Joint submission by Bhutan and Nepal

Inputs to the technical phase of the First Global Stocktake under the Paris Agreement

Bhutan and Nepal welcome the opportunity to submit inputs to the first Global Stocktake, pursuant to decision 19/CMA.1, paragraph 19, 36 and 37 for the first Global Stocktake (GST).

Both the countries, situated in the Hindu Kush Himalaya (HKH) region, is characterized by its unique mountain topography and physiographic features. Anthropogenic climate change has resulted in a clear warming trend across our countries in the last few decades. Such a warming trend is likely to continue with the mean temperature projected to rise in the coming decades.

Bhutan and Nepal are committed to implement the Paris Agreement, despite being among the most vulnerable countries to climate change with negligible emissions. The efforts to limit global average temperature rise to 1.5°C would result in some risks for our countries but significantly less when compared to 2°C or higher. We therefore, call on all Parties to increase ambition and move collectively onto emission reduction pathways within this decade, consistent with the Paris Agreement's 1.5°C warming limit.

Following the provision of the Paris Agreement, the GST must provide a clear picture of the Paris Agreement's ambition mechanism to achieve the 1.5°C limit. The outcome of the GST should not be only limited to taking stock of actions, but it should also provide guidance to drive action and ambition across all thematic areas.

The warming climate has severe implications on almost all sectors in our countries. One of the most visible impacts has been on our snow and ice reserves. The latest IPCC AR6 report confirms that majority of the world's glaciers are shrinking since the 1950s, along with ice sheet loss, which is unprecedented in at least the last 2,000 years[1]. In the Himalaya, the unprecedented pace of glacier retreat is even more alarming than at the global scale. The total glacier area in the region has decreased by 24% between 1977 and 2010[2]. Even under the more ambitious goal of the Paris Agreement to limit global warming to 1.5 °C, the HKH region will likely experience temperatures of at least 0.3 °C warmer than the global average, while the central Himalayan region is likely to be warmer by 0.5 °C[3]. As a consequence, one-third of glacier volume in the HKH region is projected to be lost by the end of the century in a 1.5°C warmer world and up to two-thirds will be lost under a high emissions scenario[4].

Glaciers retreat also comes along with an increased risk of glacier lake outburst flood (GLOF) events. Climate change is also intensifying the water cycle and affecting rainfall patterns. The IPCC AR6 report confirms that the intensification and frequency of hot extremes, including heat

[1] IPCC AR6 WG1 2021
[2] Bajracharya etl al, 2014; Bolch et al, 2019
[3] Krishnan et al, 2019
[4] Bolch et al, 2019; Kraajenbrink et al, 2017

waves, and heavy precipitation, as well as agricultural and ecological droughts continue to increase with temperatures rise. For South Asia, the average precipitation as well as heavy rainfall events are projected to increase, resulting in more flooding and landslide events. All this will have far reaching consequences across the region on water-dependent energy sectors and agricultural systems.

The impacts of melting glaciers are not only limited to the mountainous regions. Rapid ice melt could lead to catastrophic sea level rise even before the end of the century. The combined ice sheet and glacier mass loss contributed to 42% of this global mean sea level rise from 2006 to 2018[5]. Continued ice sheet loss will also release greenhouse gases into the atmosphere — as temperature rises and permafrost thaws, it decomposes and emits carbon, further amplifying climate change that is causing it to melt.

Given the importance of maintaining the integrity of the cryosphere—for its stabilizing role in the climate system, the intrinsic value of its ecosystem, as well as the ecosystem services it provides to downstream communities— Bhutan and Nepal call for a dedicated space to discuss the associated risks of rising temperatures to the cryosphere to inform the technical assessment process of the GST. Bhutan and Nepal also believe that the outcome of the GST must take into account the consequences of rising temperature in mountainous regions to urgently drive emission reductions at scale and as informed by the IPCC within this decade.

[5] IPCC AR6 WG1