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Strengthening Climate Adaptation and Resilience (SAR)
GIZ Office Pakistan, Level 6, Serena Business Complex,
Sector G-5/1, Islamabad, Pakistan
Phone +92 51 111 489 725
Fax +92 51 2656 376
giz-pakistan@giz.de
www.giz.de/en/worldwide/362.html

Responsible

Dr. Nicolai Dellmann
Project Head, Strengthening Climate Adaptation and Resilience (SAR)

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GIZ Pakistan

Text

Muhammad Ahmed Raza
Communication Advisor

Contributor

Asma Asif
Technical Advisor (Monitoring and Evaluation)

On behalf of the

German Federal Ministry for Economic Cooperation and Development (BMZ)



Dr. Nicolai Dellmann

Project Head, Strengthening Climate Adaptation and Resilience (SAR)

Foreword

As the Strengthening Climate Adaptation and Resilience (SAR) project draws to a close, I am deeply moved by the spirit of collaboration that has defined our journey. This booklet is a testament to what can be achieved when national leadership, local institutions, and resilient communities work in harmony to meet the challenges of a changing climate. From the fields of Punjab to the valleys of Khyber Pakhtunkhwa, we have seen that true adaptation is not only about data and infrastructure, but about the people who turn these tools into lasting change.

I would like, on behalf of my team at GIZ Pakistan, to express my sincere appreciation to the Government of Pakistan and our provincial partners for their guidance, and to our implementing partners for their tireless work on the ground. Most importantly, I thank the community members who shared their stories and are leading the way toward a more resilient future. It has been a privilege for the team at GIZ Pakistan to support this mission. While the project comes to an end, the systems we have built together ensure that SAR's legacy will continue to protect and empower communities for years to come.

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Introduction

Why SAR, Why Now

Across Pakistan, the realities of climate change are no longer distant warnings. Floods, droughts and heatwaves are reshaping lives, livelihoods and landscapes, from the fields of Punjab to the valleys of Khyber Pakhtunkhwa. The 2022 floods alone displaced millions and underscored the urgency of collective action to strengthen resilience.

In response, the Strengthening Climate Adaptation and Resilience (SAR) project set out to help communities and institutions turn vulnerability into opportunity. Commissioned by the Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by GIZ, the project works to build the knowledge, partnerships and local systems that make adaptation possible.

Over its implementation period, the SAR project directly benefitted 251,472 people, including 54% women, through awareness, training and livelihood initiatives. It supported women-led Village Banks that provided PKR 30 million in revolving loans, enabling women to launch small businesses, grow savings and build resilience within their households. Farmers in mountain and flood-prone areas gained support through pilot crop-loss insurance, while youth, journalists and universities joined hands to promote climate awareness and learning.



At the same time, the project supported national and provincial government institutions and other private actors to plan, finance and implement climate action more effectively, ensuring that provincial priorities are aligned with federal policies and are reflected in planning and resource allocation. Together, these efforts demonstrate how climate adaptation succeeds when knowledge, innovation, ownership and community leadership come together.

By investing in people, partnerships and ideas, SAR has helped shift the national conversation from risk to resilience, proving that change begins when communities are empowered and engaged in building their own resilience.

Thematic Impact Stories

Understanding the Risks: Turning Data into Action

Building resilience begins with understanding risk. For years, adaptation planning in Pakistan relied on limited local data, leaving communities uncertain about which threats to prioritise. SAR helped bridge this data gap.

SAR developed 1 Climate Risk Profile for Pakistan and 2 provincial risk profiles for Punjab and KP, integrating gender-sensitive climate risk assessments through CLIMADA modelling, and these were endorsed by national and provincial partners for mainstreaming into planning processes and frameworks.

These profiles integrated gender analysis and highlighted the varying experiences and responses of women, men, and marginalised groups to climate change and associated risks.

Insights from these gender-responsive Climate Risk Profiles informed the development of 4 Local Adaptation Plans of Action (LAPAs), endorsed by local governments in Lower Dir, Swat, Rahim Yar Khan and Rajanpur. These plans translated risk data into projections and actionable measures, such as constructing flood-resistant culverts and promoting drought-tolerant crops.

To make these knowledge products accessible and ensure sustainability, SAR, in partnership with the Global Climate Change Impact Studies Centre (GCISC), supported the creation of the Pakistan Climate Information Portal (www.pakcip.com) and trained 6 officials (2 women) on using climate data for planning.

The project also supported local governments in developing 5 Disaster Risk Management (DRM) Plans through SRSP, helping them integrate potential risk projections into budgeting and district development schemes. These plans were developed across the Union Councils of Agra, Hissara Yasinzai, Dheri Zardad, Abbazai and Sherpao, ensuring that risk-informed planning became part of routine local governance.

By turning information into action, SAR has empowered communities and institutions alike to anticipate, prepare for, and adapt to a changing climate.



Learning for Change: Building Climate Awareness Across Generations

Climate change is reshaping lives and livelihoods across Pakistan, demanding not only new technologies but also new ways of thinking. Recognising education as the cornerstone of long-term resilience, SAR worked to build climate awareness across generations in collaboration with LASOONA – from classrooms to newsrooms.

Through collaborations with universities and the media, SAR embedded climate knowledge into formal and informal learning systems. At IM Sciences Peshawar, the project helped establish the Centre for Water Informatics and Climate Resilience (CWC) and introduced a 6-month diploma course on Climate Governance and Resilience into the IMS curriculum. A total of 30 government officials, including 6 women, completed the course modules, enhancing their theoretical and practical knowledge on how to integrate climate considerations into planning and policy.



Climate Change Curricula

6 courses on climate change were developed under University of Kassel (UoK). These courses are now uploaded on the GCISC website for wider use and can be accessed through the [KnowledgeHub | pakcip](https://www.knowledgehub.org/pakcip/). Departments of 6 universities, including NUST, the University of the Punjab, KFUEIT, the University of Faisalabad, FJU, etc., have endorsed the integration of any of these courses into their existing degree programmes.


 A total of **108** participants


42 women

were trained on the topics, including climate finance, climate data management, and qualitative research approaches to studying climate change.

These specialised training sessions were aimed at strengthening the capacity of faculty members to teach advanced climate change concepts to graduate and postgraduate students. In partnership with the University of Kassel and the Potsdam Institute for Climate Impact Research (PIK), SAR developed 6 new university courses on climate data, gender and disaster, and climate-resilient agriculture, which have now been integrated as part of the regular academic programmes.

Together, these efforts bridged knowledge and action – empowering students, professionals, and storytellers to shape an informed, adaptation-focused and resilient response to Pakistan's changing

Farming the Future: Innovation in the Frontlines of Climate Change

Across Pakistan's plains and valleys, small farmers face growing uncertainty from erratic rains, floods, and heat. Through SAR, this uncertainty became a catalyst for innovative adaptation.



At the model farm of Khwaja Fareed University of Engineering and Information Technology (KFUEIT), **288 farmers and students** – including **67 women** – received practical training in climate-smart agriculture (CSA), covering water-efficient irrigation, regenerative soil practices, and resilient seed varieties. Field schools in Dir, Swat, and Punjab introduced new techniques for wheat, sugarcane, cotton, and citrus, benefiting over **1,400 farmers**. At the same time, SAR's Business Incubation Centre at KFUEIT trained **358 students (126 women)** in agri-entrepreneurship, inspiring youth to see farming as an opportunity rather than a risk.

In Charsadda, SAR, through SRSP, introduced raised-bed strawberry and tunnel farming, which increased incomes from PKR 80,000 to 400,000 per kanal, while women-led Village Banks supported 40 gardens replicated across 310 households. These initiatives turned small plots into hubs of adaptation and economic empowerment.

From model farms to home gardens, and with the collaboration of its implementing partners, SAR proved that climate resilience grows where innovation and community ownership meet.

From Plans to Practice: Building Systems for Resilience

Resilience grows stronger when strategies, policies and plans are inclusive and consider community needs. SAR supported this by strengthening institutional capacities in climate governance and mainstreaming gender and climate resilience in every planning stage.

In Khyber Pakhtunkhwa, SAR, through its implementing partner IM Sciences, supported the Planning & Development Department to establish a Climate Change Cell, now a permanent coordination hub for adaptation and disaster management. Through this support, the Cell successfully undertook GIS-based donor mapping, conducted training on needs assessments, and advanced the development of the province's Green Climate Fund (GCF) readiness proposal.

To ensure that planning exercises translate into concrete actions, SAR and UNITAR trained 39 government officials (10 women) on integrating climate risk and adaptation into public investment frameworks. The e-learning version of this course reached over 7,000 participants worldwide, multiplying the project's impact. UNITAR training link: [Course: Strengthening Climate Adaptation and Resilience | One UN Climate Change Learning Partnership](#)



Financing the Future: From Women's Village Banks to sustainable resilience

In Pakistan's flood- and drought-prone districts, resilience depends not only on anticipating and adapting but also on sustaining the adaptation through access to finance. SAR, in partnership with SRSP, created pathways for increasing resilience at the livelihood level by empowering women to lead local financial systems, and at the federal and provincial levels by supporting access to international climate funds.



At the community level, 11 women-led Village Banks established in Charsadda and Nowshera mobilised PKR 30.7 million in revolving funds, providing 624 small loans for climate-smart livelihoods. With a 92 per cent repayment rate, these Banks became trusted, women-run institutions that combined savings, credit and disaster preparedness. When floods struck Agar Payan in 2025, 30 households received PKR 200,000 each from the contingency fund within days, serving as the community's first line of defence before formal relief arrived.

Voices of Change: Youth Leading the Climate Movement

Youth are among the most affected and underrepresented groups when it comes to climate change in Pakistan, yet they are also among the most determined to act. Through SAR, their energy was channelled into collective action and local-level leadership for a more resilient future.

Through LASOONA and in partnership with schools, universities, and local organisations, SAR established Climate School Clubs and District Youth Forums across Punjab and Khyber Pakhtunkhwa. These platforms reached over 14,000 students (52% girls) through awareness sessions, clean-up drives, and tree-planting campaigns. Youth-led initiatives such as Youth Day, Plastic-Free Days, and Green Week celebrations in Swat and Charsadda raised community awareness about climate risks and the urgency of action.

Through the Green Media Storytelling Initiative, SAR, in collaboration with the Centre for Excellence in Journalism (CEJ) at the Institute of Business Administration (IBA) in Karachi, also trained 24 journalists – half of them women – to report on climate issues accurately and responsibly. Their stories from flood-affected valleys and drought-prone regions helped shift the public conversation towards climate resilience and local innovation.

By involving and empowering youth, SAR helped sustain the call for resilience even after the project ends, carried forward by a generation that refuses to stay silent in the face of climate change.



Faces of Resilience

Safia Bibi

From Survival to Stability (Khyber Pakhtunkhwa)

In Barakao village, Lower Dir, 42-year-old Safia Bibi once struggled to feed her family after repeated droughts left her small agricultural land unproductive. As part of SAR's activity implemented by LASOONA, Safia received seasonal vegetable seeds, chickens, and training in sustainable farming and kitchen gardening. This support, provided through the establishment of a Food Production Garden, helped her start poultry rearing and expand her garden. Within 2 years, her household achieved greater food security, was able to pay school fees, and began modest saving.

Her story shows how targeted support for women's livelihoods builds longer-term resilience while also creating immediate impact at household and community level.



Now, my children eat from what we grow — and I no longer wait for help; I can help others

Safia said

Muqadas

From Vulnerability to Financial Leadership (Khyber Pakhtunkhwa)

In the flood-prone plains of Charsadda, Muqadas, a young mother of 3, once depended entirely on her husband's irregular income as a daily labourer. Her life began to change when SAR, through SRSP, introduced women-led Village Banks in her community. Through one of these Banks, she received a PKR 50,000 loan to start a small poultry business. Within months, her earnings surpassed her husband's, and she repaid the loan in full.

Recognised for her reliability and confidence, Muqadas was elected as the secretary of her Village Bank. Today, she maintains records, guides new members, and supports others in applying for small loans to start home-based enterprises.



For the first time, I decide where the money goes,

Muqadas said, smiling proudly

When floods struck Agar Payan in 2025, the Village Bank's contingency fund released PKR 200,000 for each of the 30 affected households within a few days, becoming their first line of defence before formal relief arrived.

For Muqadas, and many others like her, support provided through the project turned savings into resilience and financial independence into leadership.



Uzair-ul-Haq

From Flood Survivor to Climate Advocate (Khyber Pakhtunkhwa)

As a teenager in Swat, Uzair-ul-Haq watched the floods of 2010 sweep away his family's home, books, and his sense of safety. Later, another flood struck on the day of his board exams in 2022, a moment he describes as the turning point that reshaped his outlook on climate risks and his role in responding to them. Through the support provided by SAR's implementing partner LASOONA and his engagement with the District Youth Forum, Uzair found a platform to turn loss into learning, motivation, and leadership.

He began leading Plastic-Free Day campaigns, tree plantation drives, and community clean-up activities. His energy and determination soon made him a role model for other students, and his leadership earned him opportunities to participate in regional youth workshops on climate resilience.



When you've lived through floods, you can't ignore climate change; you have to act,

Uzair-ul-Haq
said

Today, Uzair-ul-Haq mentors younger volunteers in Swat, helping them document local environmental issues and promote climate awareness through storytelling and action. His journey from flood survivor to climate advocate shows how youth can transform personal tragedy into collective resilience and practical action for change.

Manzoor Hussain

Adapting Citrus Farming to a Changing Climate (Punjab)

In the citrus orchards of Mouza Baroosabad, Rajanpur, unpredictable weather and declining yields had made farming increasingly difficult. Rising temperatures, erratic rainfall, and pest attacks left smallholder farmers like Manzoor Hussain struggling to sustain their livelihoods.

Through the support provided by SAR's implementing partner LASOONA, Manzoor joined a Farmer Field School that introduced climate-smart techniques for citrus cultivation. He began using furrow irrigation to conserve water, mulching to retain soil moisture and control weeds, and applying organic matter to improve soil health. Within a single season, his citrus yield and fruit quality improved significantly, and his farming costs decreased.

Encouraged by his success, other farmers in his area have begun replicating these techniques, demonstrating how simple, knowledge-based innovations can help farming communities adapt and thrive in a changing climate.



With these climate-smart methods, I can finally face the changing weather with confidence

Manzoor shared

Nasreen and Taaj Mai

Women Leading through Climate Adversity (Punjab)

In Rakh Mud Molvi village, Rajanpur, two women, Nasreen Ajmal and Taaj Mai, faced financial hardship after a family accident left their household struggling to make ends meet. Through the support provided by LASOONA as SAR's implementing partner under the Climate-Smart Food Production Garden initiative, they received training, fencing materials, and climate-resilient seeds to transform a small piece of land into a productive garden.

Using organic manure and the bed-furrow irrigation technique, they began growing seasonal vegetables and raising hens. Within months, their garden provided enough food for their family, with surplus produce and eggs sold in the local market. Their success soon inspired other women in the village to establish their own gardens.

Today, the women of Rakh Mud Molvi are contributing to food security and gaining greater confidence, serving as role models for others and showing how resilience grows when women lead adaptation in their communities.



Our garden now feeds our family and helps other women see what's possible
said Nasreen

Naseem Bibi

From Awareness to Action (Punjab)

In Rakh Mud Molvi village, Rajanpur, Naseem Bibi, a dedicated Lady Health Worker, has become a voice of change in her community. After receiving training from LASOONA as SAR's implementation partner, she began leading discussions with local women on the links between climate change, health, and hygiene.

Through a series of 14 peer-led sessions reaching 140 women, Naseem used simple demonstrations to explain how clean water, handwashing, and waste management can protect families from disease and climate-related risks. Her practical, engaging approach helped women see the connection between daily health habits and broader environmental challenges.



When women understand climate change through examples from their own lives, they not only change their homes they change their community.

Naseem shared

Today, many of the women she trained have become advocates themselves, promoting hygiene and sustainable living in neighbouring households. Naseem's continued commitment demonstrates how awareness, when rooted in empathy and local leadership, can spark lasting community resilience.



SAR'S Legacy

Policy & Systems Change



Building on the thematic achievements highlighted above, SAR's most enduring contribution lies in how these efforts have been embedded into systems and institutions that will continue long after the project ends.

Resilience is not only built in households and schools, but also through the policies, capacities and governance structures that make adaptation routine rather than reactive. Across federal, provincial and local levels, SAR strengthened institutional processes and enabled government departments to plan, finance and coordinate climate action more effectively. Through the establishment and operationalisation of provincial Climate Change Cells, enhanced access to climate data and risk information, and improved collaboration across departments, SAR helped anchor climate adaptation within standard planning and development workflows.

At the same time, SAR played a catalytic role in advancing Pakistan's readiness for international climate finance. By supporting the development of concept notes aligned with global funding requirements, training officials in project formulation and donor engagement, and assisting Khyber Pakhtunkhwa's progress towards Green Climate Fund accreditation, the project helped build the foundations for long-term, large-scale adaptation financing. These system-level advances ensure that the evidence, capacities and tools developed under SAR will continue to influence policies, resource allocations and planning decisions well beyond the lifecycle of the project.

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Energy and Climate Change Cluster

Level 2, Serena Business Complex,
Sector G-5/1, Islamabad, Pakistan

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