

Chapter 22 | ENVIRONMENT AND CLIMATE CHANGE

Environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and habitats; the extinction of wildlife; and pollution. As the population of the world increases we are facing the ultimate challenge of keeping the world habitable for the humans. There is a direct relation of the human population with pollution. A growing world population might seem like an obvious threat to the environment that goes far beyond the debatable theory of global warming. Massive uncontrollable consumption of the resources and increasing pollution is causing severe repercussions for the future generations.

Sustainable development is the keystone of all considerations by the government including concern for environment, its protection, renewal and enrichment. Even though environment and climate change is no longer any single country's problem, Pakistan is doing its part for the conservation of global environment by producing less carbon and creating greener and a more sustainable world. The Prime Minister's directive for a greener Pakistan has seen the initiation of Green Pakistan programme which seeks to plant trees all across Pakistan.

Global Climate Risk index issued by the German watch, lists Pakistan as the 5th most vulnerable country in the world. Pakistan has seen huge death tolls and financial losses amounting to 2.2 billion dollars due to extreme climatic events. Pakistan is amongst the smallest contributors to the global carbon emissions but is affected the most by the extreme weather events and climate change.

Table-1
The climate risk index for 2014: the 10 most affected countries

Ranking 2014 (2013)	Country	CRI score	Death toll	Deaths per 100,000 inhabitants	Absolute losses (in million US\$ PPP)	Losses per unit GDP in %	Human Development index 2014
1 (93)	Serbia	8.17	59	0.82	3300.31	3.44	77
2 (15)	Islamic Republic of Afghanistan	10.67	434	1.39	337.1	0.55	169
3 (15)	Bosnia and Herzegovina	11.5	26	0.67	3584.78	9.36	86
4 (1)	Philippines	12.5	328	0.33	3312.69	4.48	117
5 (6)	Pakistan	12.67	1.23	0.66	2220.53	0.25	146
6 (77)	Bulgaria	13.83	31	0.43	2383.60	1.85	58
7 (143)	Nepal	15.83	533	1.9	143.1	0.21	145
8 (109)	Burundi	16	80	0.87	73.38	0.87	180
8 (33)	Bolivia	16	47	0.42	449.45	0.64	113
10 (3)	India	16.17	1863	0.15	36950.5	0.5	1135

Source: Global climate risk index by German Watch

Rising global temperatures are likely to cause more devastation and human casualties in future as in 2015 in Pakistan, according to the report of National Disaster Management Authority (NDMA) the death toll was greater than 1,200¹, as a heat wave struck the region. On one day, the temperature in Karachi rose to 48°C. This was measured at around 64 degrees on the heat index which reveals, how such a temperature is perceived by humans². Extensive research is required with accuracy and collection of data to generate reliable weather models. This will help to forecast extreme climatic events with more precision and let the nation prepare for any impending disasters.

The changes in climate will force human populations to relocate massively as the water, air and land become unusable in the very near future. Environmentally displaced people are bound to rise and will not be controllable by the resource scarce economies of the world.

Performance review 2016-17

The Green Pakistan Program is being implemented with mass afforestation all over Pakistan. Besides, Sustainable Land Management Program, phase-II and Weather Surveillance Radars at Karachi are being implemented. There are also projects like Development of Reverse Linkages with MARMARA Research Centre Turkey, which will enhance our capacity in seismic research & development and prediction of earthquakes and floods.

Outlook 2017-18

Environment and climate change strategy / policy strategy

The mitigation of the climate change devastations and deceleration in the carbon emissions is a huge requirement to curb the already disastrous effects of climate change and environmental degradation. To combat the havoc caused by extreme climatic events and to keep the catastrophes of climate change in check, following policies will be continued:

- Transformation of existing environmental policies into practice by implementing a Programme based approach and to identify gaps and issues, activities & 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.
- 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. 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 waste water treatment is imperative for the continuous and affluent supply of water for agriculture in future. Despite having the

¹ <http://www.ndma.gov.pk/files/heatwave.pdf>

² (<http://www.dw.com/en/south-asia-braces-for-another-heat-wave/g-38249710>)

potential and capacity of our industry for designing and fabricating wastewater/ sewage treatment plants locally it is challenging that a meagre portion of industrial wastewater is being treated and reused. Therefore, to treat and recycle industrial effluents, a Wastewater Treatment Program will be initiated in the country in collaboration with the provincial governments.

- For increased forestry cover and enhancement of natural resources, a strategy to develop forest cover along with conservation and restoration of the natural resources of the country will be implemented through applied approach of ownership. A strategy will also be designed to motivate locals to manage forests areas and land around their residences. Strategy would also include provision of alternative energy resources to the residents of forest cover areas such as LNG at affordable price.

International Consensus

Paris Agreement: essential elements

The Paris Agreement builds upon the United Nations Framework Convention³ on Climate Change and for the first time brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort.

The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C. The Paris Agreement requires all Parties to put forward their best efforts through nationally determined contributions (NDCs) and to strengthen these efforts in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts.

In 2018, Parties will take stock of the collective efforts in relation to progress towards the goal set in the Paris Agreement and to inform the preparation of NDCs. There will also be a global stock take every 5 years to assess the collective progress⁴ towards achieving the purpose of the Agreement and to inform further individual actions by Parties.

Programmes

Some of the Programmes which will be implemented federally are as follows:

- Development of reverse linkages with MARMARA Research Centre Turkey
- Strengthening Capacity for Effective implementation of the Pakistan trade control of Wild Fauna and Flora Act (under consideration)
- Establishment of Climate Change Reporting Unit (under consideration)
- National Disaster Spatial Data Infrastructure (under consideration)
- Implementation of Human Resource Development Plan (under consideration)

³ http://unfccc.int/essential_background/convention/items/6036.php

⁴ http://unfccc.int/files/paris_agreement/application/pdf/pa_progress_tracker_10042017.pdf

- The Prime Minister of Pakistan has approved launching of Green Pakistan Programme aimed to increase the forest cover of the country.
- Green Pakistan Programme – Revival of Wildlife Resources in Pakistan.
- Strengthening “Zoological Survey of Pakistan” for undertaking immediate inventory of undertaking immediate inventory of endangered wildlife species and habitats across Pakistan for producing regular status reports on periodic basis (Principally approved by CDWP).
- Climate Resilient Urban Human Settlements Units (Approved in principle).
- Establishment of Climate Change Reporting Unit in Ministry of Climate Change, Government of Pakistan (Approved in principle).
- Establishment of Pakistan WASH Strategic Planning and Coordination Cell (Approved in principle).