Policy brief

The road to climate resilience: migration as an adaptation strategy

April 2018

Ayesha Qaisrani
Kashif Majeed Salik

Key messages:

• Future climate projections for Pakistan show an increase in temperature throughout the country and a decrease in rainfall in the monsoon belt, which is mainly arid and semi-arid. These changes will directly affect agricultural productivity and drive increasing numbers of people out of rural semi-arid areas, unless alternative economic opportunities are provided in villages.

•Planned rural out-migration has the potential to enhance the livelihood resilience of rural households by increasing households' abilities to anticipate risk, absorb shocks and adapt to current and future threats to their livelihoods, including climate change threats.

•The findings of this research project call for better management of the migration process, especially with regards to internal migration.

PRISE
Pathways to resilience in semi-arid economies

Research for climate–resilient futures

Introduction

For Pakistan, climate change is not a far-fetched future threat, rather a reality that is already impacting lives and livelihoods adversely

Rural livelihoods are particularly at stake as a result of climate change impacts such as rising temperatures, erratic rainfalls and more intense and frequent climate-related extreme events, particularly in semi-arid regions (Salik et al., 2015). Periodic episodes of floods, droughts and heat waves have become a common occurrence in the past decade in these regions, which have immense implications for agricultural production in terms of declining crop productivity and failure of crops (Hussain, 2010). Such impacts, influenced by the already weak economic structures in the rural areas, may motivate many young people to move away from villages in search of better opportunities. However, the linkages between climate change and migration are difficult to untangle as migration can be driven by complex interactions of many factors (Etzold and Mallick, 2016).

The Fifth Assessment Report by the Intergovernmental Panel on Climate Change (IPCC, 2014) recognizes that planned migration can reduce vulnerabilities of populations who are exposed to sudden and slow onset impacts of climate change. Based on research which considers migration as an adaptation strategy (Myers, 2005; Scheffran et al., 2011; Krishnamurthy, 2012), the Sustainable Development Policy Institute (SDPI) undertook a project to explore the linkages between climate change and migration and to analyse whether planned rural to urban migration has the potential to enhance rural livelihood resilience by enhancing economic opportunities. This study was undertaken as part of a multi-country research programme titled, 'Pathways to Resilience in Semi-arid Economies (PRISE)' that aims to create new knowledge for climate resilient economic development. The project found the affirmative potential of migration to build livelihood resilience by increasing rural households' capacities to anticipate risks, absorb the impacts and adapt their livelihoods to develop more resilience to slow and sudden climate impacts.

Current policy landscape for internal migration and climate action: the missing debate

Pakistani authorities have not yet recognized planned migration as an adaptation strategy unlike some other countries such as Bangladesh (Martin et al., 2013) and Kenya (Kelpsaite and Mach, 2011) that have integrated internal migration in their adaptation planning (Wilkinson et al., 2016). Because of being the fastest urbanizing country in South Asia, the narrative around rural to urban migration in Pakistan is considerably pessimistic, with discourse about 'controlling' and 'limiting' rural out-migration to cities by various policy instruments such as rural development (Saeed et al., 2016). Academic literature in this regard is also either primarily focused on identifying the push and pull factors of labour migration or exploring the adverse impacts of labour flows in cities on the scarce urban resources, with limited deliberation on how to manage internal migration that benefits both the urban and rural economies.

Pakistan has no domestic migration policy. The draft National Emigration Policy only considers international migration, with no reference to population flows within the country (Saeed at el., 2016). Vision 2025 (GoP, 2014), the blueprint for Pakistan's development, mentions the challenges of high rates of migration to cities and promises planned urbanisation vis a vis connectivity and modern infrastructure. Although the plan does commit to 'harness the full potential' of continued migration, more effort is required to convert these statements into action. The plan does not mention how it will ensure that generation of new jobs will be inclusive i.e. equally accessible to migrants from rural areas and how it will develop the capacity of the rural labour force to integrate well in the urban market in case of migration. Additionally, the National Climate Change Policy of Pakistan (2012) takes on a pessimistic approach towards migration and talks about 'curbing rural to urban migration'. With reference to population dynamics, the policy talks about regulating population expansion, but not in terms of migratory flows, rather in terms of natural population expansion (i.e. by births).

The Framework for Implementation of National Climate Change Policy (2014) was developed to provide an actionable agenda for the implementation of the National Climate Change Policy. The Framework refers to domestic migration in its Strategy 1.2 where it defines one short-term and two medium-term objectives for restricting rural to urban migration by providing infrastructure, job opportunities and modern amenities to rural areas. While developing opportunities and facilities in rural areas is indeed essential for developing the resilience of rural households, the government should not advocate for restricting rural to urban migration. It should, rather, take initiatives to facilitate migration in terms of improving human capital of rural population and improving facilities in urban areas. In this regard, urbanization, in itself, is not a development challenge; rather it can be a driver of growth and prosperity conditional on its proper management. However, the Framework remains silent on that aspect.

In light of the above-mentioned policy scenario, this policy brief advocates for viewing rural to urban migration in the positive light of a livelihood resilience-enhancing strategy, rather than as a detriment to development. International development narrative is now experiencing a paradigm shift from considering rural to urban migration as a development challenge to accepting migration as a natural social process that requires managing and facilitation through effective urban governance (Jabeen et al., 2017). Considering the developmental concerns of Pakistan, where the population movements from rural areas are directed towards major urban hubs such as

Karachi and Lahore that are experiencing mushroom growth of slum settlements, we do not promote the unregulated flow of people into these urban centres. In fact, our study calls for redirecting population flows from these overcrowded urban areas to lesser populated or secondary cities which have the capacity to absorb investment, human resources and create livelihood opportunities for people.

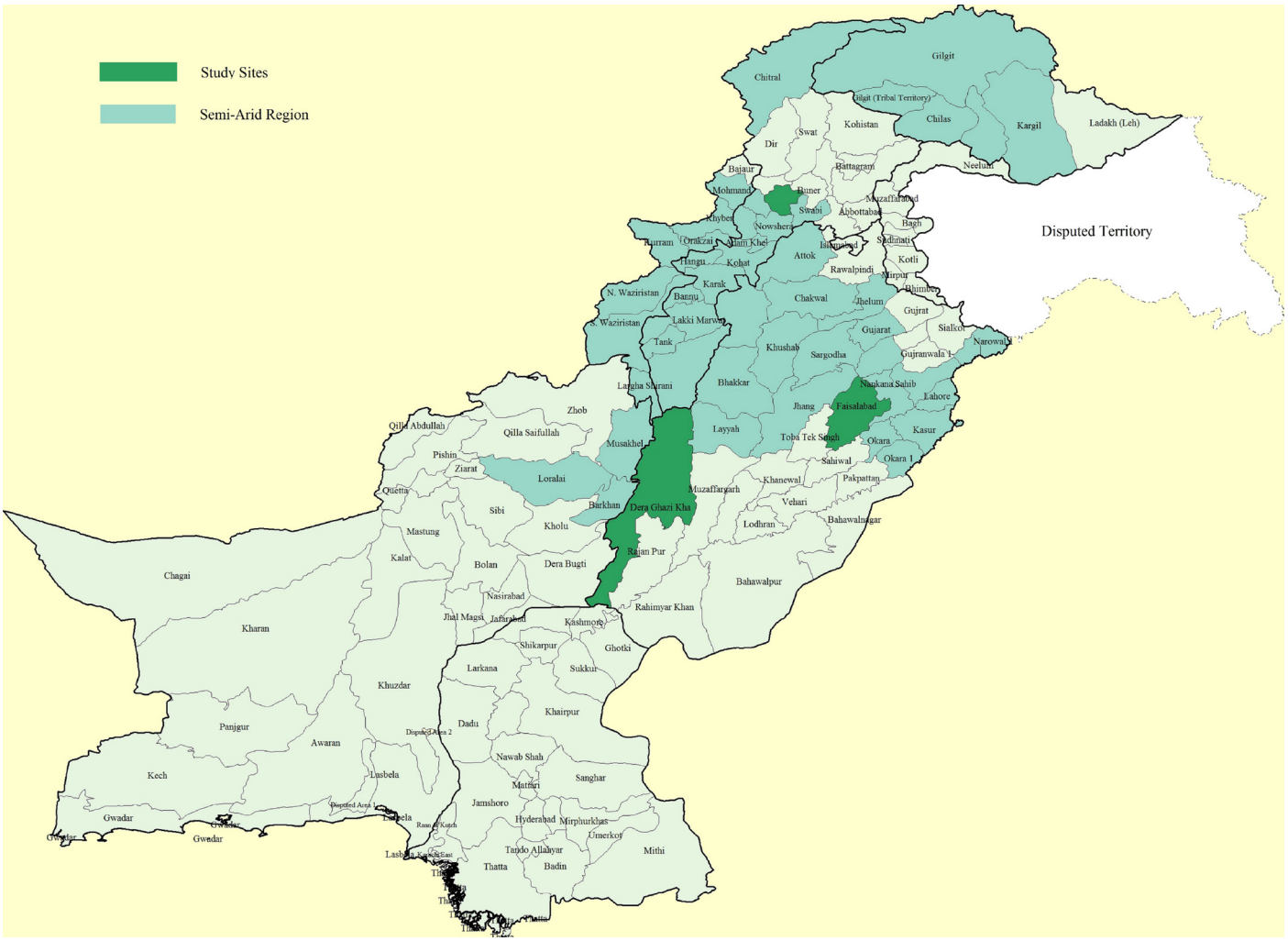
Under the Climate Change Act of 2017 passed by the National Assembly of Pakistan, three new entities were formed: the Pakistan Climate Change Council (having an advisory and oversight role), the Pakistan Climate Change Authority (the implementation body responsible for dealing with legislation, global linkages and also developing the National Adaptation Plan) and the Pakistan Climate Change Fund (responsible for securing and channelling global funds for climate action). As Pakistan initiates its process for designing the National Adaptation Plan, it is important that it considers human mobility in terms of rural to urban migration as an efficient adaptation strategy for rural households and devise approaches to facilitate safe and planned migration of rural labour with the aim of the resilience of rural households. As stated by one key PRISE project's stakeholder, Mr. Nisar Memon, Former Senator and Chairman of Water Environment Forum, we need a pro-rural and pro-intermediate cities migration policy, rather than a negative, anti-city policy (Memon, Personal Communication, 6th December 2017).

Approach and results

Focusing primarily on three semi-arid districts of Pakistan, namely: Dera Ghazi Khan (D.G. Khan), Faisalabad and Mardan (see map 1.1) through qualitative and quantitative investigation, this research study was conducted with three main objectives in mind:

- To understand the role of migration as an adaptation strategy through enhancing new economic opportunities, while also considering for distributional impacts of migration for poor and left-behind family members, including women.

Figure 1: Study sites in semi-arid Pakistan



Source: Authors' own

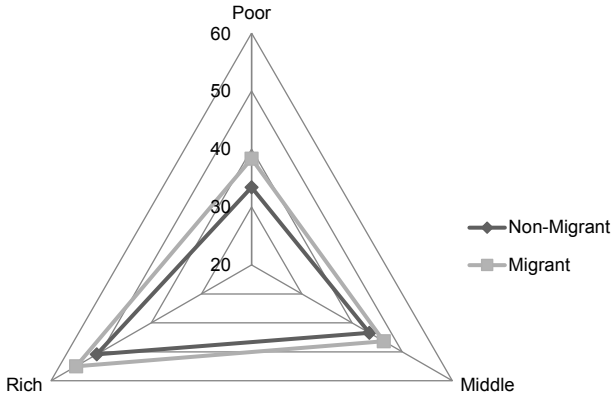
- To explore climate vulnerabilities, especially through extreme events, on rural livelihoods and to evaluate various adaptation options available to rural farm-based households.

- To propose adjustments in policy discourse to integrate internal migration in development planning by considering migration as an adaptation strategy.

Addressing the above-mentioned objectives in sequence, the study came to the following conclusions:

- Migration decisions are a result of a complex interplay of push and pull factors, food insecurity, lack of civic amenities and environmental reasons. Planned rural out-migration has the potential to enhance the livelihood resilience of rural households by increasing households' abilities to anticipate risk, absorb shocks and adapt to current and future threats to their livelihoods, including climate change threats. By coupling an index-based approach for quantifying livelihood resilience and a case study approach for understanding distributional impacts and migration outcomes, the study found that migrant households (defined as those households in rural areas that have one or more migrant members) are more resilient to climate change impacts (see figure 2).

Figure 2: Livelihood Resilience



Source: Authors' own

Comparatively higher levels of income, lower dependency ratios, more diverse sources of income, and higher employment rates define the adaptive capacities of migrant households. Scores for absorptive capacities indicate that migrant households have better access to financial resources, have more diversified household assets, and enjoy a generally higher standard of living as compared to non-migrant households. These factors better equip migrant households to cope with adverse situations. Furthermore, higher anticipatory capacity scores of migrant households show that they are better at learning new skills, have a stronger social network, and have more access to information (see Table 1)

Table 1: Livelihood Resilience Index scores for migrant and non-migrant households

Livelihood resilience index	Migrant score	Non-migrant score
Adaptive capacity		
Assets, access, income and food security	0.526	0.462
Strengthening and adapting livelihoods	0.467	0.401
Anticipatory capacity		
Preparedness and planning	0.526	0.452
Capacity, information and mobilization	0.589	0.536
Absorptive capacity		
Saving and safety nets	0.504	0.470
Substitutable and diverse assets and resources	0.211	0.146
Resilience index score (sum of adaptive, anticipatory and absorptive capacities)	2.822	2.467

Source: Authors' own

It was also found that migration as a livelihood strategy is gendered with the trend of out-migration of young men highly dominant in the patriarchal context of Pakistan. Despite this, rural women, especially younger women with some levels of education, aspire to be involved in economic activities and may even opt to migrate for the betterment of their households, provided the cultural norms prevalent in the area allowed for it. With male out-migration, on

an individual scale, women tend to shoulder higher workload back in the village and may not always observe an improvement in their economic or social empowerment. The cultural practice of joint-family systems plays a dual role – it provides a support system for families whose males migrate so that women do not have to be the sole caretaker of the family left behind. However, living in a joint-family setting often restricts women's empowerment that they may experience in terms of decision-making related to economic and social matters. Nevertheless, considered at the household scale, migrant households as a whole prove to be more resilient than non-migrant households.

- With the positive outcomes of rural to urban migration established, the project then explored the vulnerability of agricultural livelihoods in semi-arid areas to climate change and climate impact. It answered the question that if agricultural livelihoods continue to be threatened as a result of climate risks, how can migration be supported as an adaptation strategy. It builds on the premise that climate change may make the existing rural economy vulnerable which may then increase out-flow of people from villages to cities. Using the IPCC-Livelihood Vulnerability Framework, the study approached vulnerability in terms of i) exposure, ii) sensitivity and iii) adaptive capacity. The analysis brought out an important finding that (a lack of) adaptive capacity plays a prominent role in shaping the households' livelihood vulnerability. Furthermore, deteriorating or lack of irrigation infrastructure, low levels of human capital of farmers such as health and skill diversity, and loss in crop production as a result of climate impacts leads to a high sensitivity of agricultural livelihoods.

- As agricultural livelihoods become increasingly vulnerable to climate change impacts and risks, farmers resort to certain strategies to offset the ill-impacts on their earnings. In addition to increasing farm inputs and diversifying crop varieties, rural households also consider diversifying their livelihood through temporary or permanent migration of whole or part of the family members. This highlights the importance of migration as an adaptation strategy to climate change impacts by farming families in particular. In this regard, many seek to migrate away from the villages towards the urban centres of Pakistan in search of an alternative, non-farm opportunities. However, the relation between climate adaptation and migration is not so straightforward and may have many indirect and direct linkages.

- In relation to the policy perspective, this study concludes that migration should not be considered as a phenomenon to be controlled and as a problem to be solved; rather it should be promoted as part of the solution to the many socio-economic threats faced by rural population, including climate change. Migrants and their interactions with the home regions (villages) should be understood in the perspectives of agents of change for enhancing the resilience of rural households and adequate measures should be taken to ensure their integration in the urban economy as contributors to economic development rather than as a burden on the urban resources. To cater to the rising pressures on the big urban hubs, targeted policy initiatives can be devised to direct the flow of people to smaller or intermediate cities by creating opportunities there.

We conclude that it is complicated to separate climate change impacts from other socioeconomic factors that drive migration; yet through its impacts on rural livelihoods, especially agricultural livelihoods, climate change is increasingly driving people to diversify and improve their livelihoods and search for other opportunities elsewhere. Interestingly, the relation between migration and resilience is also complex, based on differentiated migration outcomes. However, generally, it has been found that migration phenomenon (the role of remittances, access and transfer of information, knowledge and skills, diffusion of new ideas and expansion of social network) leads to the enhanced resilience of migrant households.

Implications and recommendations

Inclusive resilience development is akin to valuing the welfare of both urban and rural areas. Rural economies need people-centric development to build climate resilience i.e. growth that diminishes poverty and reduces deprivation. Livelihood vulnerability of farmers can be offset by reducing the sensitivity and enhancing the adaptive capacity of farmers to climate change impacts. In light of this study, it is clear that livelihood resilience of rural agricultural households not only needs strengthening of the agriculture sector but also facilitation in diversifying their livelihood activities, within the rural economy as well through planned migration. Some of the policy measures drawn from the findings Qaisrani et al., (2018) and Salik et al., (2017) are given below:

- An important cause of sensitivity to climate change in rural semi-arid areas of Pakistan is the variability and uncertainty of irrigation water supply for agriculture purposes. This variability might also be caused due to weak and deteriorating irrigation infrastructure. The disruption in the water supply can be reduced by adopting innovative irrigation department with enhanced interactions with farmers. Furthermore, farmers' ability to cope, respond to and recover from water-stress conditions need to be enhanced by developing vulnerability and adaptation plans at the district level under different scenarios, considering the impacts of climate change. The irrigation departments should not only provide forecasting on water availability, but also spread awareness about response to extreme events, facilitate access to information, estimate vulnerability and hazards trends, and introduce coping and adaptive mechanisms that farmers can adopt.

- As climate related (extreme) events become more evident and severe, it is increasingly essential to rely on rural youth (including men and women) for coping with these risks, and adapting their livelihoods to climate change. This can be done by improving their capacity to understand vulnerable aspects of rural livelihoods, ability to effectively use new scientific information as well as local knowledge to anticipate and combat climate change risks and stressors such as floods, droughts, and heat waves. Similarly, rural labour also needs to have better and updated skills through trainings so that they are able to choose alternative (non-farm) opportunities which are less or not vulnerable to climate change. The role of district level Technical Education and Vocational Training Authorities (TEVTA) needs to be enhanced to do this. Doing so will reduce households' sensitivity to climate vulnerable livelihoods and allow them to diversify their sources of income. In this regard, agro-based small industries could be established in the proximity of rural areas to provide employment to the labour from adjoining villages. This could be initiated by PPPs between the provincial and district government and the private sector.

- Due to women's active involvement in agricultural activities, especially in D.G. Khan, their vulnerability to climate change is high. To encourage their participation in non-farm activities, local governments must create opportunities for them to access well-paid work in villages, such as supporting women-owned cottage industries by providing them trainings and access to credit and markets. PPPs and initiatives by development partners could establish skill development centres for women imparting trainings Public-private partnerships and initiatives of development partners could

establish skills development centres for women imparting training for life skills, technical and vocational education and non-traditional and better paying jobs. These centres could be linked to urban markets for the promotion of rural women's work through a fair-trade model. Women should also be formally integrated in the value chains and efforts must be undertaken to reduce the wage gap between men and women. In addition, provincial and local governments should also provide infrastructure – including water, fuel (for household consumption) and electricity – to lighten the workload that rural women shoulder. This would not only reduce their sensitivity (as the activity of collecting water and wood is more climate sensitive), but also reduce their responsibilities as males out-migrate.

- Decline in crop productivity or loss of harvest is another facet that contributes to high livelihood vulnerability to climate change through an impact on exposure. In such a scenario, the impact of climate change on agricultural productivity can be reduced when potential solutions to prevent harm are available and affordable to farmers. For instance, this study found that climate-resilient seed varieties currently available to small farmers are quite expensive, especially for small farmers. In this regard, agricultural extension services need to provide subsidised crop varieties for farmers at affordable prices, control the spread of pests and diseases and ensure proper storage of farm outputs. Furthermore, agricultural extension services need to broaden their reach, especially in KP, where people are still not receiving government services, and are thus, unaware of the many positive, livelihood enhancing schemes offered by the provincial government.

- Currently, the potential of migration as a resilience-enhancing adaptation strategy is not recognised in development plans. Policies facilitating planned migration could support improved climate adaptation for migrant families, and mitigate their risk of displacement. Since migration is an important response/ adaptation strategy, the national and sub-national governments should mainstream migration and climate change adaptation into National Adaptation Plans (NAPs) and sub-national integrated development plans (Local Adaptation Plans of Action – LAPAs). This also requires coordination among various national and sub-national departments dealing with health, education, agriculture, industry, and employment. Furthermore, for the migrants to contribute positively to national economic development and to the resilience of their families in the villages, it is important to equip them with (urban) demand-based skills through vocational training and technical education. This would help in better integration of village migrants to integrate in the urban economy.

- The findings of this research project call for better management of the migration process, especially with regards to internal migration. Climate risks can be reduced by opting for migration as an adaptive strategy in terms of livelihood diversification. However, unplanned migration in itself may lead to various development concerns such as pressure on urban resources, urban poverty, and growth of slum settlements. Proper management of internal migration can only take place if the country collects updated data on peoples' movement and settlement processes. Existing macro-level studies rely on the National Population Census of 1998, which is too out-dated to inform proper decision-making regarding migration and settlement processes. Furthermore, the current Census fails to capture the required statistics on understanding migration patterns.

- In order to track migration flows, a comprehensive registration system across administrative boundaries should be devised by the Ministry of Planning, Development and Reform in tandem with the Ministry of Labour and Manpower and the respective line ministries. This could provide deep insight into the actual migratory flows, bringing migration discussion to the forefront of policy discourse and helping in better management of peoples' mobility in Pakistan, including their employment, accommodation, and provision of civic amenities.

- Implementation of labour laws in the urban centres for migrants and operationalisation of minimum wage rates could ensure that labour migrants are not being exploited in urban areas; their rights are protected, thus enabling them to send more remittances back to their households. Higher remittances would translate into more resilience of rural household members.

- Through support programmes, PPPs can boost the rural economy by helping rural migrant families channel their remittances into productive uses, such as developing small-to-medium businesses. For example, private banks could partner with the local government to introduce subsidised loan schemes for village households to establish start-ups. Doing so could enable migrants to invest remittances in productive ways, such as setting up small enterprises for agriculture value addition, or the storage and packaging of agricultural products.

References

Etzold, B, and Mallick, B. (2016). Moving Beyond the Focus on Environmental Migration towards Recognizing the Normality of Translocal Lives: Insights from Bangladesh. In: Milan, A., Warner, K., Schraven, B. and Cascone, N. (eds.) Migration, Risk Management and Climate Change: Evidence and Policy Responses (Global Migration Issues, Sixth Ed.). Bonn: Springer.

Hussain, S. (2010). Food Security and Climate Change Assessment in Pakistan. Special Program on Food Security and Climate Change, Oxfam Novib.

Jabeen, N, Farwa, Um and Jadoon, M. (2017). 'Urbanisation in Pakistan: A Governance Perspective', Journal of the Research Society of Pakistan, vol 54, no. 1, pp. 127-136.

Keplsaite, L, and Mach, E. (2015). Migration as Adaptation? A Comparative Analysis of Policy Frameworks on the Environment and Development in MECLEP Countries, Migration, Environment and Climate Change: Policy Brief Series.

Krishnamurthy, P.K. (2012). Disaster-Induced Migration: Assessing the Impact of Extreme Weather Events on Livelihoods', Environmental Hazards, vol. 11, pp. 96-111.

Martin, M, Kang, Y, Billah, M, Siddiqui, T, Black, R and Kniveton, D. (2013). Policy Analysis: Climate Change and Migration in Bangladesh', Climate and Development Knowledge Network, Sussex Centre for Migration Research and Refugee and Migratory Movements Research Unit, United Kingdom.

Myers, N. (2005). Environmental Refugees: An Emergent Security Issue', Paper for the 13th Economic Forum, Organisation for Security and Cooperation in Europe, Prague, May 2005, pp. 23-27.

Qaisrani, A, Umar, M.A, Siyal, G.A, Salik. K.M. (2018). Rural livelihood vulnerability in semi-arid Pakistan: scope of migration as an adaptation strategy. Pathways to Resilience in Semi-arid Economies (PRISE) Report. Islamabad: Sustainable Development Policy Institute.

Salik, K.M, Ishfaq, S, Saeed, F, Noel, E and Syed, Q. (2015). Pakistan Country Situation Assessment, Pathways to Resilience in Semi-Arid Economies, Islamabad.

Salik, K.M, Qaisrani, A, Umar, M.A, and Ali, S.M. (2017). Migration Futures in Asia and Africa: Economic Opportunities and Distributional Effects – The Case of Pakistan. Pathways to Resilience in Semi-arid Economies (PRISE) Report. Islamabad: Sustainable Development Policy Institute.

Saeed, F, Salik, K. M, and Ishfaq, S. (2016). Climate Change and Heat Waves: Rural to Urban Migration in Pakistan. A Silent Looming Crisis. Sustainable Development Policy Institute, Environment and Climate Change Unit. Islamabad: SDPI.

Scheffran, J, Marmer, E, and Sow, P. (2011). Migration as Contribution to Resilience and Innovation in Climate Adaptation: Social Network and Co-development in Northwest Africa, Applied Geography, vol. 33, pp. 119- 127.

SDPI

Sustainabe Development Policy Institute
Taimur Chambers
Plot # 10-D (WEST),
Fazal-ul-Haq Rd,
Islamabad - Pakistan
Tel. +92-51-2278134
+92-51-2278135

www.sdpi.org

www.prise.odi.org

Research for climate–resilient futures

This work was carried out under the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA), with financial support from the UK Government's Department for International Development (DfID) and the International Development Research Centre (IDRC), Canada. The views expressed in this work are those of the creators and do not necessarily represent those of DfID and IDRC or its Board of Governors.

This briefing has been produced as part of a series of papers to guide the long-term research agenda of the Pathways to Resilience in Semi-arid Economies (PRISE) project. PRISE is a five-year, multi-country research project that generates new knowledge about how economic development in semi-arid regions can be made more equitable and resilient to climate change.

CARIAA
Collaborative Adaptation Research Initiative in Africa and Asia

IRCAAA
Initiative de recherche concertée sur l'adaptation en Afrique et en Asie

UKaid
from the British people

IDRC | CRDI
International Development Research Centre
Centre de recherches pour le développement international

Canada