POLICY BRIEF

# Combating Climate Change and Poverty in Asia-Pacific Least Developed Countries: A Call for Integrated Approaches

May 2024

Section on Sustainable Development and Countries in Special Situation,
Office of the Executive Secretary

ESCAP
Economic and Social Commission for Asia and the Pacific

**Acknowledgements:** This policy brief was prepared by Channarith Meng and benefited from feedback and suggestions by Yusuke Tateno and Oliver Paddison. Document support was provided by Darin Sooksripaisarnkit.



**Please cite this paper as:** Meng, Channarith (2024). Combating Climate Change and Poverty in Asia-Pacific Least Developed Countries: A Call for Integrated Approaches. CSS Policy Brief No. 24-4. Bangkok: ESCAP.

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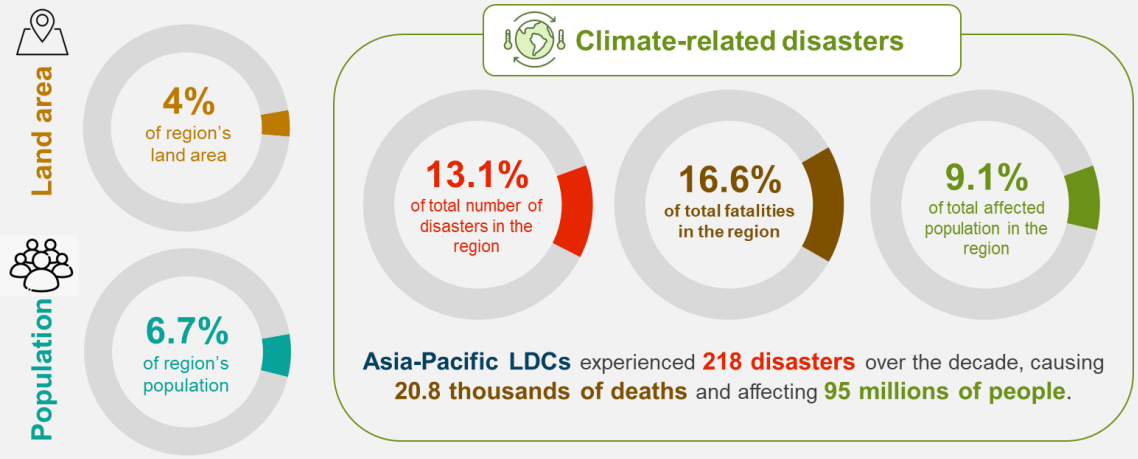
Tracking number: ESCAP/PB/56

Climate change and poverty are the two greatest challenges affecting Asia-Pacific least developed countries (LDCs).[1] As climate change escalates globally, these countries find themselves the most exposed and vulnerable to its impacts. Over the past decade, LDCs experienced around 13 per cent of the total disasters, accounting for nearly 17 per cent of deaths and 9 per cent of the affected population in the region, although these countries occupy only 4 per cent of the region's land surface and host less than 7 per cent of its population (figure 1). Flood risks are particularly high in LDCs, in which 141 million people (or nearly 11 per cent of the region's population) are directly exposed to 1-in-100-year floods.[2] Bangladesh, Myanmar, Lao People's Democratic Republic, Cambodia and Nepal are among the global top 10 for the share of the country's population exposed to flooding (Rentschler and others, 2022).

Meanwhile, the high prevalence of poverty, widespread inequality and other structural socioeconomic issues in LDCs magnify their vulnerabilities to climate change impacts. Given the relatively small size of LDCs and the large share of the population relying on natural resources for livelihoods, a single disaster can have severe impacts, disrupting supply chains and significantly affecting the economy and population. A larger proportion of people living in poverty and the lack of insurance mechanisms, combined with long-standing infrastructure deficits and weak institutional capacity, constrain their ability to respond to and recover from disasters. Together with low domestic resource mobilization and significant development gaps, LDCs lack adequate fiscal space to fulfill multiple pressing development needs, including building resilience to climate risks and lifting people out of poverty.

Against this background, there is a pressing need for more effective development approaches that integrate climate action and poverty alleviation activities, recognizing the intricate interconnection between these issues and their impacts on each other. Integrated approaches provide opportunities to pool resources and foster greater alignment, coherence, efficiency and synergy across policies to address multiple objectives and enable transformative change. This policy brief discusses the intertwined challenges of climate change and poverty in Asia-Pacific LDCs and highlights the crucial need for integrated approaches to policy design and implementation that can support accelerated climate action and poverty alleviation efforts in these countries.

**Figure 1: Land area, population and climate-related disasters in Asia-Pacific LDCs, over the period of 2014-2023.**




*Source: Author's calculation based on data from Our World in Data, for land area; from United Nations, Department of Economic and Social Affairs, Population Division (2022). World Population Prospects 2022, Online Edition, for population; and from Delforge, D., and others. EM-DAT: The Emergency Events Database, for climate-related disasters. Accessed on 30 April 2024.*

[1] Asia-Pacific LDCs comprise of Afghanistan, Bangladesh, Cambodia, Kiribati, Lao People's Democratic Republic, Myanmar, Nepal, Solomon Islands, Timor-Leste, and Tuvalu.

[2] Author's calculation based on Rentschler and others (2022).

## Linkages between climate change and poverty

### *Impacts of climate change on poverty*

Climate change is exacerbating poverty at the household level, with poor people being disproportionately affected by climate shocks and economic loss. This is particularly pronounced in Asia-Pacific LDCs, where a relatively large share of the population lives in extreme poverty. Climate change impacts on the poor are felt through multiple channels such as agricultural and fishery yields, labour supply and productivity, asset loss and changes in food prices and consumption patterns (ESCAP, ADB and UNDP, 2024).

Changing weather patterns, rising temperatures and increasing extreme climate events negatively affect agricultural and fisheries production, which are crucial for the livelihoods of small-scale farmers and low-income rural households. Global and regional studies project substantial declines in major crop yields, including rice, wheat, maize and soybean (Hasegawa and others, 2022). The reduction is expected to be particularly severe in LDCs, in which majority of the population is engaged in agriculture and heavily reliant on traditional, climate-dependent farming practices. In countries situated in or near the tropics, such as Bangladesh, Lao People's Democratic Republic and Myanmar, rising temperatures can cause water scarcity and severely affect crop production. Similarly, fishery and aquaculture industries are likely to see significant declines due to temperature rise, ocean acidification and reduced oxygen levels. Fishery productivity in tropical areas is projected to halve by 2050 compared to current levels (Lim and others, 2020). This is especially concerning for Kiribati, Solomon Islands, Tuvalu and Myanmar, which rank among the top 10 most at risk of marine fishery loss (Thiault and others, 2019).

High temperatures disproportionately impact the poor in terms of reduced labour supply and productivity, as many work outdoors in sectors such as farming and construction, where they are directly exposed to heat and air pollution. Studies consistently showed a strong link between hot weather and low output and work hours. In Asia, working hours start to decline progressively as the temperature goes above 21.5°C for high-exposure work (such as outdoor work) and above 20.2°C for low-exposure work (Dasgupta and others, 2021). It is also projected that the labour productivity will decrease by 6.7 percentage points with a 1.5°C increase in temperature, and by 10.4 and 18.6 percentage points with 2.0°C and 3.0°C increases, respectively. Countries near the equator, particularly in South-East Asia, are expected to experience even greater declines.

Poor households are at higher risk of losing assets due to climate shocks. In countries such as Bangladesh, poor households lose between 5 to over 20 percentage points more of their assets during floods or cyclones than non-poor households (Hallegatte and others, 2021). In Cambodia and Myanmar, poor households often resort to selling assets to cope with droughts, which disproportionately affect areas with high levels of poverty and malnutrition (ESCAP and ASEAN Secretariat, 2021).

Furthermore, extreme weather events can cause food price spikes through supply shocks, disproportionately affecting poor households. Studies find that poor households in developing countries spend on average between 40 and 70 per cent of their budget on food, which is significantly more than higher-income households, estimated at less than 25 per cent (Hallegatte and others, 2015 and IMF, 2012). Elevated food prices force them to spend a larger share of their income on food and compromise their ability to afford nutritious foods, healthcare, childcare and education. The reduction in essential expenditures in turn can result in short-term effects such as reduced wellbeing, early childhood undernutrition and health deterioration, as well as long-term consequences on intergenerational poverty through illiteracy and low economic productivity. This situation is particularly prevalent among urban poor households and those headed by women, who are overrepresented among the extreme poor in LDCs.

### *Poverty exacerbating vulnerability to climate change impacts*

Limited progress toward poverty reduction heightens the vulnerability of the poor to climate change, constraining their ability to cope and adapt. This vulnerability stems from several factors, including their reliance on climate-sensitive natural resources for livelihoods, such as farming, fishing, forestry and other agricultural production. Furthermore, the poor often settles in geographically vulnerable areas where exposure to climate events such as floods and droughts is high, as safer and more productive places are expensive and typically occupied by higher-income individuals (Barbier, 2015). Limited access to social protection, poor health and inadequate risk management strategies further exacerbate these challenges, leading to risk-averse behaviour, counterproductive production decisions, and negative coping strategies such as asset sales, school dropout, reduced nutrition and poverty-driven migration (Hansen and others, 2018).

Activities of those living in poverty can also contribute to greenhouse emissions and worsen climate vulnerability. With limited options, poor people often continue unsustainable practices that can degrade habitats and resources (Charles and Macnaughton, 2019). For example, burning fuelwood and charcoal for heating and cooking, which is a low-cost energy source, can contribute to emissions and significantly impact health. Overharvesting mangroves for firewood and survival activities can damage mangrove ecosystems, which provide natural infrastructure to prevent soil erosion, create habitats for animal species and protect against sea level rise and extreme weather events. Agricultural burning for land clearing can increase erosion, reduce water retention and soil fertility and increase the need for fertilizer and irrigation. This, in turn, leads to land degradation which heightens vulnerability to both slow-onset disasters like desertification and rapid-onset disasters like floods.

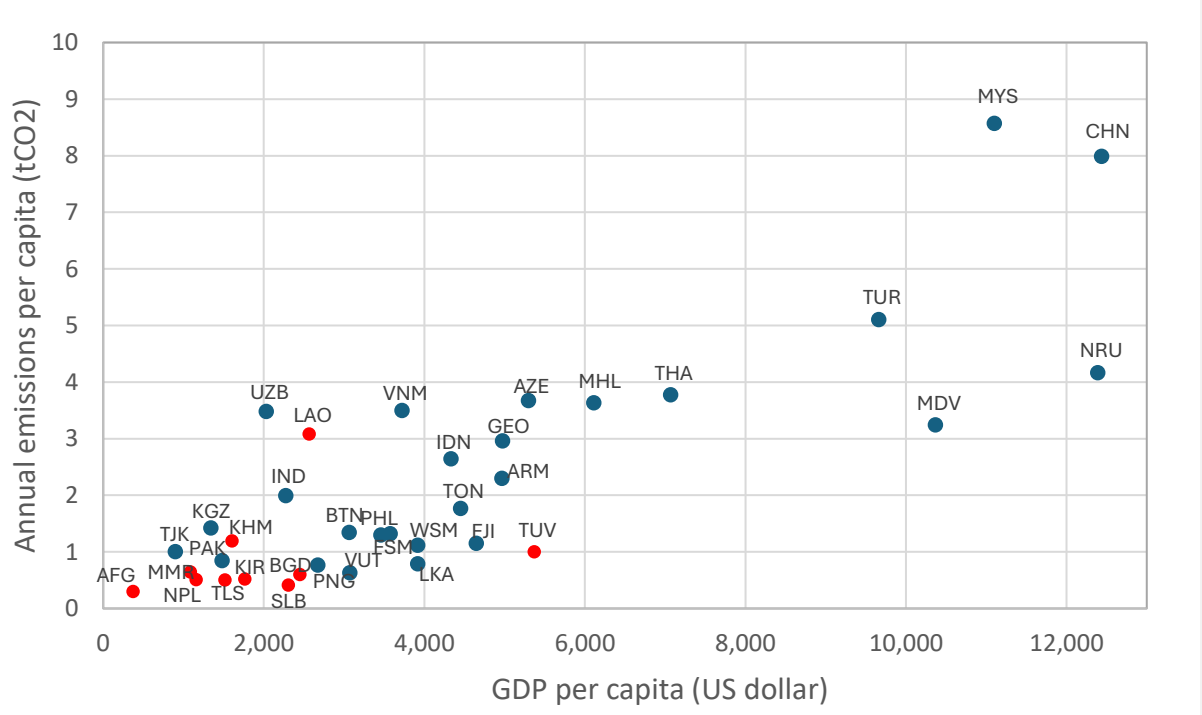
### Conflicting objectives of climate change and poverty

The linkages between economic growth, poverty reduction and climate change often prompt questions whether poverty reduction efforts could contribute to climate change, or there is any conflicting objective between poverty reduction and climate action. This is based on the straightforward assumption that economic growth is associated with an increase in consumption, including by those having moved out of poverty. This consumption increase can lead to a larger carbon footprint as more goods and services are produced and consumed, often with greater energy intensity.

However, this view oversimplifies the complex dynamics at play. Studies show significant disparities in carbon emissions between developed and developing countries, as well as among different income groups. For example, the average carbon footprints of LDCs are among the lowest compared to other middle-income developing countries in the region (figure 2), and several times lower than high-income countries such as Australia (15 total carbon dioxide, or tCO2), Brunei Darussalam (24 tCO2), New Caledonia (18 tCO2), and the Republic of Korea (12 tCO2). This inequality is also pronounced within countries, where studies consistently find that globally, the bottom 50 per cent of carbon emitters contribute to only around 10 per cent of total carbon footprints, while the top 10 per cent are responsible for nearly half of all the footprints (Chancel, 2022, and Bruckner and others, 2022). This clearly demonstrates that people living in poverty, who are part of the bottom 50 per cent, contribute very little to total carbon footprints.

A few studies have attempted to quantify the contribution of poor people to climate change using global data. Their findings suggest that, in 2014, over one-seventh of the global population lived below the extreme poverty line of US$1.90 per day; however, their contribution to global carbon emissions was less than 2 per cent (Brucker and

## Figure 2: Carbon footprints per capita in Asia-Pacific LDCs and other developing countries




*Source:* Based on Bruckner, Benedikt, and others (2022). Impacts of poverty alleviation on national and global carbon emissions. *Nature Sustainability*, Vol. 5, pp. 311–320.

*Note:* Red dots represent Asia-Pacific LDCs, and blue dots represent other developing countries in Asia and the Pacific. AFG: Afghanistan, ARM: Armenia, AZE: Azerbaijan, BGD: Bangladesh, BTN: Bhutan, KHM: Cambodia, CHN: China, FJI: Fiji, GEO: Georgia, IND: India, IDN: Indonesia, KAZ: Kazakhstan, KIR: Kiribati, KGZ: Kyrgyzstan, LAO: Lao People's Democratic Republic, MYS: Malaysia, MDV: Maldives, MHL: Marshall Islands, FSM: Micronesia, MNG: Mongolia, MMR: Myanmar, NRU: Nauru, and NPL: Nepal.

other, 2022).[3] Additionally, similar studies suggest that lifting people out of extreme poverty (i.e. achieving Sustainable Development Goal targets 1.1 and 1.2) would result in only a slight increase in global carbon emissions, ranging from 2 to 5 per cent.[4] Therefore, there is minimal conflict between reducing poverty and combating climate change. The notable inequality in emissions among countries and income groups underscores the need to focus emission reduction efforts on developed countries and the top 10 per cent of the population to achieve global emission targets.

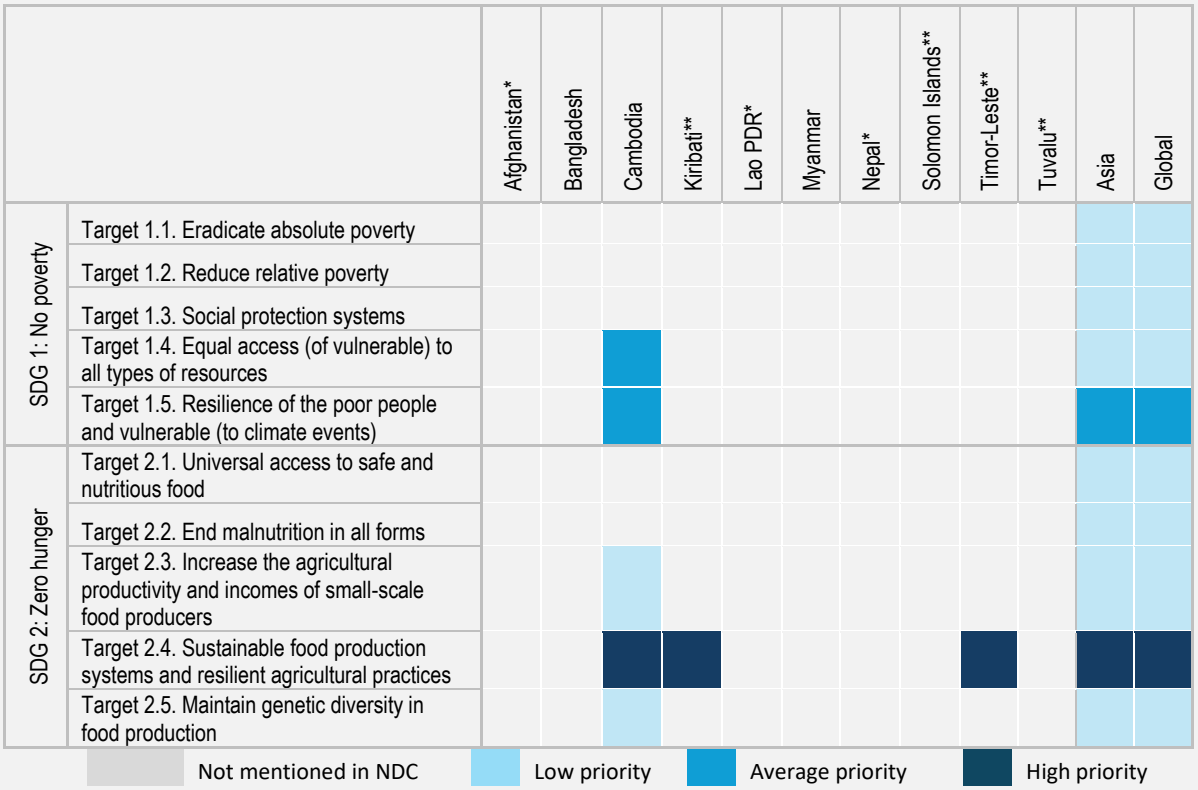
### Integrated approaches for addressing the interlinked challenges of climate change and poverty

Despite the close relationship between climate change and poverty, this connection is often not reflected in most national policy frameworks. Currently, the updated nationally determined contributions (NDCs) submitted by most LDCs contribute very little to addressing challenges associated with poverty (Goal 1) and, relatedly, food insecurity (Goal 2) (figure 3). Specifically,

[3] 37 per cent and 57 per cent of the global population, respectively, lived below the World Bank poverty lines of US$3.20 and US$5.50 per day. They contributed to about 7 per cent and 16 per cent of total emissions, respectively.

[4] Bruckner and others (2022) estimated that achieving SDG target 1.1 and 1.2 could lead to maximum global emissions increase of 2.1 percent, but this estimate does not include emissions from non-market energy sources like firewood, predominantly used by low-income households, which could slightly raise carbon footprints. Wollburg and others (2023) examined economic growth as a means of poverty reduction and calculated the emissions linked to the necessary growth for poverty eradication. Their analysis suggests that eradicating poverty would not only involve increasing the consumption of poor individuals but also of non-poor individuals in poor countries. However, even under this less optimistic scenario, the additional global emissions linked to eradicating extreme poverty would be small, amounting to just 4.9 percent of 2019 global emissions, and would not significantly impact the global climate change challenge.

**Figure 3: SDG 1 and 2 targets addressed in updated Nationally Determined Contributions (NDCs) in Asia-Pacific LDCs.**




*Source: Based on Dzebo, Adis and others (2023). NDC-SDG Connections: Data on updated NDC submissions (V2). Available at https://zenodo.org/records/8091619. Accessed on 22 April 2024.*
*Note: * also landlocked; ** also small islands developing States.*

most LDCs do not mention any aspects or priorities related to the targets of Goal 1 and Goal 2 in their NDCs. An exception is Cambodia, which, to some extent, prioritize target 1.4 (equal access of vulnerable to all types of resources) and target 1.5 (resilience of the poor people and vulnerable to climate events) in its NDC. A few other countries such as Kiribati and Timor-Leste give high priority to target 2.4 (sustainable food production systems and resilient agricultural practices).

This gap indicates opportunities for more integration of climate action and poverty reduction efforts, which are central to supporting the livelihoods of the poor and marginalized. Integrated approaches to climate action and poverty reduction have the potential to unlock synergies in policy implementation, optimize resources and enable better institutional arrangements to co-deliver and accelerate progress across development agendas.

### *Policy considerations for implementing integrated approaches*

Pursuing the integrated approaches to address the challenges of climate change and poverty requires new ways of thinking and possibly necessitates adjustments and reforms focused on the following policy considerations:

1. There is a need to **integrate poverty reduction priorities into climate policies** to ensure that efforts to reduce emissions do not exacerbate but reduce poverty. This entails designing and implementing mitigation and adaptation policies that prioritize the most vulnerable people and communities affected by climate change and provide targeted assistance to those with limited coping capacity. Policy instruments could range from relief-focused social protection programmes and short-term job offer to victims to rebuild infrastructure, to government-funded or

subsidized climate-related insurance, and the establishment of post-recovery community plans and funds to assist affected populations (ESCAP, ADB and UNDP, 2024).

2. **Mainstreaming climate responses into poverty alleviation policies** is equally important to ensure that poverty alleviation and development efforts address climate-related risks and impacts. Initiatives like climate-smart agriculture (CSA) show promise in bringing climate considerations into development practices. Such initiatives not only boost agricultural productivity sustainably but also build resilience of agriculture to climate change and reduce greenhouse gas emissions. Many of these practices have been implemented in LDCs and thus hold potential for broader adoption and upscaling (ESCAP, ADB and UNDP, 2024).

3. Integrated approaches require **strengthened institutional coherence and coordination** not only among government institutions but also with other stakeholders such as civil society organizations and the private sector. This involves reviewing existing governance structures, identifying areas where coordination efforts need to be improved, and, where necessary, restructuring or establishing new institutional arrangements such as steering committees to oversee climate and poverty strategies. Joint financing mechanisms and shared budgets for collaborative climate-poverty initiatives and implementing joint reporting and accountability frameworks, are also crucial (Charles, Kalikoski and Macnaughton, 2019).

4. Effective pursuit of integrated approaches and coordinated mechanisms requires **developing strong institutional capacity**. All government institutions and stakeholders need to understand the interactions between climate action and poverty alleviation, adapt to change and cooperate effectively, even within new institutional arrangements. Strong institutional capacity will enable better planning, policy alignment, priority setting, and streamlined processes to effectively implement integrated policies.

5. Promoting linkages between climate action and poverty alleviation through **local engagement and initiatives** is essential. This is based on the rationale that climate risks and impacts vary across communities, and thus addressing them is most effective at the local level, where solutions can be tailored to meet specific community needs. Support measures can include fostering local engagement in integrated policy planning, implementing and monitoring; improving local capacity and access to information and technologies; and providing technical and financial resources for locally led businesses and initiatives that deliver climate-poverty benefits such as climate-smart agriculture, climate-related insurance, and renewable energy projects (Charles, Kalikoski and Macnaughton, 2019).

6. **Finance and investment** are key to advancing actions at the nexus of climate change and poverty. Scaling up climate finance is crucial, but it is equally important to direct funds to key areas such as adaptive social protection, labour-intensive climate infrastructure, skills development, sustainable enterprises and locally led initiatives that most benefit marginalized communities. In LDCs, where domestic resources are inadequate, financial, technical and institutional support from the international community, including multilateral development banks, is indispensable. Such support should look into integrated approaches to guide financing and investment activities that maximize synergies between climate action and poverty alleviation efforts (ESCAP, ADB and UNDP, 2024). Mobilizing finance from the private sector and other sources, and through innovative models, is also necessary for achieving climate and poverty-related goals. Innovative financing models such as crowdfunding, blended

finance and green bonds can be customized to fund projects or initiatives aimed at building resilience of poor and vulnerable communities against climate change impacts.

7. **Multistakeholder partnerships and regional cooperation** are key to implementing and fostering integrated approaches and addressing transboundary issues of climate change. These enable the pooling of human, social and financial capital to jointly discuss issues, identify gaps and develop solutions in a holistic, coherent and coordinated manner. The international community can support regional and global coordination efforts by facilitating consensus building, initiating technical and financial assistance, setting up international standards and practices, providing capacity building and technological transfer, and promoting exchanges of good practices and peer learning among countries which are of great benefits to LDCs.

## Conclusion

The intersection of climate change and poverty presents a significant challenge for the Asia-Pacific LDCs, exacerbating their vulnerabilities and impeding development progress. LDCs bear a disproportionate burden of climate-related hazards, with substantial risks and severe consequences for millions of people, especially those living in poverty. This group, representing a large segment of the population in these countries, is the most affected by increasing climate impacts and has the least capacity to cope and adapt, despite having contributed minimally to emissions. While policy frameworks and measures are in place to combat climate change and poverty, they are pursued in silos that often result in ineffective policies, investment shortfalls and an imbalance between short-term gains and long-term costs, which can impede meaningful climate action and poverty alleviation.

Transformative change is needed. The interconnection of climate change and poverty calls for integrated approaches to policy thinking, design and implementation that can unlock synergies and prioritize vulnerable communities to ensure that no one is left behind. Integrated approaches entail mainstreaming poverty considerations into climate action and vice versa, strengthening institutional capacity, policy coherence and coordination, and empowering local communities through tailored, locally led initiatives. In addition, financing mechanisms need to be scaled up and directed towards activities that largely benefit marginalized populations, while multistakeholder partnerships and regional cooperation need to be leveraged more effectively for addressing such complex, transboundary challenges.

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