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Forum of Young Global Leaders Indo-Pak
Initiative on:

Climate Change & Disaster Risk Reduction: Managing Risks, Sharing Benefits

Overview of WWF – Pakistan’s Climate
Change and Adaptation Programmes and
Interventions

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Overview of WWF – Pakistan’s Climate Change and Adaptation Related Interventions

WWF – P is currently implementing a series of projects and programmes in Pakistan, which address climate change impacts and focus on adaptation activities.

In 2011, WWF – P has launched a new climate change project with the financial support of the European Commission. The project, “Building Capacity on Climate Change Adaptation in Coastal Areas of Pakistan,” (CCAP) is for 5 years and focuses on reducing the risks faced by vulnerable communities in coastal areas of Pakistan through the implementation of adaptation interventions and capability building, in addition to promoting integrated water resources management, basin management and supporting governance mechanisms to become more responsive and robust when addressing climate variability and change related impacts.

The CCAP project in collaboration with WWF – P’s Indus for All Programme will be undertaking community based vulnerability assessments in two selected coastal sites and deltaic assessments in anticipation of future interventions on water scarcity, climate variability and adaptation in the Indus Basin. These assessments will be holistic, assessing the health of ecosystems across the Indus Delta and in the selected sites; determining the likely changes to ecosystem services as a result of climate change; looking at the links between ecosystems, livelihoods and climate change; and identifying ‘hotspots’ of vulnerability and natural resilience. The project also intends to develop climate adaptation plans, which will feed into government planning documents designed to respond to emerging climate risks and adaptation needs. Further collaborative work includes pilot testing environmental flows downstream of the Indus River to test the resilience of the deltaic ecosystem.

The interventions regarding coastal vulnerabilities and adaptation are supplemented by WWF – P’s work on hazard related vulnerability assessments in Pakistan’s northern mountainous region of Gilgit and Chitral; capacity building for GLOF related disaster risk reduction; and disaster risk assessment and management planning.

The Indus for All Programme, WWF – P’s large scale and long-term programme, based in the Indus Ecoregion is part of a 50 year vision for the Indus Ecoregion. In its first 5-year phase the Programme focuses on natural resources management and livelihoods improvement. Within these thematic foci, the Programme regularly monitors land use and changing land use patterns, and forest cover across the Indus Delta. Also as part of its ongoing work on natural resources management the Programme is intensively engaged in community supported and, eventually community managed, mangrove plantations. The Programme has also awarded a series of small grant funds through its ‘Partnership Fund’ to non-governmental organizations,

community partners, government partners and academia to address issues such as species rehabilitation, reforestation, watershed management and provision of alternate energy.

WWF – P is also operating in the Gilgit-Baltistan mountainous region of Pakistan. The area has a sensitive landscape and is vulnerable to climate variability and change impacts. The indications of climate change are quite visible in the region where a maximum increase of 0.44 °C per decade has been recorded over the last few decades. WWF – P has initiated a range of small and medium scale initiatives on climate change adaptation and mitigation in the area. These include: a project on Glacial Lake Outburst Floods (GLOF); a Regional Climate Risk Reduction in Himalayas project; a project on climate change adaptation through watershed management; and a high altitude wetlands protection project.

The project on GLOFs aims at enhancing community based knowledge about these hazards and building their resilience capability when faced with such events. The project carried out an assessment of community based disaster preparedness, and produced participatory risk management plans for vulnerable villages. The participating communities were trained in Community Based Disaster Risk Management (CBDRM) and 50 male and female volunteers were trained in emergency relief and were organized to form Community Emergency Response Teams (VERT) at village level.

The Regional Climate Risk Reduction in Himalayas project (RCRRP) assesses risks associated with the impacts of climate change induced hydro-metrological hazards in the region and undertakes appropriate mitigation and preparedness measures at community level. The pilot project was implemented in six of the most vulnerable villages of Gilgit, Hunza-Nagar and Astore districts. Major outputs of the project included, community based Hazard Vulnerability Risk Assessment (HVRA) of 12 Union Councils in Gilgit district, Disaster Risk Reduction (DRR) planning in the six target villages and networking for information sharing and raising awareness. The project, with the support of the six villages, developed DRR plans, conducted trainings on Disaster Relief Management and helped form Village Emergency Response Teams at village level. Governance capability interventions within the project included the development of risk maps for 12 UCs of Gilgit district and were shared with the local government for future planning. Awareness raising activities included exposure visits, media campaigns and education outreach and a demonstration project to show case better natural resource management practices as a mitigation strategy to reduce climate risks i.e., soil erosion, land sliding, flood, rock fall, and mudflows etc. through slope stabilization and compact plantation on hazardous active slopes.

The project on Climate Change Adaptation through Watershed Management promotes adaptation through watershed management works and livelihood support to local communities. The project focuses on combating river bank erosion through river training through bio engineering works; and plantation drives to reduce soil erosion. Local communities are involved in improving natural resource management practices through applied trainings on watershed



management, wildlife surveying and identification techniques, raising Sea buckthorn nursery and fruit processing to support local livelihoods. Similarly the Saving Wetlands Sky High project focuses on protecting fragile ecosystems in the high altitude wetlands of Gilgit-Baltistan from flash floods.

Across Pakistan, WWF – P’s programmes promote and provide alternate energy interventions. These interventions range from biogas, solar and hybrid energy units to fuel-efficient stoves, solar cookers and water heaters. Furthermore in response to climactic variability, WWF – P is also promoting Better Management Practices for agriculture. These practices showcase the necessity of water efficient agriculture and reduce harmful greenhouse gas (GHG) emissions. These interventions, in conjunction with Farmer Field Schools and other capacity building initiatives also produce co-benefits such as improved water quality, and reduced production costs. The large-scale successful adoption of BMPs, upwards of 24,000 farmers at last count, will help build resiliency among rural farmers and increase their ability to adapt to climactic variability such as unpredictable and extreme weather events, longer and more frequent droughts, shifting rainfall patterns, and pest infestations. In view of the success of the agricultural BMP model, WWF – P anticipates piloting better management practices for fisheries.

In terms of water resource management, WWF – P is engaged in areas of watershed management, coastal management and water reuse. For instance, in the Murree Hills, WWF – P is engaged in slope stabilization, forest conservation and introducing rain water harvesting; WWF – P has piloted 5 constructed wetlands to reuse waste water as a cost-effective means of water purification before diverting it into natural or man-made waterways, or use in agriculture.

Appropriate planning and management of natural resources, specifically, planning for the economic costs of climate change impacts requires natural resource inventorying and valuation of ecosystems and ecosystem services. WWF – P has also been engaged in innovative valuation work, very much in keeping with the environmental valuation study conducted by the World Bank, which is quoted by the Government with regard to the cost of environmental degradation Rs. 365 billion annually. The study conducted by the Programme assigns monetary values to five ecosystems and of particular interest are the calculations on carbon sequestration values of deltaic and forest ecosystems. The expertise to calculate carbon sequestration values offers a means of assessing the scope of Pakistan’s involvement in the carbon market and the possibility of producing carbon credits.