00271 to 273	6250 BPI	BUR 0005	Landsat-5 TM Image of Tak, Burma (29 January 1990)
G00332	6250 BPI	GLB 0027	Global Landuses & Landscapes
G 00333	6250 BPI	MAL 0005	Soil Map of Malaysia
G 00333	6250 BPI	THA 0029	Landuse Map of Thailand

MENRIS/ICIMOD

Dataset Catalogue

P.O.Box 3226, Kathmandu,

Nepal

Tel: 977-1-525313

Fax: 977-1-524509

* All dataset request in this catalogue should be forwarded to the above address.

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : MENRIS

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
	Nepal Population,Landuse,Landcapability	Raster	Nepal	1978-1979	100 M	16.3 MB
	Nepal Landsat TM	Raster	Nepal, Mustang Valley	20 November 1988	30 M	40.2 MB
	Nepal Landsat TM	Raster	Nepal, Kathmandu	12 October 1988	30 M	40.2 MB
	Nepal Panchro (Spot)	Raster	Nepal, Kathmandu	20 December 1988	10 M	
	Nepal Landsat TM	Raster	Nepal, Kathmandu	24 January 1989	30 M	12.9 MB
	Bangladesh data (FAO)	Raster	Bangladesh			
	Nepal Landsat MSS	Raster	Nepal, Deukhuri	1984	50 M	6.7 MB
	Nepal Landsat MSS	Raster	Nepal, Lumbini	1984	50 M	6.9 MB
	Nepal Landsat MSS	Raster	Nepal, Kathmandu	1984	50 M	6.9 MB
	Nepal Landsat MSS	Raster	Nepal, Sagarmatha	1984	50 M	6.7 MB
	Nepal Landsat MSS	Raster	Nepal, Kanchangha	1984	50 M	6.7 MB
	Nepal Landsat MSS	Raster	Nepal, Gaar	1984	50 M	6.9 MB
	Nepal Landsat MSS	Raster	Nepal, Janakpur	1984	50 M	6.7 MB
	Nepal Landsat MSS	Raster	Nepal, Dhankuta	1984	50 M	6.7 MB
	Nepal Landsat MSS	Raster	Nepal, Tingkar	1984	50 M	6.5 MB
	Nepal Landsat MSS	Raster	Nepal, Humla	1984	50 M	6.5 MB
	Nepal Landsat MSS	Raster	Nepal, Dadeldhura	1984	50 M	6.6 MB

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : MENRIS

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
	Nepal Landsat MSS	Raster	Nepal, Jumla	1984	50 M	6.6 MB
	Nepal Landsat MSS	Raster	Nepal, Dolpa	1984	50 M	6.7 MB
	Nepal Landsat MSS	Raster	Nepal, Mahendranagar	1984	50 M	6.6 MB
	Nepal Landsat MSS	Raster	Nepal, Negalganj	1984	50 m	6.6 MB
	Nepal Landsat MSS	Raster	Nepal, Pokhara	1984	50 m	6.8 MB
	Nepal Landsat MSS	Raster	Nepal, Mustang	1984	50 m	6.8 MB
	Nepal Landsat MSS	Raster	Nepal, Gorkha	1984	50 m	6.8 MB
	Nepal Landsat MSS	Raster	Nepal, Jugalhiml	1984	50 m	6.6 MB
	Nepal Aerial b/w scanned	Raster	Nepal, Kathmandu	December 1989		
	Nepal Digital Elevation Model	Raster	Nepal, Kathmandu area	Nov-Dec 1986	20 M	12.7 MB
	Nepal Panchro (Spot)	Raster	Nepal, Kathmandu area	12 December 1986	10 M	50.8 MB
	Nepal Panchro (Spot)	Raster	Nepal, Kathmandu area	7 November 1986	10 M	51.8 MB
	Nepal Panchro (Spot)	Raster	Nepal, Kathmandu area	12 December 1986	10 M	51.85 MB
	Nepal Landsat TM (Q2)	Raster	Nepal, Kathmandu	21 December 1990	30 M	11.40 MB
	Nepal Landsat TM	Raster	Nepal, Ganesh massif Gorkha	21 December 1990	30 M	11.40 MB
	Nepal Landsat TM	Raster	Nepal, Manash massif	15 December 1991	30 M	11.40 MB
	Nepal Lansat TM(Q1)	Raster	Nepal, Kathmandu area	21 December 1990	30 M	11.40 MB

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : MENRIS

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
	Nepal Landsat TM(Q1)	Raster	Nepal, Tansen	26 November 1990	30 M	11.40 MB
	Nepal Landsat TM(Q2)	Raster	Nepal, Narayan Garh	26 November 1990	30 M	11.40 MB
	Nepal Spot XS	Raster	Nepal, Kathmandu N.	05 May 1991	20 M	16.22 MB
	Nepal Landsat TM	Raster	Nepal, Sagarmatha M.	17 November 1992	30 M	43.14 MB
	Nepal Landsat TM	Raster	Nepal, Jumla area	30 November 1989	30 M	43.14 MB
	Nepal NOAA-AVHRR	Raster	Nepal Country	04 November 1992	1.1 km	4.1 MB
	Nepal NOAA-AVHRR	Raster	Nepal Country	25 January 1993	1.1 km	4.1 MB
	Nepal Panchro (Spot)	Raster	Nepal, Manang area	04 March 1990	10 m	
	Nepal Spot XS	Raster	Nepal, Mustang area	10 May 1991	20 m	
	Nepal Panchro (Spot)	Raster	Nepal, Mustang area	16 October 1992	10 m	
cohkh000	Elevation Contours	Vector	HKH Region	Unknown	1:5m	
cthkh000	Main City	Vector	HKH Region	Unknown	1:5m	
dbhkh000	District Boundary	Vector	HKH Region	Unknown	1:5m	
luhkh000	Landuse	Vector	HKH Region	Unknown	1:5m	
pqhkh000	Precipitation	Vector	HKH Region	Unknown	1:5m	
prhkh000	National Parks	Vector	HKH Region	Unknown	1:5m	
rbhkh000	Regional Boundary	Vector	HKH Region	Unknown	1:5m	

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : MENRIS

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
rihkh000	Rivers and Streams	Vector	HKH Region	Unknown	1:5m	
conp0000	Elevation Contours	Vector	Nepal	Unknown	1:1m	
dbnp0000	Districts: Pol. Subdivisions	Vector	Nepal	Unknown	1:2m	
genp0000	Geology	Vector	Nepal	Unknown	ca 1:1m	
nbnp0000	National Boundary	Vector	Nepal	Unknown	1:2m	
panp0000	Protected Areas, Parks	Vector	Nepal	Unknown	ca 1:3m	
prnp0000	Mean Annual Precipitation	Vector	Nepal	Unknown	ca 1:3m	
rinp0000	Major Rivers	Vector	Nepal	Unknown	1:2m	
renp0000	Regions: Pol. Subdivisions	Vector	Nepal	Unknown	1:2m	
ronp0000	Roads and Trails	Vector	Nepal	Unknown	1:1m	
tonp0000	Headquarters	Vector	Nepal	Unknown	1:2m	
zonp0000	Zones: Pol. Subdivisions	Vector	Nepal	Unknown	1:2m	
lunp0103	Land Utilisation	Vector	Ilam District	Unknown	1:50,000	
otnp0103	District Outline	Vector	Ilam District	Unknown	1:125,000	
rdnp0103	Roads and Trails	Vector	Ilam District	Unknown	1:125,000	
stnp0103	Major Settlements	Vector	Ilam District	Unknown	1:125,000	
vbnp0103	VDC Boundary	Vector	Ilam District	Unknown	1:50,000	

DATASET CATALOGUE

Data Availability : MENRIS

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
conp0200	Elevation Contours	Vector	Koshi Zone	Unknown	1:50,000	
lsnp0200	Land System	Vector	Koshi Zone	Unknown	1:50,000	
conp0207	Elevation Contours	Vector	Dhankuta District	Unknown	1:25,000	
frnp0207	Forest Areas	Vector	Dhankuta District	Unknown	1:25,000	
rdnp0207	Roads and Trails	Vector	Dhankuta District	Unknown	1:25,000	
rinp0207	Rivers and Streams	Vector	Dhankuta District	Unknown	1:25,000	
stnp0207	Major Settlement	Vector	Dhankuta District	Unknown	1:25,000	
vbnp0207	VDC Boundary	Vector	Dhankuta District	Unknown	1:25,000	
brnp0500	Suspension Bridges	Vector	Bagmati Zone	Unknown	1:125,000	
conp0500	Elevation Contours	Vector	Bagmati Zone	Unknown	1:125,000	
dbnp0500	District Boundary: Pol. Subdivisions	Vector	Bagmati Zone	Unknown	1:125,000	
lanp0500	Land Systems	Vector	Bagmati Zone	Unknown	1:50,000	
lcnp0500	Land Capability	Vector	Bagmati Zone	Unknown	1:50,000	
lunp0500	Land Utilisation	Vector	Bagmati Zone	Unknown	1:50,000	
panp0500	Protected Areas	Vector	Bagmati Zone	Unknown	1:500,000	
panp0500	Panchayats: Pol. Subdivisions	Vector	Bagmati Zone	Unknown	1:125,000	
rdnp0500	Roads and Trails	Vector	Bagmati Zone	Unknown	1:125,000	

DATASET CATALOGUE

Data Availability : MENRIS

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
rinp0500	Drainage Networks	Vector	Bagmati Zone	Unknown	1:500,000	
vinp0500	Major Settlements	Vector	Bagmati Zone	Unknown	1:125,000	
zbnp0500	Zonal Boundary	Vector	Bagmati Zone	Unknown	1:125,000	
vbnp0523	VDC Boundary	Vector	Sindhupalchowk Dist.	Unknown	1:50,000	
conp0524	Elevation Contours	Vector	Kabhre District	Unknown	1:50,000	
ctnp0524	Bridges	Vector	Kabhre District	Unknown	1:50,000	
rinp0524	Rivers and Streams	Vector	Kabhre District	Unknown	1:50,000	
stnp0524	Major Settlements	Vector	Kabhre District	Unknown	1:50,000	
vbnp0524	VDC Boundary	Vector	Kabhre District	Unknown	1:50,000	
vbnp0525	VDC Boundary	Vector	Bhaktapur District	Unknown	1:50,000	
ctnp0526	Lalitpur Main City	Vector	Mangal Bazzar	Unknown	1:500	
rinp0526	Rivers and Streams	Vector	Lalitpur District	Unknown	1:50,000	
vbnp0527	VDC Boundary	Vector	Kathmandu District	Unknown	1:125,000	
vbnp0528	VDC Boundary	Vector	Rasuwa District	Unknown	1:50,000	
vbnp0529	VDC Boundary	Vector	Nuwakot District	Unknown	1:50,000	
icnp0530	Ilaka Boundary	Vector	Dhading District	Unknown	1:50,000	
lunp0530	Land Utilisation	Vector	Dhading District	Unknown	1:50,000	

DATASET CATALOGUE

Data Availability : MENRIS

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
ounp0530	District Boundary	Vector	Dhading District	Unknown	1:50,000	
vbnp0530	VDC Boundary	Vector	Dhading District	Unknown	1:50,000	
brnp0709	Bridges	Vector	Gorkha District	Unknown	1:50,000	
lunp0709	Land Utilization	Vector	Gorkha District	Unknown	1:50,000	
rdnp0709	Roads and Trails	Vector	Gorkha District	Unknown	1:50,000	
rinp0709	Rivers and Streams	Vector	Gorkha District	Unknown	1:50,000	
stnp0709	Major Settlements	Vector	Gorkha District	Unknown	1:50,000	
vbnp0709	VDC Boundary	Vector	Gorkha District	Unknown	1:50,000	
conppjar	Contour	Vector	Arun River Basin	Unknown	1:50,000	
dbnppjar	District Boundary	Vector	Arun River Basin	Unknown	1:50,000	
rdnppjar	Roads and Trails	Vector	Arun River Basin	Unknown	1:50,000	
rinppjar	Rivers and Streams	Vector	Arun River Basin	Unknown	1:50,000	
stnppjar	Place Name	Vector	Arun River Basin	Unknown	1:50,000	
wbnppjar	Watershed Boundary	Vector	Arun River Basin	Unknown	1:50,000	
conppjkm	Elevation Contours	Vector	Khimti Hydro Power	Unknown	1:125,000	
rinppjkm	Rivers and Streams	Vector	Khimti Hydro Power	Unknown	1:125,000	
rdnppjkm	Roads and Trails	Vector	Khimti Hydro Power	Unknown	1:125,000	

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : MENRIS

As of 5 January, 1994

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
stnppjkm	Major Settlements	Vector	Khimti Hydro Power	Unknown	1:125,000	
shnppjkm	Spot Heights	Vector	Khimti Hydro Power	Unknown	1:125,000	
lunppjkm	Landuse	Vector	Khimti Hydro Power	Unknown	1:50,000	
conppjll	Elevation Contours	Vector	Lele Watershed	Unknown	1:50,000	
rinppjll	Rivers and Streams	Vector	Lele Watershed	Unknown	1:50,000	
stnppjll	Major Settlements	Vector	Lele Watershed	Unknown	1:50,000	
wbnppjll	Watershed Boundary	Vector	Lele Watershed	Unknown	1:50,000	
genppjmc	Geology	Vector	Melamchi Watershed	Unknown	1:50,000	
rinppjmc	Rivers and Streams	Vector	Melamchi Watershed	Unknown	1:50,000	
conppjsv	Elevation Contours	Vector	Shivapuri Watershed	Unknown	1:10,000	
lcnppjsv	Land Capability	Vector	Shivapuri Watershed	Unknown	1:50,000	
lsnppjsv	Land System	Vector	Shivapuri Watershed	Unknown	1:50,000	
lunppjsv	Land Utilisation	Vector	Shivapuri Watershed	Unknown	1:50,000	
rinppjsv	Rivers and Streams	Vector	Shivapuri Watershed	Unknown	1:10,000	

Landcare Research NZ Ltd.

Dataset Catalogue

Private Bag 11 052,

Palmerston North,

New Zealand

Tel: 646-356-7154

Fax: 646-355-9230

* All dataset request in this catalogue should be forwarded to the above address.

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Landcare Res.NZ Ltd

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
	Cook Islands Land Resourse	Vector	Atiu-current Southern Cooks	1990	1:30,000	2 MB(Ati
	Soil Survey for Kingdom of Tonga	Vector	National	1992	1:25,000	12 MB
	Soil Survey of Niue	Vector	National	1983	1:25,000	10 MB
	Hazard Maps, Solomon Islands	Vector	Part Duadal canal	1989	1:50,000	10 MB
	Land Resource Survey, Western Samoa	Vector	National	1989	1:50,000	20 MB
	Pacific Insect Pests	Digital	South Pacific Region	1978 - present	N/A	32 MB
	Plant Protection Database for the Pacific	Digital	South Pacific Region	1990 - present	N/A	
	Pacific Soils Database	Digital, grid ref.	South Pacific region	1988-present	N/A	
	EOSAT Agency	Landsat images	NZ and South Pacific	1972-93(MSS) 1984-93(TM)	Variable	90MB(MSS) 270 MB
	SPOT Agency	SPOT images	NZ	1986-93	Variable	36 MB
	NOAA Imagery	NOAA images	NZ	1990-93	Variable	1 MB
	Soil Survey of Fiji	Paper maps	National	1982-4	1:50,000	N/A
	Pacific Plant Collection	Card files	Pacific region	1928-present	N/A	N/A
	Flora of Niue	Card files	National	1970	N/A	N/A
	Flora of Cook Islands	Card files	National	1974-present	N/A	N/A
	Flora of Tonga	Card files	National	1977-92	N/A	N/A

Mekong Secretariat

Dataset Catalogue

Kasatsuk Bridge, Rama I Road,

Bangkok 10330, Thailand

Tel: 662-225-0029

Fax: 662-225-2796

* All dataset request in this catalogue should be forwarded to the above address.

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Mekong Secretariat

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
CA-AG001	Agric - Rice	Vector	Cambodia		500,000	
CA-MI001	Inundation	Vector	Cambodia	1986	500,000	
CA-PG001	Pedo Gemopedo	Vector	Cambodia		500,000	
CA-S001	Soil map	Vector	Cambodia	1986	500,000	
LA-CT001	Contour	Vector	Laos	1960	20,000	
LA-CT002	Contour	Vector	Laos	1960	20,000	
LA-CT003	Contour	Vector	Laos	1960	20,000	
LA-CT014	Contour	Vector	Laos		20,000	
LA-CT015	Contour	Vector	Laos		20,000	
LA-CT024	Contour	Vector	Laos		20,000	
LA-CT025	Contour	Vector	Laos		20,000	
LA-CT036	Contour	Vector	Laos		20,000	
LA-CT037	Contour	Vector	Laos		20,000	
LA-CT038	Contour	Vector	Laos		20,000	
LA-CT-039	Contour	Vector	Laos		20,000	
LM-CM001	Catchment	Vector	Cambodia	1954	250,000	
LM-CM002	Catchment	Vector	Cambodia, Viet Nam	1955	250,000	

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Mekong Secretariat

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
LM-CM003	Catchment	Vector	Cambodia, Viet Nam	1954	250,000	
LM-CM004	Catchment	Vector	Cambodia, Viet Nam	1955	250,000	
LM-CM005	Catchment	Vector	Viet Nam	1956	250,000	
LM-CM006	Catchment	Vector	Viet Nam	1956	250,000	
LM-CM007	Catchment	Vector	Viet Nam	1967	250,000	
LM-CM008	Catchment	Vector	Thailand	1962	250,000	
LM-CM009	Catchment	Vector	Thailand	1961	250,000	
LM-CM010	Catchment	Vector	Thailand	1958	250,000	
LM-CM011	Catchment	Vector	Thailand	1954	250,000	
LM-CM012	Catchment	Vector	Thailand, Laos	1954	250,000	
LM-CM013	Catchment	Vector	Laos,Viet Nam	1954	250,000	
LM-CM014	Catchment	Vector	Thailand, Cambodia	1954	250,000	
LM-CM015	Catchment	Vector	Thailand, Cambodia	1954	250,000	
LM-CM016	Catchment	Vector	Thailand, Laos, Cambodia	1954	250,000	
LM-CM017	Catchment	Vector	Laos, Cambodia, Viet	1962	250,000	
LM-CM018	Catchment	Vector	Thailand, Cambodia	1954	250,000	
LM-CM019	Catchment	Vector	Cambodia	1954	250,000	

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Mekong Secretariat

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
LM-CM020	Catchment	Vector	Cambodia, Laos	1954	250,000	
LM-CM021	Catchment	Vector	Cambodia, Viet Nam	1954	250,000	
LM-CM022	Catchment	Vector	Thailand, Cambodia	1954	250,000	
LM-CM023	Catchment	Vector	Cambodia	1954	250,000	
LM-CM024	Catchment	Vector	Cambodia	1954	250,000	
LM-CM025	Catchment	Vector	Cambodia, Viet Nam	1954	250,000	
LM-CM026	Catchment	Vector	Viet Nam	1954	250,000	
LM-CM027	Catchment	Vector	Viet Nam	1954	250,000	
LM-CM028	Catchment	Vector	Burma, Thailand, Laos	1955	250,000	
LM-CM029	Catchment	Vector	Thailand, Laos	1955	250,000	
LM-CM030	Catchment	Vector	Thailand	1957	250,000	
LM-CM031	Catchment	Vector	Thailand, Laos	1955	250,000	
LM-CM032	Catchment	Vector	Thailand, Laos	1955	250,000	
LM-CM033	Catchment	Vector	Thailand	1958	250,000	
LM-CM034	Catchment	Vector	Laos	1954	250,000	
LM-CM035	Catchment	Vector	Laos, Viet Nam	1954	250,000	
LM-CM036	Catchment	Vector	Thailand,Laos	1962	250,000	

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Mekong Secretariat

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
LM - CM037	Catchment	Vector	Thailand ,Laos, Viet Nam	1962	250,000	
LM - CM038	Catchment	Vector	Laos, Viet Nam	1954	250,000	
LM - CM039	Catchment	Vector	Thailand, Laos	1958	250,000	
LM - CM040	Catchment	Vector	Thailand, Laos	1955	250,000	
LM - CM041	Catchment	Vector	Laos, Viet Nam	1955	250,000	
LM - CM042	Catchment	Vector	Thailand	1958	250,000	
LM - CM043	Catchment	Vector	Thailand, Laos	1962	250,000	
LM - CM044	Catchment	Vector	Thailand, Laos, Viet Nam	1954	250,000	
LM - CM045	Catchment	Vector	Laos, Viet Nam	1954	250,000	
LM - CM046	Catchment	Vector	China, Laos	1955	250,000	
LM - CM047	Catchment	Vector	China, Bhutan, Thailand	1955	250,000	
LM - CM048	Catchment	Vector	Bhutan, Thailand, Laos	1955	250,000	
LM - CM049	Catchment	Vector	Bhutan, Thailand, Laos	1955	250,000	
LM - CM050	Catchment	Vector	China, Viet Nam, Laos	1954	250,000	
LM - CM051	Catchment	Vector	Viet Nam, Laos	1954	250,000	
LM - CM052	Catchment	Vector	Laos, Viet Nam	1954	250,000	
LM - DN001	Drainage	Vector	Cambodai	1954	250,000	

United Nations Environment Programme (UNEP)
Regional Environment and Natural Resources Information Centre (RENRIC)

GUIDELINES FOR THE INVENTORY EXERCISE, NEEDS ASSESSMENT AND PROJECT PROPOSALS

1.0 Introduction

The present state of the environment demands that informed decision making for sustainable development needs to be improved and should be based on sound information. This is more concretely emphasized in Chapter 40 of the Agenda 21 document of UNCED.

Sustainable development is not an issue alone of environment. The achievement of sustainable development requires the integration of environment and development. Man's environment problem has become so complex such that both the bio-physical and socio-economic data have to be taken into consideration and integrated for a holistic and multisectoral analysis to enhance decision making processes.

However, the lack of capacity, particularly in developing countries, for the collection and assessment of the bio-physical and socio-economic data, for their integration and transformation into useful information and for their dissemination has been noted. There is a need to improve the availability and utilization of information for sustainable development policy formulation. Coordination among the various institutions engaged in these activities either at the regional, sub-regional or national levels needs to be established and strengthened.

Presented with this challenge, UNCED and Agenda 21 had enjoined UNEP, the principal body within the United Nations System in the field of environment, to assume greater responsibility and a more proactive role in sustainable development decision making and action. To help bridge the data gap and improve the availability of information, UNEP's major task is to assist in building up and strengthening capacities of national environment ministries towards formulation of environment policies based on an integrated and multisectoral analysis of bio-physical and socio-economic data. It is envisaged that a decentralized network of key sub-national agencies/institutions individually involved in the collection and maintenance of these data will be established at the national level for a more coordinated information acquisition and dissemination.

As an initial step towards this capacity building endeavor, UNEP is undertaking an inventory exercise of institutions, experts and data on environment information in each country. This will be implemented in close coordination with sub-regional and national institutions. The inventory will assist national governments in identifying and determining what data are being gathered by what institutions and by whom, and whether they need some assistance for further training or capacity building. The inventory exercise will also assist in the in-country needs assessment and in the development of capacity building proposals to be funded by donors.

2.0 Directory of Institutions, Experts and Data

The first output of the inventory exercise is a directory of institutions, data and experts at the national, sub-regional and regional levels. This will be completed through the aid of a questionnaire. The questionnaire is of two kinds. The first is a questionnaire for the institution which aims to gather information regarding the general functions and activities of the institution and what information and data they collect and process. The second questionnaire is for the environmental professionals of the respondent institution which aims to determine the human resource capabilities and needs of these institutions.

The administration of the questionnaire in the sub-region will be carried out by UNEP's partner institutions, namely: ASEAN, ICIMOD, MEKONG Secretariat, SACEP and SPREP, to be referred to as "partners" in the subsequent paragraphs. The following are some considerations and suggested steps in administering the questionnaire:

2.1 Identification of the Respondent Institution

		Outputs	Time-frame
The partners will have to identify the institution to which the questionnaire will be administered. To do this, the following series of steps may be followed:			
a)	In consultation with the national contact institution (nodal point), identify and list down the various sectors in each country (e.g., agriculture, communication, natural resources, fisheries, etc.). The sectoral divisions/classifications vary from country to country. Any policy documents or official environment reports would serve as reference materials.	List of sectors	1 day
b)	Review the available relevant materials, official documents and reports found in the contact institution's library, and for every material, fill in the blanks below:	Literature review	2 weeks

Sector (e.g., Agriculture) _____
Title of Document: _____
Author: _____
Major Issues: (e.g., land degradation, salinization of land, etc) _____
Publisher: _____
Place of Publication: _____
Date of Publication: _____
Location of the Book: _____

The purpose of this exercise is to come up with a list of environmental issues in each country.

c) List alphabetically all the environmental issues for each country. (Attachment-1 is a sample matrix of the various issues confronting the countries in Asia-Pacific Region.) — Environmental Issues — 1 day

d) Identify the data needed for each environmental issue, as follows: (See Attachment-2) — List of Data — 1 day

Issues	Data
Air pollution:	atmosphere, land use, population
Deforestation:	land use, population, infrastructure
_____,	____, ____, ____, ____
_____,	____, ____, ____, ____

e) Prepare a matrix showing the data on the left-most column and the issues on the top-horizontal line. List the data and issues alphabetically. Mark an x in the corresponding cell where a datum is used in a particular issue. — Matrix — 1 day

Example:

ISSUES / DATA	Air Pollution	Deforestation	Depletion of Energy Resources	Land Degradation	Salinization of Land
Atmosphere	X			X	
Geology					X
Hydrology				X	X
Land use	X	X	X	X	
Topography				X	

f) Based from the matrix above, list the key institutions which have the mandate to collect, store and disseminate each specific datum.

Example:

Data	Institution
Geology	Dept. of Geology, Ministry of _____
Land Use	Dept. of Forestry, Soils Dept.
_____	_____
_____	_____

2.2	Make appropriate number of copies of questionnaire.	Copies of Questionnaire	1 day
2.3	After identifying the institutions, either the partner or the national contact institution prepares a letter addressed to the head of each key institution seeking his/her assistance in completing the questionnaire. Enclose a copy of the questionnaire for his/her information. (See Attachment-3)	Letter	1 day
2.4	Identify and establish contact with a key/contact person in each institution. You may do this through previous association with the institution concerned, or through referral from other colleagues, or through the letter addressed to the head of the institution requesting him/her to appoint somebody to be responsible for this. It is preferred that the contact person should be the one designated by the head of the institution. It has been observed that, in most institutions, we always have to get the approval of the head for this type of exercise.	Contact Person per Institution	1 week including follow-up
2.5	Make an appointment with the contact person. See him/her personally. Interview him/her using the questionnaire as the guide. Do not forget to ask for a copy of the institution's brochure or annual report, whatever is available. For the questionnaire on experts, seek the assistance of the contact person. Ask him/her for the names of professionals in their institution who can be the respondents for the questionnaire. See these professionals personally, interview them, and fill up the questionnaire simultaneously. Kindly ask for a copy of the expert's CV, if possible.	Filled-up Questionnaire	3-4 weeks
2.6	Data entry and processing. Compile all the questionnaires together for data entry and processing. Common codes and formats will be used to facilitate integration and consolidation at sub-regional and regional levels.	Print out of data	3 weeks
2.7	Lay-outing and printing of the directory. Each directory will contain summary statistics and indexes.	Sub-regional Directory of Institutions, Experts and Data	2 week

3.0 Needs Assessment

3.1 It has been noted that many countries, particularly the developing countries, lack the capability to collect, assess, integrate, analyze and transform bio-physical and socio-economic data into timely and useful information for sustainable development policy formulation. Hence, there is a need for capacity building.

3.2 Capacity building for environment information involves the utilization of new technologies tools for faster and more accurate data integration and the development and enhancement of the skills of the institution's personnel in using these technologies. Geographic Information Systems (GIS), remote sensing and experts systems are some of the new technologies that have been identified as appropriate and effective tools towards this aim. Determining the needs for capacity building of the various institutions, therefore, will be based on the availability/absence of facilities and skills required to use these technologies.

3.3 Shortlisting and identifying the institutions in each country which need assistance for capacity building will be done by UNEP's partner institutions, i.e., the sub-regional institutions. Priorities will be given to institutions with:

a) no computer facilities;
b) no GIS facilities; and
c) personnel having no or limited computer and/or GIS knowledge and skills.

3.4 From the inventory exercise, fill in the following tables to facilitate the shortlisting of institutions.

a) Indicate the number of available units of the following hardware in each institution.

H A R D W A R E

Country:							
Institutions	P C			Workstation	GIS Facilities		
	286	386	486		Digitizer	Plotter	Color Printer

b) Put a check in the appropriate column to indicate availability of software in each institution.

S O F T W A R E

Country:										
Institution	Wordprocessor	Spreadsheets	Database	G I S			Remote Sensing			Expert System
				ArcINFO	IDRISI	Others	ERDAS	Micro Brian	Others	

After (a) and (b), prepare a list of institutions that need computer hardware and software.

Institutions	Hardware		Software	
	Particulars	Quantity	Particulars	Quantity

c) Indicate the number of personnel in each level with the characteristics defined below.

TRAINING NEEDS

Country:												
Institutions	No Basic Knowledge					Needs Further Training					GIS Applications	Level
	WP	SS	DB	GIS	RS	WP	SS	DB	GIS	RS		
												Top Mgmt.
												Mid. Mgmt.
												Prof.
												Technical
												Top Mgmt.
												Mid. Mgmt.
												Prof.
												Technical
												Top Mgmt.
												Mid. Mgmt.
												Prof.
												Technical

4.0 Project Proposals

The data gathered in the inventory exercise as well as in the needs assessment provide information regarding the status of technology and human resources of each country as far as environment information processing and dissemination is concerned. From such information, the sub-regional institutions will be able to determine the nature of intervention the particular country needs, in terms of training and technology transfer. The partners will then develop and prepare project proposals for each country based from these requirements for submission to and funding by bilateral and multilateral donors. The individual country project proposals will be compiled and consolidated into a sub-regional compendium of project proposals. This compendium will contain, among other things, the project proposals for each country plus a project proposal by the sub-regional institution itself. Consolidation at the regional level will be done by UNEP/GRID in Bangkok.

Project proposals for capacity building should indicate the type of training to be given, level and estimated number of persons to be trained, venue of the training, type and quantity of hardware and software. An example would be the provision of two PC 486 for every institution with no computer facilities, plus one PC ArcINFO with one additional key. Training would then consist of one basic GIS training for technical people (3 months) up to the top management (one day).

Below is a proposed outline that may be followed by all partners for uniformity and to facilitate consolidation, both at the sub-regional and regional levels.

a) Cover Page (one page)
b) Project Identification Page (one page)
c) Introduction (one page)
d) Objectives (one-half to one page)
e) Outputs (one-half to one page)
f) Project Implementation (two pages)
g) Project Management and Organization (one page)
h) Project Timeframe (one page)
i) Budget (one to two pages)

Some details are furnished in the following pages.

a) **Cover Page:** *Contains the title of the project*

PROPOSAL FOR THE _____

OF

_____

_____

b) **Project Identification Page:** *Presents basic information about the project.*

Title of the Project :

Project Number : *(if any)*

Country :

Implementing Organisation: *(the sub-regional institution undertaking the proposed activities contained in the proposal, including the address)*

Project Duration : *months/year(s)*

Commencing :
Completion :

Project Cost : (expressed in US dollars)

c) **Introduction:** *An introduction or background in a project proposal usually presents the statement of the problem and rationale of the project, the circumstances and bases for the project. This may include a brief description of the country's state of the environment, some reference to UNCED and Agenda 21, and a summary of the processes/activities that have been undertaken so far (i.e. inventory exercise, need assessment, etc.) that led towards the conceptualization of this project. A brief description of the organisations involved in the project may also be included.*w

d) **Objectives:** *Should define both the long-term/general and short-term (or immediate)/specific objectives, what the project hopes to achieve related to capacity building. These should be stated in terms of ends, not means. Objectives describe what changes or improvement are expected to effect in the target group: individuals, organisation, or country. Objectives should be specific, result-oriented, measurable, and attainable within the given timeframe.*

3) **Outputs:** *These are the products of activities completed by the project. At the end of the project, completion of these outputs may serve as one of the measurement indicators in determining the success of the project.*

f) **Project Implementation:** *This is where the activities that need to be undertaken to achieve the defined objectives are listed and described. For each activity, the responsible unit for implementation (i.e., person or organisation) should be identified.*

The following table may be used:

ACTIVITIES	*RESPONSIBLE UNIT*
Activity 1 *Activity 2* *Activity 3, etc.*	

For training activities, the table below may be followed:

Type of Training	GIS Application	No. of Training	Duration	Venue	Est. No. of Participants by Level			
					TM	MM	Prof.	TP

For purchase and procurement of hardware and software, indicate the kind of hardware/software needed.

Institution	Types of GIS Software (quantity)		
	Software 1	Software 2	Software 3

Institution	Hardware (quantity)				
	PC	Digitizer	Plotter	Laser Printer	etc.

g) **Project Management and Organisation:** *Defines the roles and responsibilities of the persons involved in the management of the project, the people responsible for ensuring the successful implementation of the project. Usually, an organisational chart is shown in this section.*

The reporting mechanism is also presented here, i.e., progress report every six months and terminal report to be submitted 30 days or 60 days after project completion.

h) **Project Timeframe:** *State the length of time the project is expected to be completed, indicating the date of commencement as well as the date of completion. A Gantt Chart of Activities is presented here showing when a specific activity is expected to be accomplished.*

ACTIVITIES	M O N T H											
	1	2	3	4	5	6	7	8	9	10	11	12
Activity 1												
Activity 2												
Activity 3												

9.0 Budget: *Below are some cost items that may be included in the project proposal:*

Amount
(expressed in US$)

Training Component
- Group training (participation in seminars, training courses, study tours, etc.)
- Meetings/conferences
- Sub-total

Equipment
- Expendable equipment (property or equipment with an original cost of under $500 for which inventory records are not maintained, including softwares, etc.)
- Non-expendable equipment (property or equipment valued at $500 or more a unit and with a serviceable life of 5 years or more, e.g., computers)
- Sub-total

Miscellaneous
- Operation and maintenance of equipment (includes operation & maintenance of equipment, repair & rental of computer equipment)
- Reporting costs (for editing, translation, printing & distribution of reports & publications, including case studies, training mats.)
- Sub-total

Grand Total

Emerging Issues / Countries	Deforestation	Land Desertification	Land Degradation	Destruction of Bio-diversity	Pllution of Inland Water	Marine Water Pollution	Air Pollution	Health Harzards	Noise Pollution	Pupulation Growth	Depletion of Ocean & Coastal Resources	Depletion of Energy Resources	Land Slides	Loss of Aquatic Fish	Salinezation of Land	Low Agric. Production & Fertility	Rural-Urban Migration	Flood	Drought	Cyclone	Earthquake	Waste Disposal
Afganistan		X						X														
Australia			X		X				X													
Bangladesh		X	X	X	X	X		X		X			X		X	X			X			
Butan								X														
China	X	X	X		X	X	X								X	X		X	X	X		
India	X	X	X	X	X	X	X	X							X	X		X	X	X		X
Indonesia	X				X	X		X	X	X						X		X	X	X	X	X
Iran		X			X			X														
Japan					X		X		X									X		X	X	
Lao PDR	X		X	X			X									X						
Malayasia	X				X	X																
Cambodia	X		X	X	X						X	X		X								
Myanmar	X							X							X	X		X	X	X		
Pakistan	X		X		X	X		X							X	X		X	X			X
Phillipines	X				X	X				X					X	X		X		X	X	X
DPR Korea					X		X			X						X		X		X		
Nepal	X	X	X	X				X		X			X			X		X	X			
New Zeland					X																	
Thailand	X		X		X	X	X	X	X	X			X		X	X	X	X				X
Sri Lanka	X				X			X					X		X	X		X	X			
Vietnam	X		X		X	X	X		X	X					X	X		X	X	X		
Hong Kong									X													X
SPREP Countries																						
Cook Islands			X	X	X	X								X								X
Micronesia	X				X	X				X				X								X
Fiji	X	X	X	X	X	X								X								X
Kribati				X	X	X				X				X								X
Marshall Islands					X	X				X				X								X
Niue	X		X	X	X	X																X
Papua New Guinea	X			X		X		X						X								X
Solomon Islands	X			X		X				X				X								X
Tokelau				X	X	X				X				X								X
Tonga	X		X	X	X	X								X								X
Tuvalu	X			X	X	X				X				X								X
Vanuatu	X				X	X				X				X								X
Western Samea	X		X	X	X	X								X								X
TOTAL	22	7	15	15	27	22	7	12	6	14	1	1	4	13	9	13	1	12	9	8	3	19

Attachment-1

EMERGING ISSUES	BASELINE DATA	
Land desertification	1) hydrology 2) Land use 3) Drainage 4) Soil	1) population 2) Infrastructure 3) Education 4) Trade 5) Administrative boundary
Deforestation	1) Land use	1) Population 2) Infrastructure 3) Education 4) Trade 5) Administrative boundary
Land slides	1) Geology 2) Land use 3) Soil 4) Hydrology 5) Topography	1) Population 2) Infrastructure
Depletion of energy resources	1) Land use 2) Oil	1) Infrastructure 2) Population 3) Trade 4) Education
Loss of aquatic fish	1) Soil 2) The atmosphere 3) Land use	1) Population 2) Trade 3) Infrastructure
Destruction of Bio-diversity	1) Land use 2) The atmosphere	1) Population 2) Infrastructure 3) Education 4) Trade 5) Tourism
Salinization of Land	1) hydrology 2) Geology 3) Drainage 4) Soil	1) Infrastructure

Attachment-2

Attachment-3

Sample Letter

_____(Date)_____

Dear (Hon. Minister/Secretary or whatever the title is),

The United Nations Environment Programme (UNEP) has committed itself to the development and strengthening of capabilities of national governments and institutions on environment information towards sustainable development policy formulation. This is also UNEP's contribution to the implementation of UNCED's Agenda 21.

Sharing the same goal of achieving sustainable development, (sub-regional institution or national focal point) enters into partnership with UNEP in the implementation of a programme designed to strengthen national level environment agencies. The initial activities of this programme consist of conducting an inventory exercise of environment institutions, experts and data in each country within the Asia and Pacific region. A directory is expected to be produced which would contain basic information about the institution, its projects and activities, the data it collects, and the human resources it has. Dissemination of this information is expected to facilitate exchange and access to data for wider use especially by decision makers towards sustainable development.

Through the inventory exercise, needs of the institution for capacity building will also be assessed and identified. This will form the basis in the preparation of project proposals for each country which will be submitted to bilateral and multilateral donors for funding.

It is in this connection that we are writing your good office to enlist your assistance towards the successful implementation of this programme. As mentioned above, the first activity is an inventory exercise to be completed through a questionnaire, a copy of which is enclosed for your information. We specifically seek your assistance in completing this questionnaire. Would be very grateful if you could designate somebody who could personally meet with our programme officer and fill-out the questionnaire. Our fax number is _____, or I could be contacted by phone through tel. no. _____. May we also inform you that a copy of the directory will be supplied to you upon its completion and publication.

Would highly appreciate hearing from you the soonest time possible.

Our Best Wishes.

Respectfully yours,

_____
(Director of the Sub-regional institution or chairperson of the national focal point/contact inst.)

Name of Addressee
Minister/Secretary/Director/Head
Address

DATASET CATALOGUE

Data Availability : Mekong Secretariat

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
LM - DN002	Drainage	Vector	Cambodia, Viet Nam	1955	250,000	
LM - DN003	Drainage	Vector	Cambodia, Viet Nam	1954	250,000	
LM - DN004	Drainage	Vector	Cambodia, Viet Nam	1955	250,000	
LM - DN005	Drainage	Vector	Viet Nam	1956	250,000	
LM - DN006	Drainage	Vector	Viet Nam	1956	250,000	
LM - DN007	Drainage	Vector	Viet Nam	1967	250,000	
LM - DN008	Drainage	Vector	Thailand	1962	250,000	
LM - DN009	Drainage	Vector	Thailand	1961	250,000	
LM - DN010	Drainage	Vector	Thailand	1958	250,000	
LM - DN011	Drainage	Vector	Thailand	1954	250,000	
LM - DN012	Drainage	Vector	Thailand, Laos	1954	250,000	
LM - DN013	Drainage	Vector	Laos, Viet Nam	1954	250,000	
LM - DN014	Drainage	Vector	Thailand, Cambodia	1954	250,000	
LM - DN015	Drainage	Vector	Thailand, Cambodia	1954	250,000	
LM - DN016	Drainage	Vector	Thailand, Laos, Cambodia	1954	250,000	
LM - DN017	Drainage	Vector	Laos, Viet Nam, Cambodia	1962	250,000	
LM - DN018	Drainage	Vector	Thailand, Cambodia	1954	250,000	

DATASET CATALOGUE

Data Availability : Mekong Secretariat

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
LM - DN019	Drainage	Vector	Cambodia	1954	250,000	
LM - DN020	Drainage	Vector	Cambodia, Laos	1954	250,000	
LM - DN021	Drainage	Vector	Cambodia, Viet Nam	1954	250,000	
LM - DN022	Drainage	Vector	Thailand, Cambodia	1954	250,000	
LM - DN023	Drainage	Vector	Cambodia	1954	250,000	
LM - DN024	Drainage	Vector	Cambodia	1954	250,000	
LM - DN026	Drainage	Vector	Viet Nam	1954	250,000	
LM - DN027	Drainage	Vector	Viet Nam	1954	250,000	
LM - DN028	Drainage	Vector	Bhutan, Thailand,Laos	1955	250,000	
LM - DN029	Drainage	Vector	Thailand, Laos	1955	250,000	
LM - DN030	Drainage	Vector	Thailand	1957	250,000	
Lm - DN031	Drainage	Vector	Thailand, Laos	1955	250,000	
LM - DN032	Drainage	Vector	Thailand, Laos	1955	250,000	
LM - DN033	Drainage	Vector	Thailand	1958	250,000	
LM - DN034	Drainage	Vector	Laos	1954	250,000	
LM - DN035	Drainage	Vector	Laos, Viet Nam	1954	250,000	
LM - DN036	Drainage	Vector	Thailand, Laos	1962	250,000	

DATASET CATALOGUE

Data Availability : Mekong Secretariat

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
LM - DN037	Drainage	Vector	Thailand, Laos, Viet Nam	1962	250,000	
LM - DN038	Drainage	Vector	Laos, Viet Nam	1954	250,000	
LM - DN039	Drainage	Vector	Thailand, Laos	1958	250,000	
LM - DN040	Drainage	Vector	Thailand, Laos	1955	250,000	
LM - DN041	Drainage	Vector	Laos, Viet Nam	1955	250,000	
LM - DN042	Drainage	Vector	Thailand	1958	250,000	
LM - DN043	Drainage	Vector	Thailand, Laos	1962	250,000	
LM - DN044	Drainage	Vector	Thailand, Laos, Viet Nam	1954	250,000	
LM - DN045	Drainage	Vector	Laos, Viet Nam	1954	250,000	
LM - DN046	Drainage	Vector	China, Laos	1955	250,000	
LM - DN047	Drainage	Vector	China, Bhutan, Thailand	1955	250,000	
LM - DN048	Drainage	Vector	Bhutan,Laos Thailand	1955	250,000	
LM - DN049	Drainage	Vector	Bhutan, Laos,Thailand	1955	250,000	
LM - DN050	Drainage	Vector	China,Viet Nam,Laos	1954	250,000	
LM - DN051	Drainage	Vector	Viet Nam, Laos	1954	250,000	
LM - DN052	Drainage	Vector	Laos, Viet Nam	1954	250,000	
TH-AM001	Admin. Buriram	Vector	Thailand		50,000	

DATASET CATALOGUE

Data Availability : Mekong Secretariat

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
LM - DN037	Drainage	Vector	Thailand, Laos, Viet Nam	1962	250,000	
LM - DN038	Drainage	Vector	Laos, Viet Nam	1954	250,000	
LM - DN039	Drainage	Vector	Thailand, Laos	1958	250,000	
LM - DN040	Drainage	Vector	Thailand, Laos	1955	250,000	
LM - DN041	Drainage	Vector	Laos, Viet Nam	1955	250,000	
LM - DN042	Drainage	Vector	Thailand	1958	250,000	
LM - DN043	Drainage	Vector	Thailand, Laos	1962	250,000	
LM - DN044	Drainage	Vector	Thailand, Laos, Viet Nam	1954	250,000	
LM - DN045	Drainage	Vector	Laos, Viet Nam	1954	250,000	
LM - DN046	Drainage	Vector	China, Laos	1955	250,000	
LM - DN047	Drainage	Vector	China, Bhutan, Thailand	1955	250,000	
LM - DN048	Drainage	Vector	Bhutan,Laos Thailand	1955	250,000	
LM - DN049	Drainage	Vector	Bhutan, Laos,Thailand	1955	250,000	
LM - DN050	Drainage	Vector	China,Viet Nam,Laos	1954	250,000	
LM - DN051	Drainage	Vector	Viet Nam, Laos	1954	250,000	
LM - DN052	Drainage	Vector	Laos, Viet Nam	1954	250,000	
TH-AM001	Admin. Buriram	Vector	Thailand		50,000	

DATASET CATALOGUE

Data Availability : Mekong Secretariat

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
TH-CT005	Contour	Vector	Thailand, Laos		20,000	
TH-CT006	Contour	Vector	Thailand, Laos		20,000	
TH-CT007	Contour	Vector	Thailand,Laos		20,000	
TH-CT008	Contour	Vector	Thailand		20,000	
TH-CT009	Contour	Vector	Thailand		20,000	
TH-CT010	Contour	Vector	Thailand, Laos		20,000	
TH-CT011	Contour	Vector	Thailand, Laos		20,000	
TH-CT012	Contour	Vector	Thailand, Laos		20,000	
TH-CT013	Contour	Vector	Thailand, Laos		20,000	
TH-CT016	Contour	Vector	Thailand		20,000	
TH-CT017	Contour	Vector	Thailand		20,000	
TH-CT018	Contour	Vector	Thailand		20,000	
TH-CT019	Contour	Vector	Thailand		20,000	
TH-CT020	Contour	Vector	Thailand		20,000	
TH-CT021	Contour	Vector	Thailand		20,000	
TH-CT022	Contour	Vector	Thailand		20,000	
TH-CT023	Contour	Vector	Thailand		20,000	

DATASET CATALOGUE

Data Availability : Mekong Secretariat

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
TH-CT027	Contour	Vector	Thailand, Laos		20,000	
TH-CT028	Controur	Vector	Thailand,Laos		20,000	
TH-CT029	Contour	Vector	Thailand, Laos		20,000	
TH-CT030	Contour	Vector	Thailand,Laos		20,000	
TH-CT031	Contour	Vector	Thailand, Laos		20,000	
TH-CT033	Contour	Vector	Thailand		20,000	
TH-CT034	Contour	Vector	Thailand, Laos		20,000	
TH-CT035	Contour	Vector	Thailand		20,000	
TH-CT039	Contour	Vector	Thailand, Laos		20,000	
TH-GL008	Geological	Vector	Thailand	1972	250,000	
TH-GL009	Geological	Vector	Thailand	1979	250,000	
TH-GL010	Geological	Vector	Thailand	1979	250,000	
TH-GL011	Geological	Vector	Thailand	1979	250,000	
TH-GL012	Geological	Vector	Thailand	1979	250,000	
TH-GL014	Geological	Vector	Thailand	1976	250,000	
TH-GL015	Geological	Vector	Thailand	1979	250,000	
TH-GL016	Geological	Vector	Thailand	1979	250,000	

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : Mekong Secretariat

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
TH-GL018	Geological	Vector	Thailand	1976	250,000	
TH-GL031	Geological	Vector	Thailand	1976	250,000	
TH-GL032	Geological	Vector	Thailand	1976	250,000	
TH-GL033	Geological	Vector	Thailand	1979	250,000	
TH-GL036	Geological	Vector	Thailand	1979	250,000	
TH-GL037	Geological	Vector	Thailand	1979	250,000	
TH-GL039	Geological	Vector	Thailand	1979	250,000	
TH-GL040	Geological	Vector	Thailand	1979	250,000	
TH-GL042	Geological	Vector	Thailand	1979	250,000	
TH-GL043	Geological	Vector	Thailand	1986	250,000	
TH-LU001	Land Use	Vector	Thailand	1990	500,000	
TH-CT032	Contour	Vector	Thailand,Laos		20,000	

SPREP

Dataset Catalogue

P.O.Box 240, Apia,

Western Samoa

Tel: 685-21929

Fax: 685-20231

* All dataset request in this catalogue should be forwarded to the above address.

G R I D
BANGKOK
Fax : (66-2) 516 2125

DATASET CATALOGUE

Data Availability : SPREP

As of 12 October, 1993

CODE	TITLE	TYPE	LOCATION	DATE	SCALE	SIZE
	American Samoa	Vector	Tutuila Island		1:60,000	2 MB
	Federated States of Micronesia	Vector	Pohnpei		1:100,000	8 MB
	Guam	Vector	National		1:100,000	1 MB
	Republic of Kiribati	Vector	Arorae		1:25,000	33 KB
	Federated States of Micronesia	Vector	Truck		1:125,000	1.5 KB
	Republic of Kiribati	Vector	Tarawa		1:50,000	159 KB
	Republic of Kiribati	Vector	Kuria		1:25,000	192 KB
	Republic of Kiribati	Vector	Aranuka		1:25,000	59 KB
	Niue	Vector	National			7 MB
	Marshall Islands	Vector	Majuro		1:35,000	161 KB
	Palau	Vector	Northern Part		1:25,000	2 MB
	Solomon Islands	Vector	Guadacanal		1:50,000	128 KB
	Tokelau Islands	Vector	Nukunonu			
	Kingdom of Tonga	Vector	National		1:25,000	10 MB
	Tuvalu	Vector	Nui			
	Western Samoa	Vector	National		1:50,000	22 MB

Table of Contents

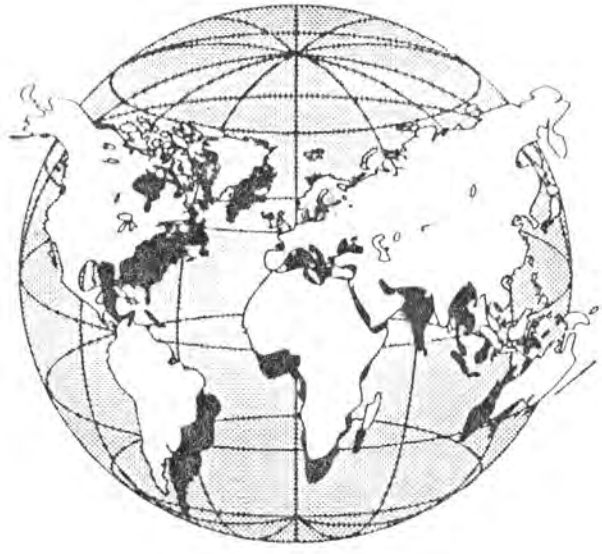
1. BACKGROUND 1
1.1 GRID Centre Roles 2
1.2 Users of the GRID Archive 3

2. THE GRID ARCHIVE 3
2.1 Types of Data 3
A sample of GRID Global Datasets: 3
2.2 Categories of Data for Distribution 4
A. Global and regional datasets from UN, non-governmental or intergovernmental sources: 4
B. Global and regional datasets from national organizations: 4
C. National datasets from international development activities and non-governmental organizations: 4
D. National datasets from national organizations: 4
E. Datasets from commercial organizations or centres subject to cost recovery: 4
2.3 Dataset Availability 4
2.4 Archive Maintenance 5
2.5 The GRID Data Bulletins 5
2.6 The GRID Meta-Database and NASA Master Directory 6

3. Data Release Guidelines and Procedures 6
3.1 Release guidelines 6
3.2 Procedure for requesting data 6
3.3 Charges 7
3.4 Data media and formats 7
3.5 Acknowledgements 7

G R I D

GLOBAL RESOURCE INFORMATION DATABASE
INFORMATION SERIES NO. 17 (REV. 2)



Data Release Policy
and
Data Archive Access Guidelines

November 1992

Global Resource Information Database, United Nations Environment Programme, PO Box 30552 Nairobi Kenya

1. BACKGROUND

GRID, the Global Resource Information Database, is an environmental data management service within the United Nations system which maintains a distributed global archive of environmental information in digital form for use by environmental analysts and decision makers at national, regional and global levels. The GRID archive is maintained to assist individual nations and the international community in making sound decisions related to resource management and environmental planning by enhancing the availability and applicability of digital environmental data.

The Data Release Policy statement and Data Archive Access Guidelines describe the types of data which have been collected into the GRID archive and how users should go about obtaining them. It must be emphasized that most datasets within the archive have been contributed by the researchers or institutions who have created them so that data users may more readily locate and acquire them. Without such contributions the variety of datasets available would be greatly reduced, and GRID recognizes both the value of these contributions and the necessity for complete citation of suppliers in all published uses of these data.

The majority of datasets in the GRID Data Archive are freely available upon request, although contributors of datasets which are preliminary in nature and still under evaluation may require that they approve any requests for these data received by GRID. Similarly, the distribution national and sub-national datasets remains subject to the wishes of the states concerned, and data products of a commercial nature may be available for use in GRID Centres only. Details of these criteria are given later in the document. Although GRID does not charge for distribution of these data, it does encourage requesters to provide appropriate new and important datasets to the archive in exchange for data released. In this way it is hoped to continually improved both the scope and quality of datasets available.

GRID was established in 1985 by the United Nations Environment Programme (UNEP) in the framework of Earthwatch, the UN system-wide environmental assessment activity. GRID is an international co-operative effort involving UN Specialized Agencies, intergovernmental organizations and national governments, coordinated from a Programme Activity Centre of UNEP.

The GRID archive contains many thousands of datasets covering over 50 environmental parameters or themes at scales ranging from global to sub-national. All datasets have the common characteristic of linking values for environmental parameters to specific locations on the earth's surface i.e. of being *spatially referenced*. This means that analysts can determine *where* as well as *what* combinations of environmental factors are in effect.

GRID's principal data analysis tools are *Geographic Information Systems* (GIS) and *satellite Image Processing systems*, both of which allow data for given areas to be combined, compared and analyzed on a geographic basis. Through use of these tools, previously unidentified *relationships* between environmental factors may be more readily identified, and the plausibility of relationships tested. Most data archived by GRID are stored in formats amenable to processing with such tools.

GRID has four main data management functions:

1. to bring together key global and regional environmental datasets produced as a result of inventory and monitoring activities, particularly those of the Global Environment Monitoring System (GEMS)
2. to integrate such datasets through geographical referencing and defined functional linkages within geographic information systems (GIS)
3. to establish an analytical basis for assessment statements on selected key environmental issues
4. and, in general, to convert environmental data into integrated information usable by both national and international decision-makers and scientists anywhere in the world.

GRID also aims to provide access to a unique international GIS service, which includes computer hardware, software and expertise.

The *GRID Brochure*, the reports in the *GRID Information Series*, and the *GRIDView* leaflets provide further information on the GRID system and its activities. They may be obtained through the Director of GRID or the Manager of any GRID Cooperating Centre at the addresses given at the back of this publication.

1.1 GRID Centre Roles

As noted above, GRID is a distributed system currently comprising co-operating centres each with specific geographic and sectoral responsibilities.

Location	Support & Staffing	Role
Nairobi, Kenya **Geneva, Switzerland**	UNEP, and Government of Switzerland	Main data archive repositories; application and technology transfer support.
Arendal, Norway	Norway Ministry of Environment	Polar areas and northern oceans data repository; development of Baltic basin integrated database.
Sioux Falls, USA	EROS Data Centre (US Geological Survey), NASA, UNEP	Access point to NOAA, NASA and EDC data holdings, and to EDC technical staff; high-quality image production; global land characterization.
Bangkok, Thailand	UNEP, Asian Institute of Technology	Asia data repository and support for Southeast Asian regional activities; technology transfer support to region.
Tsukuba, Japan	Centre for Global Environmental Research (National Institute for Environment Studies); Ministry of Environment	Access to Cray-2 super-computer; support to International Lake Environment Committee; development of methodologies for integration of environmental and socio-economic data.
Kathmandu, Nepal	International Centre for Integrated Mountain Development (ICIMOD); Governments of Germany & Switzerland	Himalaya & Hindu Kush integrated database development; development of strategies for acquisition, management and analysis of data for mountain areas.
Warsaw, Poland	Polish Ministries of Environment, and Natural Resources & Forestry; Norwegian Ministry of Environment	Support to East European regional activities using Polish expertise; development of bio-diversity assessment for a national State of Environment report.
Sao Jose dos Campos, Brazil	Instituto Nacional de Pesquisas Espaciais (INPE)	Environmental analysis; remote sensing; access to datasets for Amazonia.
Moscow, Russia	Ministry for Environment Protection	Environmental data access for the Commonwealth of Independent States; boreal forest data
Suva, Fiji (pending)	UNEP, South Pacific Regional Environment Programme (SPREP)	Support to South Pacific national and regional activities.

1.2 Users of the GRID Archive

Each year thousands of environmental datasets are duplicated from the GRID archive and distributed cost-free to users around the world. Many of the individuals who request data are researchers and environmental analysts responsible to national agencies for environmental management or resource planning. Others are global change scientists or academic researchers affiliated to universities. Datasets from the GRID archive have also been distributed to secondary school students and undergraduates. Although most datasets in the archive are available from other sources, these users have taken advantage of GRID's existence as a single point of contact alleviating the need to contact a multitude of separate institutions.

The GRID archive is also available to researchers and analysts undertaking studies in collaboration with UNEP, either as individuals or on behalf on national institution, international organizations or non-government organizations.

In many cases those who request data from GRID already possess digital environmental data for other regions or parameters. Wherever possible, GRID encourages the contribution of such datasets to the archive so that others may in future benefit from their free availability.

2. THE GRID ARCHIVE

2.1 Types of Data

Whether or not specific types of data are available from the GRID archive depends on the particular area under consideration. Global datasets in the GRID archive necessarily cover all areas of the earth, but their effective scales ranging from 1:2 million to 1:100 million mean that they are of limited use to national-scale applications. However, the GRID data archive does also contain data at scales of 1:1 million or larger for some areas. As described below, GRID Data Bulletins are published regularly with details of dataset available from the archive, and the GRID Meta-Database system provides users with computerized browse and query facilities for identifying datasets of interest. The GRID Director or the Manager of any GRID Cooperating Centre (addresses given at the end) will provide full details of datasets available for specific areas or countries.

A sample of GRID Global Datasets:

Land Use and Landcover Cultivation Intensity; Seasonal Integrated Albedo; Natural Wetlands; Vegetation Type; Vegetation Index (Weekly; Monthly, Seasonal & Annual maxima available); Landscapes	**Boundaries** Political, national and selected sub-national; roads, railroads; Natural including coastlines, islands, lakes; major & minor rivers.	**Climate** Precipitation & Temperature anomalies; Precipitation and Temperature (30-year averages)
Atmospheric gases Ozone Distribution; Methane Emission	**Ecosystems & Lifezones** Major Eco-system Complexes; Life Zones	**Elevation** 5-minute and 10-minute cells
Demography Population	**Geophysics** Surface Crustal Temperature	**Soils** FAO classifications; Soil Degradation; Desertification

Similar categories of data are available at continental, regional, national and sub-national scales, and new datasets are regularly incorporated into the archive.

2.2 Categories of Data for Distribution

The majority of datasets within the GRID archive are effectively in the public domain and so may be freely duplicated and distributed; others are subject to certain restrictions arising from their contributors. Datasets in the GRID archive may be classified into the following general categories:

A. Global and regional datasets from UN, non-governmental or intergovernmental sources:

"Public domain" datasets which have been released by a UN organization or an intergovernmental organization such as the International Union for Conservation of Nature and Natural Resources (IUCN) and the International Soils Reference and Information Centre (ISRIC), etc., either as maps, atlases, books or in other published form, or which are available as digital data. Examples are the *FAO Soils Map of the World* and the *Global Assessment of Human-Induced Soil Degradation (GLASOD)*. This category also includes datasets derived by UNEP-GRID Centres.

B. Global and regional datasets from national organizations:

Developed within national agencies, typically for analysis of global processes or as an aid to international communication. Examples are the US Navy Global Spot Elevation Dataset and the NOAA Weekly Global Vegetation Index. This category could include datasets derived by cooperating GRID-compatible national centres. For most practical purposes they are "public domain".

C. National datasets from international development activities and non-governmental organizations:

Obtained from the same sources as type A data above, these data are limited in scope to one country or a part thereof. They have been generated through the activities of an internationally financed development project, and are generally considered by the country in question to be suitable for circulation to users outside that country.

D. National datasets from national organizations:

National or sub-national datasets arising out of a national organization project activity, often generated from GRID supported case studies. Such datasets are usually privileged by the terms of the case study agreement. Most national and sub-national datasets in this category may only be released with the expressed permission of the relevant authority. Spatially resampled (generalized) versions of the data may be used to update other GRID datasets.

E. Datasets from commercial organizations or centres subject to cost recovery:

Datasets produced by profit-making organizations, either for internal use or for public sale, or by national institutions which are bound by legislation to recover costs of data acquisition and distribution. These reside in the GRID archive by arrangement and are only for in-house use. Many of these datasets are satellite images sold by commercial vendors.

Please note that licensing agreements do *not* allow GRID to distribute either raw (unprocessed) satellite data from commercial sources or any other datasets subject to commercial license.

2.3 Dataset Availability

Each dataset held by GRID carries a distribution classification, namely:

Free Access those data which GRID is normally able to distribute without restriction. This is the vast majority of the datasets in the archive.

SOURCE APPROVAL those datasets which GRID holds in the archive but which require prior approval from the originating body before distribution. GRID will usually apply to the originating body on behalf of the requester, but the requester will often need to provide very specific information concerning the intended application and distribution of those data. *This class includes national and sub-national datasets. Requests for these will usually require indication that the relevant national government knows and approves of the purpose for which the data is to be used.*

IN HOUSE usually licensed products from commercial concerns which GRID is unable to distribute. *This class includes all unprocessed commercial satellite data.*

2.4 Archive Maintenance

The GRID archive is operated in a distributed fashion with each GRID Cooperating Centre responsible for acquisition and distribution of datasets pertaining to a given geographical or sectoral sphere (see earlier table). In general, the division of Centres' responsibilities is along geographical lines: the Africa datasets, for instance, are maintained in Nairobi. Addresses for GRID Centres are given at the end of this document. As improved information is received at GRID, relevant datasets are modified and the changes incorporated into the GRID archive at the responsible Centre. All Centres report any such updates to the GRID Director on a regular basis.

Any errors which users detect in datasets acquired through GRID should be reported to the supplying Centre, which will take appropriate measures to rectify them in future releases of the data. In cases of problems concerning accessibility of the data, such as the storage format used or incomplete topology, GRID will endeavour to rectify the problem in-house. All issues relating to the accuracy of the data, its coherence, consistency and comparability to other similar datasets will be referred to the original publisher.

2.5 The GRID Data Bulletins

On the basis of the information received from the various GRID Centres, a detailed listing of the current GRID datasets is issued on a regular basis from GRID-PAC in printed form and on diskettes. Both summary and detailed bulletins are available; detailed information about each dataset includes:

- name or title
- source, including originators, and originating unit or organization, and a literature reference, as appropriate.
- dates indicating publication or generation, and/or date range covered by the dataset.
- the data structure; datasets are normally archived in either Arc/Info vector format or a simple raster format.
- map projection and coordinate system
- scale or spatial resolution, as appropriate.
- availability as per the guidelines outlined in section 2.1; all datasets have been assigned one of the following categories: free access, source approval, or in-house GRID use only.
- a descriptive legend and narrative statement supplying more details about its contents, history, purpose and limitations in terms of accuracy and quality where these have been determined by the relevant science group.

2.6 The GRID Meta-Database and NASA Master Directory

The GRID Meta-Database System is a computer-based catalogue designed to help potential users of the GRID archive to identify and locate suitable datasets. It does not contain the actual datasets held by GRID (which run to many gigabytes of storage) but rather descriptions or *metadata* about them. The parameters listed in section 2.3 are a printed subset of the GRID meta-database directory, which has 30 or more parameters per dataset.

The first implementation is installed on mainframe systems at the Nairobi and Geneva Centres and descriptions of most datasets in the GRID archive have been entered. This versions will soon be accessible by public network users; details of access methods with be published forthwith. Implementations for DOS PC and UNIX workstation users are expected to be released during 1992.

A general on-line data directory containing the GRID meta-database and other references will be accessible at GRID-Geneva during 1992; a major part of the US National Aeronautic and Space Administration (NASA) Master Directory will be incorporated. This system will be available to data network users. In addition, entries in Directory Interchange Format have been exchanged with and are accessible through the Global Land Information System (GLIS) of the US Geological Survey's EROS Data Centre.

3. Data Release Guidelines and Procedures

3.1 Release guidelines

In general, requests for data from the archive will be filled according to data availability, work load and the nature of the dataset being requested. Requests will be queued with priority given to requests related to joint activities with UNEP programme areas.

UN Organizations, intergovernmental organizations, private research organizations, scientific and academic Organizations, non-governmental organizations and national government organizations are all eligible to request data from the GRID archive. Requests from such eligible organizations for data with an Free Access rating will normally be filled without further clearance. Requests for data with a Source Approval rating will be referred to the relevant authority for clearance, and in some cases, the requestor will be advised to seek the data from source. Datasets with an In-House rating will not be distributed; however, information about such datasets, including the distributor's name, will be sent to eligible organizations on request.

Data requests from private commercial firms and private individuals will not normally be filled. Exceptional cases in which the intended use of the data would be of direct benefit to the United Nations or member states will be considered on a case-by-case basis by the GRID Director.

3.2 Procedure for requesting data

Requests for data from the GRID archive should be sent on the data request form included at the end of this document to the nearest GRID Center at the address given on the back. These Centers will forward requests to the responsible GRID Centre for processing. Datasets will be sent by UN pouch or international mail as appropriate. In the case of urgent requests, datasets can be sent by commercial courier service at cost to the recipient. In the case of very large orders, datasets may be sent by air freight to be paid by the recipient upon receipt.

The variety of computer platforms, operating systems and analysis software now available makes it difficult to ensure that data are delivered in the form most practical for the user. If GRID must seek additional details before processing a request, delivery may be delayed unnecessarily. Therefore it is very important that all the following information be provided when making data requests to GRID:

- the requestor's name, title and organizational affiliation(s).
- the nature of the project for which the data are being requested, including title, objectives, timetable, source(s) of finance, institutional framework, anticipated outputs, and expected use of outputs.
- the software and hardware on which the data will be processed.
- the name(s) and/or identifier number(s) of the dataset(s) requested.
- the desired output medium: magnetic tape, diskette or optical disk. Where tape is the preferred medium, parameters such as density and block size should be specified.

Every effort will be made to fill data requests promptly. However, delays may occur, particularly for datasets requiring source approval prior to distribution.

3.3 Charges

There is no charge for datasets obtained from GRID. However, recipients are asked to supply an appropriate number of replacement media. *Please note that all data requests should be accompanied by an adequate number of disks or tapes.*

GRID does actively encourage data requesters, whenever appropriate, to exchange new and important datasets for those obtained from the Data Archive. While this is not a condition to acquisition of datasets from GRID, it is hoped that this policy will help ensure the continued growth of both variety and quality of datasets available to users through the archive.

3.4 Data media and formats

GRID datasets are normally supplied on 9-track magnetic tape (1600 or 6250 bpi), IBM 3480 or DEC TK70 tape cartridges, diskettes (3.5" or 5.25" floppy), or optical disk (IBM 3363 200 MByte). Datasets are usually distributed in the data format in which they are archived. Requests for data in other formats will only be filled in exceptional cases. Unless the requester specifies that a particular proprietary data structure is appropriate (such as VAX/VMS BACKUP, IBM VM TAPE LOAD or UNIX *tar*), data will be forwarded as Arc/Info export files for vector coverages or as headerless, uncompressed, one line per record files for raster data.

A copy of available documentation, preferably in ASCII file format, will be sent with datasets.

3.5 Acknowledgements

Users of datasets supplied through GRID are requested to incorporate in output products and reports acknowledgements to the originator of the data and to the fact that they were acquired through GRID. Appropriate wording may be like "Unesco (1987) through GRID". GRID's ability to remain abreast - and hence to anticipate the evolving requirements of its user community - will be greatly enhanced if a copy of any significant outputs could be provided to the GRID Centre supplying the data, or to the Director of the GRID Programme Activity Center, UNEP, Nairobi.

With regard to all matters concerning data requests, the decision of the UNEP Office of the Environment Programme is final.

GRID - BANGKOK

Global Resource Information Database
Asian Institute of Technology
GPO Box 2754, Bangkok 10501, Thailand

UNEP

Telefax: (66-2) 516-2125
Telex: 84276 AIT TH

Telephone: (66-2) 516-2124
(66-2) 516-0110 Ext. 536

DATA REQUEST FORM

In order to expedite your data request, please ensure that a copy of the following form is completed :

Address information

Name _____
Title _____
Section _____
Organization _____
Postal Address _____
_____

Phone No. _____
_____
Fax No. _____
Telex No. _____
E-mail address _____

Data Sets Requested

Dataset Code	Title	Dataset Code	Title
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Data Media Information

Media to use when sending the requested data (tick one):

Diskette

3.5 "	720kb	___	1.4 Mb	___
5.25"	720kb	___	1.2 Mb	___

Tape

9-track	1600 bpi	___	6250 bpi	___
Quarter-Inch-Catridge		___		

Additional Information

Computer used to process the data _____
Operating System used _____
Software used to process the data _____
Intended use for the data _____
_____

Date of request _____ Signature _____

For GRID-Bangkok use only

Request Number _____ **Date request received** _____

Dataset Information

No of Datasets _____ No of Files _____ No of bytes _____

Media Information

Type _____ Required quantity _____

Supplied by requestor _____

Request management

____ Forward the request to appropriate GRID node

Date forwarded _____ Node _____

____ Requested data available at the GRID-Bangkok node

Processing required ____ No special processing (only copying, etc)

____ Minimal processing (subset, conversion, etc)

____ Special processing

Staff member assigned : _____

Expected date of completion : _____

Dispatch date _____ **Signature of coordinating staff** _____

Follow up action

_____

_____

_____

Feedback from the requestor

_____

_____

_____