Brief on National Lakes Protection and Conservation Programme

Pollution in our lakes has been steadily increasing over the years, and has become more severe in the lower reaches of the basins. The sources of this pollution include uncontrolled discharges of municipal as well as industrial wastes in water bodies, runoff from agriculture fields where agrochemical usage has been increasing, and other natural as well as anthropogenic activities which take place in the basins (catchment areas). High incidence of water borne diseases can directly be attributed to polluted waters in our lakes. Other impacts of high contamination in the waters include loss of biodiversity and ecosystems, reduction in fish population and damage to soils and crops in the irrigated areas.

MAJOR ISSUES

- The existing water resources in the country are under threat due to untreated discharge of municipal and industrial wastes to rivers and other surface water bodies.
- Untreated sewage from our cities and towns is usually released in the nearby land, streams or *nullahs*, which ultimately drain the highly polluted water in the rivers. Key examples in this regard include sewage from Lahore polluting Ravi River, sewage from Karachi polluting Lyari and Malir Rivers, and sewage from Islamabad polluting Nullah Lai (which drains in the Sowan River)
- During the last several years, Hepatitis-B is on the rise in major cities, which is mainly due to the mixing of sewage with the drinking water.
- Our industries import about 525 types of chemicals and dyes/colours for use in different processing industries. Their processing generates wastes, most of which are released untreated in the rivers and drains, posing potential risk to public health.
- Excessive use of agrochemicals (chemical fertilizers and pesticides) has resulted into the contamination of surface run off, which in turn pollute the rivers. Recent studies have revealed the presence of residues of pesticides, nitrates and nitrites in drinking water above the acceptable limits.

- During the year 2000, a bone deformity disease appeared in the form of an outbreak in the peripheries of Lahore, which is attributed to the contamination of groundwater by fluorine.
- The marine environment has been severely polluted by discharge of industrial and domestic sewage through the Malir and Lyari rivers and other sources, carrying in excess of 350 mgd of effluents. Oily discharge is also contaminating sea water at the Karachi port and harbour.

In the absence of proper monitoring of the river water quality or the adverse effects the high level of contaminants these rivers receive, the severity and graveness of the problem is not fully understood or appreciated.

The following table highlights some costs of remediation (COR) of environmental neglect in Pakistan, which takes the approach of finding what would it cost annually to restore the environment.

Cost of Remediation for Pakistan

	COR (million US$ in 1990 rates)
Water	53.97
Air	119.49
Land (erosion)	522.59
Solid Waste Management	187.21
Forests	157.40
Ecosystems	36.09
COR per capita	9.58
COR as % of GDP	2.57
COR (total)	**1,076.76**

Source: Peter Rogers et al (1997): *Measuring Environmental Quality in Asia*.

The costs of remediation for water and solid waste management are directly or indirectly linked to the river/lake water contamination. Time required for completion of proposed Project is four years and cost of project is Rs. 231.0 Million.

The proposed Project is in line with one of the objectives of the country's National Environmental Policy: "Secure a clean and healthy environment for the people of Pakistan". The proposed Project is one of the many projects envisaged by the Mid-term Development Framework: 2005-2010 of attaining sustainable economic growth without

environmental degradation, and seeks to improve the water quality of the lakes. The Mid-term Development Framework: 2005-2010 (MTDF 2005-10) has been developed in line with the NEAP objectives, and focuses its four core areas: Clean air; Clean water; Solid Waste management; and Eco-system management. The proposed Projects falls under the 'Water, Sanitation and Slums (Pakistan Clean Water Programme)' component, which is a part of the '*Brown Environment*' category of the Mid-term Development Framework: 2005-2010. The Project will be executed under the supervision of the Federal Ministry of Environment represented by the Secretary, M/O Environment.

The Pakistan Environmental Protection Act 1997 addresses the pollution discharges under its Section 11. Under this Section, the National Environmental Quality Standards (NEQS) address the waste effluent discharges into the water bodies. The proposed Project seeks to rehabilitate and conserve lakes and rivers, which are among the most important natural resources of the country.

SPECIFIC OBJECTIVES

- To enhance the capacity of government and partner agencies to develop and then implement a comprehensive lakes management strategy, strengthen institutional and individual capacity at the national, provincial and local levels for lakes management, increase public awareness and understanding of lakes and their values, and catalyse public and private measures and commitments to secure sustainability of these water bodies.
- To develop plan for sustainable conservation of one lake that will serve as replicable models for subsequent nationwide lakes conservation initiatives.