4. Response to Problems Regarding Environment and Development

4.1 Natural Environment

(1) Deforestation and Desertification

The use of wood for fuel accounts for nearly 90% of the wood consumption in Pakistan and the wood consumption volume, excluding imported wood, is approximately double the forest growth volume, constituting one factor for deforestation.

The Inspector General's Office of the MELGRD has instructed each provincial forest department to formulate a long-term working plan for the purpose of sustainable forest management, has strengthened community-level activities, monitoring and afforestation, including the management of private land, and has approved the lower enforcement power of provincial governments.

Meanwhile, the assistance by such international organizations as the EC, World Bank, ADB, the Netherlands and UNDP for the forestry sector in Pakistan emphasises improvement of the vicious relationship between the excessive exploitation of natural resources and poverty, focusing on the implementation of projects designed to (i) sustain the livelihoods of poor people, the number of which increases under vulnerable natural conditions, and (ii) establish sustainable forest management.

(2) Biodiversity and Conservation of Ecosystem

Alteration of the configuration of a watershed because of water use for an irrigation system, etc. has various impacts, including the diminishment of fresh water bodies in the lower reaches. As a result, the ecosystem for mangrove forest, birds and marine organisms are threatened in brackish water zone. Indiscriminate deforestation for fuel-wood, large-scale commercial logging and over-grazing have placed precious flora and unique fauna in a critical situation.

In the NEAP 2001, the MELGRD lists ecosystem management as one of the four core fields. It has prepared the Biodiversity Conservation Action Plan 2000 and has been implementing some ecosystem conservation programmes which are specific to unique areas with NGOs and with the technical and financial assistance of such international natural environment protection organizations as the GEF, WWF and IUCN. At the federal level, the preparation of a red data book is in progress with the assistance of the SDC with its completion expected in a few years time.

There is a consensus among the organization involved in environmental conservation that a matter of the highest priority is the capacity building of primarily the provincial wildlife protection departments and forest departments which are responsible for practical conservation work of the natural environment. As the survival of the ecosystem relies on the characteristics of the geographical area, the participation of the local community affecting the local environment is essential for conservation of the natural environment. Accordingly, conservation projects which are appropriate for specific areas are being promoted to make the sustainment of the livelihoods of local residents compatible with conservation of the ecosystem in each area.

4.2 Urban Environment

(1) Air Pollution

Although air pollution in large cities in Pakistan is facing a critical situation, clear data indicating the causal relationship between air pollution and health damage or the rate of contribution by source is not readily available except for reports on the adverse impacts of offgas from certain plants on human health. General emphasis based on limited measured data is placed on SPM by comparing the local value with the relevant WHO guideline.

While the NEQS sets forth the legal threshold for 18 items to stationary emission sources, NOx (annual median) is the only subject item in regard to the ambient air quality. In the case of vehicular emissions, only CO and black smoke are subject to the regulatory regime.

In regard to stationary sources of air pollution, the SMART (self-monitoring and reporting tool) programme is being implemented as in the case of waste water and each provincial EPA monitors plants based on the plant offgas standards.

One measure in progress to control mobile sources of air pollution is the conversion from fuel with high emission factors of NOx, etc. (diesel and the mixing of kerosene) to CNG with a low emission factor. Oil companies are planning to phase out leaded petrol in 2005.

The VETS was established in Peshawar in 1997 with the assistance of the GTZ as part of the Urban Industrial Environment Protection (UIEP) Programme. While more than 5,000 vehicles have been inspected, further assistance for other cities has been suspended due to the shift of emphasis of the GTZ's aid to capacity building and other reasons.

While a project to effectively implement the SMART Programme and a project to introduce mobile VETSs nationwide have already been approved as NEAP-SP projects, funding sources

have not yet been found. A project to promote CNG as the main fuel for vehicles has also bee formulated as a NEAP-SP project but has not yet been approved.

(2) Water Quality

The pollution of groundwater, which is a main source of drinking water together with river water, has become a serious problem. Groundwater pollution is inferred to be caused by untreated industrial waste water. Even though the NEQS set forth effluent standards, hardly any plants are equipped with a treatment system. Inspection by the provincial EPAs has found that most plants fail to meet the NEQS and plant owners appear to simply refuse to implement any improvement. Despite the establishment of a judiciary system consisting of environment courts and environment judges, the law enforcement capacity of the administration, including EPAs, is desperately weak.

A programme designed to gradually improve the application of the SMART with the involvement of local support councils has been approved under the NEAP-SP to change the SMART from a theory to practice. Again, however, there is not yet any prospect of securing the necessary funding.

The virtual lack of solid waste management is another cause of river water and groundwater pollution. The solid waste collection rate is said to be less than 50% in most cities and the dumping of solid waste in rivers is commonplace, particularly in slum areas which are not covered by a collection service. Even if solid waste is collected, many of the final disposal sites are located on a river bank without proper planning. The high environmental load, particularly during the dry season, is assumed to be caused by the direct discharge of urban sewage to rivers or discharge after a simple lagoon-type sewage treatment system.

As described above, the complex mechanism of water pollution is caused by a variety of factors. One of the most fundamental problems at present is the lack of a system, as well as equipment, to conduct continuous water quality monitoring in an appropriate manner.

The introduction of common waste water treatment facilities is planned so that Pakistani industries dominated by small and medium size enterprises with weak capitalisation can develop in harmony with the need for environmental conservation.

(3) Solid Waste Management

Even prior to the decentralisation of provincial governments, solid waste collection and disposal was conducted by district-level public service departments. A medium to large size

city which constitutes a single district is now facing the need for large-scale exclusive disposal sites because the conventional make-shift method of renting private land can no longer cope with the increasing volume of solid waste resulting from progressive urbanisation.

As in the case of many other parts of the world, the securing of public land for use as final disposal sites is a slow process because of opposition by local residents. When the purchase of land is necessary, the provincial government is required for provide a substantial budget. In Lahore, such planned purchase has been abandoned because the Punjab Provincial Government could not raise the required Rs 80 million to purchase the planned disposal site from its own revenue. This failure in the relatively rich Punjab Province has resulted in pessimism among public service departments in other provinces (districts). Even if final disposal sites can be secured, they are likely to be located in remote areas and there is concern that the financial situation of districts will make it impossible to meet the increased operation and maintenance cost of the transport vehicles.

Meanwhile, the federal government is proceeding with participatory solid waste management projects along with a 3R (reduction, re-use and recycling) campaign. The federal government is also planning a guidance programme using national guidelines to deal with the different levels and methods of solid waste management by different administrative units. However, there is currently no prospect of funding the implementation of this programme.

4.3 Social Environment

The problem of poverty which is attracting international attention in aid circles can be considered to be both a causal factor for environmental problems and the vulnerability of people most affected by environmental deterioration.

There has been a continual inflow of people to urban areas, partly because of the conflict in Kashmir, resulting in the establishment of slums called “katchi abadis” by the urban poor. The environment of these slums varies because of ethnic problems (including conflict and discrimination) and most of them do not receive such public services as water supply, sewerage, power supply and solid waste collection services. This situation is one of the factors for the worsening of the urban environment and people living in these slums are the most vulnerable to the adverse impacts of the worsening urban environment. Moreover, refugees from Afghanistan have been entering Pakistan since 1979. While these refugees are accommodated in many refugee camps in the NWFP and Balochistan, camps accommodating more than one million refugees (which is equivalent to almost half of the local Pakistani population) near Peshawar, the capital of the NWFP, have become a factor for the increasing environmental load of the city as in the case of katchi abadis.

The environmental problems in rural areas are typically forest depletion and desertification caused by over-grazing and indiscriminate cutting. The background for such practices is the social environment in which the poor who lack educational opportunities to acquire the knowledge and skills required for sustainable development are struggling to maintain their lives against the background of a fragile natural environment in the frontier areas to which they have been driven by various development programmes/projects.