

## CHAPTER 22

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### ENVIRONMENT AND CLIMATE CHANGE

The world is facing serious environmental problems such as climate change, air and water pollution, waste disposal, natural resources depletion, deforestation, loss of biodiversity, and ocean acidification. Industrialised nations which are still major consumers of the Earth's resources, are also leading emitters of greenhouse gases thus they are prime responsible for environmental degradation and climate change in the world. Pakistan, like many other countries, is also facing some environmental challenges. Water pollution, desertification, soil erosion, water logging and salinity, solid waste management and deforestation are some of the major environmental issues in Pakistan. Industrial pollution, though not too high at the moment but may get worse if unchecked. Air pollution is endemic because of a surge in automobiles, insufficient emission standards, and in the absence of effective law enforcement. Land degradation is a serious problem both in irrigated and barani areas. Elsewhere, mining, erosion and deforestation are major causes of land degradation. All this is compounded by relentless urbanisation<sup>1</sup>, changing consumption patterns, and climate change.

Despite its overarching role, the environment sector has not been recognised fully in the calculus of the economic or social sectors, even though the direct and indirect losses to the economy are estimated at over Rs365 billion annually. The inability to address the situation will result in extremely high costs in the future. It is therefore necessary to help improve country's capacity to achieve environmentally sustainable economic development to meet the needs of present and future generations.

To achieve sustainable economic development, it will be necessary to keep in mind the balance between the ecological footprint (resource demand) and the bio-capacity (resource supply) in Pakistan. The ecological footprint across the planet has been increasing inexorably, as its capacity has diminished, leading to a state of deficit as far back as the '80s [Source: WWF<sup>2</sup>]. This allows a better understanding of the underlying causes behind phenomenon such as climate change.

Fresh water faces perhaps the most critical threat. With an estimated population of 227 million by 2025, Pakistan's current water availability of less than 1100 cubic meters per person, down from 5000 cubic meters in 1951 classifies it as a "water-stressed" country that is heading towards becoming a water-scarce country if action is not taken urgently. Thus there is need to develop a comprehensive water strategy that must combine the building of a substantial amount of additional water storage; the minimisation of losses in the conveyance system; and implementation of effective policies to maximise crop yields per unit of water.

While Pakistan makes a negligible contribution to total Global Greenhouse Gas (GHG) emissions (among the lowest in the world), it is among the countries most vulnerable to climate change.

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<sup>1</sup> Pakistan is the most urbanised country in South Asia (Ref : *Vision 2025*, 2007)

<sup>2</sup> See [www.wwf.ca/downloads/lpr2008\\_ecologicalfootprint.pdf](http://www.wwf.ca/downloads/lpr2008_ecologicalfootprint.pdf)

The country has very low technical and financial capacity to adapt to and mitigate the effects of climate change. Global warming has caused acceleration in melting glaciers, shifts in biodiversity, changes in crop and vegetation distribution, vulnerability of mountain, desert, marine and coastal ecosystems. Therefore, there is need to aggressively explore opportunities of capacity building and institutional strengthening to address the climate change issues in Pakistan.

## **Performance review 2014-15**

The government has undertaken several projects and programmes on many levels to support the Environmental goals through the federal and provincial resources. Many projects have been completed with focus on areas of capacity building, provision of clean drinking water, environmental management, biodiversity, air pollution control and watershed management, urban development, promotion of tourism, restoration of lakes and water bodies, environmental awareness, waste management, and wetlands management, etc. One of the major issues which are being faced in the country is desertification and land degradation. To combat desertification and land degradation, federal govt. started an umbrella project with the assistance of UNDP. First phase of this project has been completed and targets such as institutional and knowledge capacity building, feasibility studies for testing Sustainable Land Management (SLM) practices and designing full demonstration investments, has been achieved. Second phase of this project is also under implementation in 14 districts of Pakistan with approved cost of Rs1666.67 million.

The government is also working with several NGOs, INGOs and United Nations organisations, such as Leads, WWF, IUCN and UNEP on environmental issues and has implemented projects in capacity building on climate change adaptation, environment rehabilitation, mountain area and wet areas conservancy and in provision of clean drinking water. Due to the efforts of the government of Pakistan, performance of Pakistan in achieving the targets set under MDG 7<sup>2</sup> (Ensure Environmental Sustainability) is remarkable. Target of conversion of 0.92 million vehicles on the Compressed Natural Gas (CNG) has been achieved. Target of access to improved water resources through hand pump, electronic motor and tap water has also been achieved. Progress is on track to meet the target for land protection for the conservation of wildlife as a percentage of total land area. However, Pakistan's performance on other targets such as forest cover and lowering the Sulphur content in high speed diesel as well as access to sanitation and energy efficiency by the proportion of population is not such remarkable and Pakistan is behind in achieving these targets from its regional counterparts. Thus there is need to increase awareness and to change attitude of people regarding environmental issues as well as strict compliance of government regulations is also imperative in the achievement of environmental sustainability targets.

## **Outlook 2015-16**

The Annual Plan focuses on provision of productive and healthy natural resources, gradual improvement in air and water quality, institutional strengthening, and taking up sustainable development across different sub-sectors of the economy and to achieve these objectives, the following actions will be taken:

- Transformation of existing environmental policies into practice by implementing a programme based approach and to identify gaps and issues, activities and action plan as well as strategies to overcome the environmental issues.

- A realistic approach in the management of ecosystem will be carried out with the special emphasis on imperative ecosystem segments such as protection of biodiversity, water conservation and soil erosion protection, carbon sequestration and biodiversity protection, etc.
- In Pakistan supply of drinkable water and sanitation (WSS) requires special attention as presently a large number of households don't have access to enough potable or shallow water, numerous also lacks in proper sanitation system and toilets. Poor sanitation leads to sickness as well as negative impact of ecosystem. Therefore, a strategy to improve sanitation and to expand access to clean drinkable water particularly in rural areas is being implemented with the help of provincial governments.
- Due to the water scarcity in the country, the wastewater treatment is imperative for the continuous and affluent supply of water for agriculture in future. Despite having the potential and capacity of our industry for designing and fabricating waste water and sewage treatment plants locally still a meagre portion of industrial waste water is being treated and reused. Therefore, to treat and recycle industrial effluents, a Wastewater Treatment Programme will be initiated in the country in collaboration with the provincial governments.
- For increased forest cover and enhancement of natural resources, a strategy to developed forest cover along with conservation and restoration of the natural resources of the country will be implemented through applied approach of ownership. Another strategy will be designed to prepare locals to manage forests areas and wild lands around their residences. Strategy would also include provision of alternative energy resources to the residents of forest cover areas at affordable price.

The Plan also focuses on the achievement of following targets in the area of sustainable environment.

S.#	Environmental indicators <sup>3</sup>	Benchmark 2012-13	Targets 2015-16
1	Forest cover including state-owned and private forest and farmlands (as percentage of the total land area)	5.2%	5.4%
2	Area protected for conservation of wildlife (as %age of total area)	11.6%	11.7%
3	Access to sanitation (national)%	72%	76%
4	Access to clean water (national)%	87%	89%
5	Number of continuous air pollution monitoring stations	7	9
6	Percentage of Sulphur (by weight) in high speed diesel	0.6	0.50 to 0.05
7	Sanitary landfill in major cities	0	2

<sup>3</sup> See 11<sup>th</sup> five year plan

## **Programmes**

In 2015-16, the environment and climate change programmes and projects are aligned with the Vision 2025 by focusing on sustainable growth of the country through integration of environmental considerations in development. Pakistan is a resource scarce country and the careful allocation of resources is planned to achieve the optimum growth without the cost of environmental degradation. An allocation of Rs169 million has been earmarked in the PSDP 2015-16 for following federally implemented programmes:-

- Establishment of Clean Development Mechanism Cell (Islamabad)
- Sustainable Land Management Programme Phase-II, (in 14 districts of Pakistan)
- Installation of Weather Surveillance Radar at Karachi
- Carbon Neutral Pakistan
- Pollution Control Research and Development Project
- National Biogas Plan