No. GEB/Stu-Eve/2019/12

Generating Global
Environmental Benefits - GEB

NEED ASSESSMENT STUDY OF SELECTED STAKEHOLDERS / DEPARTMENTS AT PROVINCIAL LEVEL (KHYBER PAKHTUNKHWA) FOR DEVELOPMENT AND ACCESS OF ENVIRONMENTAL INFORMATION MANAGEMENT SYSTEM

A need assessment study conducted by GEB project for 7 departments (EPA, PHED, Irrigation, Fisheries, Wildlife, Agriculture, P&D) in KP. Results proposed 4 approaches (direct, parallel, modular and phase-in) that may be adopted for establishment of a robust EIMS

GEB - A Joint Initiative of United Nations Development Programme (UNDP) & Ministry of Climate Change (MoCC)

Generating Global
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Acronyms

ADP	Annual Development Plan
AWP	Annual Work Plan
EIS	Environmental Information System
ESD	European Soil Database
GEB	Generating Global Environment Benefit
GEF	Global Environment Facility
GIS	Geographic Information System
ICT	Information and Communication Technology
IT	Information Technology
KP	Khyber Pakhtunkhwa
KP-EPA	Khyber Pakhtunkhwa- Environmental Protection Agency
MDG	Millennium Development Goal
MIS	Management Information System
MoCC	Ministry of Climate Change
NDMIS	National Disaster Management Information System
NEMIS	National Environmental Management Information System
NPC	National Project Coordination
P&D	Planning and Development
PHED	Public Health Engineering Department
PIF	Project Identification Form
PMU	Project Management Unit

SDPN	Sustainable Development Network of Pakistan
TORs	Terms of References
UNDP	United Nations Development Program
WISE	Water Information System for Europe

1. Executive Summary

The information and communications revolution is shaping a far more integrated economy. Addressing environmental and sustainability concerns requires a multidimensional approach that is interwoven with the global economy and the planet's natural systems. Both factors are mutually reinforcing. This is because the concept of sustainability requires a global economy in long-term harmony with its supporting natural systems. Following Millennium Development Goal (MDG) Number 7 aims to ensure environmental sustainability and requires countries to "integrate the principles of sustainable development into country policies and programs and reverse loss of environmental resources." The links between the economy and the environment are manifold: the environment provides resources to the economy, and acts as a sink for emissions and waste on the other hand. Natural resources are essential inputs for production in many sectors, while production and consumption also lead to pollution and other pressures on the environment. Poor environmental quality in turn affects economic growth and wellbeing by lowering the quantity and quality of resources or due to health impacts, etc. In this context, environmental policies can curb the negative feedbacks from the economy on the environment and vice-versa.

Likewise Environmental assets add to managing risks to economic and social activity, helping control flood risks, regulating local climate and maintaining the supply of clean water and other resources essential for maintaining life. This strengthen economic activity and wellbeing, therefore maintaining the condition of natural assets is a key factor in sustaining growth for the longer term. However Pakistan being a developing country with un-wise industrialization and rapid population growth is creating stress on the available resources, deteriorating environment and affecting public health. Pakistan faces significant environmental challenges from tackling dangerous climate change to managing threat to our water resources and bio diversity. The process of integrating environment into economic decision making in Pakistan is hampered by lack of consistent and reliable data & information.

A holistic approach needs to be adopted to address the prevailing environmental implications of the country, right from data generation & interpretation to policy making and implementation. Delivering essential and reliable information on environmental issues remains a major obstacle in the country. Presently the state of environmental data and information in Pakistan is much

poor, with the idea to remove barriers from environmental information management and mainstream global environmental concerns into economic decision making, United Nations Development Program (UNDP) together the Global Environmental Facility (GEF) has taken an initiative and launched a project with the help of Ministry of Climate Change (MoCC) i.e. "***Generating Global Environmental Benefits" GEB in 2018***. Pursuant to the Annual Work Plan (AWP-2019) of the GEB project, aims to conduct a "***Need Assessment Study of Selected Stakeholders/Departments at Provincial level for Development and Access of Environmental Information System"*** So that the same may be further explored for improvement in Pakistan".

In that regards, initially 08 nos. of core government environmental departments in Khyber Pakhtunkhwa (KP) were identified in consultation with the National Project Coordinator (NPC). A structured questionnaire was designed for the need assessment study. Furthermore; purposive sampling technique was adopted during the survey, in which statistically 5% of the total technical staff in each department was interviewed. During the survey the prevailing management system was assessed in the selected provincial government departments. It was determined that, currently every government department is practicing old conventional method (manual filing/hard form) for data generation and record keeping. As a result of which the data remains in shelves rather than disseminated in the form of valuable information for decision making process. With the idea to introduce environmental information system into the existing management system, a decentralized comprehensive environmental information management system should be introduced by applying the given four different approaches which includes, 1) ***Direct Approach,*** 02) ***Parallel Approach***, 03) ***Modular Approach or Pilot Scale implementation*** and 04) ***Phase in-Implementation Approach*** are suggested. These approaches/methodologies can further be explored for the successful implementation of the Environmental Information Management System (EIMS) into the selected government departments.

2. Introduction to the Project:

Accurate, reliable and timely information is vital to effective decision-making in almost every aspect of human endeavor, whether it be undertaken by individuals, an organization or governments. In the modern development planning and policy decision making process, ready and quick availability of information is a pre-requisite (*Umar, 2010).* Developmental planning is best guided by Environment and socio-economic data and information collected continuously over time and space.

The current era is called information and communication era as many studies are conducted regarding the collection; processing and transferring information. Planning and control cannot be treated separately. To fulfill the planning and control process in each organization/department, various data should be collected from inside and outside of the department and be transferred to the system doing information processing via the communication channel. The information processing should be as the system can present the necessary, timely and adequate information for decision making and present to the decision makers (*Bahman, 1991*). As having un-necessary information leads into the immersing of the manager in information and his confusion and continuance of the activities of some of the activities disturbs the organization/department. Incomplete information disturbs the planning, control and decision making and makes it ineffective as scientifically and practically.

The current management in encountering the complexities of the decisions found that the manual irrelevant systems based on the importance given to the above information cannot provide the required data and present them at appropriate time. Most of the managers are faced with data or a lot of information experiences without any effect for them in decision making, planning, organizing and correct control in the department/organization.

The management information systems increased the managers' information and even the experts of various levels of the organizations, which extend help in further decision-making process. Preliminarily, it is inherent to state that decision making is an integral part of any business. This is because a majority of operations in an organization revolve around decisions made by the management and other key stakeholders inside or outside the organization. And in order for decision to be made adequately, it is vital for there to be a good information system since decisions are based on information available (*Babaei, & Beikzad 2013).*

The Agenda 21 says that "in sustainable development, everyone is a user and provider of information considered in the broad sense. That includes data, information, appropriately packaged experience and knowledge. The need for information arises at all levels, from that of senior decision makers at the national and international levels to the grass-roots and individual levels".

The Agenda 21 in its chapter 40 highlights two major areas of concern- the data gaps and the availability of the information. The gap in the availability, quality, coherence, standardization and accessibility of data is a common problem found in developing countries.

In the recent times, statisticians are developing quantitative methods to solve environmental problems. Human beings are dependent on the environment for their development. However, anthropogenic activities are degrading the environment by putting immense pressure on the earth's carrying capacity. Statistics plays a vital role in management, analysis and dissemination of data related to complex and interrelated environmental issues. Addressing these issues requires effective use of the reliable information on environment. Environmental database is the systematic collection of qualitative and quantitative information of environmental resources. This information will require regular updates to keep track of the changes occurring in them. A database can be called an environmental database if it fulfills the following three conditions:

i. Majority of data is environmental data.
ii. A database system is used for the storage of these data.
iii. The database is established as the basis for environmental queries

Environmental databases have various applications:

i. It helps in the analysis of current state and trends of environmental factors and would help in predicting the future trends.
ii. It will also help in environmental impact assessment. On the basis of that a decision can be taken about the implementation of a development activity in an area.
iii. It is a source of dissemination of information to the general public which can help in increasing their awareness about the various environmental issues.
iv. Formulation of sound policies also requires reliable and timely information. Databases can help the policy makers in this process.
v. It can also serve as a source of information for academic purposes.

Over the years, with support from the donor community, Pakistan has made significant investments to strengthen environmental information management systems. Starting with Sustainable Development Network of Pakistan (SDNP) as one of the first providers of internet and email services, such initiatives included Pakistan Development Gateway, development of provincial environmental profiles, Pakistan Water Portal, Pakistan Weather Portal, National Environmental Management Systems (NEMIS), National Disaster Management Information System (NDMIS) and many others. However, project-funded, most of these initiatives suffered from lack of sustainability. Also, the fragmented approach didn't address the need for a comprehensive environmental information management system that will enable informed policy making, planning and reporting on a consistent basis. A lot has happened but a lot remains to be achieved.

United Nations Development Program (UNDP) together with the Global Environment Facility (GEF) has initiated a project that is, Generating Global Environment Benefit (GEB) Project, which is in full conformity not only with the needs and priorities of the Government of Pakistan but also with the priorities of GEF and UNDP. It falls under the GEF -5 Focal Area of Cross-Cutting Capacity Development, addressing all of its five objectives but notably the second, 'to generate, access and use information and Knowledge' and the third, 'to strengthen capacities to develop policy and legislative frameworks'.

The project also sits neatly with the UNDP strategic priority of 'Strengthened national capacities to mainstream environment and energy concerns into national development plans and implementation systems' and with its country program outcome: 'Commitments under global conventions on biodiversity implemented'. In fact there is a strong convergence of interests in enabling Pakistan to secure the sustainability of its long term economic development by protecting its natural resource base and to enhance its global contribution to environment and sustainable development.

2.1. Purpose of the Project:

The purpose of the project is to strengthen national capacities to mainstream environmental concerns into national development plans and implementation systems.

2.2. Purpose of the Study:

The purpose of the study was to map the potential Pakistani/selected departments at provincial level whose need for the establishment of an environmental information system can be assessed and devise methodologies/strategies that may be followed for the fulfillment of the need of environmental information system.

2.3. Goals and Objectives of the Project:

The project's overall goal is 'Generating Global Environmental Benefits from Improved Decision Making in Pakistan'. Its more specific objective is 'to remove the barriers to environmental information management and mainstreaming global environment concerns into economic decision making'. The objective is two-fold in its focus, one related to environmental information, and the other to employing this information for improved economic decision making. The project will thus have two inter-related components of:

(a) Establishing a robust environmental information management system; and

(b) Stimulating commitments and filling gaps in capacities for integrating environment and development as laid down in Project Identification Form (PIF).

2.4. Expected Project Outcomes and Outputs:

The project will have three interrelated outcomes:

i. Regular availability of consistent and reliable environmental data;
ii. A coordinated and robust environmental information management system, and,
iii. Enhanced commitment and capacity for sustainable development planning and legislation.

3. Environmental Information System

Environmental Information Systems (EIS) is a broad term, used for a range of IT systems related to natural resources data management. A working definition, given is the following one. "*An Environmental Management Information System can be considered as an enterprise information system that provides efficient and accurate access to knowledge elements related to information about the natural environment"*.

Environmental monitoring networks established worldwide, primarily in areas with potential pollution problems, observe and record the conditions of the natural environment. Through these networks, vast volumes of raw data are captured, and EIS oversee integrating all recorded data-streams. A typical EIS installation involves the fusion into a central database of environmental data recorded at distributed locations and in different means (*Athanasiadis & Mitkas, 2009*). Most commonly, EIS have been developed and installed to pursue one or more of the following goals;

a) **Off-line analysis systems**: Such systems are geared towards gathering historical data in a systematic way and making them available for in-depth analysis of natural phenomena.

b) **Real-time reporting systems**: These are systems responsible for identifying and reporting the current environmental conditions. They satisfy the public need for environmental awareness and the administrative and industrial needs for prevention measures.

c) **Early Warning Systems**: In this case, the goal is to predict the future conditions of the environment. The need to forecast and forewarn about potential environmental problems is the key for preserving nature and taking precautionary actions.

Until lately, environmental data were meant for environmental scientists occupied with off-line studies and post-processing activities in their effort to understand the natural phenomena involved. However, there has been a transition in this practice: The consequences of the growing societal interest in the environment and sustainable development were the emerging need for providing environmental information to the public. Worldwide there are numerous Environmental Information Systems such as European Soil Database (ESD), The Water Information System for Europe (WISE) and Air Quality in Europe among others used for environmental data storage and dissemination. The need for the Environmental Information System in Pakistan is more important now than ever. Most of the departments store their data in hard form/files without a centralized and coordinated database system, which is why the same

data resides in shelves without utilizing it for greater good *(Athanasiadis, 2007)*. Environment Information system can serve a great tool to develop inter-agency coordination through a single data resource center and to disseminate the same data to a wider audience publicly.

3.1. Implementation of the Environmental Information System:

The implementation of the EIS is a part of the management process. This leads to organizational change and it can affect people and change their work style. The process of rising behavioral responses may bring favorable or unfavorable results depending on system implementation and strategies undertaken by organizational/departmental management. In the implementation process, system designers should ideally act as a change agent or catalyst. The successful implementation of EIS cannot be separated from their roles in addressing human factors carefully. The implementation process is also referred to "the process of information systems development". A new information system implementation is a significant investment for an organization/department. Because information system is a socio-technical system, the development should involve a combination design between activity system and ICT system *(Davies, 2009*). Moreover, the concept of EIS implementation process consists of five steps, as the following:

i. Investigation
ii. Analysis
iii. Design,
iv. Implementation &
v. Maintenance

To identify problematic issues regarding the implementation of EIS, many problems in the implementation of EIS may come out from these issues. More specific categorization of the problems is management process, organizational/departmental environment, leadership, and technical & personnel problems.

i. Management process problems focus on the functional operations of an organization/department such as budget, personnel, and general management.
ii. Organizational environment problems are identified as intangible factors such as organizational culture, the change and behavior.
iii. Leadership problems related to executive organization/department interaction issues.

iv. Technical problems of the system mainly refer, to the hardware and software of information technology.

v. Personnel problem is individual issues in the organization/department.

Those problems have an impact on the planning, procurement, and deployment of information systems in organizations.

4. Methodology:

A holistic approach was adopted to conduct the need assessment study, right from consultation with the experts, literature review, followed by questionnaire-based survey in the selected key government departments in Khyber Pakhtunkhwa Province. A structured questionnaire attached as (***Annexure 1***) was developed, covering but not limited to the given topics:

- Types of environmental data the target department generates;
- Mechanism of environmental data processing and reporting;
- Internal databases for data maintenance if any;
- Data Sharing/Pooling;
- Inter-departmental coordination
- Identification of hurdles/loop holes in current form of data sharing;
- Capacity building of the target department for implementation of Environmental Information System.

With the idea to avoid spreading the resources and maintaining the result orientation of the project; purposive sampling technique was adopted for the proposed survey. Earlier more than 15nos. of government departments were selected, who are generating environmental data in one way or another, but on the basis of relevancy of each department with environment 08nos. of the core government departments were purposively selected. At each department, statistically 5% of the technical staff was interviewed. The eight targeted departments are as follows;

Target Line Departments of KP

KP, Environmental Protection Agency (KP-EPA)

i. Planning and Development Department P&D (Agriculture & Environment)

ii. Fisheries Department

iii. Forest Department

iv. Wild Life Department

v. Irrigation Department

vi. Public Health Engineering Department, PHED

vii. Agriculture Department

After detail survey and meetings with the concerned technical staff in respective department, in Khyber Pakhtunkhwa the following situation was observed.

5. Existing Management Practices in the Departments:

5.1 Current Database Management Practices:

Environmental data in all the studied departments is stored in traditional filing system, where hard copies are maintained. This traditional practice is prevalent in every core government department where no advance database management system has been developed for efficient record keeping and interpretation in to meaningful/useful information. Conversely, advance system for data management helps user to insert, delete or retrieve data whenever required. Manual documentation is ineffective and time-consuming practice. They need to organize and store the files; furthermore, immediate dissemination of information through manual record appears as to be a tiresome task. The discrepancy in a correct decision-making process is due to lack of data base management and data accessibility. The issue needs to be addressed well in time for better and productive outcomes. The modern database management system is more implicit in controlling the data redundancy, consistency and sharing along with integrity, improved security, and backup and recovery services. There will be increased productivity and accessibility through better responsiveness.

5.2 Status of Environmental Data Reporting and Dissemination:

The fact about the core department connectivity with the environment in one way or another is evident but unfortunately, none of the department is generating legitimate environmental reports. For instance, Environmental Protection Agency (EPA) has taken necessary measures to look into the environmental issues of the province, but due to the lack of proper data handling does not create periodic environmental reports. This is evident from the fact that “Environmental Profile of Khyber Pakhtunkhwa”, a comprehensive report on state of the environment although with limited scope is published every five years. This too contains freshly collected data through consultants on air, water and noise pollution, and doesn’t essentially reflect the changes occurred over the course of five years profile period. Hard copies of the profile are available with the Agency and can be obtained upon request. In addition to this, the Public Health Engineering Department (PHED) conducts drinking water quality tests of the water supply schemes on random basis followed by reports submission to government departments upon request. It has been observed that no other department is following this practice of submission of environmental reports. During an interview with Chief Agriculture & Environment, Planning and Development Department, it was revealed that they do not emphasize upon collection of environment related

reports from any department rather they work upon allocation of funds in Annual Development Plan (ADP) for their projects. Every government department only submits their monthly and quarterly progress reports. He further added that, environment is least considered by the provincial government, in this year the government has allocated approximately rupees 40million out of 100billion for environment, which shows the level of dedication of the government toward environmental protection.

5.3 Accessibility of Environmental Information

As stated earlier, due to the existing conventional system of data management, there is no direct way or accessibility with ease towards environmental data. The government departments along with the relevant stakeholders need to play their part in collection of the most authentic facts and figures related to environment. These facts and figures need to be recorded in a more effectual manner to work upon finding solutions for environment related problems. The existing practice in the offices incorporates delay processing, invisibility, low productivity, poor check and balance, prolong reviews, and entail corruption (H.U.Khan & A. Javed 2017).

5.4 Inter-Departmental Coordination:

Keeping in view the current scenario, all departments are working in isolation with no meaningful approach towards essential coordination. There is a dire need of improvement in this area, because according to prominent officials there is a relative dependence among interacting officials of the different departments working on environment, due to their mandate, in many of the cases. They are not satisfied with contemporary coordination mechanisms. Mr. Zubair Khan Deputy Director Fisheries Planning & Development said that “In Tarbela Dam three separate boats are being floated by three separate provincial departments (Wild life, Fisheries and Forestry) Wildlife department make efforts to control illegal duck hunting, while; department of Fisheries’ personnel’s is conducting surveillance to avoid fish hunting, whereas; the forestry department is busy collecting timbers. Mr. Zubair is of the view that all of three activities can be carried out by deploying one single boat carrying personals from each department. However; because of lack of inter-departmental coordination the resources are being miss-used.

Inter-departmental coordination is also essential as it is a kind of collaboration among departments which is more than simply cooperating with other teams. It involves a shared vision, mutual respect and in depth understanding of each other’s role in environmental protection with

goal of achieving excellent outcomes. Likewise, it also decides to analyze in detail all aspects of a common environmental issue with the idea, to devise the most appropriate mitigation set for it.

5.5 Constraints for Generating Environmental Data and Processing:

The results of the survey conducted, brought forth the constraints for generation of environmental data and processing. The lacks of individual capacity, human resources, adequate financial resources followed by institutional arrangements are the major obstacle barriers in initializing the processes of data analysis in public sector organizations of KP. The tools with Planning and Development (P&D) department are adequate but because of the limited capacity for their effective utilization, they are of no use. The public sector organizations cannot recruit staff due to low financial budget allocated to them. In Pakistan, most of the institutional infrastructure has been modeled following the rich and developed countries like USA, which are in a suitable position to afford the expenses due to acquisition of essential human resource capacity and infrastructure etc. for requisite environmental planning and reviews. By keeping into consideration the prevailing economic circumstances of the country in general and KP in particular, the affordability of enormous expansion of capacity seems impossible. The capacity for environment integration and development among the concerned planning and development entities and environmental departments like Wildlife, Forestry, EPA, Fisheries, Irrigation and Agriculture etc, failed to increase in recent years. Despite increasing demands placed on them by the population growth and economy.

5.6 Basic Understanding of Environmental Information Management System (EIMS):

Most of the focal persons were unaware of the needed environmental information system. The system which is essential for better future performances through improved decision making process can be implemented once you have reliable and consistent data. The Forest department is working to introduce management information system, similarly, they are utilizing other advance software system like Geographic Information System (GIS) for mapping the forest resources under their jurisdiction. Moreover, the PHE department is likely to launch e-governance system in proceeding future, with the help of which, the department would upload and share information on regular basis with more efficiency and ease. These and other individual efforts although worth praising do not essentially dictate the implementation of centralized resource information in the future until and unless all the relevant stakeholders agree upon.

6. Conclusion and Recommendations:

It has been concluded that within the existing practices of the government departments in KP, the data or information remains least accessible to the public and other stakeholders due to multitude of problems, and cannot be incorporated in the economic decision making process.

It is therefore recommended that a decentralized comprehensive environmental information management system should be introduced. The system will provide relevant, reliable and timely information to the various users depending on their needs. Similarly, it will not only provide reliable data for conducting quality research in the field of environment, but it will also extend support in decision making process. Moreover; Since Pakistan, is signatory to various international conventions, this information system will help to produce quality reports in response to each convention supported by the reliable and accessible information.

6.1 Proposed Methodologies/Strategies:

Based on the findings of detailed survey and stakeholders' interviews, the following methodologies are proposed to fulfill the need of environmental information management system in the selected government departments at provincial level.

6.1.1. Data Analysis at each Department:

In the preliminary stage, a thorough data management exercise is needed at each department by a team of experts. The team shall include Management Information System (MIS) Specialists, data record keepers and experts from different government departments and corporate sector. During the process, the team will determine the type, nature and amount of data generated in each department. The specialists will then propose effective data management practices for implementation and sustainability. The following approaches can then be considered for successful implementation of the Environmental Information Management System.

6.1.2. Direct Conversion Approach:

Direct conversion is the implementation of the new system and the immediate discontinuance of the old system. This approach is only applicable when;

i. The system is not replacing any other system.
ii. The old system is judged absolutely without value.
iii. The new system is either very small or simple and,
iv. The design of the new system is completely different from that of the old system.

6.1.3. Parallel Approach:

It is an approach wherein both the old and the new system operate simultaneously for some time. The outputs from both the systems are compared and difference is reconciled. The advantage of this conversion is that it gives a high degree of protection to the organization from the failure in the new system and has gained a wide spread popularity.

The disadvantage will be the costs associated with duplicating facilities and the personnel to maintain the dual systems. This conversion is opposite of direct conversion. In parallel conversion a target data should be set to indicate when this conversion can be withdrawn, and the new system will operate on its own.

6.1.4. Modular Approach or Introducing EIS on Pilot Scale:

This is generally recognized as "Pilot approach", means the implementation of a system in the organization on a piece-meal basis. This has few advantages / merits such as;

i. The risk of systems failure is localized,
ii. The major problem can be easily identified and corrected before further implementation,
iii. Operating personal can be trained before system is installed within the organization/department,

Additionally, the pilot scale project will help identify loopholes, evaluate feasibility, time, cost, unforeseen problems and will improve the project design prior to performance of full-scale implementation.

6.1.5. Phase-in-Implementation:

This approach is similar to modular method but it differs because of segmentation of system, however, not the organization/department. It has advantages that the rate of changes in a given Organization/department can be totally minimized and the data processing resource can be acquired gradually over a period of time. System exhibits certain disadvantages such as limited applicability, more costs incurred to develop interface with old system and a feeling in the Organization that system is never completed.

Apart from the above strategies, the following steps can ensure successful implementation of EIS

i. **Capacity Building**

a. Focal persons from the target departments can be brought together to round table sessions through workshops/seminars to chalk out the discrepancies/loopholes in the current departmental data management system.

b. Orientation sessions should be arranged to exhibit the full spectrum of the proposed EIS.

c. Based on these exercises, recommendations can be sought from different departments.

ii. ***Political Will:*** Political will always play a major role in materializing important tasks/projects in the landscape of this country. For the purpose in hand, major political stakeholders such as Minster for Environment, Information etc. could play a vital role. Moreover, lessons learned from ***Pakistan Citizen Portal*** can be utilized for successful implementation of Environmental Information Management System in Khyber Pakhtunkhwa as well as the whole country.

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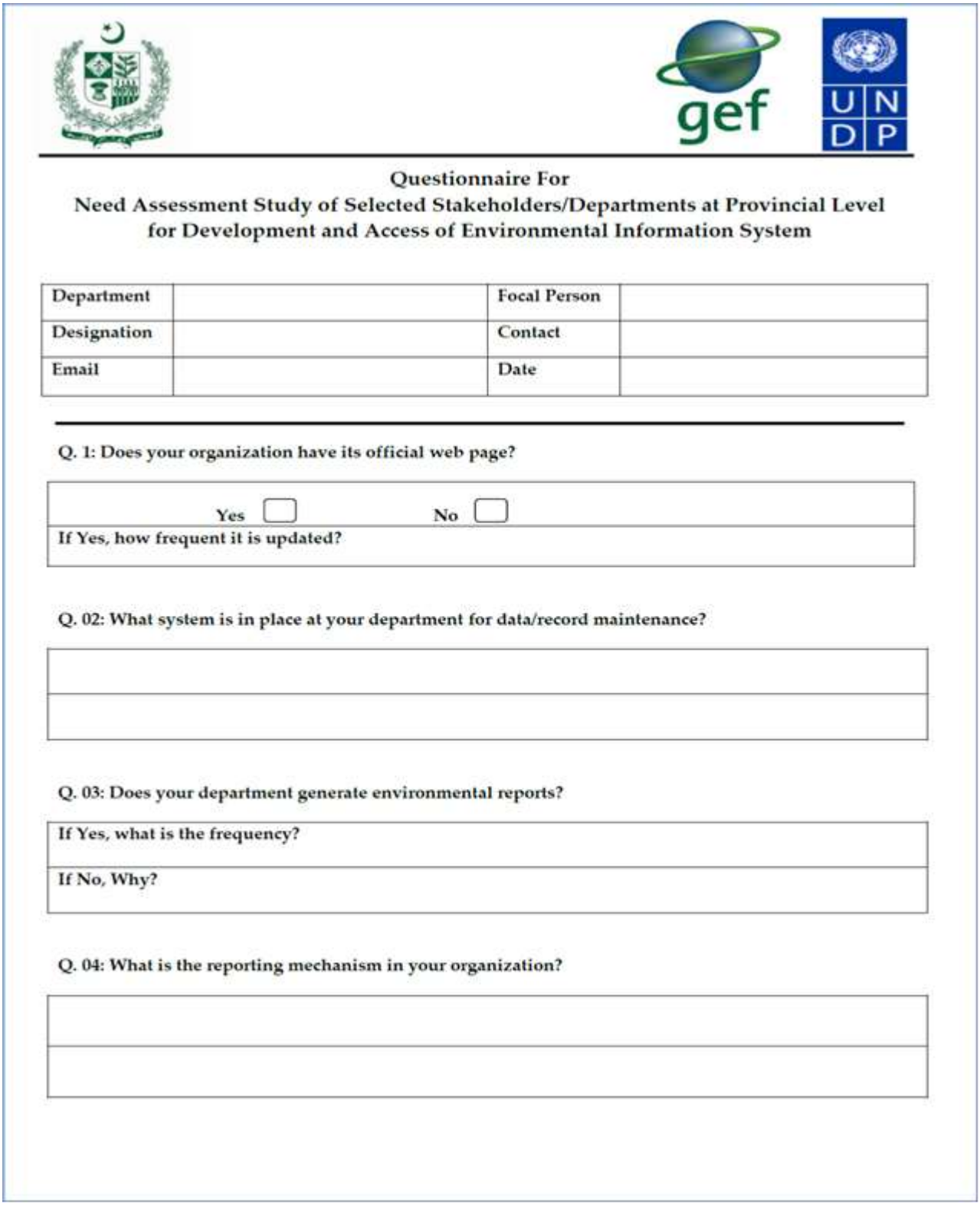
(Annexure A: Questionnaire)



Questionnaire For
Need Assessment Study of Selected Stakeholders/Departments at Provincial Level for Development and Access of Environmental Information System

Department		Focal Person	
Designation		Contact	
Email		Date	

Q. 1: Does your organization have its official web page?

Yes ☐ No ☐
If Yes, how frequent it is updated?

Q. 02: What system is in place at your department for data/record maintenance?

Q. 03: Does your department generate environmental reports?

If Yes, what is the frequency?
If No, Why?

Q. 04: What is the reporting mechanism in your organization?

Q. 05: Is there any Existing Database in your department? If Yes, Please specify

Q. 05: Do you publish any annual/ quarter reports?

Yes ☐ No ☐
If Yes, where it can be available other than your department?

Q. 06: Does your organization share these reports with another government department regularly?

If Yes, how frequently?
If No, Why?

Q. 7: what is the procedure for getting information from your department?

Q. 08: Is there any mechanism developed for inter-departmental coordination in your department?

If Yes, how?
If No, why?

Q. 10: Does your organization have coordination mechanism with international agencies like UNDP, UNEP, FAO etc?

YES ☐ NO ☐

Q. 11: What kind of constraints does your organization have in generating environmental data and processing?

(i) Capacity Building ☐	(ii) Financial ☐	(iii) Human Resource ☐	(iv) Other ☐

Q. 12: Does your organization have understanding about Environmental Management Information System?

YES ☐	NO ☐
If Yes: Explain:	

Q. In the last year how many request your department have received for information under Right to Information Act?

Q. Can I share this information to any other organization/department/person with your reference?

YES ☐	NO ☐

Thank You ☺

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