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Generating Global
Environmental Benefits - GEB

ENVIRONMENTAL INFORMATION & MANAGEMENT: GLOBAL PERSPECTIVES & WAY FORWARD FOR PAKISTAN

June 17th, 2019
Peshawar, KPK

REPORT OF A 'ROUND TABLE CONFERENCE (RTC)'
ORGANIZED BY GENERATING GLOBAL ENVIRONMENTAL
BENEFITS (GEB) IN COLLABORATION WITH ENVIRONMENTAL
PROTECTION AGENCY (EPA), PESHAWAR

*GEB - A joint initiative of United Nations Development Programme (UNDP)
& Ministry of Climate Change (MoCC)*





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Executive Summary

Generating Global Environmental Benefits (GEB) project aims to remove the barriers to environmental information management and mainstream global environment concerns into economic decision-making. As per the AWP-2019, a Roundtable Conference (RTC) was organized by PMU, GEB project with the title of ““Environmental Information & Management: Global Perspectives & Way Forward for Khyber Pakhtunkhwa” on June 17, 2019. The objective of the RTC was to educate stakeholders/selected representatives regarding the integration of environment and development and thus enhance their commitment and capacity for the role of public and private sector in ensuring environmental sustainability’.

The objective of the GEB project are two-fold in its focus; one related to environmental information and the other is to employ this information for improved decision-making. Moreover, the said project has three inter-related outcomes: Regular availability of consistent and reliable environmental data; a coordinated and robust environmental information management system; and enhanced commitment and capacity for sustainable development planning and legislation. The purpose of this RTC was to explain the importance of environmental information and management, discuss barriers in its development and find innovative solutions to the environmental problems. The RTC was addressed by a subject expert. It was agreed among the participants that arranging RTCs such as this one are important to increase environmental understanding of the concerned stakeholders/participants as they have a vital role to play in raising environmental awareness as well as formulate public views and perceptions on development projects. Participants of the subject RTC appreciated the activity and efforts of GEB team and wished that such activities may continue in future through different forums so that they are capacitated with the right information on the environment.

Welcome Remarks by Dr. M. Bashir Khan, DG, EPA, Peshawar

On 17th of June 2019, the RTC started with the recitation of Holy Quran. This was followed by brief introduction of participants. Dr Muhammad Bashir Khan, Director General (DG), EPA, Peshawar, warmly welcomed Dr Saleem Janjua, National Project Coordinator, GEB Project, and all the participants to the RTC. He stated that the purpose of RTC was to discuss environmental issues and problems faced by departments in the absence of an integrated EIMS.

He stated that data availability is very important to carry out any practical measures. Timely collection and analysis of transparent, credible, and adequate data is pre requisite for proper planning and execution. He ensured that EPA, Peshawar would

always extend its full support for GEB project in order to establish EIMS by giving every possible assistance and support to the project team.



Opening Remarks by Dr. Saleem Janjua, National Project Coordinator, GEB

Dr. Saleem Janjua, National Project Coordinator, GEB, MoCC & UNDP thanked Dr M. Bashir Khan, DG EPA, Peshawar for facilitating RTC at EPA, Peshawar and all the participants to spare their time for joining the RTC. He briefly overviewed the GEB project and its components as the project aims to explore how the environmental data is collected, generated, and analyzed by different government and private departments. He emphasized on the need of robust and integrated environmental information management system. GEB project has initiated its activities in 2019 and the startup activities planned by the GEB project are to map out all the relevant departments having necessary data. This will be followed by need assessment of relevant departments and finally establishing a pilot EIMS for KP. This requires sustained efforts from all stakeholders and government departments have an immense role to play in this regard.



Foreword of Concept Allied to the Environmental Information and Management: by Dr. Haroon Khan, Deputy Director, CCC, University of Agriculture

Dr Haroon Khan, Deputy Director, Climate Change Center (CCC) at the University of Agriculture, Peshawar, in his presentation, amicably shared the information with participants and described the basic concepts of EIMS. While discussing the basic concepts related to EIMS, he stated that it is the organized combination of civil societies and communication networks to collect data resources, transform it, and then disseminate information. It is a kind of environmental monitoring database system designed to identify and to promote the progress of sustainable environmental management. Although, information management practices in many organizations have a long history and are evolving rapidly, data handling and management practices are somewhat less developed. A system for systematically obtaining, processing, and dissemination of relevant environmental information should be available under various thematic areas in an integrated manner. To establish an EIMS we need to;



- Set objectives and targets
- Implement a program to achieve objectives
- Monitor and measure its effectiveness
- Correct problems
- Review the system to improve it and overall environmental performance
- Statement of intentions and principles in relation to overall environmental performance
- Provide a framework for setting and reviewing environmental goals and objectives
- Identify environmental aspects of activities, products and services
- Determine which are associated with significant environmental impacts
- Identify and track legal and other applicable requirements

He elaborated that in most instances, current data collection and transfer is disorganized and there are very few tools to support it. He pointed out that data within organizations is scattered and effective collaboration and data collection is not feasible. Institutional memory is not sufficient for retaining enough data for future use. As a result, different environmentalists address the same problems repeatedly. EIMS refers to the management of an organization's environmental programs in a comprehensive, systematic, planned, and documented manner. It includes the organizational structure, planning, and resources for developing, implementing and maintaining the policy for environmental protection.

The quality of environment is one that satisfies the criteria of the Triple Bottom Line (TBL) that refers to performance evaluation related to social, environmental, and financial framework. The information collected under TBL framework could be measured and evaluated through Environmental Performance Index (EPI). National and International legal compliance is necessary for various products, services and internal operations. EIMS helps to develop, implement, manage, coordinate, and monitor environmental policies that help with legal compliance. Waste reduction begins at the design phase through pollution prevention and waste minimization and finally, recycling. He stated that the specific objective and need to establish a functional national environmental data/information management system in KPK is to maintain a quality environment. The purpose of EIMS established should be to review and analyze the current situation of national environmental data/information management in the country; to establish an appropriate institutional and technical framework; to develop a sector-specific and inter-sectorial database of environmental information in the country. Another purpose would be to establish a functional national environmental information system in KPK and to build and strengthen the capacities of key organizations involved in establishment and sustainable operation of the project.

Information sharing involves the relatively simple process of transmission either through documentation or through verbal communication. Dr Haroon Khan also unfolded the plan where the Agriculture University of Peshawar may provide support to the GEB project to

achieve its desired goals towards establishment as well as extension of GEB coverage towards KPK.

Global Examples of Environmental Information and Management by Mr Rowaid Ullah, Environment Compliance Specialist, Halcrow Pakistan

Mr Rowaid Ullah, Environment Compliance Specialist, Halcrow Pakistan Pvt. Ltd highlighted the global perspectives and examples for EIMS. By highlighting the significance of environmental information, he stated that the 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro called for the establishment of information systems that would improve access to information with environmental relevance and make it available as a basis for decision-making.

According to the United States (US)-EPA, EIMS organizes descriptive information (metadata) for data sets, databases, documents, models, projects, and spatial data. EIMS intends to provide the environmental management system of organizations with information that can be incorporated with other information requirements to assist organizations to achieve environmental and economic goals. The establishment of EIMS provides a focal point at which decision-makers and planners can draw authentic and viable information on environmentally sound issues. Likewise, EIMS encourages interdisciplinary cooperation and networking, resulting in shared responsibilities and tackling of environmental issues in a holistic manner. He continued by stating that, the evolution of EIMS is closely associated with the technological advancement in the field of Information Technology (IT) sector from early 1970s and 1980s. During that era, two different remote sensing satellites, which include (LANDSAT & SPOT), were launched. The satellites provided large amounts of environmental data that could be used for analysis and management. Gradually, more institutes became aware of the need to establish environmental information systems due to increased pressure on natural resources from rising population levels as well as natural disasters such as floods and drought. He asserted that this period saw phenomenal growth in the number of actors involved in environmental information system development. Various numbers of systems are established worldwide to address different environmental and resource management issues. They serve for the assessment of environmental risks, such as flood, heat waves, glacier melting and storms etc. The system then helped to contribute toward sustainable development through efficient use of the available information. In response to UN Conference on Environment and Development (UNCED), some African governments have responded by formulating environmental management policies. The World Bank has funded initiating the EIS for Sub-Saharan Africa (EIS-SSA) Program (now EIS-AFRICA) with



the idea to promote the implementation of effective EIS. Moreover in Zimbabwe, with the help of donors interventions, they have initiated *Integrated Resources Information System* (IRIS), *Vegetations Resources Information System* (VERIS) & *Agricultural Land Evaluation Information System* (ALEIS); however these systems did not sustain due to funding issues. Countries such as *Uganda, Ghana, Zambia, Eritrea* and *Tanzania* have launched National Environmental Information Networks (EIN) (UNEP, 2002). The purpose of the network was to tackle technical and other institutional constraints they faced during EIS development. He pointed out that, multiple issues such as Institutional barriers, followed by financial, technical and lack of human resource capacities were among the major obstacles that hindered the process of EIS development in Africa.

He further revealed that the EIS system is comparatively more developed in Europe than Africa because the European Commission (EC) has established a Shared Environmental Information System (SEIS) in 2008. Its purpose was to improve the collection, exchange and use of environmental data and information across Europe. Since then, SEIS has become a collaborative initiative of the EC together with the European Environment Agency and the 39 countries of the European Environment Information and Observation Network (EIONET). SEIS aimed to create an integrated, web-enabled, EU-wide environmental information system by simplifying and modernizing existing information systems and processes.

The following are some of the Environmental Information Systems which are currently being practiced across Europe:

- **WISE:** Water Information System for Europe is the European information gateway to water issues. It integrates reporting data flows from many water-related directives as well as water-relevant statistical data.
- **INSPIRE:** Initiative to build an Infrastructure for Spatial Information in Europe which aimed to improve the accessibility and interoperability of spatial data.
- **BISE:** The Biodiversity Information System for Europe.
- **SEIS-ENP:** EEA is implementing an EU-funded project (2010-2014) to extend SEIS to 16 European neighbours to the east and south (Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Israel, Jordan, Lebanon, Moldova, Morocco, Palestinian Authority, Russian Federation, Syria, Tunisia and Ukraine).
- **EEA:** A portal for sharing ozone information links national and regional ozone websites informing users with real-time local air quality data
- **GMES:** Global Monitoring for Environment and Security. Aims to provide information services based on Earth monitoring data obtained from satellites and institutes observations of water, air and land.
- **Eye on Earth** (EoE): A global public information service “for creating and sharing environmental information, and good practice for implementing a SEIS for Europe. EEA”. The vision is that anybody in the world, including institution, scientist or business, will be able to use EoE for their information needs.

- **GEO:** Group on Earth Observations. A global partnership which includes the EC and its Member States is coordinating efforts to build a Global Earth Observation System of Systems (GEOSS).

He further added that when it comes to technological advancement, the United States stands ahead in the rest of the world. They have established The National Oceanic and Atmospheric Administration in 1970 (NOAA). It is an American scientific agency which focuses on the conditions of the oceans major waterways and the atmosphere. The agency is further contributing towards but not limited to National Weather Service, Oceanic Services, National Environmental Satellite, Data, and Information Service, National Marine Fisheries Service, National Integrated Drought Information System etc.

He stated that the Geographic Information System (GIS) is another good example of EIMS being used worldwide. In addition, it is a fundamental component of environmental management because they are capable of recording, storing and processing data with geographical, temporal and thematic content. Unlike paper maps, GIS is not static and can be updated continuously to provide a more current and useful information system. Importantly, once a GIS database for an area has been developed, it can be used for multiple projects. Mr Rowaid concluded that, in case of Pakistan, multiple sectors are contributing towards generation of environmental data in one way or another. Nevertheless, due to lack of proper data management system, the data/information remains in the shelves and are not readily available for the decision-making process.

The Apt. Way Forward by Mr. Afsar Khan, Deputy Director, Environmental Protection Agency (EPA). KPK

Mr. Afsar Khan, Deputy Director, Environmental Protection Agency (EPA), KP in his presentation titled "The Apt Way Forward for EIMS in KP Province" explained that environmental data and information play an important role in environmental governance and preparation of policies and plans for KP province. Environmental information is not only important for governments but also for the private sector, multilateral organizations, NGOs and other interest groups. Environmental data and information serve as a tool in monitoring and enforcing compliance with regulations, standards, and environmental policies. While providing an important instrument for policy integration, they also assist in informed decision-making. Consequently, it has become imperative to deliver essential and reliable information, environmental issues to decision-makers, and ability to harmonize with international standards and classifications. To create the understanding of the context, he explained that wisdom is the utilization of accumulated knowledge to create a higher level of understanding of the data. The dynamics of knowledge are generated through research, disseminated through communication, and extended through application in the field.

He discussed the three Rio Convention on Biodiversity, Climate Change and Desertification deriving directly from the 1992 Earth Summit. Each instrument represents a way of contributing to the sustainable development goals of Agenda 21. The three conventions are intrinsically linked, operating in the same ecosystems and addressing interdependent issues.

He further revealed that according to Rio Declaration and Agenda 21: (every 24 months) and Pakistan Environmental Protection Act, 1997: Clause (d) of subsection 1 of section 6 the functions of Federal EPA: the EPA shall prepare and publish an annual National Environment Report on the state of the environment as per Clause (f) of subsection 1 of Section 4 *the functions of Environmental Protection Council*. The council shall consider the National Environment Report and give appropriate directions thereon. Similarly, the importance of such information management for preparation of national documents to comply with international agreements, the national EIMS is indispensable. He continued by stating that production of these documents will need the development of a system where data may be collected, compiled, processed, and analyzed for appropriate interpretation in the relevant document. In our existing system, there are gaps between research findings and policy making to communicate and transform integrating research findings into the policy-making process. By shedding light on Way Forward for KP province, he stated that information management for improved decision-making and local planning systems is needed. He also pointed out the importance of removing barriers to environmental information and management to mainstream the global environmental concerns into economic decision making. Significance of this system is to manage the environmental information and employ this information for improved decision-making by establishing a robust environmental information & management system in Pakistan. He further explained that Environmental Information & Management System (EIMS) is a set of processes that enables an organization to reduce its environmental impacts and increase its operating efficiency. EIMS includes organization structure, planning, and resources for developing and implementing the policy for environmental protection. Currently, there is no EIMS in Pakistan. EPA manually collects, transmits and analyze the environmental data. EPA has its own Act regarding environment that is called KP EPA Environmental Act, 2014. Similarly, EPA has its own Environmental Policy since 2008, which is in line with the National Environmental Policy of Pakistan. EPA has also formulated Provincial Climate Change Policy and Action Plan in consultation with line departments. To implement the policy, there is a Provincial Climate Change Policy Implementation Committee which has been notified by the KP Government. It comprises of secretaries from relevant departments. He further added that EPA has taken steps to publish its data of all related environmental variables of KP in a “KP Environmental Profile” in 2018. The GPS locations have been added too. The copies of KP Environmental Profile have been transferred to academia, ministries, and line departments with the aim to set this booklet as a benchmark. Although the Government of KP province is spending more than 7.5% of its total budget on environmental issues, however we suggest our government for more allocation in various sectors to conduct adaptation and mitigation measures in either ADPs or PSDPs for a better Environmental Management System. He also recommended allocating specific budget for adopting state of the art technologies. There is a strong need for coordination among the line departments and civil society to share information as enough work has been done in every sector but needs to be highlighted. He concluded by suggesting that establishing an EIMS will play an important role in environmental performance, good governance and to implement the policies in true letter & spirit.

Interactive Session

Dr Saleem Janjua and Dr M. Bashir Khan started the interactive session and comments/feedbacks from participants were welcomed

One of the participants said that the presentation discussed some facts and figures about our environmental protection which is a good sign and indicates that Pakistan is going Eco-friendlier in its energy sector, due to ban on the coal power plants. A media person raised a point that the jargon mostly used for climate and environmental-related topics is difficult and is not understood by common person.

Another participant commented that environmental information in KPK province must be available at one website to identify the current situation at the grass-root level. Director-General EPA, Peshawar Dr M. Bashir Khan agreed to this comment and shared the information that EPA, Peshawar is currently working on it and information collected in previous years will be updated on the website.

A Lecturer from the University of Peshawar, Miss Shahla Naznin suggested that the researches of academia, especially Dept. of the Environmental Sciences University of Peshawar are not generally involved in various development projects. They hold very useful data and have great capacity; however, such resource-people need financial aid to carry out their researches accurately while GEB project needs data so HEC research projects and student researchers can be a good source of primary data for the environmental profile of various process of KP province. GEB Project team noted the point and appreciated the participants for their technical inputs. The interactive session was ended by Vote of thanks and souvenir distribution among officials and key participants.



Souvenir Distribution



Gallery



Press Release



پشاور: کانفرنس چیئرمین کے کنٹری ڈائریکٹر ڈاکٹر سلیم جنجوعہ اور انجینی ڈاکٹر بشیر خان انوار مشن سسٹم کے حوالے سے بریفنگ دیتے ہوئے

آلودگی کے حوالہ سے یو این ڈی پی اور وزارت ماحولیات کی کانفرنس
پاکستان کے لیے انفارمیشن مینجمنٹ سسٹم کی اشد ضرورت ہے: ڈاکٹر سلیم جنجوعہ
آلودگی پر کنٹرول کیلئے پہلی بار بجٹ میں ٹریک منسوبہ متعارف کرایا گیا: ڈاکٹر بشیر

پشاور (کنجیس رپورٹر) اقوام متحدہ کے ادارے یو این ڈی پی۔ پی ایچ پی اور وزارت ماحولیات کی مشترکہ کانفرنس میں ڈاکٹر سلیم جنجوعہ نے ماحولیات کی مہم اور اس میں حصہ داروں کی ضرورت کو اجاگر کرتے ہوئے "انوار مشن انفارمیشن مینجمنٹ سسٹم" پر توجہ دے کر "آلودگی" کے عنوان سے کوئی میوزک کنٹریس پشاور میں منعقد کی گئی جس میں بین الاقوامی سطح پر ای آئی ایم ایس کے لئے پاکستان کے ڈاکٹر محمد علی کی جانب سے صدارت جزیں گھول انوار مشن سسٹم کے کنٹریس کوآرڈینیشن، مشنری آف کلائمٹ چیئرمین ڈاکٹر سلیم جنجوعہ نے کی۔ ڈاکٹر سلیم جنجوعہ نے پاکستان سمیت دنیا بھر میں موسمیاتی تبدیلیوں اور ان کے متعلق دنیا کی اہمیت کے متعلق اظہار خیال کرتے ہوئے کہا کہ پاکستان کے لئے ماحولیات معلومات اور مینجمنٹ سسٹم کی اشد ضرورت ہے۔ اس کی افادیت اور اہمیت بارے بات کرتے ہوئے ڈاکٹر سلیم جنجوعہ نے کہا کہ انوار مشن انفارمیشن مینجمنٹ سسٹم کی مدد سے

حکومت بھارتین پاکستانی مروجہ کی چاہتی ہے اس حکام کی کامیابی کے لئے ماحولیات کی کام کو بدھ سسٹم سے منسلک کر کے ملکی پالیسی کو ترجیح دینے میں اہم کردار ادا کرے گا۔ ڈاکٹر سلیم جنجوعہ نے کہا کہ حکومت کے ساتھ تمام حلقہ اور اس ادارہ اسٹیک ہولڈرز کو ملکی ضروریات کے لئے کردار ادا کرتے ہو گا۔ تقریب میں شامل ڈاکٹر محمد بشیر ڈی پی او وزارت ماحولیات پر مملکت انجینی نے خاص طور پر ماحولیات و حکام کے لئے دی گئی اس کے کردار پر روشنی ڈالی۔ انہوں نے کہا کہ ای پی اے نے بجٹ میں ملکی مروجہ ڈیجیٹل منسوبہ کو متعارف کیا ہے جس کی وجہ سے بہت محنت کارخانوں کی دھوئیں کو کنٹرول کیا جانے کا پشاور میں 800 کے قریب بہت محنت کے کارخانے ہیں اور اس پر انجینئر کے بدولت ہم ماحولیات آلودگی پر قابو پا سکتے ہیں۔ اس موقع پر میڈیا کی موجودگی میں اسٹیک ہولڈرز نے پاکستان میں ماحولیات کے احکام کے لئے تعاون کی یقین دہانی کرائی۔

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