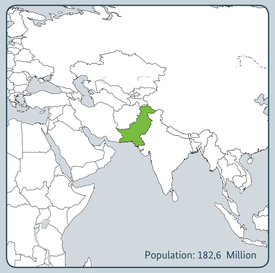
Pakistan – The Challenge of Climate Change – Partnering with Biodiversity Conservation



Pakistan is bestowed with a wide variety of ecosystems and habitats ranging from the Arabian Sea in the south to the second highest peak in the world – K-2. Four ecosystems of Pakistan are even included in the Global 200 biologically most outstanding ecoregions in the world.

While being blessed with an extraordinary biodiversity, Pakistan is severely threatened by climate change and its impacts at various levels. Pakistan being among the 10 most vulnerable countries to climate change, colossal damage of life and property from recent floods are still fresh in our memories. In 2012, the Government approved a National Policy of Climate Change and created the World's first full-fledged National Ministry of Climate Change. Pakistan's National Conservation Strategy was approved in 1992 and with a National Biodiversity Strategy and Action Plan (NBSAP) elaborated in a bottom-up-participatory approach, Pakistan has always shown strong political commitment to the cause of environment and sustainable development. Having understood how closely climate change and biodiversity related topics are interlinked, Pakistan is exploring ways to implement the two related conventions on biodiversity and climate change in a synergistic manner. This poster highlights the strategic plan for biodiversity and its 20 Aichi-Biodiversity Targets and Pakistan's actions towards the mutually supportive implementation of biodiversity and climate change activities.

A

1 The Government of Pakistan supports green journalism and environment, climate change and biodiversity issues are covered on a daily basis.

1 Pakistan raised wide scale awareness through regularly celebratinges international days on Biodiversity, Forests, Water, Environment, etc.

2 Biodiversity is a mandatory component of environmental impact assessments (EIAs), aiming at halting the negative impact of developmental projects on biodiversity and environment.

3 An integrated landscape management pilot project will be launched on three different sites to test the efficacy of positive incentives to reduce and ultimately halt the degradation and fragmentation of priority ecosystems by 2019.

4 Numerous projects (e.g. value addition of Non-Timber Forest Products, water shed management, micro irrigation systems, sustainable agriculture, etc.) aiming at the sustainable use of natural resources have been launched.

Sustainable Agriculture and its reduced footprint on priority ecosystems

The Government of Punjab, WWF-Pakistan and IKEA have been collaborating under "Pakistan Sustainable Cotton Initiatives (PSCI)" since 2005 for the development and promotion of site-specific Better Management Practices (BMPs). More than 50,000 farmers participated in the program to grow better cotton over an area of 200,000 ha in 2011. Results included a reduction of 37.5 % in water use, 47 % in pesticide use and around 41% in fertiliser use, leading to a cost-benefit ratio of 1:2.3 for farmers using BMP compared to 1:1.1 by non-BMP farmers. This model is currently being up-scaled to include additional crops like rice and sugarcane over larger agricultural surfaces. Farmers are slowly adopting micro irrigation systems, are increasingly planting low delta crops and are changing cropping patterns, thus contributing to biodiversity conservation. It's Pakistan's participatory approach towards sustainable agriculture, including measures such as diversification of crops and micro irrigation systems, and less use of synthetic pesticides and fertilizers that provides an important framework to strengthen climate change resilience of rural communities.

Farmers of Chitral receive a demonstration of a drip-irrigation scheme.

B

5 Large scale afforestation activities on the national (approx. 40 million trees in 2014-2015) and provincial level (Billion Trees Tsunami campaign in Khyber Pakhtunkhuwa under the Green Growth Initiative).

5 Pakistan in collaboration with Mangroves for Future Program is striving to encourage integrated coastal ecosystem (mangroves, marine fisheris, rights of custodian communities) management and investments that are ecologically and socioeconomically sound, and promote human well-being and security .

6 Restocking of rivers/streams with indigenous fish species. Rver Ponch Mahasheer NP (first aquatic protected area of Pakistan) established to protect Golden Mahasheer (*Tor putitora*) species in Azad Jammu and Kashmir.

6 A mechanism will be created for the coordination among agencies responsible for managing water, fish, and wildlife resources in wetlands by 2017.

7 Pakistan joined the UN-REDD programme in 2011, is a member of Forest Carbon Partnership Facility, has nominated a national REDD focal point about to implement REDD+ readiness activities on national and provincial level (REDD+ roadmap for KP).

7 Khyber Pakhtunkhuwa (Forest Province) developed a REDD+ road map which includes the drafting of a provincial REDD+ strategy/ establishment of a REDD+ cell.

7 Aquaculture is increasingly contributing to meeting the protein needs of Pakistan and is widely restricted to fish ponds, thus reducing the threat to biodiversity.

Pakistan-Reducing Emissions from Deforestation and Forest Degradation (REDD+)

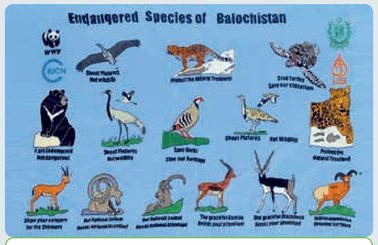
The REDD+ process was initiated by the Government of Pakistan in 2009 with consultative workshops and awareness raising. In 2012, a multi-stakeholder Steering Committee was constituted. Provincial Coordination and REDD+ Management Committees were constituted. National and provincial focal points were declared. Working Groups were formed to compile and deliver information on the following:

a. Governance and Management of REDD+
b. Stakeholders' Engagement and Safeguards;
c. National Forest Monitoring System
d. Drivers of Deforestation and Forest Degradation.

All the relevant bodies are working together to create awareness and to initiate the REDD+ Readiness process in Pakistan. The inputs acquired through this process will be utilized to develop the REDD+ National Strategy and Implementation Plan. Pakistan prepared an R-PP (Readiness Preparation Proposal) to be implemented in the period from January 2014 to December 2017. Provincial Forest Departments of Punjab, Sindh, Balochistan, Khyber-Pakhtunkhwa, AJK and Gilgit-Baltistan have designated their respective provincial Focal Points for REDD+.

Painting competition on Pakistan's climate change resilience held by the Ministry of Climate Change.

C



11 In Gilgit-Baltistan three National Parks (Khunjerab, Central Karakoram and Deosai) were recognized to conserve unique biodiversity, ecosystems and natural resources.

11 Pakistan established 117 community conservation areas (CCAs) as an excellent example of positive incentives to restore biodiversity and the rights of custodian communities and indigenous people. Overall, nationally recognized protected areas cover 12% of the country's surface area.

12 Successful conservation and re-introduction of captive bred Chinkara *(Gazella indica)*, Chir Pheasant *(Catreus wallichii)*, Western Horned Tragopan *(Tragopan melanocephalus)*, Musk Deer *(Moschus chrysogaster)*, and Woolly Flying Squirrel *(Eupetaurus cinereus)*.

13 The gene pool of crops is being maintained and updated at different institutions of the Pakistan Agriculture Research Council (PARC). Similarly, selected indigenous breeds of livestock are being maintained in different livestock research stations, throughout Pakistan.

Central Karakoram National Park - A success story of protected area management

It is located amidst the lofty peaks of the Karakoram Mountains in Pakistan, spanning partly four of the seven districts of Gilgit-Baltistan. With K-2 (8611m), the world's second highest peak as its centre piece, the Park is characterized by the most rugged, glaciated, and climate change affected landscapes on earth, offering tremendous potentials for tourism and mountain expeditions. WWF-Pakistan in collaboration with Gilgit-Baltistan Forestry Wildlife and Environment Department, CKNP Directorate and Ev-K2-CNR has been monitoring biodiversity, primarily focusing on large mammalian fauna. A baseline of wild ungulates (Himalayan ibex and Astore markhor) has been established at all major catchments of the Park, consisting of a minimum number of 2,500-3,000 ibex in 21 valleys with 100-150 Astore Markhor in six valleys and 20-30 Ladakh Urial in one valley. After its status as a National Park had been established, seasonal assessments revealed overall increasing trends in numbers of wild ungulates, e.g., during winter 2011 the minimum number of Himalayan ibex observed in three valleys, viz. Basha, Thalay and Hisper, was 20, 39, and 430 respectively, which increased to 192, 229, and 645 respectively during winter 2013.

D

14 The "Sustainable Land Management project to Combat Desertification in Pakistan" by GEF/UNDP created an enabling environment for mainstreaming Sustainable Land Management (SLM) practices, built the institutional capacity and implemented successfully nine pilot projects for demonstrating SLM practices in arid and semi-arid regions of all four provinces of Pakistan. Phase-II of this Project is now focusing on upscaling best SLM interventions to a wider landscape in Pakistan.

15 Mangroves for future, Billion Tree Tsunami campaign, Community conservation Areas and Pakistan's Glacial Lake Oouburst Flood (GLOF) projects are landmark achievements towards CC mitigation through biodiversity conservation.

15 In Murree, a popular hill resort near Islamabad, the provincial Government of Punjab converted a 16 ha planned residential development scheme into the first Biodiversity Park in Pakistan after realizing the adverse impact of the housing scheme on environment and biodiversity.

16 Pakistan succeeded to create political will for the accession to the Nagoya Protocol on Access and Benefit Sharing. This will help Pakistan in maintaining its GSP plus status and also in clarifying the status of transboundary genetic resources that are shared by more than one country.

Climate Change Mitigation through Biodiversity Conservation

The Ministry of Climate Change is exploring synergies between climate change mitigation/adaptation and ecosystem maintenance, restoration, and its sustainable use. Such nature-based climate change mitigation approaches are used to reduce greenhouse gas emissions and to conserve and expand carbon sinks. As "NO-REGRET OPTIONS" these approaches are useful even if the effects of climate change do not materialize as predicted. Examples of nature based approaches include:

a. Annual Mass Afforestation Campaigns: 27 million trees with 70% success rate planted in 2014 and 50 million trees to be planted by the end of 2015. In addition to this, the Khyber Pakhtunkhuwa government launched the Billion Trees Tsunami campaign in 2015 under its green growth initiative.

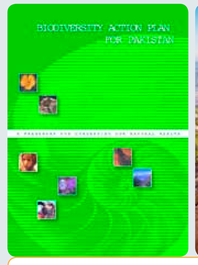
b. Mountains and Market: Sustainable production of biodiversity goods and services through community ecosystem-based enterprises in demonstration conservancies in the northern mountains of Pakistan.

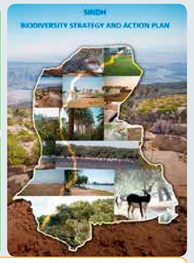
c. Network of Protected Areas: Currently, Pakistan has notified 26 National Parks, 91 wildlife sanctuaries, 116 game reserves, 117 community reserves, 19 Ramsar Sites, 9 marine and littoral protected areas and 2 biosphere reserves.

d. Mangroves For Future (MFF): The "MFF National Strategy and Action Plan" has been validated and Pakistan holds the Guinness World Record of planting most (541176) mangrove trees in 24 hours by a team of 3000 people.

e. Pakistan GLOF Project: The Ministry of Climate Change developed human and institutional capacities to better enable vulnerable local communities from Glacier Lake Outburst Floods (GLOF) in Northern Pakistan by reducing risks and vulnerabilities of GLOF.

E





17 A Biodiversity Action Plan was prepared in 2000. On the basis of lesson learnt from previous processes a revised NBSAP has been drafted by consulting all administrative units of Pakistan.

17 Provincial BSAPs have been developed for the first time in the history of Pakistan to create wider ownership and thus insure the implementation of the UN-CBD throughout Pakistan.

18 The transhumance pastoralism is practiced by "Gujjars" in northern Pakistan and some tribes in western Pakistan. Their traditional practices are well recognized.

20 Additional resource mobilization from all available sources is foreseen by 2018, aiming at a substantial increase of the current funding and thus allowing for an effective implementation of the NBSAP.

Mainstreaming of Biodiversity in Pakistan

The term biodiversity was a relatively new term to define the web of life and although the three objectives of the CBD were not new concepts, the implementation of the convention played a very useful role in popularizing biodiversity values and the importance of conservation, sustainable use and equitable sharing of benefits. Biodiversity is now included in the curricula of many universities, safeguards are installed to prevent the spread of invasive alien species, the participation of stakeholders in planning and decision making is more effective, and the equitable sharing of benefits has increased community participation in conservation. The following bullet points highlight some of Pakistan's success stories:

a. For the first time CBD implementation in Pakistan is done in a coordinated manner with all provinces and regions through provincial biodiversity strategy and action plans.
b. Biodiversity is included in the curricula of many universities.
c. Biodiversity considerations are included in environmental impact assessments and climate change related policies.
d. Scaling up of community participation in conservation.
e. Conservation status of many threatened and critically endangered species has improved.
f. Protected Area coverage and number of PAs under effective management has increased.

AICHI BIODIVERSITY TARGETS
STRATEGIC GOALS

A Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.

Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.

Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

B Reduce the direct pressures on biodiversity and promote sustainable use

Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

C To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

D Enhance the benefits to all from biodiversity and ecosystem services

Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

E Enhance implementation through participatory planning, knowledge management and capacity building

Target 17: By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.

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