

SARHAD PROVINCE CONSERVATION STRATEGY

INDICATORS FOR SUSTAINABLE DEVELOPMENT

SECTION 2

***INTEGRATED ASSESSMENT SYSTEM FOR
PAKISTAN'S NORTH WEST FRONTIER PROVINCE***

PREPARED BY

**DR. PETER HARDI
LASZLO PINTER
JEFF TURNER**

**MEASUREMENT AND INDICATORS PROGRAM
INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT
WINNIPEG, CANADA**

APRIL-JUNE 1998

THE INTEGRATED ASSESSMENT SYSTEM

An integrated assessment system has four main components:

- The *process* of assessment;
- The *institutional arrangements* for the assessment;
- The *tools* of assessment (particularly the indicator set); and
- The *products* of assessment (periodical reports and data sets).

The present document addresses the first three topics.

Main expectation

The Pakistan Environment Programme (PEP) partners expect that the Technical Assistance (TA) provided by the International Institute for Sustainable Development (IISD) will outline an actual system for assessing progress toward sustainable development. The system for measuring progress in the implementation of the Sarhad Province Conservation Strategy (SPCS) is being applied to the North West Frontier Province (NWFP) as a pilot project. Monitoring the implementation of the National Conservation Strategy (NCS) is a secondary goal. Each of these efforts is seen as steps to the more general end of introducing sustainable development reporting on a national scale.

The purpose of the document is to provide clear answers to the following questions:

What is an assessment process?

What issues to measure?

What data to collect? What data are available?

How to measure?

Who is to be involved in measurement and assessment?

How frequently to report progress?

Long-term objectives

The PEP partners look for the establishment of an *indigenous capacity* of measurement, assessment and reporting that will remain functional even when external aid organizations leave the country. The role of these organizations must be catalytic, being actively involved only in the first measurement projects, while domestic capacity develops.

The measurement and assessment system that will be established in the NWFP will need to be unique to the province, but in terms of its structure and strategy it will need to be general and applicable to other provinces and eventually to the country as a whole.

Specific objectives

A clearly identified objective of the assessment system is to help government correct its course during the planning and implementation of development and conservation strategies. Another objective is to help local communities to adopt sustainable management practices and monitor local capacities. The capacity assessment identified a need for actual physical measures and specific indicators, instead of macro-level, highly aggregated indices.

Products

- An integrated assessment system, including process description, institutional arrangement, data processing and reporting;
- A reporting system based on measured data and including a set of indicators;
- A matrix to compare what is proposed in the strategies and what is already measured;
- A matrix of selected priority issues with corresponding data and proposed indicators;
- A set of ready-to-use indicator sheets;
- A code-book to data availability.

PART 1: THE PROCESS

ESTABLISHMENT OF THE MEASUREMENT AND REPORTING SYSTEM

The development of a measurement and reporting system that is suitable to local audiences will require a process with clear objectives, time-line, resources, institutional arrangements, and the identification and commitment of participants with the necessary knowledge and skills. The current assessment is already part of this process, but it is only an initial phase, to be followed by the action of local organizations. Ideally, the two will be closely linked. Although the TA plays an important role in building capacity for measurement, Pakistani organizations should become fully capable of carrying on the measurement and assessment activity on their own, relying on strong national networks and expertise. *Figure 1 describes the key phases, tasks and nature of a general assessment process that will also be used to describe a process specific to the SPCS and the NCS.* A detailed workplan and timeline for reporting on the implementation of the SPCS is attached (Attachment 1).

The process template includes three main phases: (1) preparatory phase; (2) evaluation; and, (3) implementation. Two of these, *the preparatory and evaluation phases started with this TA, while the third and crucial phase will need to be initiated and maintained by organizations in Pakistan.* The process design is based on our experience in establishing measurement and assessment systems on the provincial and large organizational scale, and general principles of assessment, particularly the Bellagio principles¹ for assessment. Both our experience elsewhere and the meaning of the Bellagio guidelines need to be translated into specifics that reflect the unique conditions of the NWFP and the needs of the conservation strategies.

Preparatory phase

1. Identify key provincial policy priorities

The preparatory phase included the identification of key policy priorities and existing capacities for measurement and reporting in the NWFP. The mandate of the NCS and SPCS provides the overall context for measurement and assessment and defines the relationship with government agencies, other NGOs and communities in the country. The selection of provincial policy priorities must always be based on this mandate and reflect the extent of harmonization between national and provincial policy priorities.

¹ <http://iisd.ca/measure/1.htm>

2. Identify existing measurement and reporting systems

One of the key objectives of this TA is to help set up a measurement and reporting system. Assessment and performance reporting is routinely done in many organizations for different purposes, and it was fair to assume that some of the existing reporting mechanisms in Pakistan and the NWFP may be related to the kind of assessment they wish to develop for the strategies. The assessment of such capacity was necessary to help identify potential linkages, possible challenges, and avoid unnecessary duplication.

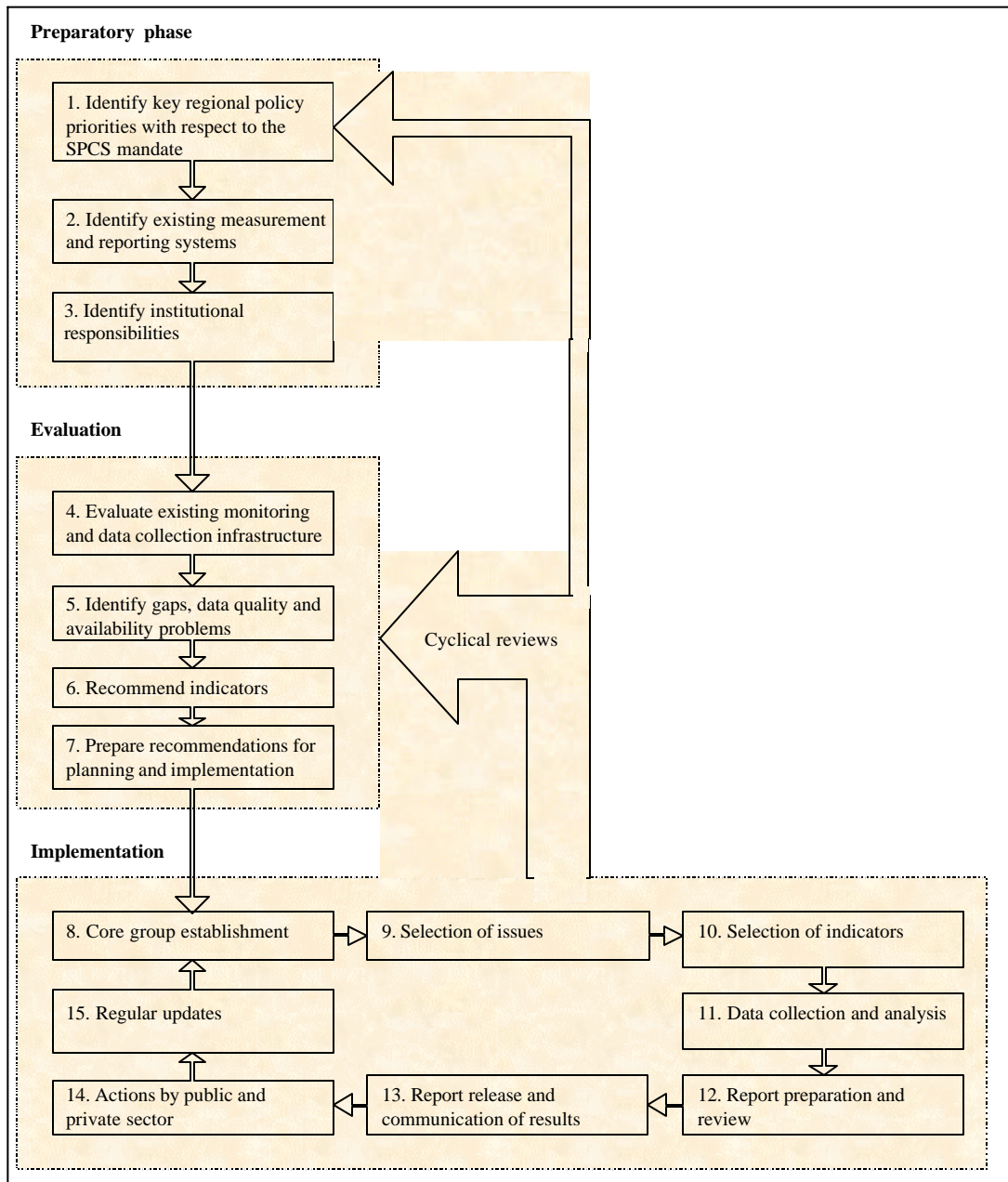


Figure 1, Section 2: The process of establishing and managing a measurement system

3. Identify institutional responsibilities

While measurement belongs to the core mandate of some organizations, such as statistical bureaus, it is secondary in others. The assessment, therefore, had to cover the role measurement and assessment play within the broader context of policy making, enforcement, and so on, and extend to the understanding of organizational responsibilities.

A recommendation for an institutional arrangement, based on the findings of the Capacity Assessment presented in the Phase 1 Report of the TA, is included as a *separate part* of this document.

Evaluation phase

4. Evaluate existing monitoring and data collection infrastructure

Some monitoring and data collection exists in most regions of the world, even if socio-economic, organizational or topographic conditions make it difficult, and the NWFP is not an exception. Even if there are significant gaps in the types of parameters measured, existing data collection capacities should and need not be duplicated. Collecting a wide variety of socio-economic and environmental data requires expertise and resource capacities on an ongoing basis that few organizations can afford to maintain indefinitely.

In Pakistan, as in most other countries, routine and standardized data collection and monitoring are in the domain of a few key agencies. Information from these sources may provide the most important basis for the indicators to be used by the SPCS.

5. Identify gaps, data quality and availability problems

The assessment of data gaps and data quality problems is based on understanding the nature of the information needed to conduct a meaningful assessment. The consultants relied on the findings during the preparation and field work stage. Their information was based on studies, reports, documents as well as interviews, consultations and the acquired familiarity with the mandates, policies and activities of the provincial government, the local IUCN office and the SPCS Support Team, as summarized in the Phase 1 Report. As expected, *apart from a significant body of information, some serious gaps in data and information collecting and processing capacity have been found.*

In terms of data availability and quality, a range of questions were raised, some of the most basic included the following:

- existence of monitoring system and capacity;
- data availability;
- adequacy of spatial coverage;
- adequacy of time series;
- adequacy of measurement methods;
- access to measurement results.

6. *Recommend candidate indicators*

Based on the information required to construct meaningful indicators and the limitations posed by data, a preliminary set of measures have been identified. In addition to relevance to provincial issues, institutions and their policies, a number of other criteria were used when selecting these measures.

7. *Prepare recommendations for planning and implementation*

The final phase of the TA includes the preparation of recommendations for implementing a measurement system. Implementation has several facets, including institutional and political will, resources, technical skills and capacity development, and first and foremost a vision for what the system should achieve and how it should operate. *Some elements of this are provided in the TA, but it will require additional insights throughout the implementation process by provincial stakeholders, experts and communities.*

Implementation phase

With the preparation of recommendations for planning and implementation the mandate of the current TA will come to an end. Implementation of the recommendations will be mainly the task of the SPCS implementation partners that may or may not involve additional TA programs and external consultants. The ultimate objective of implementation is to develop and maintain a measurement and assessment capacity whose mandate is explicitly outlined in national and/or provincial legislation **and** that is self-sustaining in the NWFP because of technical knowledge and financial support. These are essential preconditions for creating a successful measurement and assessment system.

8. *Core group establishment*

Measurement and assessment in the provincial sense is a complex undertaking with many potential stakeholders and audiences, vested interests and sensitivities. Coordination of the process is a critical task, one that requires a *core group of a small number of people who are familiar with the technical, socio-cultural and political aspects of the region, and its information infrastructure.* The core group has a mandate to initiate and coordinate the process. It may consist

of representatives of some of the key organizations interested in and capable of permanently hosting the initiative. These and other key institutional requirements will be discussed in Part 2 of this report.

A key task of the core group will be to develop an implementation strategy within the framework of its mandate, following up, as appropriate, on the recommendations of this TA. The core group will have to understand the objectives, mechanisms and constraints of measurement, foreseeing the usefulness and some of the key uses of measures in the identification, diagnosis and responses to trends most important for the people and land of the NWFP. The following points describe what the strategy of the core group would have to address in detail.

9. *Selection of key issues*

In order to keep the measurement initiative focused, the core group will need to find a way to select a *small number of key issues* that will be measured by indicators. Such a selection has two purposes. First, it will help limit the number of indicators – if there are too many, they may take attention away from the ones that are really important. Second, it will also help the core group and others involved in this process to think about the overall objectives of the conservation strategy and provincial development.

The issues addressed by the conservation strategy could provide an initial menu from which a smaller number of priority issues are selected. The number of potential issues, even if one considers only those listed in the conservation strategy, is very high, and dealing with them *will require a piecemeal approach in which initially only a subset of issues is selected.* The selection of a small set of key issues requires an iterative process, with public participation.

Based on this, the selection of key issues would consist of two phases:

- Development of an overall framework for issues and indicators

There are a number of frameworks in use, such as the one based on the pressure-state-response (PSR) classification or another that breaks provincial issues into four categories, including economic, ecological, human and institutional capital². It would be the task of the core group to decide whether any of the existing frameworks would be adequate for the NWFP and the SPCS, or whether they would need to adjust them to suit their specific requirements. For the present purpose, *the SPCS and the NCS should serve as the framework to organize the measures and indicators.*

- Participatory selection of key issues

Key provincial issues will be selected for the categories defined in and by the framework used. The issues selected will help guide the selection of indicators themselves, so it is an important step in the cyclical process.

² For a review of currently used frameworks see Industry Canada report.

While the core group could provide the framework, *it will be necessary to involve a broader range of stakeholders in the selection of issues*. Core group members, however well informed, may place emphasis on issues of concern to the stakeholders they are most closely associated with, and downplay the importance of issues essential for others. This may risk missing some critical provincial issues relevant for stakeholders who are underrepresented in the process. Deciding who will be the other social stakeholders involved in the measurement exercise is a very important and, as often turns out, sensitive step, especially if some groups feel they are evaluated according to measures chosen by others.

An important point is *setting a proper balance between social stakeholders representing major interests and participants with expert knowledge of specific matters* (e.g., people and organizations with professional level knowledge of environmental issues, geo-statistics, and so on.). One possibility is to involve technical experts in separate working groups, another to mix them with other stakeholders in order to keep the number of groups lower.

The number of stakeholders involved in the measurement initiative can get rather large, although it may be necessary *to keep the number under 40 or 45*. The selection of issues would normally take place in a series of participatory, facilitated meetings. Even if the number of participants is under 40, it may be necessary to form subgroups to examine specific issue clusters or categories identified in the framework. Under guidance by the core group, these subgroups would develop and prioritize issue lists in one cluster, e.g., natural environment or economic capital, and take their results back to the core group that integrates results and presents them in a whole group setting.

Either way, the result of this step will have to be *a prioritized list of well-defined issues in all categories of the applied framework or strategy*.

10. Selection of indicators

Based on the prioritized list of issues, stakeholders will make recommendations for specific indicators. An indicator will be associated with, and will be used to track changes in a specific issue. *The preliminary indicator set identified in the evaluation phase of the TA could serve as a starting point for the selection of the indicator set, amended with other measures as necessary*. The identification of indicators from the preliminary list provides the *interface that links the results of the TA and subsequent implementation*.

In addition to relevance to stakeholders, the measures selected will have to fulfill several selection criteria. There are many partially overlapping indicator selection criteria listed in the published literature, but some of them may have specific importance in the NWFP. Without a claim of completeness, the more important criteria will be:

- relevance to provincial stakeholders, acceptance of results and conclusions;
- data availability;

- measurability; and,
- cost of measurement.

The proposed indicators will have to be individually evaluated against these selection criteria by those proposing them and eventually by the core group compiling the indicator set for presentation to and approval by the entire stakeholder group.

11. Data collection and analysis

Data collection is one of the most labour-intensive and time-consuming parts of the measurement and reporting process that requires careful planning and coordination. The preparatory and evaluation phases of the TA provided information on existing monitoring systems and data streams. This information on the availability and quality of data can serve as the basis for the data collection process.

Normally data are gathered from existing databases and data sets, without the collection of new data. *Mapping these databases and data streams, such as the one prepared for this report will help identify sources.* In some critical cases where an issue received very high priority, but no data are available, primary data collection may take place. Whether this will be possible depends on the nature of data to be collected and the availability of resources. In case data are not available and cannot be promptly collected for an indicator, the measurement initiative can make a strong argument for including the given parameter in future routine monitoring programs.

Data collection would be the collective task of the core group and working groups focused on specific issue clusters. The role of the working groups will be to identify individual data sources, access databases, assess the quality of the information, and compile the data in a commonly agreed upon database. *The core group provides overall guidance and synthesizes the data from the different working groups into an integrated set.*

12. Report preparation and review

Measurement is useful to the extent it reaches people and organizations that understand the importance and meaning of the indicators and can initiate an effective response. However, measurement is also an important part of making people realize socio-economic and ecological *trends and interactions* in the NWFP. Informing decision-makers and educating the public are two of the most important complementary uses of indicators, and both require that they are regularly published, easy to access and understand.

The report will have to address the following main points:

- presenting trends both in graphical and numerical format (probably in an appendix);
- explaining trends;
- evaluating policy successes and failures related to trends; and,

- identifying key linkages between a given indicator and other trends and indicators presented in the report.

The core group, in consultation with working groups, will define the main points in the analysis and the format in which the indicators are presented. *Draft sections on individual indicators will be written by working groups, and shared with the core group and other working groups to make cross-cutting analysis and help identify potential contradictions or synergies in different parts of the report.* The core group would serve as the depository for final drafts, write general sections of the report and compile the entire report for publication.

Given that there are several languages used in the region, optimally the whole report or at least its executive summary version would be translated and made available to people of the different ethnic groups.

13. Report release and communication of results

The trends analyzed in the report will help evaluate conservation and/or sustainable development strategies used in the NWFP, specifically from the perspective of the government and from a broader ecological and socio-economic approach. The audience therefore includes IUCN-P, other organizations involved with conservation initiatives, and the general public of the NWFP. It is essential that the measurement initiative, and in particular the release of the indicators, *receive adequate publicity in the local and provincial media.* This publicity will not be automatically given; it will need to be planned and organized by the core group well in advance. A good way to keep media attention on the initiative would be to have a representative of a respected media organization involved in one of the working groups.

14. Actions by public and private sectors

Step 14, 'actions' in Figure 1 means the influence indicators have on actual decisions. This impact may range from the evaluation and assessment of decisions, policies and management to the planning of alternative solutions. These 'actions' are of course outside the domain of the core group and the working groups for the management process, but it is this stage where the usefulness of the indicators and the measurement initiative gets tested.

15. Regular updates

Performance evaluation and measurement is an *ongoing activity*, and reporting on progress takes place in *cycles*. The frequency of these cycles is best defined in legislation; normally it would range from two to five years. The *first cycle is unique because the content, process and usefulness of the exercise needs to be tested*, but in later phases some of the tasks become more routine, embedded in institutional memory and the skills and knowledge of key participants.

PART 2: INSTITUTIONAL HOME

As part of the process of measurement and reporting, the regular use of indicators requires an institutional host that provides stability, continuity and adequate working conditions for the team performing the measures. The team, which preferably consists of the representatives of different institutions and organizations, requires clearly assigned duties and responsibilities as well as a degree of relative independence to minimize bias and/or interruption in its work. Importantly, adequate human and financial resources need to be allocated to the assessment, since it is not a one-time project but a long-term, institutionalized task. That is the only way to establish continuity, create a baseline data set, store data and information for future references, and rely on them as the (smaller or larger) community's institutional memory.

In the NWFP, there are several options for an institutional host. The host institution might be a government department or agency, a local NGO or an international organization that has an office at the site. Each of these arrangements has certain advantages and disadvantages. Considering the conditions mentioned above, the best solution seems to be a partnership based on collaboration between government and NGOs. The NWFP has established several Round Tables (RTs) to involve different stakeholders and increase representation in provincial decision-making and development planning. According to the information available at this time, the RTs are adequately functioning and might be the best institutional host for the assessment and measurement project. The RTs bring together government and grassroots activists, private and public sector, NGOs and community leaders.

The RTs, however, even if they are willing to be the formal host of the measurement and reporting tasks, are not organizations with a permanent location. A *Secretariat* with a *permanent office space* is still to be established. The choice of location should consider the availability of necessary technical conditions, easy access, and so on. It is important that a small but professional, *paid* staff be employed; it is a precondition for establishing a reliable database and/or institutional links to existing databases, the adequate handling of data and information, and the maintenance of technical capacity and institutional memory.

As part of Phase 2 of the TA, Dr. Hardi held discussions to find the most effective solution for the institutional arrangements of the assessment process. The recommendations of the Phase 1 Report (now part of Section 1 - Final Report) were further clarified and the outline of a satisfactory solution had been negotiated with the chief economist of the government of NWFP. Accordingly, a quasi-independent team, formally established by the RTs of the province, will be hosted by the office of the chief economist. The location of the team is under consideration (one possibility is the office of the Provincial Bureau of Statistics that directly reports to the chief economist).

The chief economist pledged full support for the SPCS assessment work. The team would include seconded government technical experts, NGO representatives (including IUCN's SPCS team), and

academic experts. Close collaboration with the Frontier Resource Centre is envisioned. The group might be headed by a co-chairmanship, including the chief economist and an NGO representative.

At the early stages the Secretariat only requires computers with adequate data processing software and preferably with an Internet connection to facilitate contact with other local, domestic and international offices. Geographic Information System (GIS) based measurement and data processing are not necessary for the effective operation of the Secretariat, though at a later stage it might provide a useful tool. The application of technology needs to be adjusted to local capacities; the experience with GIS technology in the NWFP proves that in an isolated environment and with false expectations it cannot fulfill its anticipated function, or worse, it might create disappointment and discredit later use.

The Secretariat would function as the core working group of assessment and measurement and formally might report to the RTs. The RTs could be the publisher of periodic reviews or state of sustainability reports.

ATTACHMENT TO SECTION 2 – ASSESSMENT SYSTEM
SPCS-PAKISTAN ASSESSMENT PROCESS WORK PLAN AND TIME LINE

TASK	Time* Cumulation by Stage		
	Stage 1	Stage 2	Stage 3
<i>Stage 1 Preparation and Evaluation</i>			
Identify key regional policy priorities	█		
Identify existing measurement & reporting systems		█	
Identify institutional responsibilities		█	
Evaluate existing monitoring and data collection infrastructure		█	
Identify gaps, data quality and availability problems		█	
Recommend indicators		█	
Prepare recommendations for planning and implementation		█	
<i>Stage 2 Implementation</i>			
Finalize institutional arrangements		█	
Core group establishment		█	
Selection of issues		█	
Selection of indicators		█	
Data collection and analysis		█	
Draft report preparation and review		█	
Draft report release & communication of results to stakeholders		█	
Write and edit final draft		█	
Finalize report		█	
<i>Stage 3 Publication and Action</i>			
Publish			█
Disseminate			█
Feedback			█

* Each segment represents a two-week time period. Approximately 60 weeks are needed to accomplish the task; currently the project is already in its second stage of implementation.