Policy framework to combat the challenges of climate change in the Upper Indus Basin

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The Indus River Basin (IRB), one of the major river basins in the Hindu Kush Himalaya, is primarily sustained by meltwater from the cryosphere. It caters to diverse sectors, including intense irrigation-supported agriculture, energy production, tourism and biodiversity. The cryosphere of the Upper Indus Basin (UIB) is mainly influenced by the western disturbances with subordinate contribution from the Indian Summer Monsoon. Increase in ambient temperature, shrinking cryospheric reserves, fluctuating surface run-off and enhanced frequency of extreme weather events are some of the noticeable indicators of climate change in the UIB. These changes will most likely adversely affect the water-dependent sectors in the upstream and downstream of IRB, posing serious threat to food security and livelihoods. Although the region has gained significant attention in recent years, there remains a noticeable knowledge gap pertaining to certain key issues with serious implications for the natural environment and the people. A national workshop was organized for stimulated deliberations to identify the major knowledge gaps and suggest a policy framework for climate change mitigation in the UIB. The workshop underscores the urgent need of multi-institutional, multidisciplinary, comprehensive, coordinated and time-bound collaboration to study the interplay of complex drivers on water resources of the UIB.

Keywords: Climate change, policy framework, river basins, summer monsoon, western disturbances.