

Plenary

Building Climate-Resilient Communities: Linking Nature-Based Solutions and Social Protection

In collaboration with GIZ

Pakistan accounts for less than 1% of global greenhouse gas emissions, yet it is one of the countries [most exposed to climate extremes](#). The [Climate Risk Index 2026](#) ranks Pakistan 15th among countries most affected by extreme weather events over the 30-year period from 1995 to 2024.

The [2022 floods](#) affected 33 million people and killed more than 1,730. Damages exceeded USD 14.9 billion and economic losses reached about USD 15.2 billion, and Sindh absorbed close to 70% of the total. The same assessment projected that the floods could push between [8.4 and 9.1 million](#) more people below the poverty line.

Three years later, the [2025 floods](#) caused damages of PKR 822 billion (USD 2.9 billion), killed more than 1,039 people, displaced over 4 million and affected about 6.5 million across 70 districts. Agriculture alone accounted for PKR 430 billion of the damage.

Slow onset stress compounds these shocks. At 1.09 °C above the long-term average, 2025 was the [second warmest year in 65 years](#). [Per capita water availability](#) fell below the 1,000 cubic metre scarcity threshold, reaching 899 cubic metres in 2025.

These losses fall hardest on rural households that depend on climate-sensitive livelihoods, and on women in particular. Agriculture employs 33.1% of all workers but 61.4% of employed women. Almost half of employed women ([49.7%](#)) work as contributing family workers, and [32.1 million women](#) carry out unpaid livestock-related work. These women have the fewest resources to prepare for shocks, protect productive assets and recover from losses.

An integrated response is needed. [Nature-based Solutions \(NbS\)](#) are actions that protect, conserve, restore, sustainably use and manage natural or modified ecosystems in ways that address social, economic and environmental challenges while delivering human well-being, resilience and biodiversity benefits.

The need for NbS in Pakistan is clear. Forests cover only about [4.7% of the country](#), and around [11,000 hectares are lost each year](#). The [Green Pakistan Programme](#) has increased tree cover over about 0.7 million hectares. Measures in agriculture, water management, renewable energy and community infrastructure further strengthen local adaptive capacity.

[German Development Cooperation](#) has already tested such measures in practice in support of Pakistan's National Adaptation Plan (NAP). In Multan, it supported the piloting of the [Sponge City Model](#), which demonstrates how NbS can strengthen urban climate

resilience in Punjab. In [Charsadda and Peshawar](#), model community schools integrate rain gardens, green roofs, sustainable insulation, passive ventilation and other green building practices, showing how community infrastructure can become both climate-resilient and environmentally sustainable. The schools also serve as a platform for inclusive community participation, with a focus on women and youth.

Resilient ecosystems and infrastructure protect communities, but households also need the means to withstand shocks when they occur. Social protection helps vulnerable households manage risk, reach livelihood opportunities and take part in longer-term resilience efforts. After the 2022 floods, the Benazir Income Support Programme ([BISP](#)) [used National Socio-Economic Registry data](#) to identify the poorest 40% in notified *tehsils* and paid a one-time grant of PKR 25,000 per family. In total, it reached 2.8 million families with PKR 70 billion ([Benazir Income Support Programme \[BISP\], 2025](#)).

BISP now supports over [10.2 million families](#). More than [10 million beneficiaries](#) are being linked to the formal financial system through digital wallets. Over [500,000 have received digital and financial literacy training](#) through a programme funded by the European Union and the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by GIZ through the Sustainable Development Policy Institute (SDPI).

National policy increasingly connects these systems. The [National Disaster Risk Financing Strategy](#) envisages channelling rapid support to vulnerable populations through BISP ([Ministry of Finance, 2026](#)). Meeting Pakistan's NDC 3.0 targets requires an estimated USD 565.7 billion in investment, and the Pakistan Green Taxonomy, notified in September 2025, now gives that finance a common definition of 'green' ([Ministry of Finance, 2026](#)).

Yet these instruments are still largely planned and delivered in isolation. Climate-risk information seldom determines where adaptation investments go, ecosystem restoration and community infrastructure rarely reach the households that social protection already serves, and women remain at the margins of both. GIZ Pakistan works across nature-based solutions, climate-resilient agriculture and infrastructure, and adaptive social protection. This plenary will present this work as one approach: climate-risk information guides where adaptation investments go, nature-based and community measures strengthen the assets that households depend on, and social protection ensures that vulnerable people, especially women, can take part in and benefit from adaptation. Specific session objectives include to:

1. Demonstrate how climate-risk information can guide the prioritisation of adaptation measures and resilience investments.
2. Showcase practical examples of nature-based approaches and climate-resilient agricultural and community infrastructure.

3. Examine how social protection programmes, together with digital and financial literacy, complement climate adaptation.
4. Identify opportunities to scale integrated, gender-responsive resilience approaches through government planning, institutional partnerships and sustainable financing.

Organisers:

Dr Fareeha Armughan: Research Fellow & Lead-Centre of Evidence Action Research
Sustainable Development Policy Institute, Pakistan
Email: fareehaarmughan@sdpi.org

Dr Kamran Khan, Provincial Coordinator, Sustainable Development Policy Institute,
Pakistan
Email: Kamran_Khan@sdpi.org

Mr Ehtisham Afzal, Provincial Coordinator, Sustainable Development Policy Institute,
Pakistan
Email: ehtisham_afzal@sdpi.org

Ms Asma Rubab, Provincial Coordinator, Sustainable Development Policy Institute,
Pakistan
Email: asmarubab99@gmail.com

Ms Johanna Knoess, Head (Adaptive Social Protection), GIZ Pakistan
Email: johanna.knoess@giz.de

Mr Wolfgang Hesse, Cluster Coordinator (Energy, Climate Change), GIZ Pakistan
Email: wolfgang.hesse@giz.de