

Climate risk impacts on employment opportunities for youth in Pakistan

A survey report



Waheed Ahmad began his mobile repair business with a cash grant from the Pakistan Red Crescent Society (PRCS) and the International Federation of Red Cross and Red Crescent Societies (IFRC) as part of the Integrated Recovery Programme (IRP) for families affected by the 2010 monsoon floods in Pakistan. Usman Ghani, IFRC, 2012.



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Introduction

Pakistan faces a high level of disaster risk due to its exposure to a variety of natural and climate-related hazards including earthquakes,¹ floods, landslides, storms and extreme temperatures (WBG & ADB, 2021). Research pertaining to the impact of these hazards on youths' access and participation in the labour market is limited. **This study aims to understand how climate-related risks and hazards are reshaping traditional avenues of job entry and employment, particularly for young people in Pakistan.** Based on the findings, recommendations are made on how social protection programmes could support the youth of Pakistan to navigate the changing nature of the labour market. Social protection interventions can help individuals to cope with the risks they face over their lifetime, such as unemployment or disability. One element of this support is improving employment and livelihood outcomes (McCord, 2018).

This brief is aimed at policymakers, academia, international/non-governmental organizations (I/NGOs) and civil society groups, who can use these messages to develop and implement youth-focused programmes to address climate hazards; enhance research and evidence-building on the differentiated needs of youth groups; and eventually improve services to adapt to the youth-specific covariate risks posed by climate-related hazards.

Key findings

1. Among the seven Pakistani provinces surveyed, youth in Balochistan reported to be the worst affected by the negative impacts of climate risks, with food shortages being the impact of highest concern.
2. Across all climate hazards, health issues and loss of school days were the two most serious impacts reported, followed by loss of income.
3. Among full-time workers, 84 per cent reported that climate hazards can create challenges in securing gainful employment; 70 per cent of currently enrolled students said they felt the same way.
4. More than 65 per cent of respondents felt that the climate-related events they had experienced so far had impacted their employment, business and work prospects.
5. The majority of youth surveyed indicated that floods and heatwaves as well as earthquakes are the most important climate and natural hazard risks that they feel inadequately prepared for.
6. The primary reasons contributing to feelings of inadequate preparedness to these hazards include a lack of awareness of management strategies, unpredictability of the impacts, poor infrastructure, and a lack of early warning systems.
7. Skilling, job training, job-related counselling, placement support and cash-for-work programmes are the preferred forms of support among youth to address climate impacts.

1 Please note that, while earthquake is not a climate-related hazard, we have included it in the study because it is a crucial hazard of concern for Pakistan and can heavily impact youth and their employability; especially in periods of compounding crises (e.g., the risk of earthquake during a cold wave). Some preliminary studies also suggested that climate change could potentially trigger catastrophes such as earthquakes, volcanic eruptions, tsunamis and landslides due to melting glaciers and rising sea levels (Masih, 2018)

Methodology

The study aimed to understand the experiences of youth in the face of climate risks and hazards from seven Pakistani provinces, to provide recommendations on how youth can be best supported through these challenges by social protection interventions. To do so, the following three research questions were considered:

- 1. What are the main climate hazards faced by youth in Pakistan?**
- 2. What are the perceived impacts of these climate hazards on youth?**
- 3. What type of support do youth require to address these challenges?**

Rooted in these overarching research questions, a set of 15 qualitative and quantitative survey questions were formulated. These were then uploaded into Google Survey and shared with key provincial youth members and volunteering focal points within the Pakistan Red Crescent Society (PRCS). The focal points then distributed the survey among a wider set of youth volunteer groups. It was also shared among youth climate activists in Pakistan, as well as with students in the field of disaster management and environmental sciences via social messaging platforms such as WhatsApp. The survey was made available in English and Urdu, and survey data was collected online in August and September 2023.

To analyse the survey results, responses were disaggregated based on the respondents' provinces, while keywords were extracted from open-ended questions. The application of thematic coding revealed provincial variations in exposure and vulnerability to natural and climate-related disasters. In addition, the integration of quantitative data – such as keyword frequency – allowed for a more comprehensive understanding of impacts. Notable findings include a similar combination of hazards across all provinces, with frequently mentioned impacts such as “loss of school days” and “damaged infrastructure” providing insights for more targeted social protection policy recommendations.

Profile of respondents

A total of 131 individuals completed the survey, of which 120 fitted the age criteria of 16–30.

The average age of respondents was 22 with slightly more male respondents than female respondents at 50.8 per cent and 49.2 per cent, respectively. The majority of the respondents were from Punjab (34.17 per cent), followed by Balochistan (18.33 per cent), Sindh (15.83 per cent), Khyber Pakhtunkhwa (12.5 per cent), Gilgit-Baltistan (10.83 per cent), Azad Jammu and Kashmir (6.67 per cent) and Islamabad (1.67 per cent).

The respondents exhibited a high level of educational attainment, as more than two-thirds (67.5 per cent) were either enrolled on or had successfully completed a bachelor’s degree. An additional 17.5 per cent were in the process of receiving or had received a master’s degree, with a further 2.5 per cent indicating a doctorate. The remainder were en route to or had received their high school diploma (10.83 per cent) or did not specify their education level (1.67 per cent).

The survey yielded notable findings on the frequency of respondents’ experiences of natural and climate-related hazards (see Table 1).

Table 1: Frequency of natural and climate-related hazards as reported by the survey respondents. Source: Authors

Climate hazards	Respondents facing risk (%)	Frequency of events in the last 15 years (%)			
		1–5 times	6–10 times	11–15 times	16+
Earthquakes	83.33	44	20	17	19
Heatwaves	82.5	46.47	26.26	6.06	21.21
Floods	75.83	45.15	18.68	15.39	20.78
Storms	60.83	52.05	27.4	2.74	17.81
Cold waves	59.17	54.9	19.7	15.5	9.9
Landslides	58.33	52.86	24.28	8.57	14.29
Droughts	52.5	58.73	20.63	12.7	7.94
Other	41.67	56	18	8	18

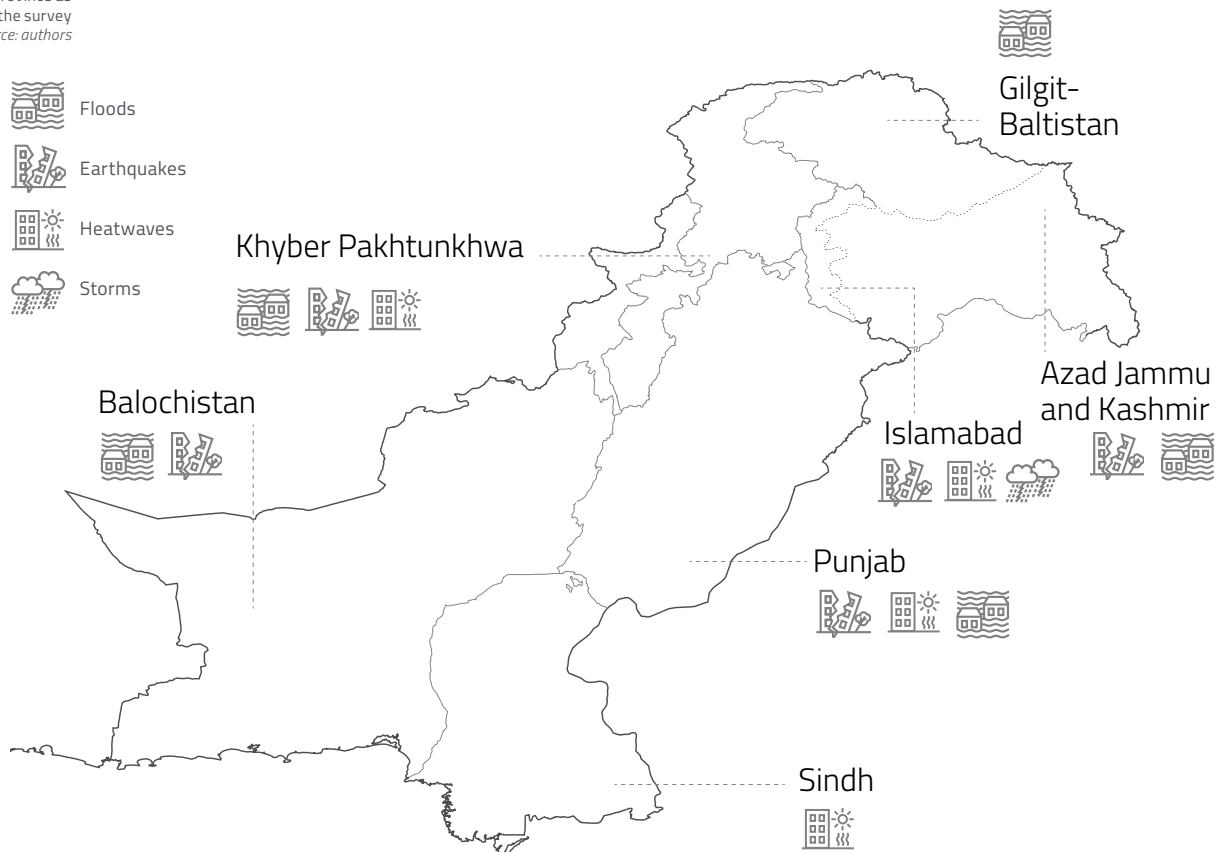
A substantial 83 per cent of respondents had encountered earthquakes with the majority facing 1–5 occurrences in the last 15 years. A notable percentage had also experienced even higher frequencies of earthquakes. Following this, heatwaves were widespread, affecting 82.5 per cent of respondents. Although nearly half of those surveyed had encountered heatwaves 1–5 times, a significant 21.21 per cent had faced them 16 or more times, indicating that heatwaves are a frequent occurrence across Pakistan. In addition, 75.83 per cent of respondents faced floods, 60.83 per cent encountered storms, and 58.33 per cent experienced landslides, indicating the considerable reach of climate-related hazards in the country. Individuals experiencing floods and storms indicated a higher frequency of these hazards too. The remaining hazards of cold waves and droughts were experienced by 59.17 per cent and 52.5 per cent of respondents, respectively. Lastly, 41.67 per cent indicated other climate hazards; however, these were not specified.

Results disaggregated by province

The following section presents an analysis of prominent climate hazards per province as reported by the survey participants (see Figure 1). It also helps to illustrate the diverse ways in which these challenges and impacts manifest. Given these impacts, we assess how these hazards are perceived to influence labour market accessibility and affect individual decisions, such as considering migration as a means to access more sustainable work and business opportunities. Additionally, this section offers an insight into the specific types of assistance requested across all seven provinces.

A key finding from the survey was that youth reported different hazards as the most concerning according to the province they were in. This implies that support and programmes offered to youth may need to be customized based on the hazards that are the most important for the province.

Figure 1: Prominent climate hazards per province as reported by the survey participants. *Source: authors*



Situated in northern Pakistan, respondents from Azad Jammu and Kashmir identified earthquakes and floods as the predominant natural and climate-related hazards faced by the province. The impacts of these hazards manifest primarily as loss of school days, health issues and damage to infrastructure. Of the respondents surveyed, 75 per cent perceived that these hazards impact employment and labour market opportunities. An additional 50 per cent acknowledged that the impacts of these hazards influenced their decisions around migration. The main forms of assistance requested in the province were skilling programmes, job training and job-related counselling.

The province of Balochistan in western Pakistan confronts floods and earthquakes as its top natural and climate-related challenges. These hazards have given rise to socio-economic concerns, the foremost being the loss of school days, food shortages and health impacts. In the survey, 68 per cent of respondents from Balochistan identified these hazards as posing challenges to employment and business opportunities. An additional 36 per cent indicated that the presence of these hazards and their impacts influence decisions around migration. In Balochistan, the most requested forms of assistance were cash-for-work programmes, skilling programmes and job training.

In Gilgit-Baltistan, floods were identified as the leading hazard, giving rise to concerns around damaged households and infrastructure, loss of income, food shortages and loss of school days. These multifaceted impacts threaten socio-economic development in the province. Approximately 85 per cent of respondents from Gilgit-Baltistan acknowledged that climate hazards pose challenges to accessing the labour market, with 61.5 per cent indicating that decisions around migrating were influenced by the presence of these hazards. In response to these challenges, respondents expressed a strong preference for skilling programmes and job-related counselling, followed by cash-for-work programmes and job training.

Responses from Islamabad were limited to two respondents who identified earthquakes, heatwaves and storms as major natural and climate-related hazards faced by the capital city. The impacts of these hazards had led to the loss of income, damaged infrastructure and adverse health impacts. Although responses were limited, there was a shared concern regarding access to employment and labour market opportunities due to these hazards. However, the hazards had not influenced the respondents' migration decisions. With regard to assistance through social protection, respondents indicated the need for support via the following types of programmes: cash-for work, job training, skilling and job placement support.

In Khyber Pakhtunkhwa, survey results identified floods, earthquakes and heatwaves as the major hazards faced by the province's inhabitants, leading to adverse consequences such as health impacts, loss of school days and loss of income. A substantial majority of 86.7 per cent acknowledged that natural and climate-related hazards had impacted access to employment and labour market opportunities, with 60 per cent indicating that these events influence their migration decisions. To address these challenges, respondents emphasized the need for support primarily through skilling and job training programmes.

In Punjab, the primary hazards faced by respondents include earthquakes followed by heatwaves and floods, resulting in significant impacts such as loss of school days and health-related issues. In comparison with other provinces, only 43.9 per cent of respondents perceived that natural and climate-related hazards impact their access to the labour market. Correspondingly, around 22 per cent of respondents indicated that these hazards influence their migration decisions. To mitigate these impacts, respondents requested support in the form of skilling, followed by job training, job-related counselling and job placement support.

Respondents from the province of Sindh identified heatwaves as the most common climate hazard with impacts on health and loss of income. Approximately 63 per cent acknowledged that these climate hazards impact employment opportunities in the region. Furthermore, 42 per cent of the respondents indicated that these hazards influence their decisions around migration. To address these challenges, respondents emphasized the need for job training and skilling programmes as well as job placement support.

Potential pathways for support

Survey questions were designed to gauge the type of support – including non-social protection support – that would be required for youth to adapt to and overcome obstacles posed by natural and climate-related hazards, particularly for entry to and participation in the labour market.

General questions around how youth can be supported in accessing employment under a changing climate yielded a range of responses:

- **Education and skills development** including reskilling and upskilling, bridging the skills gap between fossil fuel industries and green jobs, and promoting internships and apprenticeships.
- **Investing in green sectors** including green entrepreneurship, advancing climate-friendly infrastructure development, and ensuring a just transition towards a more sustainable economy.
- **Green practices** such as initiatives that promote green certification and labelling, as well as the adoption of climate-friendly procurement practices.
- **Collaboration and partnership** by engaging both the public- and private-sector and fostering international cooperation to achieve common goals.
- **Risk assessment and management** involving climate risk assessments and implementing climate insurance and financial instruments to mitigate climate risks.
- **Support measures** such as social safety net programmes, adaptation initiatives, and long-term commitments to address the different challenges effectively.
- **Information campaigns** that aim to enhance climate literacy and promote public awareness and advocacy on climate issues.
- **Innovative approaches** including new ways of working (e.g., remotely) and linking labour market policies to climate information and research.

In reviewing strategies to navigate the labour market, survey respondents expressed preferences for active labour market policies and employment support programmes. The most popular initiatives requested were job skilling, with 67.5 per cent of all respondents recognizing its importance, followed by job training at 59.1 per cent. Additionally, almost half of the respondents found cash-for-work programmes, job-related counselling and job placement support to be valuable options at 48.3 per cent, 46.7 per cent and 45.8 per cent, respectively. The remaining schemes included re-skilling (30 per cent), migration support (25.8 per cent) and unemployment benefit (25.6 per cent), indicating lower – yet still substantial – preferences for these types of support. A small percentage – 1.67 per cent – indicated other options were viable but did not specify what these were. This highlights the need for a diverse set of strategies to address the labour market challenges posed by natural and climate-related hazards for youth in Pakistan.

Given that loss of income was reported among the top three negative impacts of climate change, employment-centred approaches to recovery were highlighted to cushion income shocks following disasters and help individuals to build resilience. As a respondent in Gilgit-Baltistan said:



Climate change events can have significant impacts on the job market, particularly in regions where infrastructure is frequently damaged by climate hazards. Companies that rely on stable infrastructure may face disruption or incur additional costs due to the need for repairs or reconstruction. Furthermore, governments often allocate substantial portions of their budgets towards reconstruction efforts, diverting resources that could have been invested in job creation and economic development. This can limit opportunities for employment and economic growth in affected areas."

Disaggregated by age group, the top three requests for support were similar – with skilling and job training common to each group. Individuals aged 16–20 expressed interest in skilling, job training and cash-for-work programmes, while respondents aged 21–25 identified similar needs including skilling, job training and job-related counselling. Meanwhile those aged 26–30 indicated a focus on job training, skilling and cash-for-work schemes was important.

Discussion and recommendations

Governments should implement programmes based on priority, budgetary availability and impacts in the short- and long-term. Findings from Kluve (2016)² illustrate the government costs, short-term effects, long-term effects from the best-case scenario and long-term effects from the worst-case scenario of job assistance, training, private-sector incentives and public employment (see Table 2). Based on this information, job search assistance and job-related counselling provide low-cost positive impacts in the short-term as well as the best-case long-term assistance.

Training programmes such as skilling, reskilling and job training have medium to high costs but have larger positive effectiveness in attaining their objectives in the long-term best-case scenario in comparison to other programmes. Public works programmes such as cash-for-work schemes have a high budgetary requirement with minimal positive impact. Kluve (2016) found that public works programmes often do not have a high impact on the future employability of beneficiaries as the jobs provided did not reflect the primary and core sectors of the labour market. These findings should be interpreted with caution as national and local dynamics are extremely important in identifying costs and impact.

Table 2: Key features of active labour market programmes, adapted from Kluve (2016).

	Job search assistance	Training	Private-sector incentives	Public employment
		Classroom training; work practice; basic skills training; life skills training	Wage subsidies; self-employment assistance; start-up grants	
Government cost	Low	Medium / high	High	High
Short-run effect	Positive	Negative	Positive	Positive
Long-run effect (best case)	Small positive	Large positive	Small positive	Zero to small positive
Long-run effect (worst case)	Small negative	Small negative	Negative	Large negative

In 2022, the International Labour Organization and Pakistan Workers Federation launched the Rapid Infrastructure Rehabilitation project in Hanna Orak, Balochistan to provide flood-affected individuals with a total of 5,000 days of employment (ILO, 2022). Activities included cleaning camp sites, establishing temporary latrines, removing mud from pathways and draining flood waters in return for daily wages (*ibid*). Though this work was essential during the recovery of floods, the skills developed and applied in the programme reflect temporary labour needs rather than the labour market skills needed in Pakistan.

² Although Kluve (2016) reviewed the effectiveness of active labour market policies with a focus on Latin America and the Caribbean, Table 2 is based on a framework which reflects global trends.

Engaging the private-sector: Roshini Baji Project

Though private-sector initiatives are not discussed in this study, the private-sector may be leveraged for training and skilling interventions.

For example, Karachi-Electric, an electricity provider in Pakistan, implements the Roshini Baji Project in partnership with Concern for Children, which supports marginalized groups with education, medical attention and other basic human requirements. The project aims to increase awareness of electrical, fire and rain safety in low-lying communities that are vulnerable to electrocution and extreme weather events (WePower, 2023). In 2022, the project was expanded to provide training for women to become electricians (*ibid*). A total of 60 women graduated from the Certified Electrician Course the same year, which required them to complete 8,000 hours of in-person training (*ibid*). Overall, the programme promotes safe practices during extreme weather events, expands the engagement of women in the power sector, and provides long-term employment prospects (*ibid*). It is unknown how many of the women who completed the training were youth.

Studies from the International Labour Organization have found that Pakistan faces obstacles regarding the quality, availability and effectiveness of skills development (ILO, 2023). This encompasses limited knowledge on the demand for skills, inadequate resources for outreach, an absence of skills transferability, discrepancies in the training provided across provinces, poor governance and institutional coordination, and the irregular engagement of private-sector employees in Technical and Vocational Education and Training (TVET) (*ibid*).

However, there is evidence that the Government of Pakistan has implemented numerous schemes to resolve these issues and bridge the gap between youth unemployment and the labour market (*ibid*). This includes the development of a Skills 2030 Vision by the Employers Federation of Pakistan to prioritize reskilling for future work (*ibid*) as well as the Prime Minister's Youth Programme to promote pro-youth employment policies and programmes, such as the Youth Entrepreneurship Scheme (YES), Skills for All programme, Green Youth Movement, National Internship Program, Startup Pakistan, and the Youth Empowerment Platform (*ibid*).

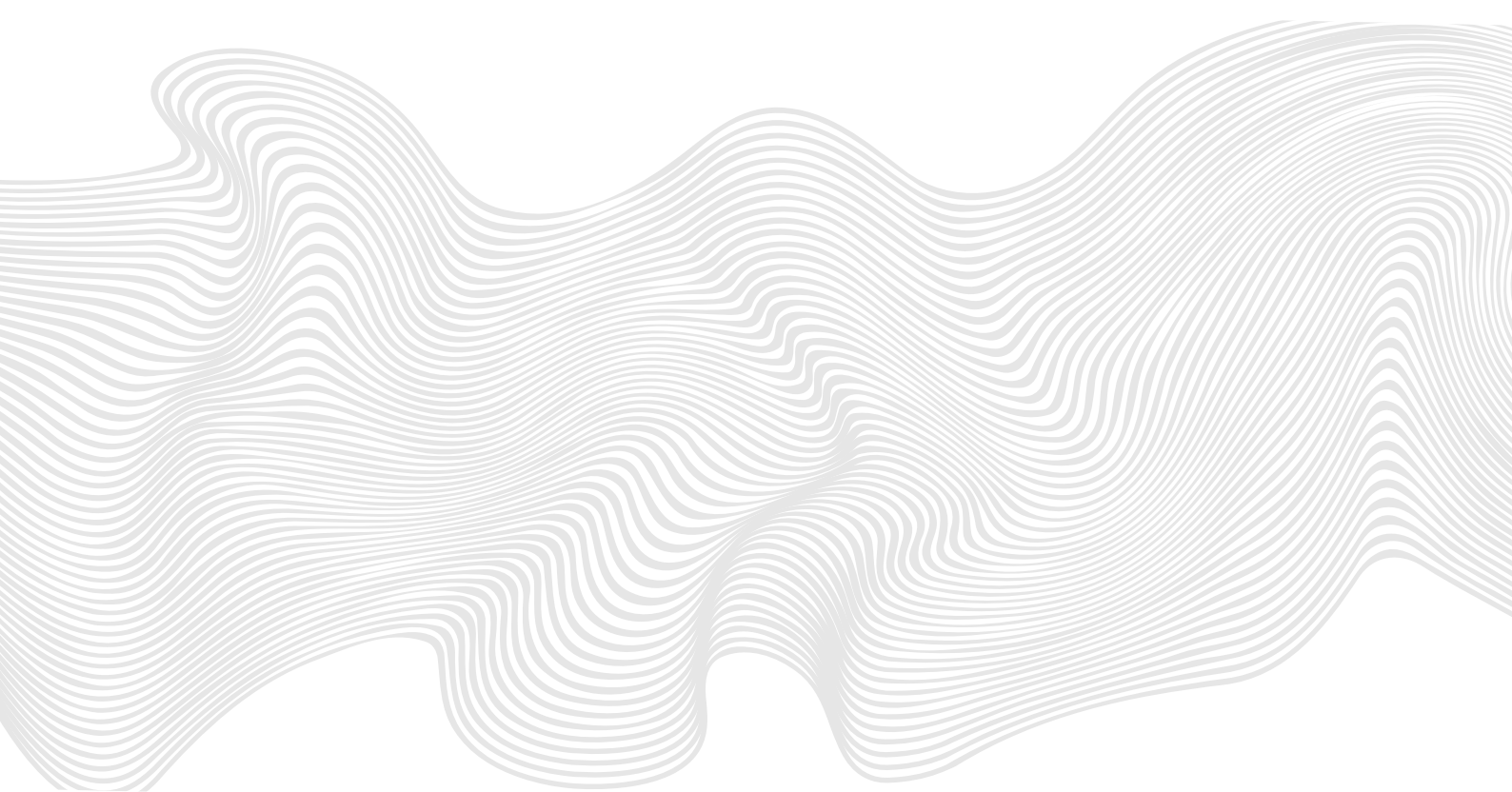
These strategies may benefit from incorporating additional social protection benefits in addition to active labour market policies. Complementary programmes may include passive labour market policies to set guidelines on decent work during climate hazards such as heatwaves. Additionally, fee waivers for education programmes may be applied for individuals who have 'aged out' of free education. A range of social protection interventions may strengthen the employability of youth in a labour market impacted by climate hazards.

In the aftermath of floods in 2010, the Government of Pakistan implemented the Citizens Damage Compensation Program (CDCP) – a temporary social assistance programme to provide 8 million flood-affected individuals with rapid cash support via Visa debit cards (WB, 2013). In such responses, active labour market interventions may be linked to add a 'cash plus' component and support people in building their adaptive and resilience capabilities. The Benazir Income Support Program – a cash programme targeting women-headed households in the poorest quintile – may similarly be leveraged to provide a cash plus component and build the capacity of beneficiaries to participate in the labour market.

Additional information should be compiled to assess the employment support requirements of marginalized youth including women, people living with disabilities, and tribal communities.

This would help to strengthen the country's labour force by ensuring that no one is unduly excluded from this type of support.

Insights and recommendations to support youth in accessing and actively participating in the labour market, against a backdrop of climate change and other hazards, indicate that social protection should be one aspect of a wider consortium of responses. Supporting youth to mitigate and adapt to natural and climate-related shocks would help to reduce the impacts on health, education and livelihoods, given the widespread negative effects of these hazards and the frequency at which they are occurring.



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Glossary

Cash-for-work programmes are a form of social assistance which provide enrollees with short-term employment opportunities contingent on meeting certain criteria such as income level. Individuals benefiting from these programmes receive cash in exchange for fulfilling labour activities, often aimed at improving local infrastructure.

Job training schemes are vocational training programmes which equip individuals with a specific set of skills and knowledge for a particular job or industry. These programmes can be classroom-based or have an apprenticeship approach by linking to on-the-job experience.

Job placement support are initiatives that support individuals in finding employment opportunities through counselling and connecting individuals to potential employers. Job placement support can include assistance with resume writing and job applications, networking and job search.

Job-related counselling is a form of employment counselling that helps individuals to make informed decisions about their job and/or career. It consists of support from an advisor who guides the individual in assessing their skills and goals for potential career opportunities.

Migration support describes the assistance provided to individuals who are planning to migrate either internally or internationally.

Re-skilling is the process of attaining new skills or enhancing existing skills in order to adapt to changing work requirements or contexts such as technological shifts, and to prepare individuals to transition from a high carbon emitting industry to a green industry.

Skilling programmes or skills development programmes are aimed at enhancing individuals' knowledge and capabilities for different fields of work. These programmes are structured to provide technical training and education across a wide range of subjects to improve employability.

Unemployment benefits are cash transfers to individuals who are unemployed. The aim is to provide individuals with temporary support as they seek employment.