

DEVELOPMENT IN ENVIRONMENT SECTOR

Pakistan Environmental Protection Act, 1997

Implementation of the Pakistan Environmental Protection Act 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 Pakistan Environmental Act 1997, the following rules were drafted and notified.

1. Environmental Quality Standards (Certification of Environmental Laboratories) Regulations, 2000.
2. Initial Environmental Examination and Environmental Impact Assessment Regulation, 2000.
3. Revised National Environmental Quality Standards.
4. Pollution Charge for Industry (Calculation and Collection) Rules, 2001.
5. Provincial Sustainable Development Fund Board (Procedure) Rules, 2001.
6. Environment Samples Rules, 2001.
7. National Environmental Quality Standards (Self-Monitoring & Reporting by Industry) Rules, 2001.
8. Provincial Sustainable Development Fund (Utilization) Rules, 2003 were notified/published in the Gazette.
9. National Biosafety Rules, 2005
10. Hospital Waste Management Rules 2002

Draft Rules

The following rules are at the draft stage.

1. Composition of offences and penalty rules 2002.
2. Hazardous substances rules 2002

Implementation of National Environmental Quality Standards (NEQS)

To minimize role of environmental inspectors, and giving self-respect to industry, a Self-monitoring and reporting programme was devised in consultation with the Trade & Industry. The program comprised of 3 versions of software meant for industrial unit, Provincial EPAs and Federal EPA. The program is user friendly and requires minimum efforts to enter and transfer data of industrial effluents to concerned EPA. A pilot programme

was introduced and successfully completed at the federal level for 50 selected industrial units. It is intended to expand the program to provincial level for full-scale implementation through EPAs. Based on the reported data, EPAs will start negotiations with highly polluting industries and enter into pollution reduction agreements with specific targets to be set through Environmental Improvement Plans.

Ministry of Environment/ Pak-EPA opened dialogue with the industry. Consequently, the industry which was initially reluctant to adopt environmental measures soon realized the importance of pollution control for enhancing their export in the international market, where environment friendly products have edge. The Federation of Pakistan Chambers of Commerce and Industry (FPCCI) and other industrial associations took initiative and created environmental cells within their organizations. FPCCI, with the assistance of Dutch funding, initiated Environment Technology Programme for Industry (ETPI) at a cost of Rs. 260 million. This was perhaps the first breakthrough, which instigated industrial units to make investment in the environmental improvement. Industry claims that an investment of Rs. 800 million is being realized each year and they have planned a further investment of Rs.1740 million in the near future. Despite these achievements, extra efforts are still required to promote green productivity and adoption of ISO 14000.

Ministry of Environment Development has constituted a NEQS Implementation Committee headed by Dr. Pervez Hassan and comprising representatives of trade and industry, NGOs and other stakeholders. The Committee has been mandated to supervise Self-monitoring and Reporting Programme for the industry and advise the Ministry on ways and means to effectively implement the NEQS in the country.

EPAs have also started issuing Environmental Protection Orders to polluters under section 16 of the Environmental Protection Act. Government has established two environmental Protection Tribunals -one in Karachi and other in Lahore to decide environmental cases and appeals against the orders of EPAs. A case for establishment of three more Tribunals is under process with the Law Division.

Environmental Impact Assessment

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. Now the EIA process has begun in the country in an organized manner after notification of EIA Regulations 2000 and availability of IEE/EIA Guidelines (developed through a long consultative process). The Federal and Provincial Environmental Protection Agencies (EPAs) have developed their capacity to review and issue environmental clearances. The review process is carried out through public participation. Capacity of EPAs is being enhanced through on the job training.

The EIA process has further augmented after the Chief Executive's directive to financial institutions in February 2001 on restriction of loan without environmental clearance from concerned institution. Due to freedom of press, journalists frequently draw attention of concerned departments towards environmental degradation and emphasis on the legal

requirement of submission of EIA of development projects.

During the year Pak-EPA received Environmental Impact Assessment Report (EIA) entitled “Pakistan Highway Rehabilitation Project for N-5 & M-9 (Phase-I) received on 21st April, 2003. The cost of the project is USD 239.5 million and the total environmental management cost mentioned in report is 364.17 million (approximately 6.3 million US \$). The project consists on various Highway sections containing 229 k.m for rehabilitation and maintenance and 174 k.m for resurfacing and strengthening of Highway in Punjab, Sindh and NWFP provinces. This is one of the mega project in public sector and also a trans-provincial project. It will set precedents for other Highway projects in Pakistan and will strengthen sound environmental management of highway/ motorways.

Disbanding Pressure Horns

After the Cabinet decision on banning of pressure horns, campaign was launched at the federal and provincial levels. Thousands of pressure horns were removed from vehicles. While as a result of negotiations with pressure horn manufacturers single state low intensity pressure horn has been introduced. The manufacturers have been discouraged manufacturing of multi-stage pressure horns. Noise standards are also being formulated for the first time in Pakistan.

Improving Ambient Air Quality

Realizing the issue of degradation of air quality, the Government has taken various steps for its improvement to protect public from excessive exposure to pollution.

- Completed phase out of lead in petrol before three years of the planned target. Sulphur phase out programmes are also under implementation for providing clean air.
- Due to incentive regime offered by the Government, about 250,000 petrol vehicles have so far been converted to CNG and a number of new CNG stations are being set up in the country. Efforts are also being made to convert diesel vehicles to CNG. Green buses are being introduced in Karachi.
- To support pollution reduction programme ENERCON Set up 15 tune up stations for petrol and diesel vehicle and established a revolving loan of US \$ 3 million to encourage installation of additional tune up stations in the private sector.
- Constitution of Environmental Squads of traffic police at federal and provincial levels.

Establishment of Cleaner Production Center

Two multi sector cleaner production centers are already functioning one by UNIDO and other by Private Sector. Another for leather industry in the public sector will start soon in Sialkot. These CPs will promote adoption of ISO 14000 and help improve environmental performance of the industry. Combined waste treatment plant for Kasur tanneries has been

completed and functioning while similar arrangements are being planned at Sialkot and Karachi.

Mass Awareness

Realizing the potential of mass communication media as a vehicle for social change, a Media Strategy for Environment was developed. The strategy focused on transmitting information on environment degradation and raising awareness on environmental issues utilizing both print and electronic media. Producers of electronic media and journalists and columnists were requested to highlight the four core areas identified in the National Environment Action Plan (NEAP).

It is a healthy sign that articles related to environment are catching the attention of public in general and environment activists in particular. Any new development in the government sector reported in the media always receives feedback in the form of newsletter or articles.

CENTRAL LABORATORY OF ENVIRONMENTAL ANALYSIS (CLEAN)

Pakistan Environmental Protection Agency (Pak EPA) has a Central Laboratory for Environmental Analysis (CLEAN) in its premises. CLEAN is equipped with state-of-the art computerized analytical equipment. The laboratory has facilities for analyzing pollutants in air, water and soil beside toxicity levels in foodstuffs and other products. CLEAN has its regular environmental investigation programmes for air, water and soil. Pak-EPA has conducted a latest research study with the assistance of JICA –expert on pollution with emphasis of suspended particulate matter in three major cities of country. Water research study is underway with the input of Korea Overseas International Cooperation Agency (KOICA). CLEAN is conducting regular monitoring of air in Islamabad. Study on development of inventory of chemical used in industries has been carried out. Laboratory has the capabilities of carrying out field activities using portable equipment viz. High volume sampler, Dissolved Oxygen, PH and turbidity meter along with other relevant equipment for National Environmental Quality Standards.

Research and Investigation

OECC/JICA undertook a study for toxic substances of water in Karachi. Similarly investigation of air and water quality for cities of Lahore, Rawalpindi and Islamabad was completed and the report published. Data on air water quality of different cities showed high level of contamination.

CLEAN has performed the following activities during the year from July 2002 to June 2003.

i. Wastewater Quality Monitoring in Islamabad (April 2002 to May 2003):

A project on Wastewater Monitoring in Islamabad was run by CLEAN with Korean Overseas Volunteer at Pak-EPA. The purpose of this project was to know the extent of wastewater mixing directly to the streams causing pollution and to observe the wastewater moving through sewage system to the wastewater treatment plant. And with the help of these observations to make a strategy for the proper disposal of wastewater, stream management and the development of highly efficient wastewater treatment plant.

During the project sampling of the stream water running through the different areas of Islamabad was carried out in every month and analysis was done in the Pak-EPA, Laboratory. After the analysis of these samples, discussion and conclusion was made on the basis of results obtained and report was written and finalized.

ii. Survey of Drinking Water of Sara-e-Alamgir (12th December 2002):

Under the direction of Director General of Pak-EPA, a survey of drinking water of Sara-e-Alamgir was conducted by Pak-EPA, laboratory on 12th December 2002. The purpose of this survey was to initially examine the drinking water quality, sewerage system and sanitation conditions in town and on the basis of these observations to assess the health risk.

During the survey meeting was conducted with TMO Sara-e-Alamgir at TMO-office, where the briefings was made about the present drinking water supply system and solid waste management. The sampling of drinking water and wastewater was done and analysis were conducted at Pak-EPA, laboratory. On the basis of these observations, conclusions and recommendations were made and report was finalized.

iii. Air and Wastewater Monitoring of Gujranwala and Faisalabad (12th Dec. 2002 to 22nd Dec. 2002):

A project on Air and Wastewater Monitoring of Gujranwala and Faisalabad was designed jointly by Pak-EPA and JICA. The objective of this project was to estimate the Air, Water and Wastewater Quality of Gujranwala and Faisalabad. And on the basis of these observations to help in establishing the National Environmental Quality Standards for air.

The sampling of air, water and wastewater was done both in Gujranwala and Faisalabad. Certain parameters were analyzed on the spot whereas the remaining parameters of water and wastewater were conducted at Pak-EPA, Laboratory. On the basis of these results discussion was made and the final report is at final stages.

iv. Survey of Drinking Water, Sewerage System and Solid Waste Management of Gujrat City (30th January 2003):

A Survey of Drinking Water, Sewerage System and Solid Waste Management of Gujrat City was conducted by Pak-EPA, laboratory on 30th January 2003. The purpose of this project was also to assess the health risks of living beings through the evaluation of drinking water quality, Sewerage system and Solid waste management pattern in the city.

During the survey, meeting was conducted with District Environment Officer, TMO Gujrat where the discussion was made on the present situation of Drinking water, Sewerage system and Solid Waste Management in Gujrat City. Sampling of drinking water was done from different tube well sites and end users sites in Gujrat City. The analysis of these samples was conducted at Pak-EPA, laboratory (CLEAN), conclusions and recommendations were made on the basis of results obtained and report was finalized.

v. **Survey of Drinking Water of Chakwal City and Wastewater Sampling at Adhi & Rajjia Oil and Gas Field (29th May 2003):**

With the direction of Minister of State for Environment, a survey of Drinking Water of Chakwal city and wastewater sampling at Adhi & Rajjia Oil and Gas Field was conducted by Pak-EPA on 29th May 2003. The purpose of this survey was to assess the drinking water quality and the associated health problem among the population in Chakwal City.

During the survey, a meeting was hold with the Tehsil Nazim and other officials of Chakwal who briefed about the water supply system in Chakwal City. Sampling of drinking water from different locations in Chakwal City and of wastewater from Adhi & Rajjia Oil and Gas Field was done and analysis was conducted at Pak-EPA, laboratory (CLEAN). According to the Physio-chemical analysis report, it was found that out of 12 samples 7 were found with exceeding values of heavy metals (Pb and Cd) from WHO guideline. Whereas according to the bacteriological analysis report, all drinking water samples were found unfit for human consumption.

vi. **2 Cities Investigation of Air & Water Quality (Gujranwala & Faisalabad)**

JICA Environmental Expert stationed at Pakistan Environmental Protection Agency (Pak-EPA) has undertaken number of studies to determine the environmental conditions of different cities of Pakistan. In his three years stay in Pak-EPA, he has published six Reports on Air and Water Quality of different cities of Pakistan.

All previous studies were planned and executed by JICA Expert with the help of Pak-EPA and Provincial EPAs. This study was also planned by JICA Expert to grasp the actual contamination conditions of two cities (Gujranwala and Faisalabad), which are an industrial hub of Pakistan and earn considerable foreign exchange for the country. This study was exclusively undertaken by the Pak-EPA in collaboration with Environmental Protection Department of Punjab (EPD) and the respective District Env. Offices.

Purpose of Present Study

- To generate background data. Air and Water Quality monitoring were conducted to assess existing level of contamination.
- To define the inter- relationship of sources of pollution in order to evaluate the character and magnitude of existing problems.

- To assess the future worsening or improvement of air and water quality and to obtain the knowledge and understanding, necessary for developing prevention and corrective measures.
- The status of air and water pollution data and trend provide valuable information on which air and water pollution control strategies and objective decisions may be planned for long-term management.
- To generate the air monitoring data will also help in establishing the Ambient Air Quality Standards keeping in view the WHO Guidelines.
- To ascertain whether the prescribed National Environmental Quality Standards for Municipal and Liquid /Industrial effluents are being violated or not.

Green Library and Documentation Centre

The Government of Pakistan gives high priority to institutional strengthening. 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 the Ministry of Environment, Local Government and Rural Development.

Green Library is a supporting research programme of Pak EPA by making available the latest environmental literature. It is providing research information to the Central Laboratory for Environmental Analysis of Pak EPA.

Formulation of Resettlement Policy

A draft resettlement policy and enabling law were devised through a consultative process with different stakeholders. It was shared with all the Provinces and discussed with the Provincial authorities. It was also subjected to scrutiny and discussion in different workshops held at federal and provincial level. Representatives of the government, donor agencies, NGOs and other stakeholders participated. Now the Draft Policy and Enabling law has been revised by incorporating the views of all the stakeholders, which was presented in the National Workshop organized on 12 January 2002 at Islamabad. During the workshop, all the stakeholders participated in the discussions and gave their views on issues involved in the proposed National Resettlement Policy and the Enabling Law. The recommendations that came up in the workshop were incorporated and it was reiterated that the federal government will seek the endorsement of the provincial governments on the proposed documents. Based on these two documents, a country report was prepared which was presented in the Regional Workshop, held in Asian Development Bank head office Manila from 18-20 February, 2002. The draft National Resettlement Policy and Enabling Law documents have been fine-tuned to incorporate the outcome of the regional workshop. The formal endorsement/comments of provincial governments are awaited.