Chapter 3

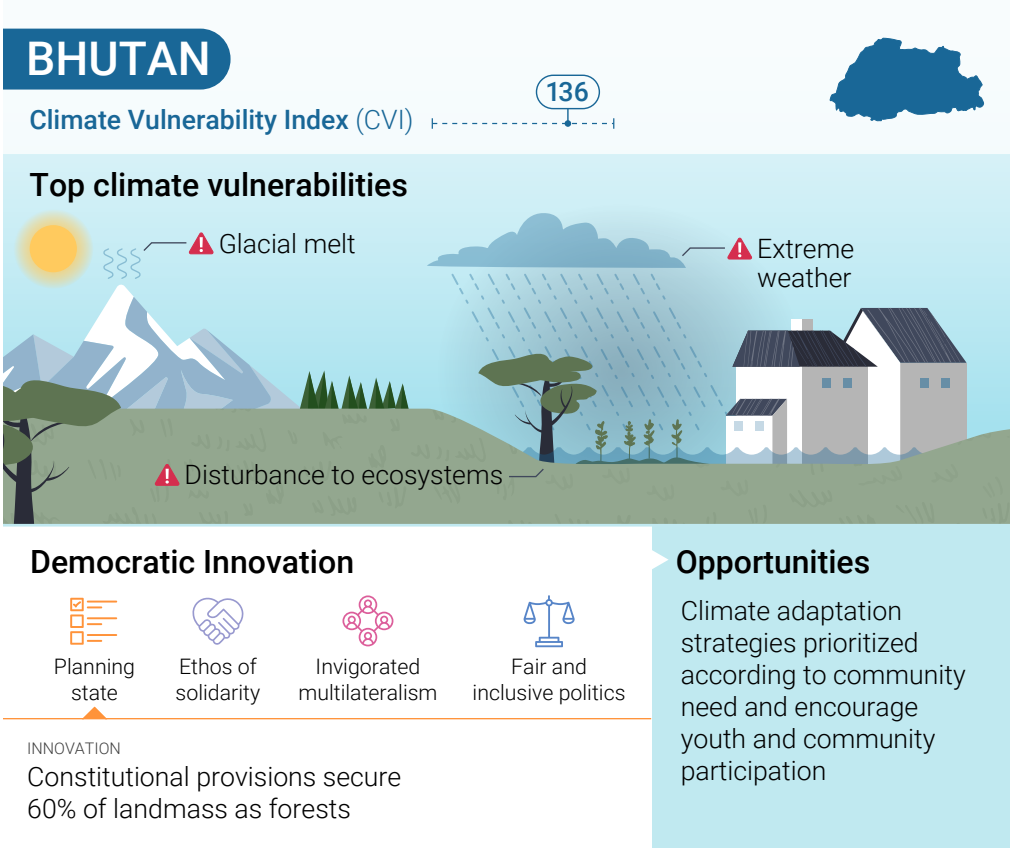
BHUTAN

3.1. INTRODUCTION

Bhutan is known as *Druk Yul*, which means 'Land of the Thunder Dragon', and is regarded as one of the last 'Shangrilas'. The Kingdom of Bhutan is located in the eastern Himalayas in South Asia. It is a landlocked country with an area of 38,394 km^2, bordered by China in the north, and by India in the south, east and west. Bhutan is divided into 20 *Dzongkhags* (administrative and judicial districts). Each *Dzongkhag* is further divided into *Gewogs* (subdistricts) and *Thromdes* (third-level administrative divisions or municipal areas). Government in Bhutan is parliamentary, with a monarch as head of state and a prime minister as head of government. The Parliament of Bhutan is bicameral and comprises the King, the National Council (the upper house), and the National Assembly (the lower house). Under the Constitution (Constitution of the Kingdom of Bhutan 2008: art. 10(1)), parliament is vested with all legislative power.

Bhutan has made tremendous progress with transforming its system of governance from a feudal system in the 1940s to a national, top-down system, and then a combination of bottom-up and top-down institutions from the start of the 21st century. The records are sparse regarding the system of governance in place prior to 1907, but it is known that Bhutan was never subject to a colonial system and was ruled by several kings until unification in 1907, when the first hereditary monarch was crowned. A National Assembly (*Tshogdu*) was established in 1953 and representatives were elected from

Figure 3.1. **Bhutan**



districts for the purpose of enacting laws and discussing issues of national importance. In 1963, a Royal Advisory Council (*Lodoe Tshogde*) was established as a link between the Monarch, the Council of Ministers and the people. The fourth King was crowned in 1974. Under his reign, a *Dzongkhag Yargay Tshogdu* (District Development Assembly) and a *Gewog Yargay Tshogtshung* (County Development Assembly) were established in 1981 and 1991, respectively. In 1998, the King assumed the power as head of state to nominate the prime minister as head of government. Freedom House (2022) describes Bhutan as having made 'significant strides toward democratic consolidation and the rule of law in recent years' and as having achieved a 'successful transition from a system in which the monarch

dominated governance to one in which policies and legislation are mostly determined by elected officials'.

Bhutan adopted its first Constitution in 2008. It codifies the institutions of government and provides the legal framework for democratic elections in a multiparty system. The Constitution vests executive power in cabinet ministers who provide advice on national and international affairs to the monarch. Since enacting a democratic electoral system in 2008, Bhutan has held regular democratic elections, the third and most recent of which were held in 2018. These have facilitated orderly changes of government. Voter turnout was relatively poor in the first elections, held in 2008, but has improved in subsequent election years.

The Bhutanese landscape is incredibly varied and broadly divided into six agro-ecological zones—a 1,000m tropical/subtropical zone; a 2,000m subtropical/warm-temperate zone; a 2,500m warm-temperate/cool-temperate zone; a 3,000m cool-temperate/sub-Arctic (cold-temperate) zone; a 3,500m subzone within a sub-Arctic zone; and a 4,000m sub-Arctic (cold-temperate)/Arctic zone (Ohsawa 1987: 17). Bhutan's location in the eastern Himalayas makes its climate complex and its topography diverse, comprised of rugged terrain and large variations in altitude over short distances. More than 70 per cent of Bhutan's land is forest, largely due to article 5.3 of the Constitution: 'The Government shall ensure that, in order to conserve the country's natural resources and to prevent degradation of the ecosystem, a minimum of sixty percent of Bhutan's total land shall be maintained under forest cover for all time' (Constitution of the Kingdom of Bhutan 2008). Bhutan's economy is highly dependent on climate sensitive sectors (see e.g. Hoy et al. 2015; National Statistics Bureau 2021).

About 57 per cent of Bhutan's population is dependent on subsistence farming for its livelihood, but less than 3 per cent of the country's land is arable (Chhogyel and Kumar 2018). The contribution of agriculture to Bhutan's gross domestic product (GDP) has declined significantly from 26.8 per cent in 2000 to about 17 per cent in 2014 (Chhogyel and Kumar 2018; National Statistics Bureau 2021). Agriculture is highly dependent on water and temperature, and vulnerable to the monsoon season and extreme weather events.

Any variation in climatic variables is likely to affect the country's population. As a landlocked country sandwiched between India and China, Bhutan's dependence on a limited number of markets from which to source its sizeable food imports places its food security and food sovereignty, or ability to source food for its population, at considerable risk.

While democracy has proved resilient in a formal sense, it faces a number of challenges, due in part to the significant number of people leaving Bhutan to seek employment elsewhere. This has created labour shortages that are already apparent in rural Bhutan, where there has been a significant reduction in arable farming. Crop yields have also been affected by shifting seasons and extreme weather events. Bhutan is particularly vulnerable to high variations in rainfall and precipitation patterns that limit the scope for crop and livestock farming in the limited area of arable land (National Statistics Bureau 2021). When the crop yield is low, due to climatic variables, the resulting food shortages put pressure on the country's economy and affect community trust and confidence in policymakers.

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3.2. **CLIMATE VULNERABILITY AND ACTION**

Bhutan is considered to be one of the countries most vulnerable to climate change in the world. It is ranked 94th of 182 countries on the University of Notre Dame's Global Adaptation Initiative (ND-GAIN) Index for 2020, where it features as the 46th most vulnerable country and the 64th most ready country (University of Notre Dame 2022a, 2022b). Bhutan's low ranking is based on the intersection of climate change impacts that are predicted to cause a decline in food crop yields and promote vector borne diseases. Bhutan's vulnerability is also affected by glacial retreat, changes in precipitation and temperature patterns, extreme weather events and disturbance to ecosystem services (Eguchi and Wangda 2012; IPCC 2007; Xie et al. 2010; Hoy et al. 2015). Given that Bhutan practises subsistence crop farming, which is highly dependent on precipitation and temperature, any changes in these variables would be expected to have a significant impact on agriculture (Chhogyel and Kumar 2018; Chhogyel, Kumar and Bajgai 2020).

Bhutan has made commitments on a high level of environmental protections but it is likely to experience the impacts of climate change due to the level of global emissions.

As noted above, Bhutan's climate ranges from tropical conditions in the south to harsh alpine conditions in the north. Seasonal atmospheric circulation and change are linked to the Indian summer monsoon and the Siberian cold, and the latter dominates in winter. As a least developed, mountainous, and landlocked country, Bhutan is highly vulnerable to the impacts of climate change (BMCI/ICIMOD 2016). Bhutan has made commitments on a high level of environmental protections but it is likely to experience the impacts of climate change due to the level of global emissions. Extreme and unusual weather events, for example, have already affected Bhutan, and incremental changes are predicted to unfold in the near future. Such developments pose high risks to the environment, the economy and community safety in Bhutan (Hoy et al. 2015; National Statistics Bureau 2021).

The Bhutanese Government has acted to address the impacts of climate change by enacting national policies, submitting National Communications to the United Nations Framework Convention on Climate Change (UNFCCC) and increasing carbon sequestration. It has also formulated a National Adaptation Programme of Action, in which five key areas for action have been identified—agriculture and livestock, forestry and biodiversity, health, water resources and energy, and natural disasters and infrastructure. There is unity among national and international non-governmental organizations (NGOs), communities and young people on the need to develop and implement measures that address the impacts of climate change. Initially, action to address climate change involved a limited number of projects. The number substantially increased after 2016, however, with the assistance of international funders (Islam, Hove and Parry 2011).

Fundamental to Bhutan's mitigation efforts is its commitment to remaining carbon neutral as part of a low carbon development policy to ensure that greenhouse gas emissions do not exceed the sequestration capacity of the country's forests.

3.3. CLIMATE CHANGE: LAWS, POLICIES AND PRACTICE

Bhutan adopted the United Nations 2030 Agenda for Sustainable Development (the Sustainable Development Goals, SDGs) in 2015 and incorporated many of the goals into its five-year development plans, including the current 12th plan for 2018–2023. Fundamental to Bhutan's mitigation efforts is its commitment to remaining carbon

neutral as part of a low carbon development policy to ensure that greenhouse gas emissions do not exceed the sequestration capacity of the country's forests. Bhutan's Constitution has an unusually strong article on the environment (Constitution of the Kingdom of Bhutan 2008, art. 5), in which Bhutan's forests are singled out for particular protection. As noted above, there is a requirement under article 5.3 that at least 60 per cent of Bhutan's land must be 'maintained under forest cover'. Bhutan's constitutional commitment to protecting the environment also has a cultural dimension. Article 5.1 states that: 'Every Bhutanese is a trustee of the Kingdom's natural resources and environment for the benefit of the present and future generations and it is the fundamental duty of every citizen to contribute to the protection of the natural environment, conservation of the rich biodiversity of Bhutan and prevention of all forms of ecological degradation…'. The goals underlying the climate change policy developed by the Bhutanese Government focus on:

> [E]nsur[ing] that Bhutan remains carbon neutral and protects the wellbeing of the people of Bhutan by adapting to climate change in an efficient and effective manner; [ensuring] meaningful participation of all relevant stakeholders in climate change action in a coordinated and coherent manner with clear roles and responsibilities; and [ensuring] that the challenges and opportunities of climate change are addressed at all appropriate levels.
> (National Environment Commission 2020: 1)

In 2009, Bhutan made its first pledge to remain carbon neutral and ensure that its greenhouse gas emissions do not exceed the rate of carbon sequestration by its forests. It has requested that the international community support its mitigation and adaptation strategies, which comprise: (a) forest conservation and management under the National REDD+ Strategy; (b) low emission development strategies for food security, human settlement, industry and surface transport; (c) waste management; (d) sustainable hydropower development; (e) alternative renewable energy; (f) a Green Hydrogen roadmap; (g) its National Energy Efficiency and Conservation Policy, 2019 and its Energy Efficiency Roadmap, 2019; and (h) cooperative mechanisms to support its mitigation ambitions (National Statistics Bureau 2021: 30–79). Bhutan's adaptation initiatives involve

approximately 10 broad priority areas for development in the National Adaptation Plan, as well as National Key Result Areas in the Government's 12th five-year plan (Government of Bhutan 2019). At the international level, Bhutan has signed the three Rio conventions, the UN Convention on Biological Diversity (CBD), the UNFCCC and the United Nations Convention to Combat Desertification (UNCCD), and ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Bhutan's current reliance on revenue from climate-sensitive sectors demands an urgent shift to the development and use of alternative resources.

Bhutan is economically dependent on hydropower, tourism and agriculture, but each of these sectors is in turn heavily dependent on natural resources and ecosystem services that are sensitive to the impacts of climate change. Bhutan's ecosystem services produce an estimated revenue of USD 4.944 billion, but they are expected to experience significant disruption from climate change (Kubiszewski et al. 2013; Hoy et al. 2015). Bhutan's current reliance on revenue from climate-sensitive sectors demands an urgent shift to the development and use of alternative resources, such as solar and wind power for energy; participation in a carbon market, such as Reducing Emissions from Deforestation and Forest Degradation; the sustainable management of forests; and the conservation and enhancement of forest carbon stocks (REDD+) through economic diversification. Bhutan's heavy reliance on hydropower leaves the country vulnerable to the impacts of climate change.

3.4. STATE OF DEVELOPMENT, CLIMATE CHANGE IMPACTS AND THE POTENTIAL IMPLICATIONS FOR DEMOCRACY IN BHUTAN

Bhutan's historical growth and development, which began in the 1960s with improved access to trade and agricultural products, among other things, and continued in the 1970s, through decentralization and institution building, laid the foundations for more recent developments, such as Bhutan's rapid economic growth through the development of hydroelectricity, and the government's commitment to Gross National Happiness (GNH). The concept of GNH has played a major role in modernizing society by measuring national well-being and presenting an alternative to GDP. GNH comprises four pillars, nine domains and 33 indicators

(see Table 3.1). The concept of GNH has paved the way for effective environmental policy, such as *The Middle Path: National Environmental Strategy for Bhutan* (1998), which emphasizes balance between development, and ecological and biological sustainability; and which is supported by legislation such as the Environmental Assessment Act (2000), the National Environment Protection Act (2007), the Waste Protection and Management Act (2009) and the Water Act (2011).

Since the introduction of the GNH indicators, Bhutan's rate of economic growth has increased and poverty levels have reduced (Asian Development Bank 2013). Bhutan is ranked 129th of 189 countries in the UNDP Planetary Pressures-Adjusted Human Development Index (HDI) for 2019 (UNDP 2020). In the medium-level human development group, Bhutan is ranked 10th among 37 countries with an HDI score of 0.654 (UNDP 2020). Indicators such as income, poverty, slow development of economic activity, limited local governance capacity, youth unemployment, and a lack of awareness of risks are said to define Bhutan's vulnerability to climate change (BMCI/ICIMOD 2016).

The areas where Bhutan is considered most vulnerable to climate change are: forests and biodiversity, agriculture, water resources, glacial lake bursts, health and landslides (BMCI/ICIMOD 2016). Climate change poses a significant threat to human development in Bhutan, and climate-related disasters and risks are likely to have significant socio-economic impacts as protected resources and ecosystems become more fragile. This makes adaptation and mitigation a national priority. Urbanization and rural-to-urban migration trends are occurring in parallel with economic growth (Yangka and Newman 2018) and are often linked to climate impacts. Rural-to-urban migration has resulted in a reduction in farming activity in rural areas, and labour force decline has reduced the supply of food to urban areas. Bhutan currently imports about 80 per cent of the rice required to meet food sufficiency needs.

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Bhutanese forests currently sequester three times more carbon than is emitted (Government of Bhutan 2015). Bhutan's goal of maintaining net carbon sink status is expected to suffer from the effects of global climate change, but it remains committed to a

Table 3.1. **Components of Gross National Happiness Index**

Gross National Happiness Index		
4 Pillars	**9 Domains**	**33 indicators**
Preservation of culture	Psychological well-being	Life satisfaction Positive emotions Negative emotions Spirituality
	Time use	Work Sleep
	Community vitality	Donation (time and money) Safety Community relationship Family
	Cultural diversity and resilience	Artistic skills Cultural participation Speak native language The way of harmony
Conservation of the environment	Ecological diversity and resilience	Responsibility towards environment Ecological issues Wildlife damage Urban issues
Economic development	Living standards	Per capital income Assets Housing
	Health	Self-reported health status Healthy days Disability Mental health
	Education	Knowledge Literacy Schooling Values
Good governance	Good governance	Fundamental rights Governance performance Political participation Services

Sources: Ura, K., Alkire, S. and Zangmo, T., 'GNH and GNH Index', The Centre for Bhutan Studies, 2012, <https://ophi.org.uk/wp-content/uploads/GNH_and_GNH_index_2012.pdf>, accessed 6 November 2022; Yangka, D. and Newman, P., 'Bhutan: Can the 1.5°C agenda be integrated with growth in wealth and happiness?', Urban Planning, 3/2 (2018), pp. 94–112, <https://doi.org/10.17645/up.v3i2.1250>.

carbon-neutral future. Bhutan has made significant progress in transitioning its energy sources from fuelwood to hydropower and solar energy. Renewable energy is widely promoted and prioritized, with a view to increasing the number of electric cars and reducing fossil fuel consumption. Bhutan's climate action efforts are, however, being impeded by concerns about its national debt, which increased to 132 per cent of GDP in 2021 (National Statistics Bureau 2021; World Economics n.d.), and the need to balance economic growth with reducing GHG emissions and increasing GNH.

Bhutan has been severely affected by natural hazards in the past (Chhogyel and Kumar 2018); and an increase in temperature will lead to an increase in natural hazards (Wester et al. 2019). Food security is a major concern, as famine, food scarcity or rising food prices could prove a turning point, given that the majority of farming households are subsistence farmers with small landholdings (Rai et al. 2022). Climate-extreme events appear to have become more common in the recent past than they were decades ago (Chhogyel and Kumar 2018; Chhogyel, Kumar and Bajgai 2020). The record loss of crops associated with such events has caused food insecurity for households (Chhogyel, Kumar and Bajgai 2020). Unsurprisingly, such events have contributed to rates of rural–urban migration, which are among the highest in South Asia. Although not officially declared, there is a sense that many of these migrants could be classified as climate refugees.

In his discussion of 'Democracy and the Challenge of Climate Change', Lindvall refers to the impact of climate change on food production, which affects food availability, nutrition and people's livelihoods, and ultimately affects social harmony (Lindvall 2021). In Bhutan, for example, as a Least Developed Country (LDC), the increasing impacts of climate change could lead to struggles for control over scarce resources, while also adding to the burden on the state. Given its location and the limited prospects of enhancing economic activity, Bhutan is dependent on external funds to support its adaptation and mitigation efforts, and is therefore keen to become more involved in international affairs. Action on climate change issues has tended to be top-down in the past, but this has changed more recently through greater public participation and awareness.

The CIVICUS Monitor, which rates countries according to the degree to which citizens are able to express their views and exercise their rights in the civic space, has assigned a rating of 'obstructed' to Bhutan (CIVICUS Monitor 2022a). CIVICUS states that it has 'concerns about media independence, access to information and the chilling effect of defamation laws on journalists' in Bhutan (CIVICUS Monitor 2022b). This rating, and how it manifests in Bhutan, is problematic for meaningful political participation, particularly given the important role of the media as a conduit for conveying information.

3.5. **CONCLUSION: ADDRESSING CLIMATE ACTION, THREATS TO DEMOCRACY AND THE WAY FORWARD**

Hydro-meteorological data indicates that Bhutan is one of the most climate-vulnerable countries in the world (Hoy et al. 2015; National Statistics Bureau 2021). Although this data is not yet embedded in local decision making, the experience of holding elections during the Covid-19 pandemic, and using the best available Covid-19 protocols, illustrates that the safety of the population is being considered by local and national decision makers. This suggests that similar discourses could be used to address the climate crisis in future. The government has prioritized the link between community adaptation and ecosystems as a National Key Result Area (Government of Bhutan 2019).

In Bhutan, elections are held and leaders chosen on the basis of pledges made in respect of socio-economic policies rather than arguments on climate change impacts, although this is starting to change. Climate change impacts and socio-economic variables are clearly interlinked, so it might be expected that measures which incorporate both agendas could assist efforts at climate adaptation and mitigation. However, the tension between these policy areas will only increase and could pose a threat to democracy in Bhutan, especially as it is set to graduate from its LDC status in 2023, which could put further pressure on the economic system. The prospects for meaningful collective action and the formulation of a clear solidaristic ethos on climate change are problematized by the predominance of socio-economic policies in elections and the gap

between local and national decision making. This may become less pronounced as Bhutan matures over time and its political system becomes more competitive.

As it becomes more clearly understood that a shared agenda on climate change is necessary, through initiatives that advance political awareness, a greater degree of solidarity on addressing the climate crisis will become more likely. Advances in political awareness since the first democratic elections in 2008 provide cause for optimism on this point, particularly as more people start to participate in politics. Ultimately, politics is a necessary tool for shaping and implementing Bhutan's mitigation and adaptation strategies in response to the climate crisis. Climate change issues could help to address the current democratic deficits if climate adaptation strategies are prioritized according to community need, youth and community participation in the political process is encouraged (giving them a voice on how the climate crisis is addressed), and connections between local and national governments are fostered for the purpose of developing locally relevant solutions. All of this would provide a meaningful and credible basis for future democratic engagement in Bhutan.

Bhutan has chaired the group of LDCs since 2020, through which it has been involved in formalizing one of three initiatives promoted by the LDC Universities Consortium on Climate Change (LUCCC). At COP 26, Bhutan asked the international community to deliver ambitious, concrete and enhanced climate action through low emission and climate-resilient development pathways. As LDC chair, Bhutan recommended that climate action could only be achieved with enhanced support, access to finance for adaptation to compensate for loss and damage, technology transfer, and capacity building to enable the responses of vulnerable countries. Bhutan has stated that the funds received thus far have been inadequate, and that global solidarity and cooperation are vital for a meaningful response to the climate crisis and effective implementation of strategies to address it (Glasgow Climate Change Conference 2021).

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