Brief on Pakistan Environmental Protection Agency

Pakistan Environmental Protection Agency has been establishment under section (5) of Pakistan Environmental Protection Act, 1997. Basic functions of Pak-EPA are to prepare or revise, and establish the National Environmental Quality Standards with approval of the Council; take measures to promote research and the development of science and technology which may contribute to the prevention of pollution, protection of the environment, and sustainable development; identify the needs for, and initiate legislation in various sectors of the environment; provide information and guidance to the public on environmental matters; specify safeguards for the prevention of accidents and disasters which may cause pollution; and encourage the formation and working of nongovernmental organizations, community organizations, and village organizations to prevent and control pollution and promote sustainable development. The Agency may undertake inquiries or investigation into environmental issues, either of its own accord or upon complaint from any person or organization.

Pakistan Environmental Protection Act, 1997:

Pakistan Environmental Protection Act, 1997 (PEPA, 1997/ The Act) is an act provide for the protection, conservation, rehabilitation and improvement of the environment, for the prevention and control of pollution, and promotion of sustainable development.

Implementation of PEPA, 1997 particularly focuses on implementation of council's policies, delegation of powers to government agencies, enforcement of National Environmental Quality Standards, introduction of EIA/IEE review procedures/system, regulatory regime for hazardous substances/wastes, resource generation through establishment of Provincial Sustainable Development Fund and levy of Pollution Charge and providing appellant forum for environmental cases.

Under the Act, following rules were drafted and notified.

1. National Environmental Quality Standards (Certification of Environmental Laboratories) Regulations, 2000
2. Pakistan Environmental Protection Agency Review of Initial Environmental Examination and Environmental Impact Assessment Regulations, 2000
3. Revised National Environmental Quality Standards, 2000
4. Provincial Sustainable Development Fund (Procedure) Rules, 2001
5. National Environmental Quality Standards (Self-Monitoring & Reporting by Industry) Rules, 2001
6. Environment Samples Rules, 2001
7. Pollution Charge for Industry (Calculation and Collection) Rules, 2001
8. Provincial Sustainable Development Fund (Utilization) Rules, 2003
9. Hospital waste management rules 2005
10. Pakistan Biosafety Rules, 2005
11. National Biosafety Guidelines, 2005

Draft Rules:

The following rules are at the draft stage:

1. Administrative Penalty Rules (Draft)
2. Composition of offences and penalty rules (Draft)
3. Hazardous substances rules (Draft)

Environmental Impact Assessment (EIA)/Initial Environmental Examination (IEE):

For new development projects, the Section 12 of the Act directs that an initial environmental examination, or where the project is likely to cause an adverse environmental effect, an environmental impact assessment be filed with the Agency for review and approval prior to project construction. The Pakistan Environmental Protection Agency issued Environmental Assessment Guideline package in 1997 which included both general and sectoral guidelines. The EIA/IEE regulations were issued in the year 2000 regarding the environmental assessment procedures giving a firm legal status to IEE and EIA. The category of projects for which an IEE or EIA is mandatory has been issued in the Regulations.

EIA is a planning tool and its main purpose is to give the environment its due place in the decision making process by clearly evaluating the environmental consequences of a proposed activity before action is taken. The EIA usually includes a description of the proposed development, data necessary to identify and assess the main impacts which it is likely to have on the environment; and a description of these impacts by reference to many factors such as people, flora, fauna, soil, water, air, landscape, cultural heritage, etc. Where significant adverse effects are identified, the EIA also include a description of the measures envisaged to avoid, reduce or remedy these effects. For main development projects in Pakistan**,** the environmental assessment process provide proponents and decision makers, as well as members of the public, with an understanding of the potential environmental effects of proposed action, so as to avoid or minimize adverse effects wherever possible bearing in mind the costs and benefits of using the environmental resource in the particular project.

Introducing EIA culture in a country like Pakistan was a difficult and challenging task particularly when the environmental institutions were weak and awareness level was low. It is quite encouraging that now the EIA process has started to begin in the country in an organized manner. Integration of environmental concerns in various government policies has been ensured. Any new project before it is approved has to pass through a process of EIA, which has become far more stringent. Public participation has been made mandatory for EIA review. The media has become quite conscious of the fact and any new project that is approved raises concerns either from the public sector or private sector. However there is still a need for improvement and overcoming the practical constraints. There are limited capacities and capabilities of many agencies responsible for protecting environment in relation to the evaluation of the Initial Environmental Examination or Environmental Impact Assessment reports for new development projects. There have been almost no training programs for the persons responsible for the evaluation of IEE/EIA reports.

Central Laboratory of Environmental Analysis & Networking (CLEAN)

Pakistan Environmental Protection Agency (Pak EPA) has a Central Laboratory for Environmental Analysis & Networking (CLEAN). CLEAN is equipped with state-of-the art computerized analytical equipment. The laboratory has facilities for analysis in different environmental fields like Air and Water Quality Monitoring, toxic substances and microbiology. Continuous air quality monitoring is

being done by fixed and mobile stations installed at CLEAN. Stack Emission Monitoring Vans are used for monitoring of industrial emission of industries located in Islamabad Industrial Estate regularly. National Data Surveillance Center has also been established at CLEAN to collect data from Federal and Provincial EPAs and to generate daily reports and Air Quality Index (AQI).

Detail of studies and surveys carried out by Pak-EPA is given below:

- Pakistan Environmental Air Quality and Emission Standards promulgated, JICA-Pak-EPA, May 2001
- Three Cities Investigation of Air and Water Quality (Lahore, Rawalpindi & Islamabad), JICA-Pak-EPA, June 2001
- Karachi Investigation on Industrial Water Quality, JICA-Pak-EPA, August 2001.
- Final Report for Domestic Solid Waste Management in Pakistan, JICA-Pak-EPA, April 2002
- Suspended Particulate Matter (SPM) Investigation for Study of Air Quality Standards in Pakistan, October 2002
- Wastewater Quality Monitoring in Islamabad (April 2002 to May 2003
- Survey of Drinking Water of Sara-e-Alamgir (12th December 2002)
- Air and Wastewater Monitoring of Gujranwala and Faisalabad (12th Dec. 2002 to 22nd Dec. 2002
- Survey of Drinking Water, Sewerage System and Solid Waste Management of Gujrat City (30th January 2003)
- Two Cities Investigation of Air and Water Quality (Gujranwala, Faisalabad), JICA-Pak-EPA, November 2003
- Survey of Drinking Water of Chakwal City and Wastewater Sampling at Aadhi Rajian Oil and Gas Field (29th May 2003)
- Urban Environmental Problems in Pakistan (A Case Study for Urban Environment in Hayatabad, Peshawar) by Overseas Environmental Cooperation Center and Pak-EPA (February, 2004)
- Waste Amount Survey in Islamabad, 2004
- Waste Amount Survey in Multan, 2004
- Investigation of Drinking Water Quality of Water Filtration Plants Installed At Islamabad and Rawalpindi
- Ambient Air and Water Quality Investigation in Quetta, 2006
- Measurement of Noise Level at Different Location of Islamabad and Rawalpindi, 2006
- The Health Effects of Air Pollution on School Children in Murree, 2007
- Measurement of NO_2 Concentration in Ambient Air in Major Cities of Pakistan Using Diffusion Samplers, 2007

Self Monitoring and Reporting Programme (SMART)/ Green Industry Programme:

Government of Pakistan notified National Environmental Quality Standards (NEQS) in August 1993 with an enforcement schedule for new industrial units from 1st July, 1994 and for existing units from 1st July, 1996 to combat pollution at source. SMART was launched on national basis on 8th March, 2006. Industries were provided with the SMART software. By implementing this system, the government has, in fact, transferred the responsibility for examining and evaluating industry's environmental performance to individual industrial facilities. Under the Self-Monitoring and Reporting System, industries in Pakistan will be responsible for systematically monitoring their environmental

performance and reporting the data to Environmental Protection Agencies. About 120 industries have registered under SMART and concerned EPAs are getting industrial monitoring data on regular basis which is of great support in impact assessment. By implementing this system, the government will, in fact, transfer the responsibility for examining and evaluating industry's environmental performance to individual industrial facilities. Under the Self-Monitoring and Reporting System, industries in Pakistan will be responsible for systematically monitoring their environmental performance and reporting the data to Environmental Protection Agencies.

National Biosafety Center:

The development objective is to establish the National Biosafety Centre, which serves as the secretariat of the National Biosafety Committee. The National Biosafety Centre provides the requisite set-up for the implementation of the Biosafety Rules and Biosafety Guidelines. The overall objective of the centre would be to provide safeguard against undesirable effects of the Genetically Modifies Organisms (GMOs). Key activities being undertaken by NBC are given below:

- Prepare an action plan for the Centre
- Hold NBC and TAC meetings as and when required and follow up implementation.
- Prepare draft standards and procedures for risk assessment and labelling of GMOs.
- Review applications for import, export, or commercial release of GMOs
- Coordinate in developing linkages with foreign Biosafety committees and relevant agencies to ensure that genetic manipulation practices in Pakistan
- Facilitate NBC in cooperation with relevant national/provincial authorities
- Coordinate facilitation in all levels of supervision of genetic manipulation work by assisting other regulatory bodies in establishing pertinent codes disciplines and guidelines for the appraisal of biohazards and the management of bio-safeguards.
- Inform and educate the public on Biosafety issues and on proposed national policies.
- Assist NBC in ensuring that the laboratory work, field work and commercial release of GMOs conform to the Guidelines.
- Disseminate information to the various institutions engaged in the genetic manipulation work about new developments in Biosafety
- Facilitate development of annual reports for the Centre

Green Library and Documentation Centre

Pak-EPA gives high priority to capacity building of other institutes. A Green Library & Documentation Center has been established in the premises of Pak EPA to provide technical support to its staff and information to general public. Green Library has technical material on air, water and soil pollution. Latest books/journals and articles are available. Green Library is also working as a resource center for Ministry of Environment. Green Library is a supporting research programme of Pak EPA by making available the latest environmental literature. It is providing research information to researchers working in CLEAN.

Technical Cooperations:

Technical Cooperation on Establishment of Environmental Monitoring System in Pakistan:

A Technical Cooperation between the Government of Japan and the Government of Islamic Republic of Pakistan has been signed in Islamabad on April 30, 2005 and the exchange of Note Verbal between the Embassy of Japan in Pakistan and the Ministry of Economic Affairs and Statistics of Pakistan on June 15, 2005.

Support will be provided in the following sectors:

- Dispatch of Japanese Experts to Pakistan
- Counterpart training in Japan
- Provision of Machinery and Equipment

Implementing Agencies:

Pak-EPA is responsible as well as implementing agency of the project. Other implementing agencies include:

- Balochistan-Environment Protection Agency
- NWFP-Environment Protection Agency
- Punjab-Environment Protection Department
- Sindh-Environment Protection Agency

Technical Cooperation on Capacity Building for Solid Waste Management:

Technical cooperation between the Japanese Preparatory Team and the Authorities concerned of the Government of Pakistan for capacity Building for Solid Waste Management were signed on 18th August, 2006. The purpose of the technical cooperation is to strengthen the capacities of Local Governments in formulation of community based solid waste management action plans; their implementation and evaluation according to the Guideline.

Project activities include the following:

- Impart training in Japan on effective collection and transportation of solid waste.
- Impart time and motion study knowledge to city district governments of Pakistan through dispatch of short term expert from Japan.
- Provide on site training on time and motion study in various cities through dispatch of short term experts from Japan.
- Monitor the progress made in terms of collection and transportation of solid waste in each city by third party on biannual basis.
- Dissemination and sharing of report with stakeholders including Pakistan Environmental Protection Agency.

Implementing Agencies:

Pak-EPA is the responsible as well as implementing agency. Other counterparts include the following:

- Capital Development Authority, Islamabad
- City District Government, Lahore
- City District Government, Karachi
- City District Government, Quetta
- City District Government, Peshawar
- City District Government, Faisalabad
- City District Government, Sukkur
- City District Government, Rawalpindi
- City District Government, Multan

Malé Declaration on Control and Prevention of Air Pollution and Its likely Trans-boundary Effect for South Asia:

Air quality monitoring station comprising a Laboratory was established at Bahawalnagar in January 2007 for Trans-boundary Air Pollution Monitoring under 'Malé Declaration on Control and Prevention of Air Pollution and Its likely Trans-boundary Effect for South Asia' which was adopted in the seventh meeting of the Governing Council of SACEP held in April 1998 in Malé.

Following activities are being undertaken under this programme:

- Wet and dry deposition analysis
- PM10, NRSPM & TSPM are analyzed at the Monitoring Site.
- Analysis of ambient air quality for SO2 & NO2 and Ozone
- Study entitled 'Crop Impact Assessment' has been done by Punjab University (nominated institute)
- Research Study- Level of Exposure of School Children to Air Pollutants undertaken in 2006