

CONVENING PAPER

Natural capital, institutions, and adaptation – insights from SANDEE@25

December 2025, Kathmandu



Background

Across South Asia and the Hindu Kush Himalaya (HKH), environmental change is accelerating, and the stakes for livelihoods are rising. For example, according to Wester et al. (2023), there is now stronger evidence of a 65% increase in the rate of glacial mass loss in the HKH, between 2000-2009 and 2010-2019 (high confidence). The stakes for livelihoods are no longer abstract as well. The glaciers and mountains of the HKH sustain the livelihoods of 240 million residents in the region and another 1.65 billion living downstream (Sharma et al., 2019). Many institutions are under strain, and real-world decisions must often be made with limited time and imperfect evidence. In this context of urgency and uncertainty, the South Asian Network for Development and Environmental Economics (SANDEE) celebrated its 25th anniversary in December 2025, organising the [International conference on development and environmental economics: SANDEE@25](#).

AnnaMaria Oltorp from the Swedish International Development Cooperation Agency (Sida), who has been involved with SANDEE for a long time, shared her personal reflections in a [video message](#) to mark the occasion

SANDEE's 25-year milestone was a timely moment to bring researchers, practitioners, and decision-makers together to reflect on what current research is telling us, what remains uncertain, and what should come next. The publication, *SANDEE@25: Advancing environmental economics research and education in South Asia: reflections, lessons, and memories of collective growth* ([ICIMOD & SANDEE, 2025a](#)) provides in-depth recollections of personal journeys of individuals who have contributed to the growth of SANDEE over the past 25 years, while the Book of Abstracts ([ICIMOD & SANDEE, 2025b](#)) provides glimpses of the issues and areas discussed at the conference.

Reflections panel with SANDEE-ICIMOD's alumni and founding members.

ICIMOD 50th ANNIVERSARY
25
SANDEE
YEARS

INTERNATIONAL CONFERENCE ON
**Development and Environmental
Economics: SANDEE@25**

12–14 December 2025
Kathmandu, Nepal



Overview of event

To commemorate the [25th anniversary of SANDEE](#) as a regional knowledge-building platform, the '[International conference on development and environmental economics: SANDEE@25](#)' was held in Kathmandu from 12-14 December 2025. The event brought together researchers, practitioners and policymakers from across South Asia and beyond. Participants from universities, government agencies, think tanks, civil society and development organisations attended the event to discuss and reflect under the theme "Development, environment, and the mountains." Within that broad theme, the conference focused on key areas: biodiversity, climate, ecosystem, environmental pollution, forest restoration, livelihoods, mountains, and people.

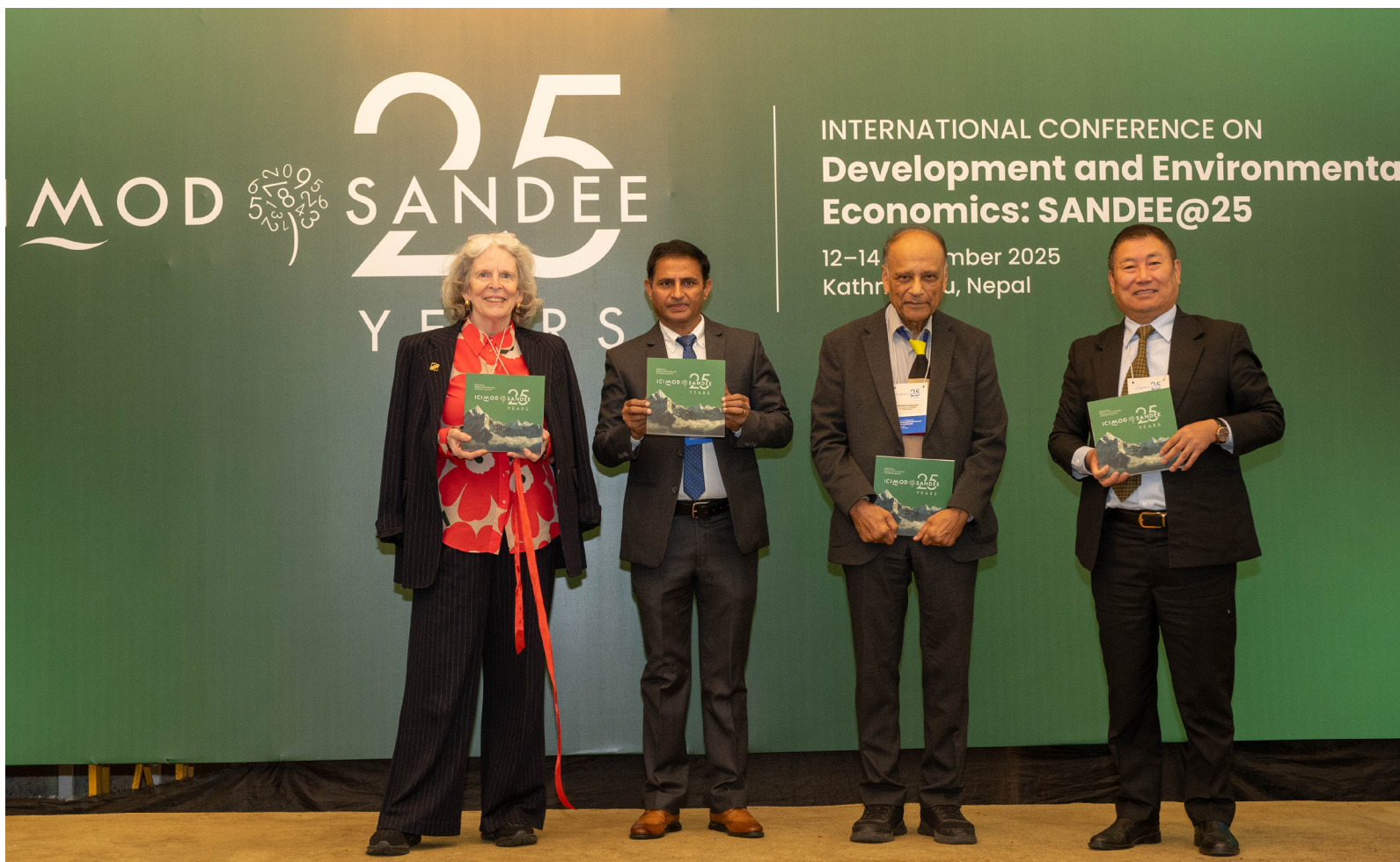
Session highlights

Keynote addresses

The event featured four keynote speeches by distinguished scholars in the field. The speakers talked about development and environmental challenges in South Asia and the HKH.

- **Sir Partha Dasgupta**, Frank Ramsey Professor Emeritus of Economics at the University of Cambridge, United Kingdom, focused on how economies assess progress and sustainability, arguing that income-centred measures can hide the depletion of underlying assets – especially natural capital – and that an inclusive-wealth lens helps make long-term trade-offs more visible in public choices. The central point was that many decisions look 'efficient' only because nature is underpriced or invisible in economic accounts, shaping investment and innovation choices quietly. He also flagged population dynamics as under-analysed in his speech. [The Lecture is published in the January issue of the Ecology, Economy and Society – The INSEE Journal.](#)

(from left - right) Dr. Teresa Fogelberg, ICIMOD Governing Board Chairperson, Dr. Mani Nepal, Senior Intervention Manager, Regional Networks, Sir Partha Dasgupta, Frank Ramsey Professor Emeritus of Economics Cambridge University and one of SANDEE Founders and Dr. Pema Gyamtsho, ICIMOD Director General, during the launch of the commemorative SANDEE@25 Reflection Booklet.





Sir Partha Dasgupta, one of SANDEE founders, delivering his keynote speech during the SANDEE@25 conference, 12 December 2026, Kathmandu, Nepal.

- **Ruth Meinzen-Dick**, Research Fellow Emeritus at the International Food Policy Research Institute (IFPRI) focused on how shared resources are governed. In her keynote speech, she shared some advances in understanding the roles of tenure and governance in the management of the commons, and how research on these topics has influenced policy and programmes. She explained that collective management can succeed when the right institutions are in place. These include tenure security, clear and fair usage rules, proper monitoring, and efficient coordination among communities and different levels of the government.
- **Biswo Nath Poudel**, Governor, Nepal Rastra Bank (Central Bank of Nepal), discussed bank lending to Nepal's agricultural sector, using finance as a practical lens to examine how incentives, information gaps, perceived risk, and delivery constraints influence investment decisions.
- **Adil Najam**, Professor and Dean Emeritus, Boston University (USA) and President, Worldwide Fund for Nature (WWF) International, spoke on 'Living in the age of adaptation: new challenges and new responsibilities for knowledge'. He framed climate change as a lived reality, linking adaptation and loss-and-damage debates to unequal burdens and underscored the need for research that remains rigorous while still guiding real-world decisions under uncertainty.

Panel sessions

Seven panel sessions focused on how to move from ideas to delivery across the region.

- The [commemorative opening panel](#) marked 25 years of SANDEE's contribution to development and environmental economics in South Asia. Bringing together distinguished scholars, policy leaders, SANDEE advisors and alumni, the discussion reflected on SANDEE's journey, from nurturing rigorous, policy-relevant research to building a strong regional community of practice. Panellists shared personal recollections and insights on SANDEE's influence on research capacity, institutions, and policy engagement across the region. The session also highlighted key lessons learned over the past 25 years and emphasised priorities and opportunities for SANDEE's future role in addressing knowledge gaps related to emerging development and environmental challenges in South Asia and the HKH.
- A panel on regional knowledge networks began with a simple problem: evidence and tools often sit in silos. Discussion turned to practical fixes, including shared learning across countries, reducing duplication, and linking research with decision needs.
- The panel on electric cooking in Nepal mapped bottlenecks to scaling up: appliance costs and financing, reliable supply, household wiring and readiness, tariffs and incentives, and after-sales support. It also noted why many households continue to 'stack' stoves and fuels even when they want to switch.
- The Payments for Ecosystem Services (PES) panel focused on designing payment schemes that fit local institutions and incentives. Discussion covered valuation choices, who pays and who benefits, and how convergence across government schemes can avoid fragmentation. The panel also discussed using Geographic Information Systems (GIS) and remote sensing to locate pilot sites and the areas where PES is worth trying first.
- In the springshed management and restoration panel, discussants underscored the increasing risks posed by springs drying up due to climate change, land-use change, and groundwater stress. Panellists pushed for moving beyond short-term, project-focused cost-benefit analyses by valuing long-term regulatory services and inclusive wealth. They also emphasised the urgent need for linking economic analyses with hydrological, social, and governance models to ensure more adaptive and integrated groundwater management.
- A session on open data and digital systems highlighted that the HKH is a region where data gaps and uneven access to data often constrain planning and risk management, and digital tools alone won't fix that. Members from ICIMOD's Regional Information Service (RIS) team and national and regional experts contributed to this panel discussion. The session's key practical takeaways focused on locking in standardization and FAIR (Findable, Accessible, Interoperable, and Reusable) data principles before scaling, investing in decision-support tools that help agencies interpret data to address planning questions, and treating capacity-building as a continuous process rather than one-off training events.
- A session on landscape resource conservation drew on field evidence from a sample of the semi-arid regions of India. It showed that decentralized, community-led water and soil management can restore agricultural productivity at costs well below conventional irrigation. But compelling results alone don't move policy. Discussion focused on what that translation actually requires: standardized protocols that national schemes can adopt, scaling without losing the participatory logic, and framing landscape restoration explicitly as climate adaptation.

Parallel sessions

Research papers were divided into twenty parallel sessions with topics in climate risk and adaptation, natural resource governance, energy transitions, environmental health, agriculture, and empirical methods. Several papers also examined disasters and air pollution, and explored distributional impacts, behavioural responses, and policy design choices. Overall, the sessions reflected a shared emphasis on regionally grounded work – using field studies, administrative sources, and spatial datasets to engage with the practical constraints that decision-makers face in South Asia and the HKH, often with attention to gender and equity. The Book of Abstracts and Programmes provides detailed information on the research presented and discussed at the conference (ICIMOD & SANDEE, 2025b).

Key messages and way forward

Key messages

1. **Looking beyond Gross Domestic Product (GDP).** GDP measures the rate of economic activity over time; it can rise even while the stock of assets that supports long-term well-being is being run down. When nature has no price – or is priced too low – it becomes ‘invisible.’ As a result, policies may seem efficient on paper, even though they damage nature and push the real costs into the future. If we treat nature as a form of capital alongside produced and human capital, we can clearly see the trade-offs involved and make more informed, sustainable choices.
2. **Putting institutions first.** Commons are not ‘wastelands’ as popularly perceived, and they do not fail by default as generally perceived as the tragedy of the commons. What we get from shared forests, rangelands, and water bodies depends on the institutional setting including tenure security, governance rules, and coordination between local communities and levels of government. A key nuance is that rights are often layered – customary, statutory, and informal – so improving commons governance is rarely just about issuing formal titles.
3. **Multi-instrument agricultural financing.** We need to frame agricultural financing as a package, not as a single lever. Alongside loans, we may consider value-chain finance covering storage, transport, processing, and marketing; more accessible insurance that is better-aligned with climate risk; and price-support tools such as minimum support prices. In case of key crops, such instruments will reduce price volatility and enhance food security.
4. **From potential risk to a lived reality.** Climate change is not something we are preparing for: it is what we are living with. Adaptation, therefore, becomes a core development task grounded in who is exposed, who is protected, and what limits are being reached. We must go outside the ‘carbon-only’ lens, given that in regions like South Asia and the HKH, climate change impacts often surface through extreme precipitation and resulting flooding, extreme heatwaves and health risks, and migration challenges.
5. **Strengthening regional research networks** plays a vital role in bringing together locally grounded rigorous scientific knowledge to address local and regional challenges. They also strengthen human capital, equipping professionals and institutions to address the urgent environmental and development issues confronting South Asia and the HKH region.

Women participants during the SANDEE Conference



Way forward

1. Enhance regional research networks so that the tools and evidence do not remain trapped within pockets. We should prioritise the use of comparable methodologies, as much as feasible, across countries, and sharing implementation lessons (both successes and failures) systematically. This will ensure more efficient learning from what worked, what did not, and why, and regional research networks help address these issues.
2. Adoption of electric cooking in Nepal is dampened by appliance costs, reliability of supply, and household readiness (locked-in investment). As a result, households often prefer stacking stoves/fuels to overcome the impacts of unreliable power supply. Addressing these issues with appropriate tariff restructuring and incentive design helps promote the adoption of electric cooking.
3. Designing efficient payment of ecosystem services schemes will fundamentally depend on the clarity of payment structure, who pays and who gets benefits, and reliability of ecosystem services valuation estimates.
4. When it comes to springshed management, we should go beyond project-based community-based adaptations and focus on ecosystem-wide valuation approaches capturing regulatory ecosystem services and linking that to conditional incentive mechanisms.
5. It is now time to think beyond data platforms to 'real' decisions and invest in national and regional digital infrastructure and connectivity, while prioritising implementation of Findable, Accessible, Interoperable and Reusable (FAIR) data principles and harmonised data standards.
6. There is need for systematic evaluation of how integrated and participatory natural resource management approaches can be scaled up to be adapted to enhance long term resilience in dryland regions.

Additional information on the SANDEE@25 Conference can also be found in [Hussain et al. \(2026\)](#).

budding researchers of SANDEE.



References

Dasgupta, P. (2026). On natural capital. *Ecology, Economy and Society—the INSEE Journal*, 9(1), 61–85. <https://ecoinsee.org/journal/ojs/index.php/ees/article/view/1899>

Hussain, A. M. T., Newa, M., & Nepal, M. (2026). International conference on development and environmental economics: SANDEE@25. *Ecology, Economy and Society—the INSEE Journal*, 9(1), 187–192. <https://ecoinsee.org/journal/ojs/index.php/ees/article/view/1901/357>

ICIMOD & SANDEE. (2025a). SANDEE@25: Advancing environmental economics research and education in South Asia: Reflections, lessons, and memories of collective growth. International Centre for Integrated Mountain Development (ICIMOD). <https://doi.org/10.53055/ICIMOD.1110>

ICIMOD & SANDEE. (2025b). Book of abstracts and programmes – International conference on development and environmental economics: SANDEE@25. International Centre for Integrated Mountain Development (ICIMOD). <https://lib.icimod.org/records/b2tf5-9qr76>

Sharma, E., Molden, D., Rahman, A., Khatiwada, Y. R., Zhang, L., Singh, S. P., Yao, T., & Wester, P. (2019). Introduction to the Hindu Kush Himalaya Assessment. In P. Wester, A. Mishra, A. Mukherji, & A. B. Shrestha (Eds.), *The Hindu Kush Himalaya Assessment: Mountains, climate change, sustainability and people* (pp. 1–16). Springer. https://doi.org/10.1007/978-3-319-92288-1_1

Wester, P., Chaudhary, S., Chettri, N., Jackson, M., Maharjan, A., Nepal, S., & Steiner, J. F. (Eds.). (2023). *Water, ice, society, and ecosystems in the Hindu Kush Himalaya: An outlook*. ICIMOD. <https://doi.org/10.53055/ICIMOD.1028>

About SANDEE

The South Asian Network for Development and Environmental Economics (SANDEE) is a research capacity and academic leadership development network of the International Centre for Integrated Mountain Development (ICIMOD) that uses economic tools and analyses to address environmental challenges that the region has been facing. SANDEE supports ICIMOD's programmatic work and strengthens its economic and policy analysis, provides research and technical support, and offers mentorship to young researchers for enhancing their research capacity and academic leadership. Established in 1999, it works in ten countries in South Asia and the Hindu Kush Himalaya (HKH) region: Afghanistan, Bangladesh, Bhutan, China, India, Maldives, Myanmar, Nepal, Pakistan, and Sri Lanka.

ICIMOD contributors: A M Tanvir Hussain, Mani Nepal, Vanessa Villegas - Carriedo, and Manashree Newa

ICIMOD and its Regional Member Countries gratefully acknowledge the generous support of Austria, Norway, Sweden and Switzerland for core and programme funding, and the Adaptation Fund, Aerospace Information Research Institute of the Chinese Academy of Sciences, Asian Development Bank, Australia, Canada's International Development Research Centre, Carleton University, Germany, Global Affairs Canada, Global Biodiversity Information Facility, Japan's Sasakawa Peace Foundation, Oxfam Novib, the United Kingdom, United Nations Environment Programme, and United Nations Development Programme and the World Bank Group for project funding.