Panel: Impact of Climate Change on Mangrove Ecosystems in South Asia

The mangrove ecosystems are the inter-tidal and super-tidal muddy shores found in bays, lagoons and estuaries which are important components of our natural ecosystems. These are dominated by woody halophytes which are highly adapted with continuous water courses, swamp and backwaters. They feed and breed an amazing diversity of economically and ecologically important flora and fauna. Not only are they a source of livelihoods for local communities but also contribute to global climate mitigation efforts through CO₂ sequestration.

In South Asia, mangrove ecosystems are faced with the constant risk of disintegration due to human activities such as clearing of land for agriculture and urban development. However, climate change is another emerging threat to these ecosystems. Increasing temperature, increasing concentration of greenhouse gases (GHGs), change of precipitation patterns, frequency and intensity of tropical storms and most importantly sea level rise, are the main climate change driven threats to mangrove ecosystems. Temperature rise, extreme weather events and changed precipitation patterns will impact water flows of the Indus River, thus impacting not only socio-economy of the country but also riparian, aquatic and deltaic ecosystems that are dependent on flow regimes.

In this context, the panel would attempt to address the following key questions related to impacts and vulnerabilities of mangrove ecosystem and dependent communities by integrating the community’s perceptions and experts’ opinion along with observed and projected climate change scenarios:

1. What are the likely drivers of sensitivity and exposure and how are they impacting climate change?
2. What is the coping potential of coastal communities in the backdrop of climate change?
3. What should be the key adaptation options for minimizing climate change impacts and vulnerabilities?
4. What should be the likely environmental flows to delta and mangrove ecosystems due to changes in river flows under climate change?
5. Can institutions and current policies play an effective role in the protection of mangroves ecosystem resources?

Panel Organisers:

Mr. Kashif Majeed Salik, Research Associate, Sustainable Development Policy Institute, Islamabad, Pakistan
E-mail address: kashif@sdpi.org

Mr. Waheed Ul Zafar Zahdi, Project Assistant, Sustainable Development Policy Institute, Islamabad, Pakistan
E-mail address: waheed@sdpi.org