



CHAPTER 4 BRIEF

EXPLORING FUTURES OF THE HKH: SCENARIOS AND PATHWAYS

Long-term future scenarios need to be developed to illuminate future uncertainties for the Hindu Kush Himalaya and enable short-term development actions to be consistent with longer-term societal and environmental transformation pathways. Long-term scenarios are also needed to ensure independence from present policies and to create more flexibility for nonlinear changes and space for identifying creative opportunities.

Considering the lack of such long-term regional level scenarios for the region, this chapter attempts to create qualitative HKH regional level developmental scenarios (2080) and prepare alternative pathways toward prosperity beyond the current developmental plans of 2030, more specifically to set clear goals for 2050 based on a 2080 prosperous future scenario for the HKH region.



KEY FINDINGS

- This is a critical moment for the Hindu Kush Himalaya (HKH). Environmentally, socially, and economically, there is no single likely future for the HKH. Between now and 2080, the HKH may run downhill, it may continue with business as usual, or it may advance toward prosperity.
- Evidence-based actions to reduce disaster risk, mitigate and adapt to climate change, and adopt good governance – as well as collaboration among state and non-state actors – are central to ensuring prosperity in the HKH by 2080.

POLICY MESSAGES

- To avert the worst case scenario for the HKH by 2080, institutional mechanisms must confront the main challenges and resolve conflicts at various levels, and among various social groups.
- The HKH will face significant risk if decision makers, governments, institutions, and communities continue with business as usual.
- To achieve prosperity by 2080, it is important to consider two potential pathways for the HKH — large-scale sustainable development investment with regional cooperation, and bottom-up investment with local and national cooperation.
- The two pathways toward prosperity are not mutually exclusive — they can and need to be integrated.

LINKS TO





OBSERVATIONS AND TRENDS

SCENARIOS HELP ENVISION THE FUTURE: A SHARED VISION APPROACH

A scenario is not a forecast or prediction; rather it is a plausible story about the future with a logical plot and narrative governing the manner in which events unfold. Scenario development generally summarizes discourses such as those on poverty, nutrition, food security, and demographic change into a “shared vision” taking into consideration various stakeholders.

Long-term scenarios help us understand gaps between current and desired policy settings, set the agenda for future policies, reduce uncertainty, and build consensus to strengthen cooperation.

Four workshops with scientists and two workshops with decision makers were conducted – involving 139 national, regional, and global participants from 74 institutions – to develop a shared vision consisting of the following:

- Challenges and opportunities driving development trajectories
- Plausible scenarios for the region by 2080, identified through consensus
- Storylines/narratives for each identified scenario
- Alternative pathways and actions for a prosperous HKH

This was achieved through a three-step process. As a first step, 2080 was used as a representative year for developing long-term scenarios for the 30-year period from 2070 to 2100. Through a participatory process, the participants identified challenges and opportunities that may drive change in the region. Keeping these drivers in view, three plausible scenarios were identified and storylines were developed for each scenario. The proposed forward-looking alternative pathways can assist in guiding policy for the decades from 2030 to 2050 that will lead the HKH to prosperity in 2080. Working backward from the three 2080 scenarios — and with reference to currently available national commitments to the Sustainable Development Goals (SDGs) and targets for 2020 and 2030 — two broad potential pathways to prosperity and actions that countries in this region need to take to put the HKH on these pathways were identified.

Visioning and strategic planning need to start now to illuminate future uncertainties and inform strategic plans to realize the long-term goal of prosperity in the Hindu Kush Himalaya.

LONG-TERM SCENARIOS ARE NEEDED TO ENABLE SHORT-TERM DEVELOPMENT ACTIONS

The current conventional planning approaches followed in the HKH region involve relatively short lifetime planning periods (five years) with less continuity between planning cycles. Long-term future scenarios are used to enable short-term developmental actions consistent with longer-term societal and environmental transformation pathways targeted towards a desired future. The HKH region currently lacks quantitative model simulations for future scenarios. As a first step, this chapter identifies challenges and opportunities driving the development trajectories of the region and the scenarios that could emerge by 2080.

WHAT IS THE WORST CASE SCENARIO?

The worst case scenario encompasses strong climate change; a socially, economically, and politically unstable region; and strong ecosystem degradation. In this downhill storyline, regional conflicts over resource sharing persist, and even multiply, as scarcity increases. People and institutions do not benefit from emerging opportunities for efficient resource use. Communities remain isolated from the larger market systems. Mountain livelihoods do not include inclusive growth through new innovations, skills, and practices. Ecosystems are degraded and biodiversity loss continues, mitigation efforts fail, and fossil fuels remain the dominant energy source. Climate change impacts reflect the Intergovernmental Panel on Climate Change (IPCC)’s worst case scenario—global temperature rising by substantially more than 2.0°C.

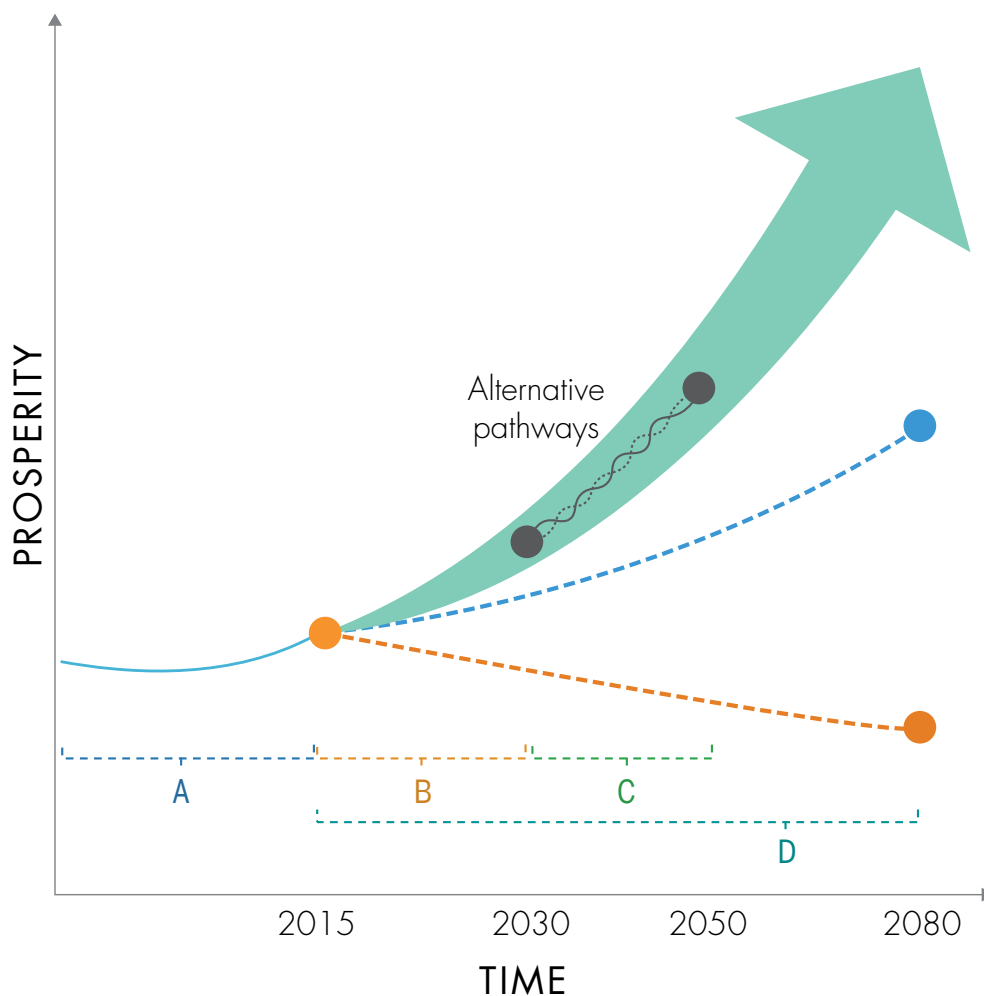
WHAT HAPPENS IF BUSINESS AS USUAL CONTINUES WITHOUT ANY SIGNIFICANT CHANGES?

The business as usual scenario envisions strong climate change, medium social, economic, and political instability, and medium ecosystem degradation. In the business as usual storyline, today's economic growth patterns persist. Business and industries strive to keep meeting economic targets, while most meet only the minimum required standards for the environment and sustainability. There is some cooperation among HKH countries, although the cooperation is neither envisioned nor realized in all the ways in which it could succeed, nor in all the sectors where it could do so. The value of ecosystems is recognized by some, but not as broadly or in as many quarters as possible. Although some climate change mitigation efforts are put in place, they do not proceed rapidly or effectively enough to meet the 1.5°C target set at the UNFCCC Conference of Parties 21 (COP21), held in Paris in December 2015.

WHAT WILL THE PROSPEROUS SCENARIO FOR THE HKH LOOK LIKE?

The prosperous scenario represents the HKH facing weak climate change; a socially, economically, and politically stable region; and low ecosystem degradation. In the prosperous storyline, regional cooperation across sectors and governing institutions enables people in the mountains and those living downstream to use a full range of ecosystem services, to reduce disaster risks, and to enjoy sustainable livelihoods and economic growth. The diversity and uniqueness of the region's natural resource assets, political life, and collaborative capacities are embraced. Biodiversity flourishes and the health of ecosystems improves. Climate change mitigation efforts largely succeed as the regional economy shifts to clean and renewable sources for most of its energy needs. The impact of climate change reflects the IPCC's moderate scenario.

DEVELOPMENT PATHWAYS AND POSSIBLE SCENARIOS for the Hindu Kush Himalaya in 2080



Scenario 1: PROSPEROUS HKH

- Weak climate change
- A socially, economically, and politically stable region
- Low ecosystem degradation

Climate change mitigation efforts largely succeed

Scenario 2: BUSINESS AS USUAL

- Strong climate change
- Medium social, economic, and political instability
- Medium ecosystem degradation

Climate change mitigation efforts do not meet the 1.5°C target

Scenario 3: WORST CASE

- Strong climate change
- Socially, economically, and politically unstable region
- Strong ecosystem degradation

Climate change impacts global temperature, which rises by substantially more than 2.0°C

A: Historical trends discussed in HIMAP chapters
C: Pathways towards 2050

B: Current commitments towards 2030
D: Scenarios for 2080

WHAT PATHWAYS LEAD TO THE PROSPEROUS SCENARIO FOR THE HKH?

A pathway is described here as a set of actions and combinations of actions that a decision maker (individual, country, business, or policy maker) can take. There are many possible and overlapping pathways toward the prosperous scenario, but we have outlined two in depth. These two pathways differ in the scale of actions, size of investments needed, level of policy engagement required, choices about technology, and inclusion of development actors. Both pathways will help lead the HKH to a prosperous scenario in 2080.

Pathway to Prosperity 1: Large-scale sustainable development investments with regional cooperation. The HKH looks to large or centralized projects in developing its natural resources. Water is harnessed for food and energy in ways that address gender inequality and persistent poverty. Human resources are mobilized on a large scale. National and international funding is provided through collaboration among state, corporate, and non-state actors. Countries increasingly share resources, improve communication, and acquire infrastructure for greater mobility. Institutions gain the strength to govern this cooperation within and outside the HKH. The South Asian Free Trade Area (SAFTA), Indus Water Treaty, and India Bhutan Hydropower Treaty – under which Bhutan exported 1,500 MW of hydropower to India in 2015 – are a few examples in this direction.

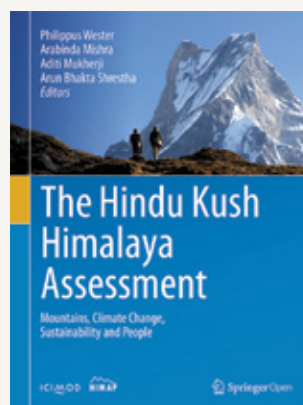
Pathway to Prosperity 2: Bottom-up investments with cooperation across multiple levels. Water and energy, while critical, are developed through smaller-scale and decentralized programmes that promote national self-reliance. Activity is coordinated among many non-state development and social actors, both nationally and sub-nationally. Multi-level governance structures are built to maintain local diversities, to fund projects, and to monitor progress toward scenario goals across actors. Farmer-managed irrigation systems in Nepal and local spring water management projects in Sikkim and Uttarakhand, India are a few good examples.

These two pathways are not mutually exclusive. Decision makers may combine actions from each pathway at various stages, as they weigh the benefits and risks and consider associated trade-offs. What is most certain is that the HKH must quickly seize unique and emerging opportunities while meeting challenges. If actions through 2030 do not pick up speed, but remain at current levels, the region will not build the cooperation and multi-level governance structures needed to develop its natural resources in ways conducive to prosperity.

KNOWLEDGE GAPS AND WAY FORWARD

Regional cooperation on resource sharing will improve regional prosperity unless global commitments to climate mitigation are also upheld. Experts and stakeholders consulted during the development of this chapter expressed pessimism in this context. The Paris Agreement, if adequately implemented can help in achieving the prosperous scenario.

A top-down regional impact assessment model should be developed to quantify the qualitative scenarios and pathways outlined in this chapter. This will help reduce risks and improve decision making in the future. In particular, two assessments can be carried out: an emissions assessment of large-scale interventions; and an economic assessment identifying the most cost-efficient and beneficial pathway and associated adaptation and mitigation costs.



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