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Bhutan

Development Update

SPECIAL SECTION: PATHWAYS TO ENHANCING SUSTAINABLE FOREST
MANAGEMENT AND EQUITABLE SOCIO-ECONOMIC DEVELOPMENT IN BHUTAN

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Abbreviations and Acronyms

AAC	Annual Allowable Cut	MoH	Ministry of Health
ABI	Association of Bhutanese Industries	MoLHR	Ministry of Labor and Human Resources
BC	Biological Corridors		
BIT	Business Income Tax	NBFIs	Non-bank Financial Institutions
BLSS	Bhutan Living Standard Survey	NDA	Net Domestic Assets
CAB	Construction Association of Bhutan	NDC	Nationally Determined Contribution
CAD	Current Account Deficit	NFAs	Net Foreign Assets
UNCBD	United Nations Convention on Biological Diversity	NFSR	National Food Security Reserve
CFMG	Community Forest Management Groups	NKRA	National Key Result Areas
CFs	Community Forests	NPL	Non-Performing Loan
CIT	Corporate Income Tax	NPRP	National Preparedness and Response Plan
COP	Conference of The Parties	NRDCL	Natural Resources Development Corporation Limited
CRR	Cash Reserve Ratio	NRF	National Resilience Fund
CSIs	Cottage and Small Industries	Nu	Ngultrum
DoFPS	Department of Forest and Park Services	NWFPs	Non-Wood Forest Products
		OP	Operational Plans
DSA	Debt Sustainability Analysis	PA	Protected Area
ECP	Economic Contingency Plan	RGoB	Royal Government of Bhutan
FMUs	Forest Management Units	RHBT	Rural House Building Timber
FRMD	Forest Resources Management Division	RMA	Royal Monetary Authority
FRPA	Forest Resources Potential Assessment for Bhutan	RNR	Renewable Natural Resources
FYP	Five Year Plan	RWCAT	Risk Weighted Capital Adequacy Ratio
GHG	Greenhouse Gas	SAR	South Asia Region
GNH	Gross National Happiness	SFM	Sustainable Forest Management
GST	Goods and Services Tax	SLR	Statutory Liquidity Ratio
HFLD	High Forest Cover, Low Deforestation	SMEs	Small and Medium Enterprises
		SRF	State Reserve Forests
INR	Indian Rupee	UNCCD	United Nations Convention to Combat Desertification
LFMP	Local Forest Management Plans	UNFCCC	United Nations Framework Convention on Climate Change
MDRP	Minimum Daily Package Rate		
MIP	Market Price Information	YELP	Youth Engagement and Livelihood Program
MoAF	Ministry of Agriculture and Forestry		

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The Bhutan Development Update is published semiannually. It assesses recent economic and social developments, prospects, and policies in Bhutan. The report is intended for a wide audience, including policy makers, business leaders, researchers and academics, the community of analysts monitoring Bhutan's economy, and the general public. The update was prepared jointly by the *Macroeconomics, Trade, and Investment* (MTI) and the *Environment and Natural Resources* (ENR) Global Practices of the World Bank by a team consisting of Melanie Trost (Junior Professional Officer) and Andrea Kutter (Senior Natural Resources Management Specialist).

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Overview

Recent Developments

Bhutan's economy has been severely affected by COVID-19 and the subsequent border closure to contain a domestic outbreak of the pandemic. The pandemic has been contained in Bhutan, with 150 confirmed cases and no deaths as of August 20. The government closed the country for inbound tourists in early March after the first "imported case" was confirmed and subsequently shut borders, on March 22, as a precautionary measure to prevent the spread of COVID-19. On August 11, the government announced a first nationwide lockdown, to curb community transmission after the first case outside of managed quarantine facilities was confirmed.¹ The economic impact of these measures has been primarily transmitted through two channels. Tourism-related and transport services have declined as tourist arrivals dried-up; the lockdown in India and domestic containment measures are expected to adversely affect other service activities that require close human interactions. Industrial production has also been severely disrupted by reduced foreign demand for

¹ Following the first COVID-19 cases outside of managed quarantine facilities, local transmission has been officially declared in Bhutan on August 16.

Bhutanese products, especially from India, disruptions to trade, and labor shortages.

In this context, economic growth is estimated to have decelerated from 3.8 percent in FY2018/19² to 1.5 percent³ in FY2019/20. This is significantly lower than the pre-COVID-19 forecast of 5.5 percent.⁴ The services sector, which has been supporting growth in the past, is believed to have contracted by 0.6 percent in FY2019/20, due to the decrease in tourism arrivals in the second half of FY2019/20 and domestic containment measures. Manufacturing, construction and other non-hydro exporting industries have been adversely affected in the second half of FY2019/20 through disruptions to critical inputs, temporary export restrictions, foreign labor shortages and lower external demand. Hydropower production and exports, on the other hand, increased with the on-streaming of the Mangdechhu hydropower project (720MW). The agriculture sector is believed to have been relatively resilient to the pandemic, supported by government measures to increase domestic production.

Headline inflation has accelerated in the second half of FY2019/20, driven by an increase in imported and domestic food prices. While inflation remained modest in the first half of FY2019/20, averaging 2.5 percent (year-on-year), it accelerated to 4.2 percent in May 2020. This was primarily due to an increase in local and imported food prices from India, with food price inflation accelerating to 9.2 percent (year-on-year) in April 2020, before slowing to 8.8 percent in May. Food prices have been increasing since mid-2019 in line with food prices in India – 85 percent of Bhutan's imports are from India and the Ngultrum is pegged to the Indian Rupee (INR) at par value – food inflation in India has since moderated to 7.3 percent in June 2020.⁵

The economic downturn and heightened uncertainty have increased financial sector vulnerabilities. After robust growth in the first half of FY2019/20, credit growth decelerated to 13 percent (year-on-year) in April 2020. While financial soundness

indicators improved by end-2019, with the Non Performing Loan (NPL) ratio decreasing from 18.4 percent in September 2019 to 10.9 percent in December, the NPL ratio rose back to 19.5 percent as of March 2020, reflecting mid-year cyclical factors. The deterioration in asset quality reflects the poor performance of the tourism/service and retail/wholesale trade sectors, which account for more than 50 percent of the NPLs. While the financial sector has adequate cushions to absorb potential losses, given its capital adequacy⁶, further disruptions to households and businesses could add further stress to the financial sector. The Royal Monetary Authority (RMA) has introduced a set of monetary relief measures to address the impact of COVID-19, including a debt moratorium and an interest waiver (including for NPLs), the provision of working capital and loans for the tourism, manufacturing and wholesale trade sectors at concessional terms, and micro loans for the cottage and small industries (CSI) sector. It will be important to ensure strong macro-prudential measures and close surveillance and supervision to maintain the stability of the financial sector.

Exports and imports have decreased significantly, in line with weak foreign and domestic demand and disruptions to trade. The current account deficit (CAD) is believed to have narrowed from 22.5 percent of GDP in FY2018/19 to 14 percent of GDP in FY2019/20, with the reduction in imports having a greater overall impact on the trade balance. While hydropower exports increased in line with higher production, exports of non-hydro goods and services have been severely impacted by the border closure and lower external demand. Meanwhile, goods imports declined as the pandemic curbed public investment projects and further delayed hydropower construction.

The fiscal balance has deteriorated in FY2019/20 due to the salary increases and higher government spending. The fiscal balance is estimated to have deteriorated from a surplus of 0.7 percent of GDP in FY2018/19 to a deficit of 3.1 percent of GDP in FY2019/20. This was due to a large increase in current

² The fiscal year runs from June 1 through July 31 in Bhutan.

³ WB staff projection. The FY2020/21 budget projects real GDP growth to decrease from 3.8 percent in FY2018/19 to 2.7 percent in FY2019/20.

⁴ Bhutan Development Update, January 2020.

⁵ The majority of food imports in 2019 was from India (91 percent).

⁶ Risk weighted capital adequacy ratio RWCAR at 14.2 percent by end-2019

spending, while total revenues also rose but to a lesser extent. Current spending has been driven by salary increases in the public sector, as well as higher government spending to fund public health measures (including stocking essential goods). Hydropower revenues increased thanks to a one-off profit transfer from the commissioning of the Mangdechhu hydropower plant. This was partly offset by a decrease in non-hydro revenues as a result of the discontinuation of excise duty refunds from India and lower tourism receipts. Public debt is estimated to have increased to 109.1 percent of GDP by the end of FY2019/20, but risks of debt distress are moderate as most of the debt is linked to hydropower projects financed by India.⁷

The government has outlined a **Comprehensive National Response to COVID-19 to protect vulnerable households and minimize the impact on employment, growth, and financial stability**. Health measures are aimed at containing the pandemic and strengthening healthcare system resilience. Social protection measures include a cash transfer program targeted at vulnerable populations and measures to increase food security. The government has also implemented a set of fiscal and monetary policy measures in March and June to provide immediate relief to affected households and businesses, including an interest waiver. To support economic recovery and growth, the government is prioritizing the implementation of the *Economic Contingency Plan (ECP)* with a focus on agriculture and farm roads, tourism and construction, and bringing forward and reprioritizing the 12th Five Year Plan (FYP) activities.

Outlook and risks

The crisis is expected to have strong and possibly long-lasting effects on Bhutan's economy. Economic growth is expected to slow markedly as a result of the crisis, averaging around 2.5 percent per year over the medium term – well below the pre-COVID five-year average of 5.5 percent. The tourism sector is expected to recover only gradually, given that travel restrictions will likely remain until 2021, and that global tourism flows are expected to remain muted. This will

depress services sector growth. The recovery of manufacturing and other exporting industries is likely to be gradual, because of the slowdown in India, Bhutan's main export market. Similarly, the construction sector is expected to recover slowly reflecting a limited pipeline of public sector infrastructure projects. Finally, the hydropower sector is expected to reach its capacity in FY2020/21 and to stabilize after that, which means that industry sector growth will likely be moderate, on average⁸, in the medium term. The CAD is projected to remain narrow in the medium term, as weak non-hydro exports coincide with subdued imports for public investment and hydropower projects. With elevated expenditure requirements, to implement the COVID-19 recovery package, and downward pressures on non-hydro revenues, the fiscal deficit is projected to increase to 6.7 percent of GDP in FY2021/22 before gradually decreasing to 4.3 percent in FY2022/23. Total public debt as a share of GDP is expected to remain elevated due to low economic growth, and to decline only gradually over the medium term.

The COVID-19 pandemic has exacerbated downside risks to growth. Given the unpredictability of the pandemic's course, there is a high degree of uncertainty over Bhutan's growth forecast. The most acute risk to the outlook is a scenario of large-scale community transmission. This would trigger prolonged mobility restrictions and result in substantial societal and economic costs. Other domestic risks include lower-than-expected hydropower production and delays in the implementation of the goods and services tax (GST) and other revenue measures, which are critical to offset the decline in excise duties and grant financing in the medium to long term. Another risk is the materialization of financial sector contingent liabilities, which could strain government finances. On the external front, a protracted outbreak globally and in India could reduce economic growth further and delay the recovery, given significant tourism and trade linkages with India and others.

The COVID-19 pandemic is an unprecedented shock that calls for rapid unconventional policy responses. The immediate priority is to prevent a

⁷ The loans from India are under an intergovernmental agreement in which the Government of India covers both financial and construction risks of the hydropower projects and buys surplus electricity at a price reflecting cost plus a 15 percent net return. This debt is denominated in rupees, electricity export receipts are also in rupees and the Bhutanese currency is pegged to the rupee, thereby reducing exchange rate risks.

⁸ Even if y-o-y fluctuations will continue to reflect weather related output effects.

further transmission of the virus, and to implement the *Comprehensive National Response to COVID-19* to protect public health, human capital and livelihoods and to prevent economic damage, while preserving macro-financial stability. However, the unprecedented situation created by the pandemic also presents an opportunity to undertake key structural reforms, in line with the forthcoming *21st Century Economic Roadmap*, that will help build resilience and ensure sustainable economic growth in the longer term. Specifically, the Royal Government of Bhutan (RGoB) could consider strengthening the economic foundations for social and environmental sustainability, with a special focus on building resilience in the tourism and agriculture sectors (including the forestry sub-sector). In this regard, the special section of this BDU's edition illustrates pathways to develop a modernized and resource-efficient forestry sector, while supporting the objective of remaining a carbon-neutral and equitable economy.

Special Section: Pathways to Enhancing Sustainable Forest Management and Equitable Socio-economic Development in Bhutan

Bhutan is the only carbon-negative country⁹ in the world, whose Constitution mandates it to maintain at least 60 percent of land area under forest cover for all time. The Kingdom of Bhutan is rich in forests and biodiversity. Conservation and sound management of forests and the environment are key development objectives that are fully mainstreamed in national policies and plans.

The forestry sector constitutes an important but underutilized and undervalued sector of the economy. While the total potential area for harvesting is 16 percent of the total forest area of Bhutan, only 7.3 percent is currently under commercial management owing to the difficult terrain and limited wood processing technologies. Even within the 7.3 percent, only conifer areas are harvested and marketed, and operation of broad leaf areas are downscaled due to limited demand and poor processing technologies. According to national accounts, forestry contributed between 2.4 percent and 2.9 percent to value added in the economy

each year between 2013 and 2017 (NSB 2018a). This does not include the contribution of the forestry sector in terms of rural timber subsidies, timber for disaster victims, timber for construction and renovation of important monuments and other national projects. However, the value of Bhutan's forest in the form of ecosystem services and ecological functions is worth between US\$394 million to US\$1,269 million per year. While Bhutan's forest policies prioritize environmental benefits there is a clear rationale for a more balanced approach toward sustainable forest management and for greater synergies between environmental conservation and economic development objectives.

Bhutan's economic growth objectives will require proactive management of its natural resource endowments. Specifically, strengthening rural livelihoods and eradicating poverty require sustainable and productive use of natural resources. The government must continue to protect forest ecosystems, which are home to globally important biodiversity, but studies have shown that an increase in sustainable forest utilization is feasible without jeopardizing protection objectives. This presents an opportunity for Bhutan to explore sustainable forest management (SFM) to the fullest.

Bhutan can remain a global champion for environmental conservation while developing a modernized and resource-efficient forestry sector. Transforming the forestry sector has the potential to increase employment opportunities, develop small and medium forest-based enterprises, reduce forest-based product imports, and trigger a move toward market-based approaches for trading timber and Non-Wood Forest Products (NWFPs). Bhutan's rich forest resources can contribute more to the country's growth and job creation, without jeopardizing its carbon-neutrality. Forests provide timber and NWFPs that are already a key element for Bhutan's carbon-neutral development path. Investing in sustainable forest management will allow Bhutan to increase its carbon sequestration potential, if forests are managed dynamically, creating opportunities for advance regeneration. More investments in wood-substitution technology will allow Bhutan to replace greenhouse gas emission-intense materials like steel and cement with wood.

⁹ Carbon negative means that Bhutan's carbon footprint is less than neutral, hence, Bhutan is removing more carbon dioxide from the atmosphere than it adds.

There are various challenges in the forestry sector. These challenges relate to four thematic areas: (i) deforestation and forest degradation, (ii) vulnerability to climate change and natural disasters, (iii) a challenging policy and institutional environment, and (iv) underdeveloped wood and non-wood industries. While deforestation and forest degradation rates are low overall, there are local hotspots and future development activities will put more pressure on forest resources. The two main drivers of deforestation include (i) the allotment of state reserve forest land for various purposes and (ii) infrastructure development related to the construction of hydropower projects (including transmission lines). Timber and fuelwood harvesting, as well as forest fires are the main drivers of forest degradation. Bhutan's *2011 Climate Change Vulnerability Assessment* predicts a warming trend in annual temperature and high levels of variability and uncertainty in annual precipitation. As a result, vulnerability is high at a community level, particularly among subsistence farmers, (Lhendup, Wikramanayake, and Freeman 2011). Finally, there is a challenging policy and institutional environment, which inhibits the development of the forest-based private sector. For instance, current regulations impede market

mechanisms that could otherwise provide incentives for more efficient resource allocation, more training of skilled labor, and more investments in state-of-the-art technology and equipment.

There are five opportunities to transform Bhutan's forestry sector into a modern and effective economic sector. These include: (i) supporting sustainable forestry management in Forest Management Units (FMUs) and Community Forests (CFs), (ii) investing in modern forest technology and infrastructure in FMUs and CFs; (iii) exploring a market-based approach for timber and NWFP sales; (iv) establishing SMEs for timber and NWFPs and value addition; (v) supporting the development of a curriculum for wood engineering and wood architecture. Implementing the proposed actions could improve the productivity of Bhutan's forestry sector, increase investments in forest-based SMEs, and build local capacity for forest-based industries, while sustaining the environmental benefits that forests provide. Finally, forest-dependent jobs and the development of NWFPs hold promising economic opportunities for rural communities and could provide an attractive source of livelihood.

1 Recent Economic Developments



a. Growth

Bhutan's economy has been affected significantly by the COVID-19 induced crisis. Even though Bhutan has had a limited number of cases, thanks to stringent containment measures (**Box 1**), the pandemic has affected the economy through two primary channels: (i) a decline in the services sector as tourist arrivals dried up, and (ii) disruptions to industrial activities, mainly through reduced foreign demand for goods exports and disrupted access to critical inputs, including foreign labor. Meanwhile, hydropower production and exports increased in FY2019/20 with the on-streaming of the Mangdechhu hydropower project. Overall GDP growth has decelerated from an estimated 3.8 percent in FY2018/19 to 1.5 percent in FY2019/20.¹⁰ The revised FY2019/20 estimate is 4 percentage points lower than the pre-COVID-19 forecast of 5.5 percent.¹¹

The tourism industry has come to a standstill since the government closed the country for inbound tourists on March 6. Growth had been driven by the services sector until FY2018/19, supported by the tourism-related activities (including transport and communication, retail, and hotels and restaurants). While tourist arrivals increased by 12.2 percent (year-on-year) in the first half of FY2019/20,¹² international tourist arrivals decreased by 37.3 percent (year-on-year) in the third quarter of FY2019/20.¹³ Overall in FY2019/20 total tourist arrivals decreased by 41.8 percent (**Figure 2**). As a result, gross receipts from tourism, which include receipts from the minimum

daily package rate (MDRP) applicable to international tourists and out-of-pocket spending, are estimated to have decreased by 42.4 percent, an amount equivalent to 5.5 percent of GDP. In addition, domestic containment measures, including school closures and social distancing, have significantly depressed consumption and services activities that require close human interaction. As a result, services sector growth is expected to have contracted by 0.6 percent in FY2019/20.

Manufacturing, construction and non-hydro exporting sectors have been adversely affected by trade disruptions, foreign labor shortages, and depressed external demand, especially from India. While goods are still allowed to be shipped across the Indian border, elevated border controls and depressed shipment volume have raised transport and logistics costs. Restrictions on cross-border movement of persons have led to foreign labor shortages. Reports from the Association of Bhutanese Industries (ABI) and Construction Association of Bhutan (CAB) indicate a sharp decline in non-hydro exports to India, while shortages in labor and raw material from India have impeded manufacturing and construction activities.

Hydropower production and exports increased in FY2019/20, supporting industry sector growth, but largely reflecting a one-off boost. The state-led hydropower sector accounts for about 26 percent of GDP¹⁴, 28 percent of exports and 22 percent of domestic revenues.¹⁵ Hydropower production is estimated

10 The growth forecast for FY2018/19 and FY2019/20 is based on World Bank staff projections since no quarterly GDP estimates are available for Bhutan. The latest national accounts estimates are available for calendar year 2018.

11 Bhutan Development Update, January 2020.

12 Bhutan Tourism Monitor 2018 and 2019.

13 There are no monthly tourist arrival statistics available for regional tourists.

14 This includes electricity (12 percent) and construction (14 percent) sector activities, which are mainly related to hydropower production and construction (NSB 2019). Hydro exports and revenue shares are provided for 2018/19 (actuals).

15 The government receives hydro-related revenues in the form of royalties, a one-time profit transfer when a project is handed over to the government of Bhutan, and corporate income taxes and dividends from the Druk Green Power Corporation Limited (DGPC), a state-owned enterprise.

Box 1. Government Response to Contain COVID-19

To date, Bhutan has been able to contain a large-scale domestic outbreak of COVID-19 thanks to domestic pandemic mitigation measures. As of August 20, there were a total 150 confirmed cases (of which 105 have fully recovered) and no deaths. The government has ordered a three-week mandatory quarantine for everyone returning from abroad at dedicated government facilities. On August 11, the country recorded its first case outside of managed quarantine, and community transmission was confirmed shortly thereafter. Prior to this, all confirmed cases were “imported” and detected while under mandatory quarantine. Around 9,000 people have undergone quarantine since early March. Bhutan has conducted around 57,000 tests by August 12, which translates to 87,000 tests per million people.

The government introduced travel restrictions and health-related measures in early March to slow the spread of COVID-19.

The first imported case of COVID-19 was confirmed on March 5, 2020. The government imposed a two weeks restriction on all incoming tourists as of the following day. On March 22, Bhutan further sealed off its land borders as a precautionary measure, except for movement of goods (the Bhutan-India border remained open for trade). As per the *National Preparedness and Response Plan* (NPRP), the country remains in code orange (moderate disruption), whereby isolation is triggered for confirmed cases and suspected cases are quarantined. All schools and educational institutes were closed on March 18.

Additional preventive measures were taken. On March 30, the mandatory quarantine period was extended from two to three weeks. On April 14, business hours for shops were reduced and gatherings in groups of three or more were discouraged. Public and private institutions were advised to implement home-based work. On May 15, the government encouraged facemasks in public places and hospitals, and restricted movement in the southern borders after 7 pm.

On June 19, the government announced reopening plans for Phase I, including new health-related measures and a limited reopening of schools. Business hours were extended from July 1. Sports centers, public parks and places reopened on June 22. Facemasks are mandatory in hospitals, schools, markets, and public transport. Home-based work for public and private sector institutions was discontinued from June 22. A tracing system is in place and the Ministry of Health (MoH) is conducting regular testing of high-risk communities and frontline responders. Selected school classes have reopened from July 1.

On August 11, the government has announced the first nationwide lockdown. The lockdown was ordered after a returning resident tested positive for COVID-19 after being discharged from mandatory quarantine and coming into close contact with people in the community. The government has asked people to stay home and restricted intra- and inter-district movements of individuals and vehicles. All schools, institutions, offices and commercial establishments will remain closed. The government has issued lockdown guidelines and is coordinating the distribution of essential food supplies in all districts. Essential and emergency medical services are being facilitated.

Boarders are expected to remain closed in 2020. The re-entry of all foreigners holding valid visas and work permits is suspended until further notice.

Figure 1. COVID-19 confirmed cases and number of people in quarantine, and policy actions

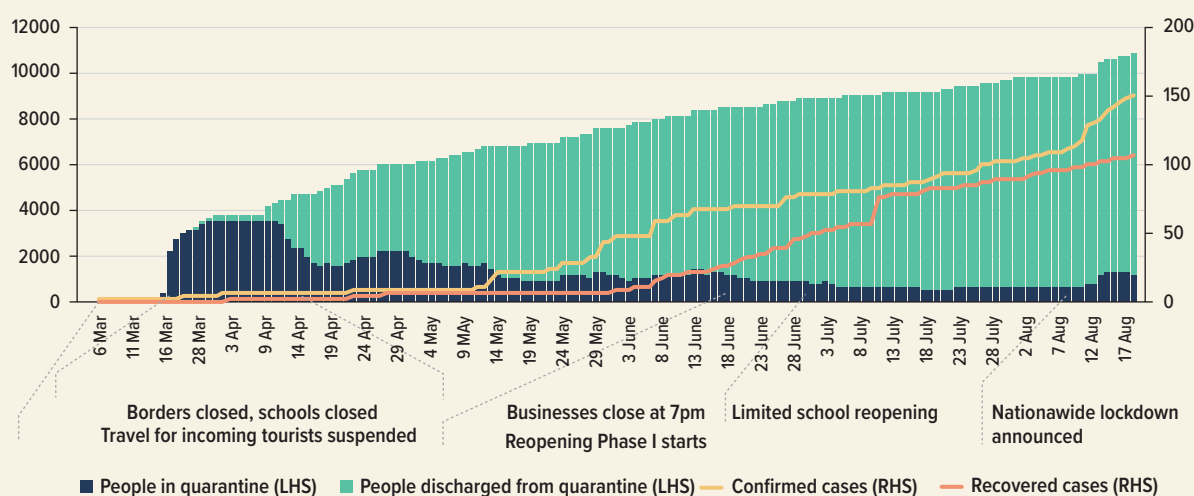
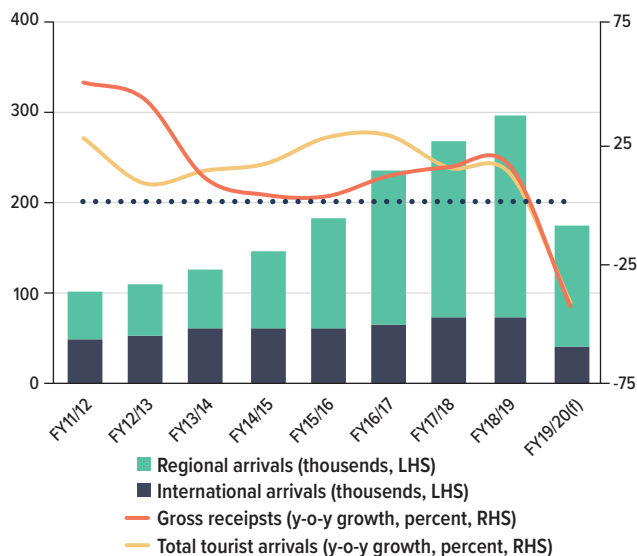
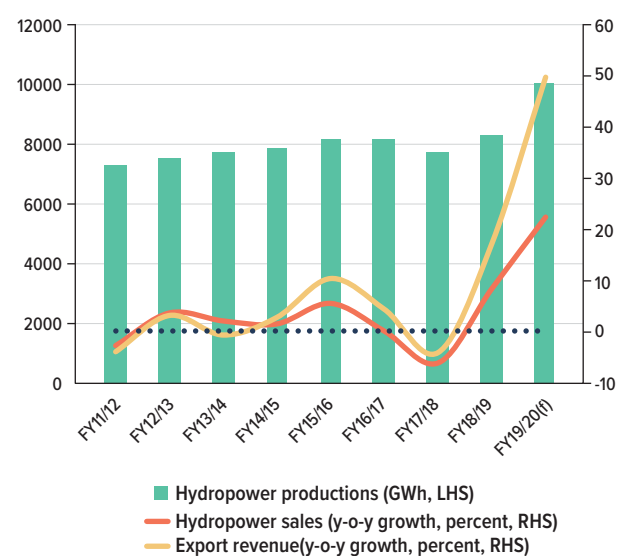


Figure 2. Tourist arrivals and gross tourism receipts

Source: MOF

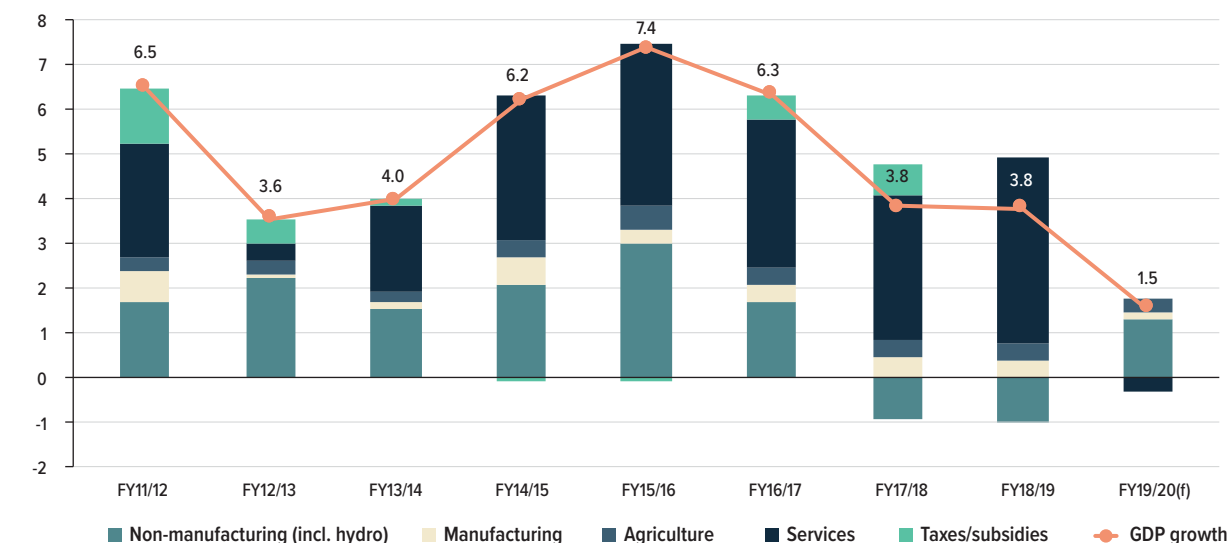
Figure 3. Hydropower production and export revenue

Source: MOF

to have increased by 22 percent¹⁶ in FY2019/20 (Figure 3). The significant increase in production was primarily driven by the on-streaming of the Mangdechhu hydropower project (720MW), inaugurated in August 2019. Production also increased in the largest hydro project Tala (1,020MW), which had been undergoing maintenance work in the previous two fiscal

years. As a result, the industry sector is estimated to have grown by 4.4 percent in FY2019/20 (Figure 4).

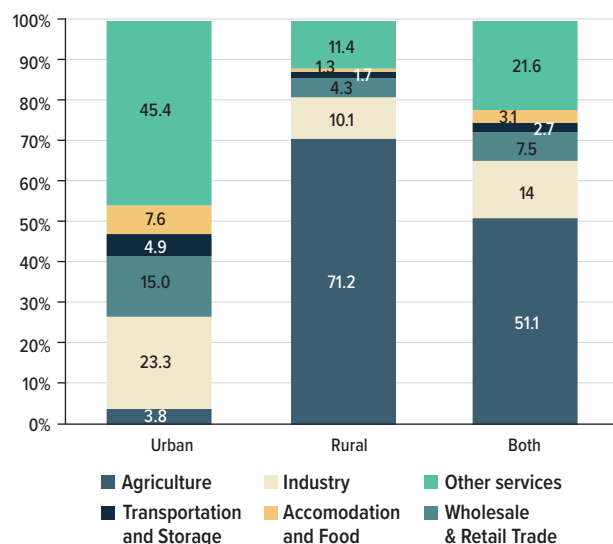
The agriculture sector is expected to have grown moderately at 2.5 percent in FY2019/20. Reduced external demand for agricultural products appears to have hurt agribusinesses. Anecdotal evidence suggests that exports of agricultural goods was hampered by

Figure 4. Contribution to GDP growth (percentage points)

Source: NBS, WB staff estimates

¹⁶ from 8,189 GWh in FY2018/19 to 9,993 GWh

Figure 5. Employment share by sector (percent), 2019

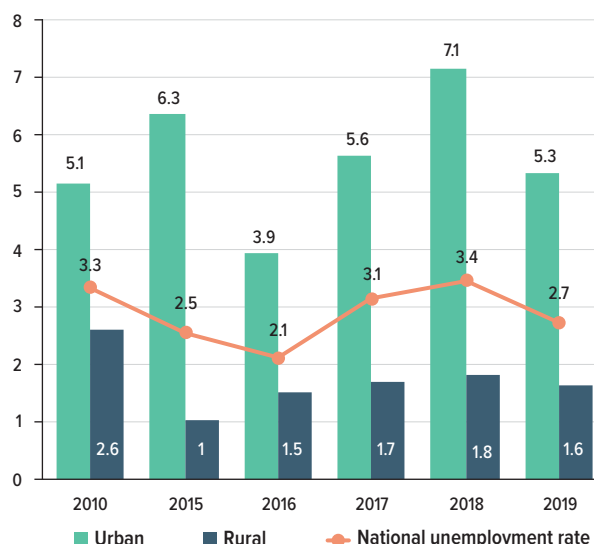


Source: NSB. 2019 Labor Force Survey

elevated border controls and the lockdown in India (the main market for Bhutan's food exports accounting for 67 percent of total food exports in 2019). As part of the *Economic Contingency Plan* (ECP), the government has implemented measures to support domestic agricultural and livestock production, including input support during the current and upcoming agricultural seasons.¹⁷ Other measures include a lending program for the rural and agricultural sector and an urban agriculture initiative.¹⁸

The employment impact of COVID-19 is expected to be felt broadly across the country but particularly in urban areas. Bhutan remains a largely rural and agrarian economy with a large informal sector.¹⁹ While the agriculture sector may absorb some underemployment from other sectors, the impact of the pandemic is likely to be felt in urban areas, where

Figure 6. Unemployment rate (percent), 2010-19



about 30 percent of households depend on tourism and trade-related activities (Figure 5).²⁰

While jobs were lost in the tourism and related sectors, the border closure and lockdown in India have resulted in a shortage of foreign workers, mainly in construction. Pre-COVID-19, the overall unemployment rate decreased from 3.4 percent in 2018 – the highest rate since 2011 – to 2.7 percent in 2019 (Figure 6). The youth unemployment rate also dropped from 15.7 percent in 2018 to 11.9 percent in 2019.²¹ According to the Ministry of Labor and Human Resources (MoLHR), around 11,000 people (3.5 percent of total 2019 employment) have lost their jobs due to COVID-19 by May 2020, mostly in tourism and allied sectors.²² In turn, there was a shortage of 20,000 foreign workers as of June and half of the remaining 28,000 workers (equivalent to 9 percent of total

17 As part of the Economic Contingency Plan (ECP), the Ministry of Agriculture and Forestry (MoAF) has put forward a 15-month agriculture stimulus plan to strengthen food security through increased domestic production and create employment opportunities.

18 The MoAF has initiated an urban and peri-urban agriculture program in Thimphu to address the current unemployment challenges while achieving food security goals. See <http://www.moaf.gov.bt/ministry-launched-urban-and-peri-urban-agriculture-program-in-thimphu/>

19 The informal sector accounted for about 80 percent of total employment in 2014 (WB 2016. Bhutan's Labor Market. Toward Gainful Quality Employment for All). The share of self-employment, a proxy measure of the degree of informality in employment, was 33.7 percent of total employment in 2019, of which agriculture self-employment accounts for 21.7 percent and services for 7.9 percent. Family worker, agriculture and non-agriculture account for 32.1 percent of total employment.

20 LFS 2019. These sectors include commerce, transport and accommodation and food services.

21 LFS 219. Reasons for the decline include a decrease in the youth population as per population projection, leading to a decline in youth labor force entering the labor market; and youth staying in the school system, thus reducing the number of unemployed youths who are seeking jobs.

22 NSB (2020). According to a rapid socio-economic impact assessment (RSEIA) of COVID-19 on Bhutan's tourism sector almost one third of respondents have lost their jobs or been placed on leave without pay. <http://www.nsb.gov.bt/publication/files/pub1ip5024jn.pdf> Also see here <https://kuenselonline.com/covid-19-forces-11235-people-out-of-jobs/>

employment) were expected to return to India once the lockdown was over.²³ A government initiative to facilitate the entry of foreign workers in priority sector from early June was put on hold when COVID-19 infections in Indian border towns increased.²⁴ MoLHR estimates that COVID-19 caused the return of about 3,500 of migrant laborers to Bhutan.

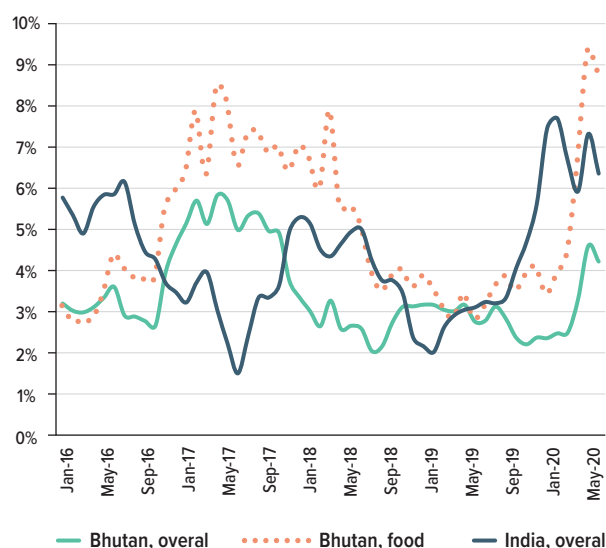
b. Inflation

Inflation accelerated in the wake of the COVID-19 pandemic, driven by food price inflation. Since 85 percent of Bhutan's imports are coming from India and its currency is pegged to the Indian Rupee (INR), Bhutan's inflation rate co-moves with that of India with a time lag.²⁵ Average inflation was low in FY2018/19, standing at 2.8 percent, reflecting a decrease in food prices. While headline inflation remained modest in the first half of FY2019/20, averaging 2.5 percent (year-on-year), it accelerated to 4.2

percent in May 2020, mainly due to an increase in local and imported food prices (Figure 7). Price increases of food items, which together carry a 46 percent weight in the CPI basket, accelerated to 9.2 percent (year-on-year) in April 2020, before slowing to 8.8 percent in May (Figure 8, Figure 9). By contrast, non-food inflation decelerated from an average of 2.4 percent in FY2018/19 to 0.4 percent (year-on-year) as of May 2020, driven by lower fuel prices, which also lowered prices for transport services (mainly operation of personal transport equipment) in the second half of FY2019/20.

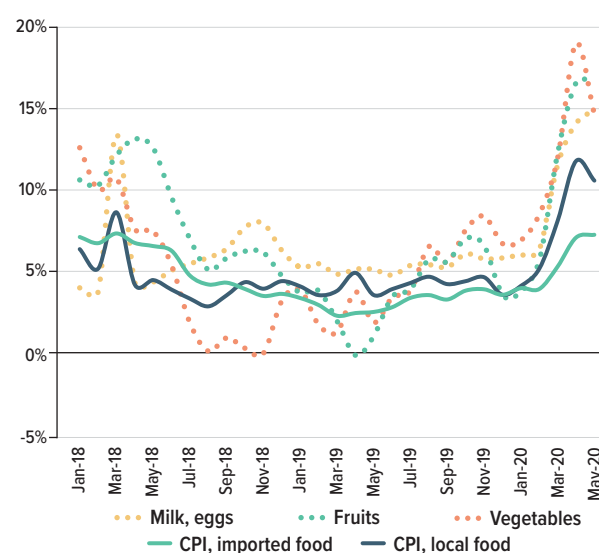
The government has taken measures to monitor and contain rising prices to mitigate risks to food security. While there have been limited formal restrictions on the movement of goods across the Indian border,²⁶ supply side disruptions have been reported, due to high transport and logistics costs and labor shortages, particularly for perishables. Anecdotal evidence suggests that a combination of supply shortages (due to the lockdown in India) and

Figure 7. Inflation, Bhutan and India (percent)



Source: NSB, MoSPI India. Note: The all-India general CPI has not been compiled for the months of April and May 2020 and have been imputed by MoSPI.

Figure 8. Food inflation, imported and local (percent)



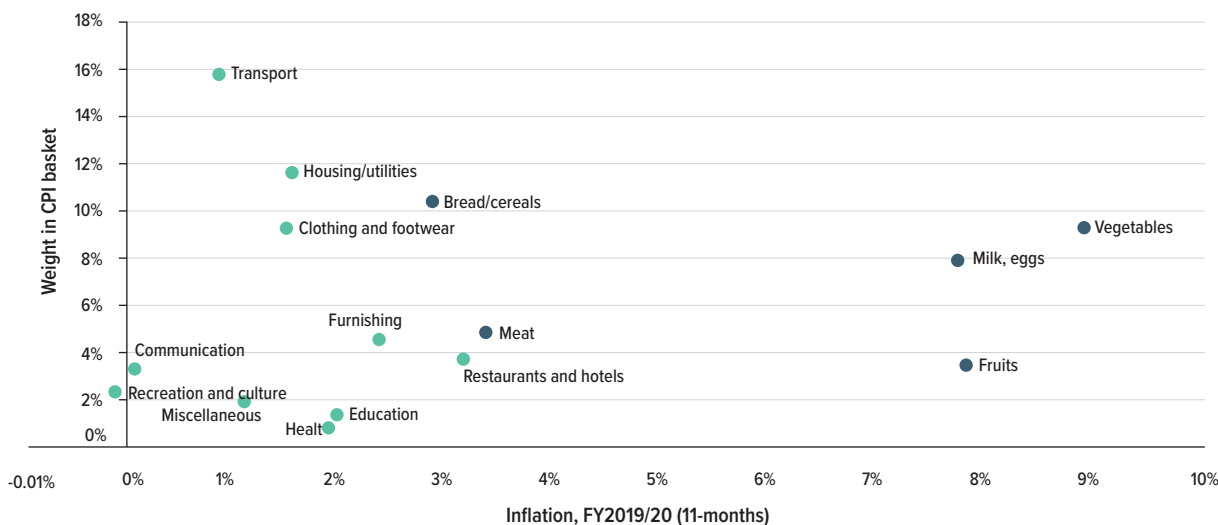
Source: NSB

23 <https://thebhutanese.bt/bhutan-short-of-20000-construction-labourers-and-half-of-remaining-28000-set-to-go-back-covid-19-impact/>

24 <https://thebhutanese.bt/cabinets-clearance-for-260-plus-foreign-workers-put-on-hold-after-covid-scare-in-jaigaon/>

25 WB (November 2018). Bhutan Development Update. The time-lagged correlation coefficient between India's Wholesale Price Index (WPI) and Bhutan's CPI is statistically significant and suggests that Bhutan's CPI lags India's WPI by six months.

26 Following COVID-19, there is a standing ban on imports of meat and meat products. On March 25, the MoAF initially announced a ban on import of fruits, vegetables, Doma, and Pani. The ban on imports of fruits and vegetables was recalled on March 27.

Figure 9. CPI categories and inflation drivers in FY2019/20

Source: NSB

increased demand for domestic produce led to localized price increases of selected food products.²⁷ Since the onset of the pandemic, the government has increased the frequency of data collection on market price information (MPI) of essential commodities and published aggregated monthly results for 20 Dzongkhags.²⁸ In an effort to contain upward pressures on prices, payments for the sales tax and customs duty on essential items have been deferred from March to June 2020. Box 2 looks at food security implications from COVID-19 disruptions in Bhutan and outlines policy recommendations to ensure food availability and the proper functioning of food markets and value chains, while supporting vulnerable households.

c. Monetary Policy and Financial Sector

Monetary policy is anchored by the currency peg to the INR. The peg, introduced in 1974, served Bhutan well for macroeconomic stability, as India is Bhutan's

largest trading partner. The peg remains an appropriate nominal anchor even though the real effective exchange rate has recently been moderately overvalued.²⁹ The RMA does not have an explicit inflation target and uses the cash reserve ratio (CRR) and the statutory liquidity ratio (SLR) to manage credit growth and interventions in the foreign exchange markets targeted at maintaining the exchange rate peg.

The growth of money supply accelerated in FY2019/20, mainly due to an increase in net foreign assets (NFAs). Broad money growth accelerated from an average annualized rate of 7.8 percent in the first half of FY2019/20 to 16.8 percent in April 2020. This was mainly due to an increase in NFAs, reflecting higher capital and financial inflows including grants (Figure 11). Growth in net domestic assets (NDAs), which is driven by private sector credit growth, slowed in FY2019/20.

Credit growth slowed somewhat in the second half of FY2019/20. While credit provision to the private sector grew at an average annualized rate of

27 Various news reports, eKuensel. In March, the Office of Consumer Protection (OCP) had received 36 complaints on price escalation in two days. Wholesalers indicated that the price for the rice has increased because transport costs doubled given the risk and illegal tax collection along Indian highways.

28 The monthly national Consumer Price Index (CPI) is disseminated with a two-month lag, and hence does not provide a real time price monitoring system to track developments at the subnational level. Complementary data is being collected by the Office of Consumer Protection (OCP) under the Ministry of Economic Affairs (MoEA), which publishes quarterly market price information of essential commodities in 20 Dzongkhags.

29 IMF (October 2018). 2018 Article IV Consultation. External Sector Assessment. The ngultrum has been moderately appreciating in real effective terms. During the first quarter of 2018 the REER appreciated by 0.4 percent and the NEER depreciated by 2.5 percent. Movements in both the REER and NEER are heavily influenced by the rupee.

Box 2. COVID-19 and Food Security in Bhutan

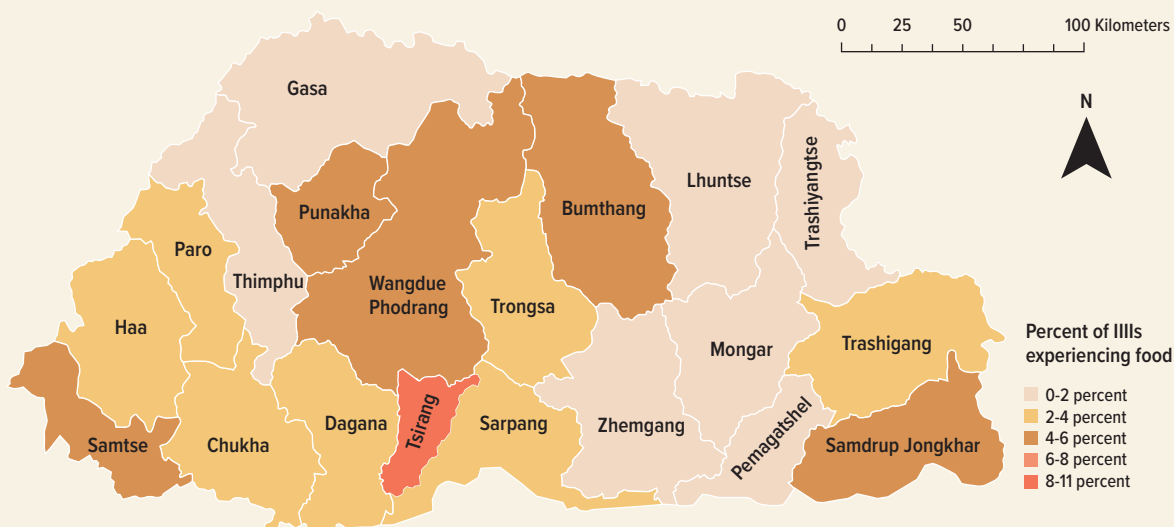
The COVID-19 crisis could impact food security in Bhutan. As a small landlocked country, Bhutan relies heavily on food imports – which account for almost half of households' food expenditure and about 17 percent of total imports. While households in Bhutan have been generally food secure before the COVID-19 crisis, there are uncertainties related to food supply in the future. The global pandemic may disrupt food supply chains resulting in shortages and prices spikes in a broad range of countries with possible impacts on Bhutan.

Bhutan relies on imports from India for a significant share of its food supplies. The country produces much of what it needs in terms of non-rice staple cereals and vegetables; however, it needs to import rice and meat products mostly from India. Imported food accounts for roughly half of Bhutanese households' food expenditure. In comparison, purchases of domestic food account for 33.9 percent and home-produced food for 16.6 percent of overall food expenditure.

There was already wide variation in food security across districts before the COVID-19 crisis. According to the latest household survey (2017), only 2.9 percent of Bhutanese reported having experienced food shortage in the preceding 12 months. But the share of such households exceeded 10 percent in Tsirang, while it was low in the districts of Dagana and Zhemgang which have the highest poverty rates of all. The highest incidence of food shortage was reported in the months of June and July. More than 60 percent of residents in Dagana are undernourished, followed by Sarpang (38.8 percent), Gasa (27.8 percent) and Zhemgang (24.5 percent). Food shortages can exacerbate pre-existing malnutrition trends. It appears that poverty and undernourishment are relatively closely related, whereas the high level of food insecurity in Tsirang may be due to other factors and warrants further investigation.



Figure 10. Share of households that previously experienced food shortage



The RGoB has responded to the potential threat COVID-19 poses to food security. Efforts have been deployed to secure food stocks (including through a *National Food Security Reserve* (NFSR) emergency action plan), to boost domestic production and distribution, and to keep trade flows open. Stockpiling of three essential non-perishable commodities is under way, and private wholesalers are procuring and distributing other essential commodities to complement the NFSR. As part of the ECP, the Ministry of Agriculture and Forestry (MoAF) has put forward a 15-month agriculture stimulus plan to strengthen food security through increased domestic production. Safety measures have been put in place to facilitate safe cross-border trade and ensure the continuous supply of essential goods. Vulnerable households have been supported through cash transfer programs (Druk Gyalpo's Relief Kidu) and efforts to monitor and contain rising prices.

To further strengthen food security, the RGoB could consider the following policy recommendations: (i) ensuring food availability and securing production in the ongoing and upcoming agricultural seasons, (ii) ensuring the proper functioning of food markets, value chains, and agri-food systems, and (iii) supporting vulnerable households.

(i) Ensuring food availability and securing production in the ongoing and upcoming agricultural seasons.

- Data collection tools and modalities could be further adapted and strengthened to monitor food and agricultural supply chains, domestic food production and availability, and agricultural input prices;
- Provisions could be made to ensure access to inputs and labor in farms for the ongoing and upcoming agricultural season, including through ongoing and scaled up support to food processing, transport, and marketing;
- Recently introduced domestic price controls on vegetables and fruits could be reconsidered;
- Climate-resilient agriculture practices and nutrition-sensitive production could be promoted.

(ii) Ensuring proper functioning of food markets and domestic and international value chains.

- Continued commitment to free trade could be emphasized. The temporary import restrictions on fruits and vegetables could be reconsidered. Other trade restrictions could be avoided to prevent further market distortions.
- Automation and electronic procedures to facilitate safe cross-border trade and to improve logistics efficiency could be prioritized.
- A cooperative trade initiative could be developed with neighboring countries to refrain from imposing trade restrictions or taxes on critical food staples.

(iii) Supporting vulnerable households.

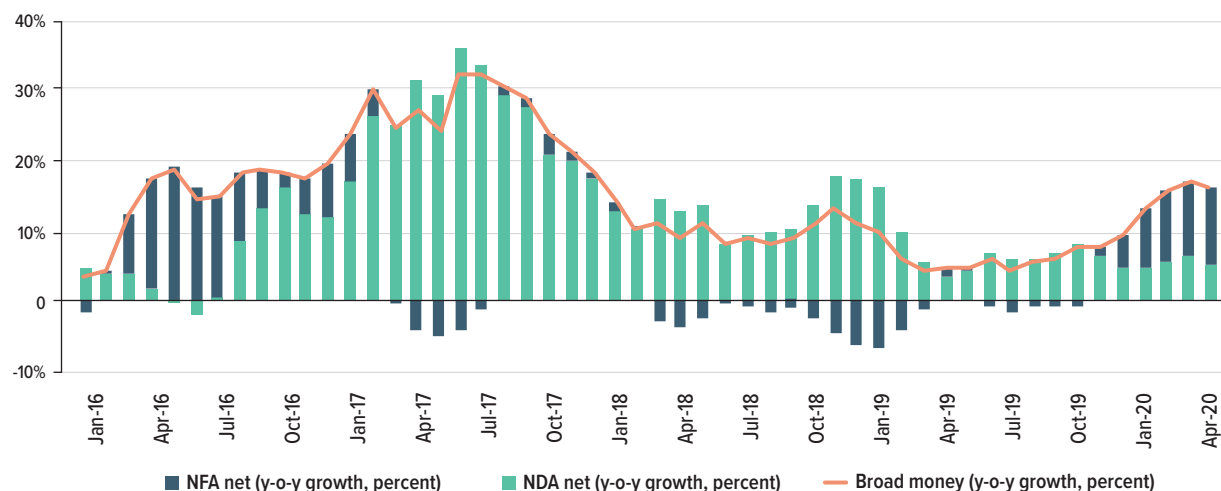
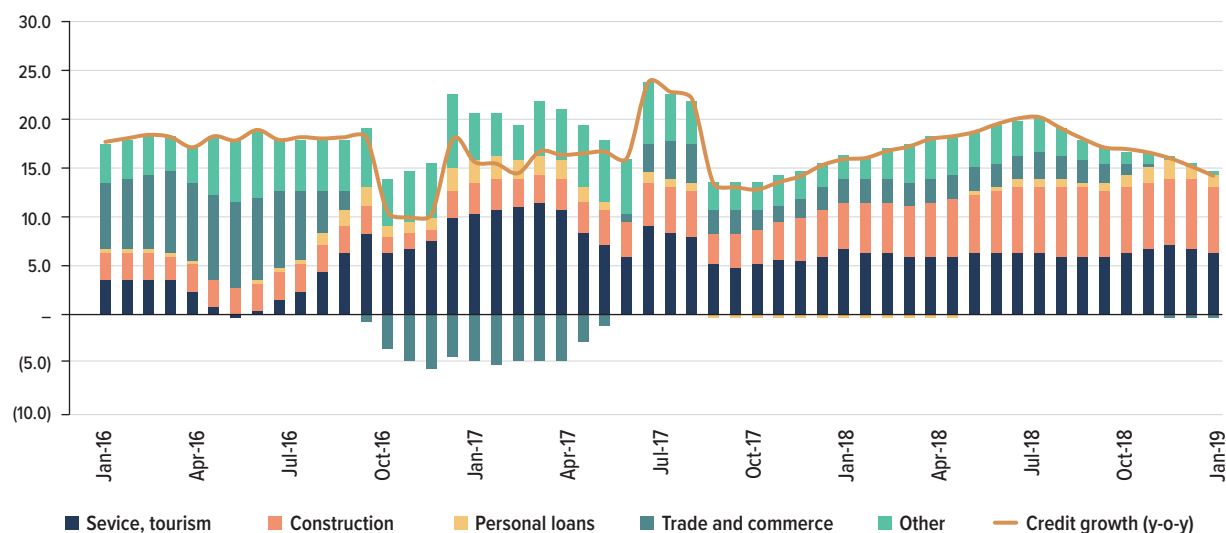
- Strengthened data collection efforts, including impact assessments and surveys, could shed further light on the impact of the COVID-19 pandemic on food security.
- Regular and frequent price monitoring at the subnational level could provide valuable and timely information that could help detect and mitigate localized food shortages.
- Nutritionally vulnerable populations, especially women and children, could be helped through alternative delivery mechanisms to ensure sufficiency in nutrient intake.
- A social registry could be established to promote a systematic approach to support the poor and vulnerable.

Source: WB (2020). COVID-19 and Food Security in Bhutan: How to Respond? Integrated Agriculture, Macro, Trade, and Social Protection Policy Actions.

16.4 percent (year-on-year) in the first ten months of FY2019/20, similar to the FY2018/19 growth rate, it decelerated to 13 percent in April 2020 (**Figure 12**). Lending remains concentrated in the construction/housing sector (27 percent of total loan exposure) and service/tourism sector (27 percent). Both sector shares in total loans increased in FY2019/20, which reflects a pick-up in tourism projects in the first half of FY2019/20, and to some extent, public infrastructure projects. Credit growth to the construction sector has accelerated from an average annualized rate

of 23.2 percent in FY2018/19 to 29.1 percent in the first ten months of FY2019/20.

Asset quality was weak before COVID-19, and has further deteriorated since the onset of the pandemic. Bhutan's financial sector asset quality is the weakest in the South Asia Region (SAR). Owing to poor underwriting standards and ineffective supervision, the NPL ratio deteriorated from 6.5 percent in 2016 to 10.9 percent in December 2019. It deteriorated further to 19.5 percent as of March 2020, reflecting

Figure 11. Money supply (y-o-y growth, percent, 3-month moving average)**Figure 12. Credit growth and sectoral contribution (y-o-y growth, percent, 3-month moving average)**

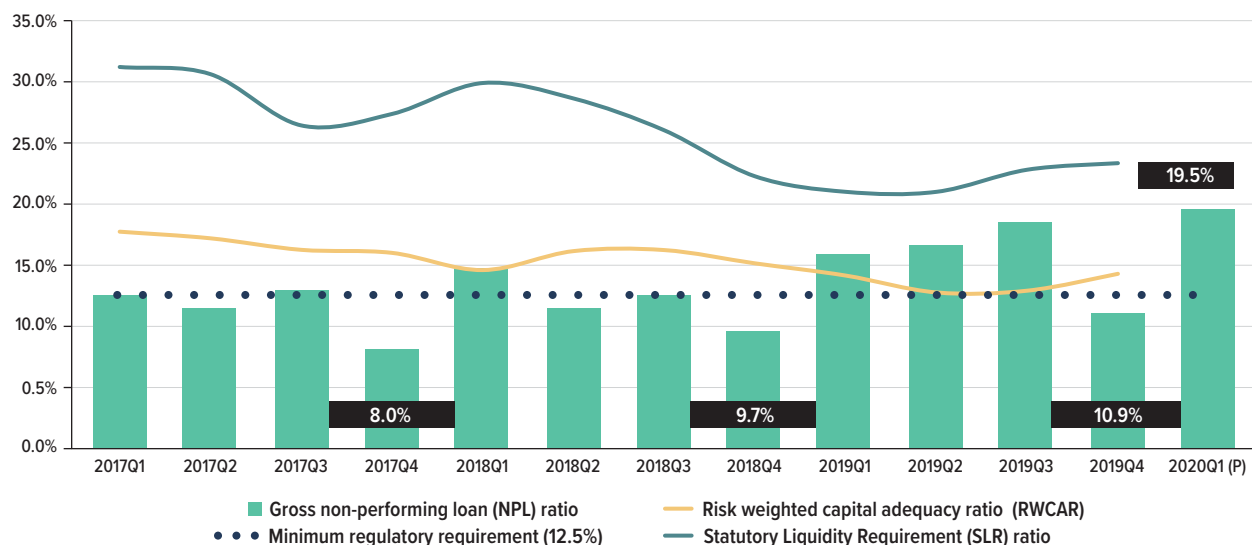
Source: RMA Source: RMA

mid-year cyclical factors.³⁰ The capital adequacy ratio (CAR) also fell from 19 percent in 2016 to 14.2 percent in December 2019. There are concerns with regards to the non-banking sector. Given limited investment opportunities in Bhutan, the non-banking sector is permitted to undertake retail lending activities. It is, however, subject to more pronounced maturity mismatches and weaker supervision, and has a lower loss absorption tolerance. The non-bank financial institutions (NBFIs), which account for 15

percent of Bhutan's total financial sector assets, cater to 24 percent of the country's borrowing needs and account for 41 percent of total NPLs.³¹ Service/tourism and trade sectors account for the largest NPL portfolio. However, as a percent of loans extended under each sector, the trade and agriculture sectors have the highest loan impairment (28 percent each). Provisions for NPLs are high, standing at 68.6 percent in December 2019, and required provisions are calculated on a (conservative) gross basis.

30 The financial sector experiences significant fluctuations in its NPL ratio for the following reasons (i) NPLs are written off periodically; (ii) financial instruments are not well aligned with borrowers' expected cash flow distribution; and (iii) there are seasonal repayments based on the borrowers' activities.

31 A systemic insurance company, in particular, is experiencing significant balance sheet pressures.

Figure 13. Financial sector soundness indicators (percent)

Source: RMA

The RMA has introduced monetary relief measures to address the impact of COVID-19. Monetary policy measures (Box 3) have included a debt moratorium and an interest waiver (including for NPLs). The cost of the interest waiver was shared equally by the government, funded through the *National Resilience Fund* (NRF), and the financial sector institutions. As the first phase of these measures came to a close on June 30, 2020, the government announced an extension of the measures with a phased approach (effective from July 1, 2020), including: (i) an interest waiver for another 3 months followed by partial (50 percent) waiver for 6 months; (ii) a debt moratorium by one year; (iii) new short-term bridge loans at concessional interest rate of up to four years for tourism, manufacturing and wholesale trade sector firms; (iv) a conversion of working capital loans (including capitalized interest) to term loans repayable over 2-4 years; (v) micro-loans to cottage and small industries (CSI) at 2 percent interest for agriculture and rural activities; and (vi) the easing of prudential norms to provide liquidity support. Finally, the RMA has cut the CRR by 200 basis point in April 2020 to improve liquidity in the banking system and facilitate the implementation of other monetary relief measures.

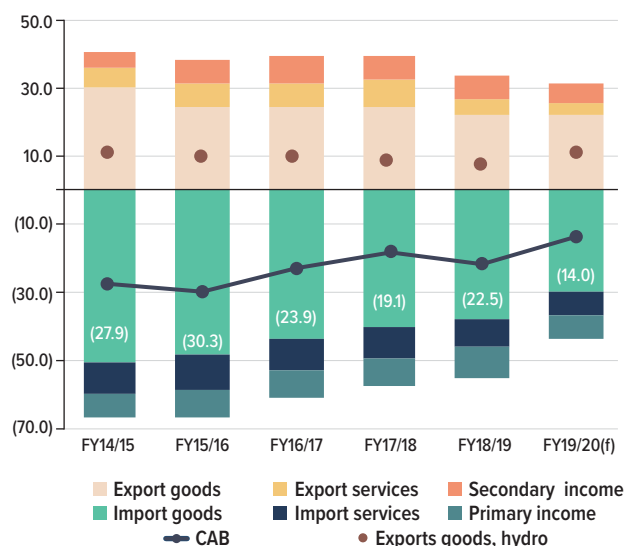
d. External Sector

The CAD narrowed in FY2019/20 as a result of muted export and import demand amid COVID-19. Bhutan has large structural trade deficits, as hydropower investments require significant imports of capital goods along with other equipment and fuel. India is Bhutan's largest trading partner, accounting for around 95 percent of its exports (including electricity exports) and 82 percent of imports in 2019. Exports and imports of non-hydro goods and services are believed to have decreased significantly in FY2019/20 in line with weak foreign and domestic demand and trade disruptions. However the reduction in imports had a greater overall impact on the trade balance and the CAD is estimated to have narrowed from 22.5 percent of GDP in FY2018/19 to 14 percent of GDP in FY2019/2020 (Figure 14). The CAD is mainly financed by capital flows from India for hydropower projects through a combination of grants and loans.³²

Total goods exports have remained stable as a share of GDP in FY2019/20, thanks to hydropower exports. Goods exports primarily comprise hydroelectricity (25.3 percent of total exports in 2019) and non-hydro commodity exports such as mineral products (31.4 percent) and base metals (28.8

³² The CA has been financed by surpluses in capital and financial accounts.

Figure 14. Current account components (percent of GDP)

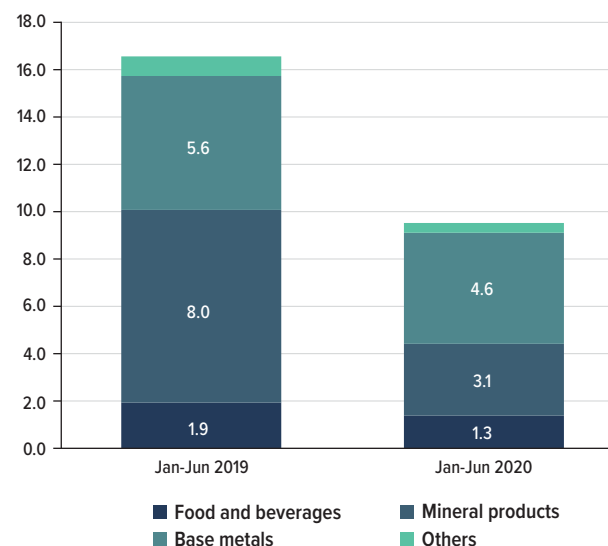


Source: RMA

percent).³³ Hydro exports are projected to have increased by 3.3 percentage points of GDP to 9.5 percent of GDP in FY2019/20 in line with higher production. However, domestic production of, and external demand for non-hydro goods from Bhutan have been affected by supply-side disruptions for critical inputs, labor shortages and the growth slowdown in India. The border closure and measures to facilitate safe cross-border trade resulted in temporary restrictions for exporting industries, including for mineral products.³⁴ Preliminary estimates indicate that total non-hydro exports decreased by 43 percent (year-on-year) in the second half of FY2019/20 (Figure 15).³⁵

Services exports fell sharply due to the halt in tourism in the second half of FY2019/20. Services exports mainly comprise tourism and transport services. While they increased by 8.2 percent in the first half of FY2019/20, in line with an increase in tourist arrivals, preliminary estimates suggest they fell by 35 percent in the third quarter of FY2019/20 (year-on-year) (Figure 16). As a result, services exports are

Figure 15. Non-hydro exports of selected goods, excl. electricity, 2019 and 2020 (Nu billion)



Source: MoF, WB staff estimates

expected to have decreased from 5 percent of GDP in FY2018/19 to 3.7 percent of GDP in FY2019/20.

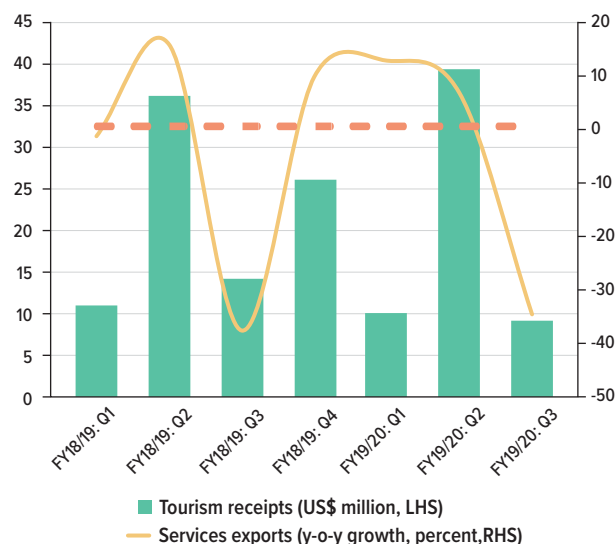
Import growth decelerated in FY2019/20 as the COVID-19 outbreak slowed public investment projects and construction works. Goods imports decreased by 4.8 percent (year-on-year) in the first half of FY2019/20. Construction works, including on ongoing hydropower projects Puna II and I, were adversely impacted by the crisis through shortages in skilled labor and raw materials. Preliminary estimates indicate that goods imports decreased by 15 percent (year-on-year) in the second half of FY2019/20. While food imports increased by 20 percent, imports of other goods including raw materials and fuel decreased by 24 percent and 16 percent, respectively. On balance, total goods imports are estimated to have decreased from 38.6 percent of GDP in FY2018/19 to 30.5 percent in FY2019/20.

International reserves remain at comfortable levels. Gross international reserves increased in the first ten months of FY2019/20 by 30 percent (year-on-year),

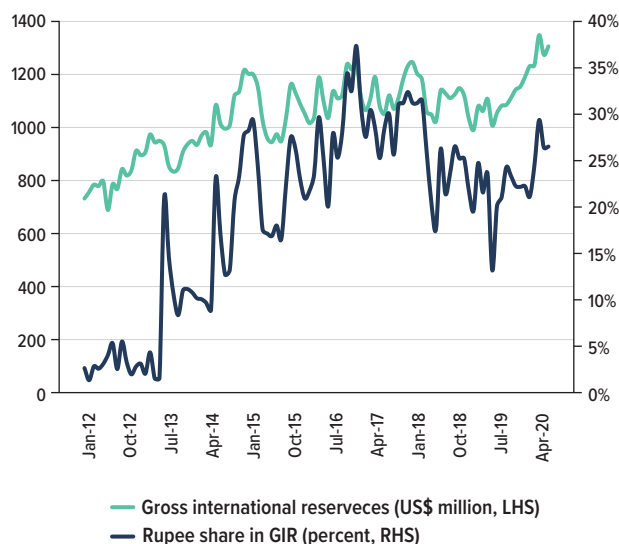
³³ MoF Annual Trade Report 2019.

³⁴ Export of boulders to Bangladesh and India from Samtse is expected to resume in August after three months. A dry port has been developed to facilitate boulder exports, with costs shared between the private sector and the government. See <https://kuenselonline.com/boulder-export-to-resume-in-samtse/> and <http://www.bbs.bt/bbsweb/public/News/View/storypage/101>

³⁵ Since no official trade data is available for 2020, the system on India's monthly trade was used to conduct a mirror trade analysis for Bhutan. India accounted for 75 percent of Bhutan's exports in 2019 (excl. electricity).

Figure 16. Tourism receipts and services exports

Source: RMA

Figure 17. Gross international reserves and percent share of Rupee reserves in total reserves

Source: RMA

to reach US\$1.29 billion in April 2020. This is equivalent to 13.6 months of imports of goods and services (Figure 17). International reserves have grown steadily over the recent years and reserve adequacy measures are met by a wide margin. The composition of reserves also improved after the rupee crisis in 2012-13, when Bhutan experienced a shortage of INR reserves. The share of INR has increased since and is better aligned with the country's external liabilities and trade structure.

e. Fiscal Performance

The fiscal balance deteriorated in FY2019/20, as the government implemented economic stimulus measures to lift the economy. Total expenditure is estimated to have grown by 27.4 percent in FY2019/20 in nominal terms (year-on-year), to reach 30.8 percent of GDP. The increase in spending was primarily driven by the increase in salaries and wages, and a pick-up in current spending. Total revenues and grants are

Table 1. External accounts

	FY14/15 (act)	FY15/16 (act)	FY16/17 (act)	FY17/18 (act)	FY18/19 (act)	FY19/20 (est)	Change
Export	35.7	31.0	31.1	31.5	26.7	25.6	(1.1)
Goods	29.4	24.0	24.2	24.0	21.6	21.9	0.3
Hydro	9.2	7.7	8.5	6.8	6.2	9.5	3.3
Non-hydro	20.2	16.2	15.7	17.2	15.5	12.4	(3.0)
Services	6.4	7.1	6.9	7.5	5.0	3.7	(1.4)
Import	(61.0)	(60.0)	(54.0)	(50.2)	(47.0)	(37.4)	9.6
Goods	(51.2)	(49.9)	(44.8)	(41.1)	(38.6)	(30.5)	8.1
Services	(9.9)	(10.0)	(9.2)	(9.1)	(8.5)	(6.9)	1.5
Primary income	(6.7)	(8.3)	(8.6)	(8.4)	(8.8)	(7.2)	1.7
Secondary income	4.1	7.0	7.6	8.1	6.7	5.0	(1.7)
Current Account	(27.9)	(30.3)	(23.9)	(19.1)	(22.5)	(14.0)	8.5

Source: RMA, WB staff estimates



believed to have increased by 11.6 percent (year-on-year) to 27.7 percent of GDP in FY2019/20. As a result, the fiscal balance is expected to have deteriorated from a surplus of 0.7 percent of GDP in FY2018/19 to a deficit of 3.1 percent of GDP in FY2019/20 (Figure 18). Financing needs in FY2019/20 have been mainly covered by external borrowing from multilateral and bilateral partners at concessional terms, while domestic borrowing has been limited.

Total revenue has increased thanks to hydropower-related revenues and external grants (Figure 19). Hydropower revenues are estimated to have increased from 4.3 percent of GDP in FY2018/19 to 7 percent of GDP in FY2019/20 thanks to a one-off profit transfer from the commissioning of the Mangdechhu hydro power plant (2.1 percent of GDP) and higher production. By contrast, non-hydropower revenues are believed to have decreased from 15.4 percent of GDP in FY2018/19 to 13.9 percent in FY2019/20, mostly reflecting the discontinuation of excise duty refunds from India and the closure of tourism due to COVID-19. Direct tourism-related revenues are estimated to have decreased from 1.1

percent of GDP in FY2018/19 to 0.5 percent of GDP in FY2019/20.³⁶ This was somewhat offset by an increase in profit transfers from RMA (0.8 percentage points). The tax-to-GDP ratio is projected to have decreased from 15.4 percent of GDP in FY2018/19 to 13.4 percent of GDP in FY2019/20, its lowest level since 2008/09.³⁷ Tax collection was low by international standards before the COVID-19 crisis, primarily because of a narrow tax base, widespread exemptions, and a limited share of the private sector in the economy. External grants, which mainly cover capital expenditures under the FYPs, are projected to have increased from 6 percent of GDP in FY2018/19 to 6.9 percent of GDP in FY2019/20, in line with the increase in capital expenditure.

Expenditure growth has been driven by an increase in current spending in response to the pandemic induced crisis and the salary increase (Figure 20). Total spending is projected to have increased from 25 percent of GDP in FY2018/19 to 30.8 percent of GDP in FY2019/20. The government has increased current spending toward measures to contain the pandemic and ensure public health, stock essential goods

³⁶ Government revenues directly related to tourism include the Sustainable Development Fee (SDF), visa fees and Tax Deduction at Source (TDS) from tour income.

³⁷ The tax-to-GDP ratio is low by international standards, primarily because of a narrow tax base, widespread exemptions and a nascent private sector.

Figure 18. Fiscal accounts components (percent of GDP)

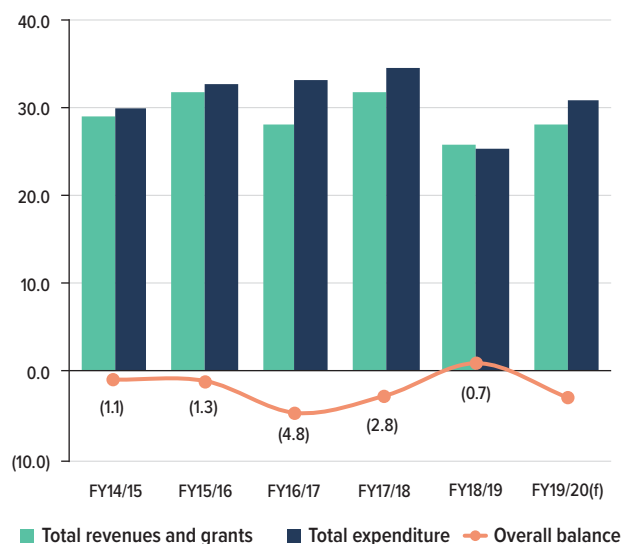
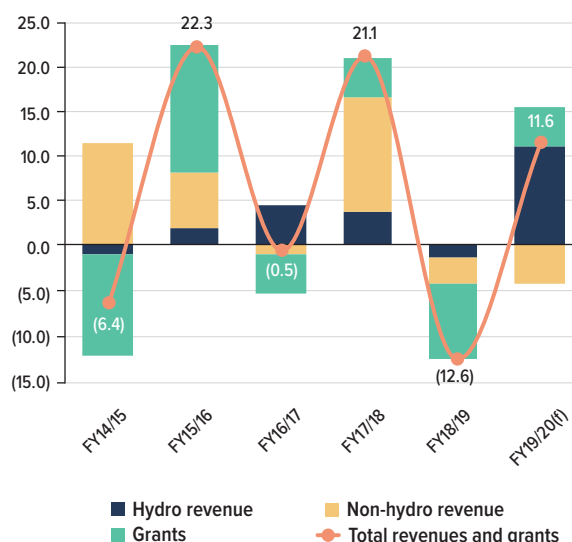


Figure 19. Contribution to revenue growth by type (percentage points)



and fuel, and other activities to ensure public safety. It also implemented fiscal and monetary measures in the fourth quarter of FY2019/20 to provide immediate relief to affected individuals and businesses as part of its *Comprehensive Response to COVID-19* (see **Box 3**). To limit the impact on spending the response measures were partially financed through internal reprioritization and technical adjustments. The government has also set up the NRF³⁸ to implement additional COVID-19 related policy measures, including an interest waiver (50 percent was covered through the NRF) and a cash-transfer program. Salaries and wages are estimated to have increased by 2.8 percentage points to 10.4 percent of GDP in FY2019/20 due to salary increases, which is mainly financed by the one-off profit transfer from the Mangdechhu hydropower project.³⁹ Capital expenditures are believed to have remained subdued at 10.3 percent of GDP in FY2019/20 as the government strove to reduce non-priority spending.

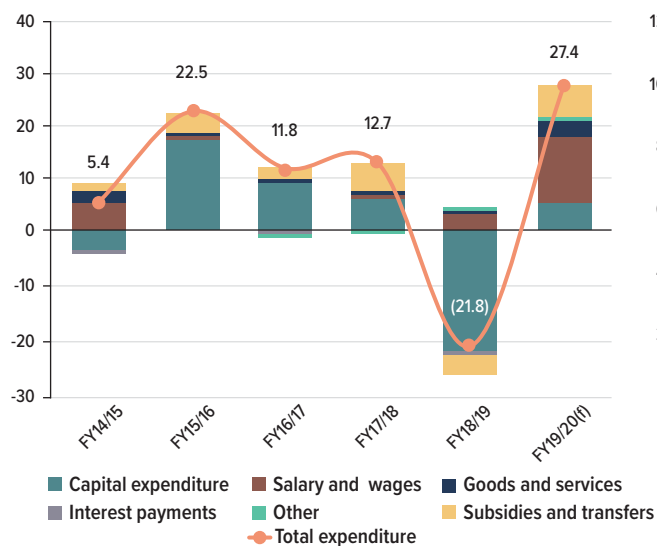
Public debt levels have increased, but risks are moderate as most of the external debt is linked to hydropower project loans from India. External debt

increased significantly over the past two decades, driven by borrowing for hydropower projects. Public debt as a share of GDP is high, estimated at 109.1 percent of GDP at the end of FY2019/20 (**Figure 21**). Hydropower debt accounts for 75.5 percent of the total debt stock. However, the 2018 *Debt Sustainability Analysis* (DSA) carried out jointly by the International Monetary Fund and the World Bank assessed Bhutan to be at moderate risk of debt distress.⁴⁰ This is because, around 95 percent of total debt has long-term maturities, and 74.3 percent is linked to hydropower project loans from the Government of India (74.3 percent of GDP). These loans are governed by an intergovernmental agreement in which the Government of India covers both financial and construction risks of the hydropower projects and buys surplus electricity at a price reflecting cost plus a 15 percent net return. This debt is denominated in rupees, electricity export receipts are also in rupees and the Bhutanese currency is pegged to the rupee, which means there are no exchange rate risks. In addition, debt service begins only after the projects are on-streamed. Domestic debt remains a small share of GDP (2.2 percent).

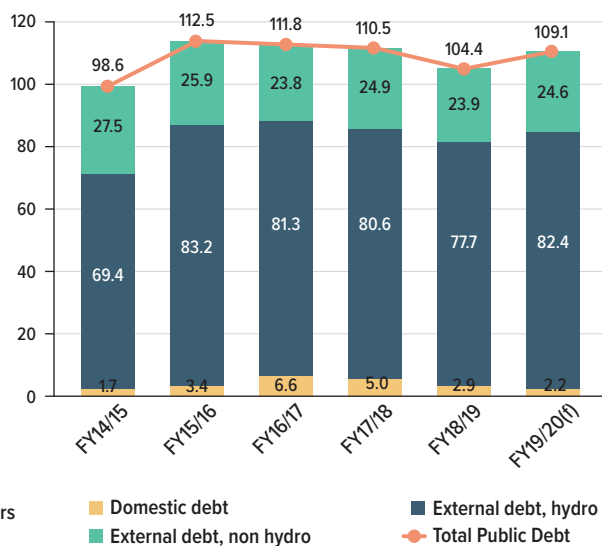
38 The NRF with a size of Nu30 billion (15.6 percent of 2019/20 GDP) will be managed by the Ministry of Finance, and all spending will be routed through the budget. The fund will receive both domestic and external funds, which will cover additional spending on COVID-19 related measures.

39 The government formulated the Fourth Pay Commission in January 2019. The report was prepared based on three principles: (a) protecting erosion of income from past-unadjusted inflation, (b) linking salary to performance, and (c) enhancing the post-retirement benefits. Also, to improve effectiveness and efficiency, the report recommends introducing performance-based incentives (PBI).

40 The next joint IMF-World Bank DSA for Bhutan is scheduled for 2020.

Figure 20. Contribution to expenditure growth by type (percentage points)

Source: MoF

Figure 21. Public debt (percent of GDP)**Table 2. Fiscal accounts**

	FY14/15 (act)	FY15/16 (act)	FY16/17 (act)	FY17/18 (act)	FY18/19 (act)	FY19/20 (est)
Overall balance	(1.1)	(1.3)	(4.8)	(2.8)	0.7	(3.1)
Primary balance	0.5	0.3	(3.5)	(1.5)	1.6	(2.1)
Revenue	29.6	30.7	28.0	31.9	23.8	28.0
Hydropower revenue	3.3	3.5	4.4	5.1	4.3	7.0
CIT	1.7	1.9	1.6	1.4	1.1	1.2
Royalties	0.0	0.1	0.1	1.2	1.3	1.4
Dividend	1.5	1.4	2.7	2.5	1.9	2.3
Transfer of profit	-	-	-	-	-	2.1
Non-hydro revenue	18.2	16.5	15.1	17.7	13.6	14.2
Direct	6.1	5.6	5.2	5.9	5.7	6.2
Indirect	7.2	6.9	7.3	8.1	7.3	4.7
Non-tax	5.0	4.0	2.6	3.8	0.6	3.3
Grants	8.1	10.9	8.5	9.1	6.0	6.9
Other	0.9	(0.6)	(0.0)	0.2	(1.8)	0.3
Expenditure	29.8	32.7	32.8	34.5	25.0	30.8
Current expenditure	17.2	16.7	15.8	16.8	15.7	20.5
Compensation of employees	8.7	8.0	7.2	7.0	7.6	10.4
G/S	4.7	4.5	4.3	4.2	4.1	4.6
Interest payments	1.7	1.5	1.3	1.3	0.9	1.0
Transfers and subsidies	1.6	2.3	2.7	4.0	2.6	3.9
Other	0.5	0.4	0.4	0.4	0.5	0.6
Capital expenditure	12.6	15.9	17.0	17.6	9.2	10.3

Source: MoF, WB staff estimates

Box 3. Unpacking the *Comprehensive National Response to COVID-19*

The budget FY2020/21 outlines the government's Comprehensive National Response to COVID-19. Short- to medium term policy actions to ensure public health and safety, maintain public confidence, macroeconomic stability and economic transformation are outlined below. The government has announced policy measures in Phase II of the *National Response to COVID-19* at the end of June, which are also included below.

Health measures are aimed at containing the pandemic and protecting health, and strengthening healthcare system resilience. The NPRP has been developed to strengthen disease surveillance, detection and prevention and ensure effective treatment. The government has reprioritized FY2019/20 budget for the procurement of protective material, drugs and medical equipment, and provisions for quarantine facilities. Budget allocations to the health sector in FY2020/21 focus on ensuring adequate medical supplies for all hospitals and health units, increasing public hospital capacity, and advancing the health flagship programs of the 12th FYP (gastric cancer, cervical cancer and breast cancer programs).

A cash transfer program and measures to increase food security were included to protect vulnerable households. Vulnerable households have been supported through His Majesty's **cash transfer program** (Druk Gyalpo's Relief Kidu, funded through the NRF), which provides immediate financial support for individuals who have been laid off, placed on unpaid leave or on reduced pay from businesses, as well as self-employed individuals who have lost their earnings either partially or completely.¹ The program was scheduled to last for three months initially (April-June 2020), and has been extended until September 2020 under Phase II. The government has also taken policy actions to **increase food and nutrition security**, through securing food stocks, and incentives to boost domestic food production and distribution. Nutritious food will be provided to more than 12,000 vulnerable children in the absence of the school feeding program, and the government has increased efforts to monitor and contain rising prices.²

Economic measures to stabilize the economy and stimulate growth focus on the agriculture, tourism and construction sectors. The government has implemented a set of fiscal and monetary policy measures to provide immediate relief to affected individuals and businesses (initially for the period April-June 2020). Most of these initial measures were extended in Phase II of the *Comprehensive National Response to COVID-19*. In addition, the government aims to revitalize the rural economy and create employment opportunities through the frontloading/re-prioritization of 12th FYP activities and the implementation of the ECP with particular emphasis on the agriculture, tourism and construction sectors.

- **Fiscal measures** include (i) interest waiver on loans for six months until September 2020, followed by a partial interest waiver (50 percent) for six months until March 2021;³ (ii) deferment of Corporate Income Tax (CIT) and Business Income Tax (BIT) filing until June 2020, and further deferment until December 2020 for tourism and allied sectors; (iii) deferment of sales tax and customs duty on essential items to facilitate import of essential items until June 2020; (iv) monthly rent waiver on leased government property for the tourism sector; (v) deferment of electricity bills for industries, (vi) simplified procurement rules and regulations to implement the ECP.
- **Monetary measures** include (i) working capital at concessional rates to wholesalers, tourism sector, and manufacturing industries to import raw materials, as well as bridging loans for business entities to ensure business continuity; (ii) micro loans at concessional interest rates for the agriculture and CSI sectors through the National CSI Development Bank. In Phase II, all monetary measures have been extended until June 2021. In addition, RMA has reduced the CRR to increase liquidity in the banking system.⁴
- The **ECP** focuses on three core programs. The *Agriculture and Farm Road Improvement Program* aims to strengthen food security through increased domestic agricultural and livestock production and new employment opportunities. This includes the improvement of farm roads to increase access to markets and reduce transport costs. Activities under the *Tourism Resilience Program* include training programs for tourism personnel in tourism and hospitality, as well as re-skilling programs for deployment

1 Affected people can apply online and upon verification, will receive a cash transfer of Nu12,000 (US\$160) per person per month for April-June 2020, and a reduced amount of Nu10,000 (US\$130) per person per month from July-September 2020. About 23,000 individuals have received the DGRK for the months of April-June for which Nu700 million (US\$9.3 million) has been disbursed.

2 For more information, see WB note on COVID-19 and food security in Bhutan, 2020.

3 Of the first 3 months, 50 percent is funded through the NRF. The remaining 9 months are fully funded through the NRF, with an estimated amount of Nu7.5 billion (US\$99.3 million).

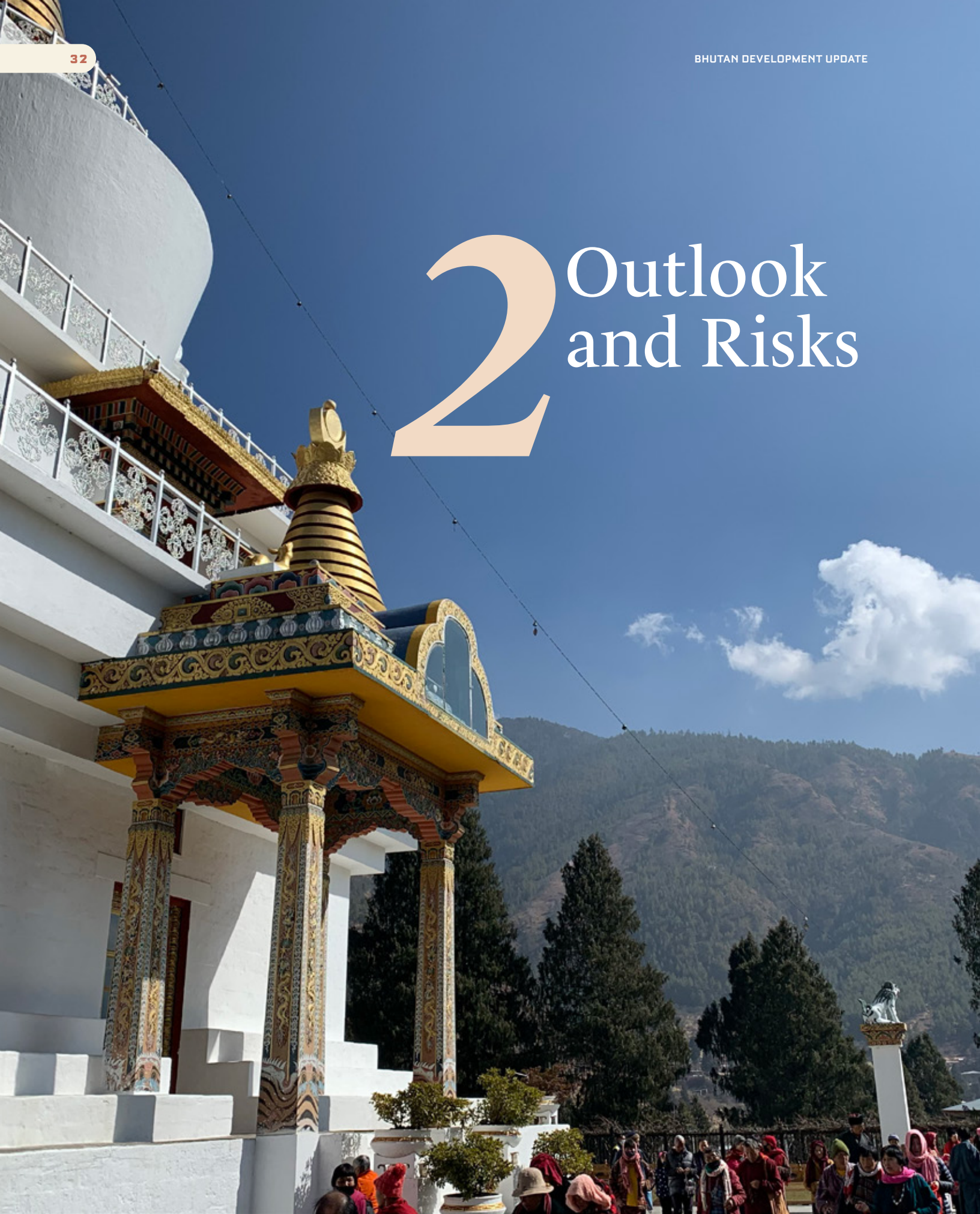
4 Monetary measures under Phase II also include a liquidity window facility (interbank borrowing system) to meet temporary funding requirements and ease liquidity constraints within the financial system and the revision/easing of prudential regulations, including the Capital Adequacy Ratio (CAR), and Statutory Liquidity Ratio (SLR).



in the construction sector. The *Build Bhutan* project aims to increase domestic labor in the construction sector through the *Youth Engagement and Livelihood Program* (YELP) and skills training.

The COVID-19 policy measures are aligned with the 12th FYP and its flagship programs. The 12th FYP is dedicated to creating a “Just, Harmonious and Sustainable Society through enhanced Decentralization”. The government will advance flagship programs under the 12th FYP through the FY2020/21 budget. Programs including *Digitalizing Bhutan*, increasing the use of digital technologies in schools, *Growing Organic*, *Redefining Tourism*, and *Managing Waste* have been leveraged through the COVID-19 response and could increase future resilience. The RGoB is currently drafting the *21st Century Economic Roadmap*, which will outline Bhutan’s long-term vision. The overall objective is to create economic opportunities for the next generation and become a ‘High Income Gross National Happiness (GNH) Society’ by 2030.

2 Outlook and Risks



a. Outlook

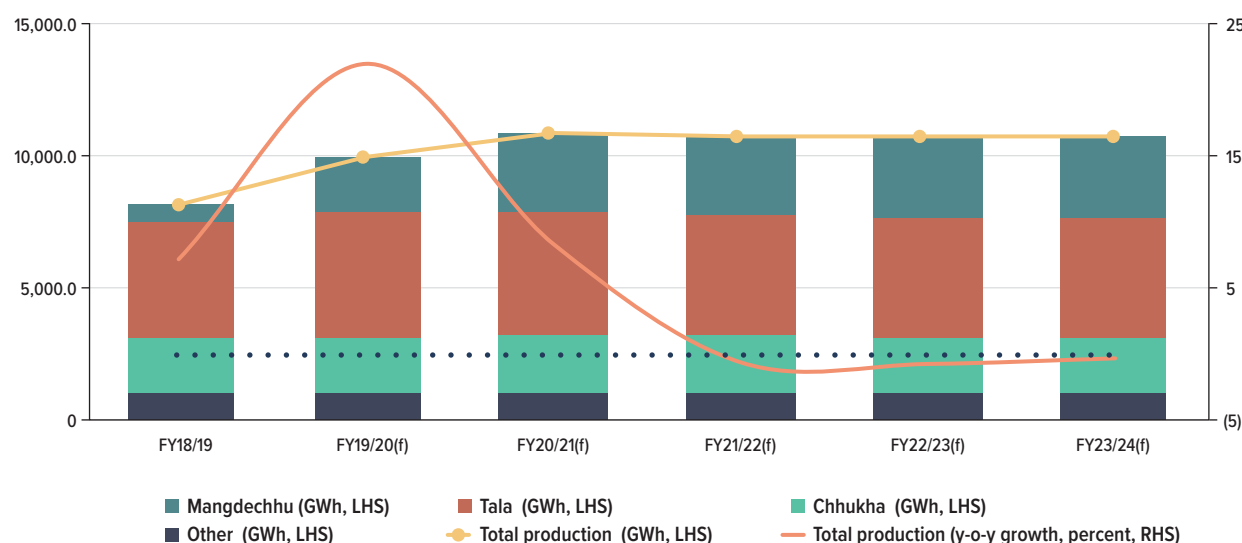
The crisis is expected to have significant and possibly long-lasting effects on Bhutan's economy. Economic growth is expected to slow markedly, averaging around 2.5 percent per year over the medium term – well below the pre-COVID five-year average of 5.5 percent. The tourism sector is not expected to return to its pre-COVID-19 level in the short term given that travel restrictions in Bhutan will likely hold until at least early 2021, dampening services sector growth.⁴¹ India's real GDP is projected to contract materially in FY2020/21 and its economy will rebound only gradually in FY2021/22.⁴² The slowdown in India is expected to weigh on the manufacturing and exporting industries, and the construction sector is likely facing a protracted slowdown in the medium term due to a limited pipeline of public sector infrastructure projects and labor shortages. The COVID-19 induced crisis is expected to further delay completion of Puna I and II beyond the projection period. Finally, as hydropower production levels are expected to reach capacity in FY2020/21, industry sector growth is expected to be moderate in the medium term (Figure 22).

Inflation is expected to remain elevated in the short term, mainly due to food price inflation, before moderating in the medium term. Food prices are expected to gradually decrease in the medium term, in line with food prices in India. Non-food inflation is projected to remain moderate, supported by low oil prices. As a result, headline inflation is projected to increase to 5 percent in FY2020/21 before moderating to around 2.7 percent in the medium term.

The CAD is expected to remain narrow over the medium term as COVID-19 related disruptions weigh on exports and imports. Hydropower exports are projected to stabilize, in line with production capacity. Non-hydro goods and services exports are expected to increase gradually over the medium term, supported by a slow recovery in demand from India and in the tourism industry. Import growth is projected to decelerate as the COVID-19 outbreak dampens investment projects and hydropower construction. International reserves are projected to remain adequate at 10.3 months of next year's imports of goods and services by end-2022/23.

The fiscal deficit is projected to remain elevated in the medium term as non-hydro revenues

Figure 22. Hydropower production, estimated capacity and production growth



Source: MoF, WB staff estimates

41 The Tourism Council of Bhutan (TCB) indicates that tourism sector may open up in January 2021. <https://kuenselonline.com/convertible-currency-earnings-hit/>

42 India Development Update, August 2020. The fiscal year runs from April 1 through March 31 in India.

Table 3. Main macroeconomic indicators

	FY14/15 (act)	FY15/16 (act)	FY16/17 (act)	FY17/18 (act)	FY18/19 (act)	FY19/20 (est)	FY20/21 (est)	FY21/22 (est)	FY22/23 (est)
Real GDP growth	6.2	7.4	6.3	3.8	3.8	1.5	1.8	2.0	2.8
Agriculture	3.4	4.4	3.6	3.7	3.8	2.5	3.1	3.5	4.0
Industry	6.0	7.6	4.7	-1.2	-1.6	3.7	2.0	1.5	1.5
Services	8.4	9.2	8.2	7.9	9.9	-0.6	1.3	2.2	3.6
Inflation (CPI)	6.7	3.3	4.3	3.7	2.8	3.2	5.0	2.8	2.7
GDP deflator		4.0	4.7	3.4	2.6	3.0	4.6	2.6	2.4
Current Account Balance (% GDP)	-27.9	-30.3	-23.9	-19.1	-22.5	-14.0	-13.8	-12.3	-12.1
Fiscal balance (% GDP)	-1.1	-1.3	-4.8	-2.8	0.7	-3.1	-6.7	-5.3	-4.3
Revenue	29.6	30.7	28.0	31.9	23.8	28.0	24.5	24.6	25.0
Hydropower revenue	3.3	3.5	4.4	5.1	4.3	7.0	7.0	5.9	5.9
Non-hydro revenue	17.3	17.1	15.1	17.5	15.4	13.9	10.3	11.8	12.3
Grants	8.1	10.9	8.5	9.1	6.0	6.9	6.9	6.9	6.8
Expenditure	29.8	32.7	32.8	34.5	25.0	30.8	30.9	29.9	29.3
Current expenditure	17.2	16.7	15.8	16.8	15.7	20.5	20.5	20.3	19.8
Interest Payments	1.7	1.5	1.3	1.3	0.9	1.0	1.0	1.6	1.6
Salary and Allowances	8.7	8.0	7.2	7.0	7.6	10.4	10.1	9.6	9.3
Goods and Services	4.7	4.5	4.3	4.2	4.1	4.6	4.6	4.5	4.4
Subsidies and Transfers	1.6	2.3	2.7	4.0	2.6	3.9	4.2	4.1	4.0
Other	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6
Capital expenditure	12.6	15.9	17.0	17.6	9.2	10.3	10.4	9.6	9.5
Debt (% GDP)	98.6	112.5	111.8	110.5	104.4	109.1	108.8	109.1	108.8

Source: MoF, WB staff estimates

remain subdued and the government implements the COVID-19 relief and recovery package. Hydro-power revenue is projected to increase in the short term, boosted by the one-off profit transfer from the commissioning of the Mangdechhu power plant in FY2019/20 and FY2020/21, before returning to pre-COVID levels (as a share of GDP).⁴³ Non-hydro revenues are expected to remain below pre-COVID levels in the medium term due to subdued economic growth, with some revenue gain from the planned introduction of the GST in 2021/22.⁴⁴ External grants, which are based on bilateral agreements with India and mainly cover capital expenditures, are expected to remain subdued as the government reduces non-priority spending. Current expenditure is projected to remain elevated over the projection period as the government implements the COVID-19 relief and recovery package (Box 3). Financing needs are projected to be covered mainly by external borrowing from multilateral and bilateral partners, net lending – principal recoveries from the Mangdechhu hydropower project,⁴⁵ and domestic financing.

Public debt is expected to remain elevated as a share of GDP due to low economic growth, before gradually declining over the medium-term. The government has decided not to participate in the G20 Debt Service Suspension Initiative (DSSI).

b. Risks and Challenges

Risks to the outlook are firmly to the downside, with a domestic COVID-19 outbreak being the most acute risk. There remains a high degree of uncertainty over Bhutan's growth trajectory due to the evolving situation related to the pandemic, including the recently announced nationwide lockdown and mobility restrictions. The most acute risk is a large-scale domestic outbreak of COVID-19, which would have substantial societal and economic costs. Other domestic risks include lower hydropower production and delays in the implementation of the GST.

Electricity production strongly depends on water availability and weather patterns. Lower than expected rainfall would negatively impact growth and reduce electricity exports and government revenues. Slower than expected implementation of the GST would affect fiscal outcomes, because of the discontinuation of excise duty refunds and lower levels of grant financing from India. The introduction of the GST in FY2020/21 and other revenue measures are critical to offset the decline in excise duties and grant financing in the medium to long term.

The contingent liabilities in the financial sector constitute another source of risk. Asset quality is expected to deteriorate further. It is thus crucial to assess the maximum exposure from contingent liabilities in the financial sector, through an in-depth assessment of vulnerable sectors, as well as the possible magnitude of providing emergency liquidity to banks and NBFIs. In the medium term, a revised loan classification requirement could be considered to reduce seasonal fluctuations in NPLs.⁴⁶

External risks include a protracted global pandemic and a slower recovery of economic activity in India. A protracted global pandemic with precautionary behaviors and restrictive policies remaining in place for several months could reduce economic growth further and delay the recovery. The slowdown in India and resulting cross-border spillovers could be more severe than expected, reducing the demand for non-hydro exports further, and possibly even for hydro exports. Even if the domestic outbreak remains under control and mitigation measures are lifted, a recovery in the tourism sector may be delayed due to international travel restrictions and changing consumer behavior.

The COVID-19 pandemic is an unprecedented situation that requires rapid and coordinated policy responses. The immediate challenge for the RGoB is to implement the *Comprehensive National Response to COVID-19*. Overall leadership and coordination in the implementation of the strategy will be critical

43 The peak in hydropower revenue in 2019/20 and 2020/21 is due to one-off profit transfer revenues associated with the commissioning of new hydropower plants.

44 The GST act was enacted in July 2020, and will be implemented in July 2021. The standard GST rate is 7 percent, the minimum turnover threshold is Nu5 million. The GST will replace the sales tax and certain other indirect taxes.

45 Net lending includes on-lending to state-owned enterprises (SOEs) (including the hydropower sector), and principal recoveries from SOEs.

46 For instance, there could be an extended period before an impaired loan can be reclassified as performing, which would also help addressing the sharp seasonal fluctuations in NPLs that characterizes Bhutan's financial sector.



to ensure its effectiveness. Delivering clear and reliable communication messages and designing health and hygiene protocols will also be important to create and maintain consumer trust as the country eases travel restrictions in the future.⁴⁷

The COVID-19 pandemic has highlighted Bhutan's vulnerabilities and development challenges such as a lack of economic diversification and job creation. Bhutan relies heavily on hydropower generation for tax revenue and foreign exchange. The public sector, the largest formal employer, employs about 20 percent of the workforce and the hydropower sector, which accounts for about 26 percent of GDP, employs less than 1 percent.

Establishing an enabling environment for the private sector is critical to create more jobs, particularly for youth and in rural areas. Bhutan relies heavily on state-owned enterprises (SOEs) to provide essential goods and services because the domestic market is small and the private sector embryonic. Structural reforms are needed to create incentives for private sector investments, including in sectors with high potential for job creation, such as agriculture/agribusiness, forestry, and tourism. With the need to reinvigorate growth and create jobs, the RGoB has increased its emphasis on strengthening the rural economy and elevated the importance of addressing financial sector vulnerabilities and economic diversification.

⁴⁷ WB (2020). COVID-19 and Tourism in South Asia. Opportunities for sustainable regional outcomes. Other recommendations for policy actions include (i) destination upgrades and reinvestment in the environment, in parks, and cultural monuments; (i) providing accessible skills training in digital communication, health operations, and contact-free service, and (iii) regional collaboration.

The recovery phase offers a window of opportunity for key structural reforms to address these weaknesses, accelerate recovery and build resilience. The RGoB could consider focusing on building resilience in the tourism and agriculture sector, including forestry. For instance, employment and re-skilling programs under the ECP could be aligned with the future requirement of labor and skills as outlined in the forthcoming *21st Century Economic Roadmap*. In the agriculture sector, the government could leverage technologies and innovation in agriculture, climate-resilient agriculture practices and

nutrition-sensitive production, as well as opportunities in organic production and value chain development. The *Agriculture Stimulus Plan* under the ECP could be aligned with the *National Organic Flagship Program* of the 12th FYP, which highlights Bhutan's comparative advantage in organic production. The special section of the BDU illustrates pathways to unlock the untapped economic potential of Bhutan's forests by promoting sustainable forest management and natural resources while supporting the objective of remaining a carbon-neutral and equitable economy.

3 SPECIAL SECTION: Pathways to Enhancing Sustainable Forest Management and Equitable Socio-economic Development in Bhutan



a. Introduction

The Kingdom of Bhutan is a **high forest cover, low deforestation (HFLD) country**. It is globally known for its efforts to conserve biodiversity and its philosophy of Gross National Happiness (GNH). Thanks to Bhutan's effective and rigorous forest conservation framework, forest cover has increased over the past decades and deforestation is well curbed. However, the forestry sector has the potential to contribute significantly more to the economy and peoples' livelihoods.

Bhutan's economic growth objectives and development aspirations require proactive management of its natural resource endowment. Studies have shown that Bhutan can increase its forest utilization, providing much needed rural employment, without jeopardizing its conservation achievements. But the current forest governance system primarily supports forest conservation, while opportunities for sustainable forest management (SFM) matching the country's development aspirations are not explored to the fullest.

- **While the total potential area for harvesting is 16 percent of the total forest area of Bhutan, only 7.3 percent is currently under commercial management owing to the difficult terrain and limited wood processing technologies.** Even within the 7.3 percent, only conifer areas are harvested and marketed, and operation of broad leaf areas are downscaled due to limited demand and poor processing technologies. While in rural areas livelihoods are largely dependent on the sustainable use of natural resources (agriculture and forestry), forests contributed only about 3 percent (US\$73 million) to GDP in 2018. This does not include the contribution of the forestry sector in terms of rural timber subsidies, timber for disaster victims,

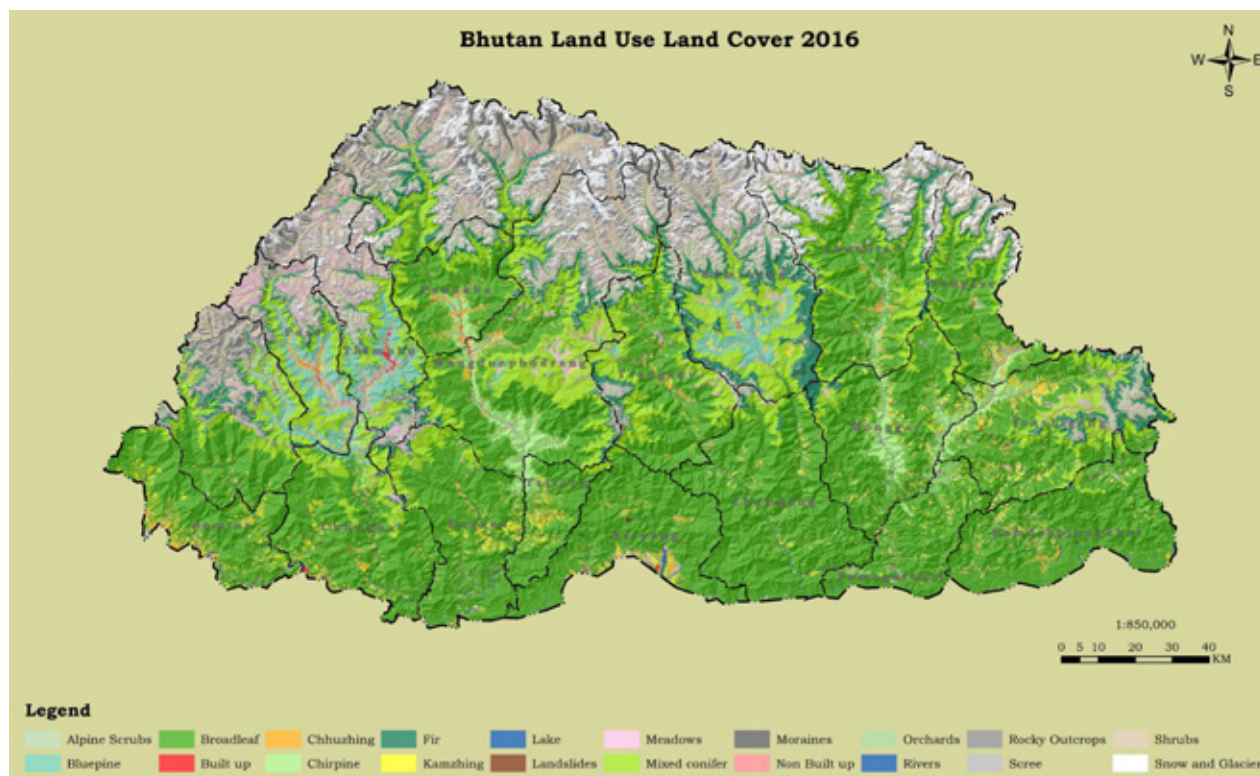
timber for construction and renovation of important monuments and other national projects. Meanwhile a lack of rural income sources and employment are fueling rural-to-urban migration, which is perceived as a national challenge. While Bhutan clearly prioritizes environmental benefits through its forest policies, there is a clear rationale for a more balanced approach toward SFM allowing for synergies between environmental conservation and economic development objectives. Improving the productivity of Bhutan's forestry sector, building up forest-based small and medium enterprises, and developing new job opportunities in the wood-based and construction industry would generate private sector jobs, more revenue for the government, and higher or new income sources especially for the rural population, as well as non-monetary co-benefits linked to increased resilience, climate change mitigation, and biodiversity conservation.

- **The forestry sector will be crucial for contributing to the development goals of the RGoB.** The sector has potential to increase its contribution to Bhutan's economy, create new job opportunities and improved livelihoods for the population without compromising forest cover and quality. In order to realize this potential, however, Bhutan's forest sector needs to be sustainably modernized considering the country's uniqueness with regard to size, geography, culture and focus on forest conservation.

b. Bhutan's Forests

Bhutan's forests account for about 71 percent of the total land area (Figure 23).⁴⁸ The Constitution mandates to maintain 60 percent forest cover in perpetuity (RGoB 2008). Bhutan's forests consist of broadleaf

⁴⁸ The definition of forest used in Bhutan: land with trees spanning more than 0.5 hectare with trees higher than 5 meters and a canopy cover of more than 10 percent.

Figure 23. Land Use: Land Cover Map of Bhutan, 2016

Source: FRMD 2017.

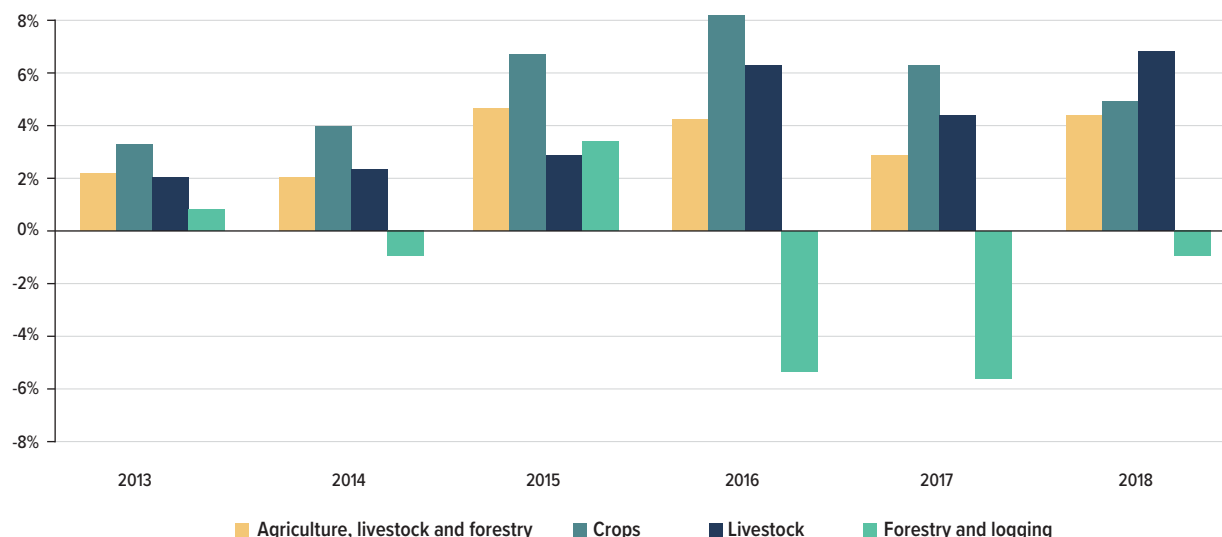
(45.9 percent), mixed conifer (13.5 percent), fir (6.0 percent), chir pine (2.6 percent), and blue pine (2.6 percent). Other land uses and land covers include shrubs (9.7 percent), snow cover (5.4 percent), rocky outcrops (4.2 percent), alpine scrub (3.4 percent), cultivated agricultural land (2.8 percent), and meadows (2.5 percent) (FRMD 2017).

Bhutan is a global biodiversity hotspot. Centuries of isolation from the international exchanges, a small population, topographical extremes, and a conservation-oriented development approach have all contributed to Bhutan's enormous biodiversity wealth. The country falls within the Indo-Burma biodiversity hotspot, which is among the 34 biodiversity hotspots in the world, with Bhutan having the highest species density and a high degree of endemic flora and fauna (Banerjee and Bandopadhyay 2016; WWF Bhutan 2016). Furthermore, Bhutan has an abundant reservoir of water resources with over 3,000 lakes, high altitude

wetlands, and a wide net of rivers and streams that provide water for Bhutan and neighboring countries (MoAF 2012). The total annual value of ecosystem services⁴⁹ provided by Bhutan's forests, including food, timber, water and energy, has been estimated between US\$394 million to US\$1,269 million (WMD, 2019).

About 51 percent of the total land area is within Bhutan's protected area (PA) network. Bhutan has five national parks, four wildlife sanctuaries, one strict nature reserve, and eight biological corridors (BCs) (DoFPS 2016). The sustainable use of natural resources by local people living in PAs is allowed except in core zones. While PAs are managed by park offices, the BCs are managed by respective forest divisions. The estimated expenditure (of US\$3–\$4) per hectare of PA in Bhutan is at the lower end of the range of expenditure values considered as sufficient for PA management (Damania et al. 2008).

⁴⁹ Ecosystem Services are benefits people derive from ecosystems, such as goods (i.e. wood and other raw materials, plants, animals, fungi and micro-organisms) and services (i.e. pollination of crops, prevention of soil erosion and water purification, and a vast array of cultural services, like recreation).

Figure 24. Renewable Natural Resources (RNR) Sector Growth (constant prices, percent)

Source: MoAF 2019.

Bhutan is internationally recognized as a leader in nature conservation and champion for the environment. The country has ratified international conventions such as the United Nations Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), the United Nations Convention to Combat Desertification (UNCCD), and the Ramsar Convention on Wetlands. Bhutan is currently the only carbon-negative country globally. In the Nationally Determined Contribution (NDC) submitted to the COP21 (Conference of the Parties) of the UNFCCC in December 2015 in Paris, Bhutan reaffirmed to remain carbon neutral and pursue a low-emission development path in support of the commitments of the Paris Agreement (NEC 2015).

c. Role of Forests in the National Economy

Current Contribution

Only a small fraction of forests is currently utilized. Due to difficult terrain and lack of advanced forest harvesting and processing technologies, only 7.3 percent of Bhutan's total forest area is currently used for commercial forest production through

Forest Management Units (FMUs) (NSB 2018a). In addition, forest area designated as Community Forests (CFs) accounts for 3.3 percent of the total forest area (DoFPS 2018). The forest area utilized by rural households for subsistence use through formal Local Forest Management Plans (LFMPs) accounts for another 4.8 percent of the total forest area (DoFPS 2018) (Feuerbacher et al. 2019). Hence, approximately 15 percent of Bhutan's forests are managed through approved FMUs, CFs and LFMPs. Forests inside the protected area networks are currently accessed by rural communities for subsistence consumption. Women are strongly engaged in community forestry and contribute to forest conservation.

The forestry sector constitutes an important but underutilized and undervalued economic sector of the economy. According to Bhutan's national accounts, forestry contributed between 2.4 percent and 3 percent to gross value added between 2013 and 2018 (NSB 2019). This does not include the contribution of the forestry sector in terms of rural timber subsidies, timber for disaster victims, timber for construction and renovation of important monuments and other national projects. From the early 2000s onward, the forestry sector's contribution to real GDP has experienced a steady decline, and since 2016, the growth rate of the sector has been negative (Figure 24). The forest sector's small contribution to GDP is also reflected in low employment numbers. In 2012, only 0.5 percent of Bhutan's labor force (1,500 workers)

worked in forestry according to the Bhutan Living Standard Survey (BLSS) 2012 (NSB and ADB 2012). Different forest resource assessments show that Bhutan could substantially increase its forest utilization with the availability of advanced harvesting and processing technologies (MoAF 2014; Schindele 2004), hence creating new job opportunities and contributing to economic growth.

Despite a large growing stock in Bhutan's forests, forest productivity remains low. Bhutan's latest National Forest Inventory (FRMD 2016) assessed the total growing stock of Bhutan's forests at 1,001 million cubic meters and average growing stock at 261 cubic meters/hectare.⁵⁰ For timber harvesting, an annual allowable cut (AAC) is determined to allow sustained yield-based harvesting of timber. In Bhutan, the AAC is determined by a combination of area, volume, and rotation age. Current timber harvesting levels are below AAC set for FMUs mainly due to the frequent breakdown of old equipment (for example cable cranes), inadequate equipment, lack of skilled manpower and unexpected weather conditions (for example changing rainfall patterns). Even if Bhutan harvests timber within the sustainable levels, demand needs to be increased for selected broadleaved species for which advanced wood processing technologies will be required.

Rural households receive preferential access to timber. For the construction and renovation of rural houses, they are eligible to receive a fixed quantity of timber at discounted royalty through the subsidized Rural House Building Timber (RHBT) program (Sears et al. 2017). For the subsistence use of fuelwood, rural households are granted an annual extraction quota of either 8 or 16 cubic meters of stack volume, depending on whether they have access to electricity or not (RGoB 2017). FMU accounts for only 56,641 m³ while the rural house building timber accounts for 2,00,316 m³ timber, which solely comes from areas outside the FMUs.

Fuelwood is the major source of energy for most Bhutanese and comprises 70 percent of national energy consumption (Siebert and Belsky 2015). Ninety-five percent of households rely on trees for lighting, heating, and cooking, out of which more

than 43 percent is attributed to space heating, 41 percent for fodder preparation, and the rest for cooking (Lhendup et al. 2015). Rural entitlements for fuelwood are decreasing as substantial progress has been made to electrify rural households. In 2017, 97.7 percent of rural households had electricity access (World Bank 2020).

Non-wood forest products (NWFPs) provide an important source of income for rural households. For example, the collection and trade of Cordyceps (*Ophiocordyceps sinensis*), a caterpillar fungus, makes up 50 percent of the income of people living in the highlands (MoAF 2016). Other NWFPs include mushrooms, incense, essential oils, fruits, seeds, grass, and bark (FAO 1996). Today, the number of NWFP management groups has risen to 148 in 17 *dzongkhags*, involving more than 5,500 rural households as members.

In 2018, there were 781 CFs covering about 92,165 hectares (3.3 percent) of forested area and benefiting 33 percent of the rural population (~32,400 households). About 18,000 hectares (0.6 percent of total forest area) was used for forest plantations (MoAF 2016). With the 2007 Land Act, farmers were given full ownership over the forest produce growing on private registered land. However, lack of incentives and subsidies discouraged farmers to register trees growing on their lands as private forests, thereby resulting in a decline of registered private forests with just 136 hectares of private forest registered in 2013 compared with 336 hectares in 2011 (MoAF 2015).

Bhutan's forests generate indirect benefits for other economic sectors, such as agriculture, energy, tourism, and transport. While forests provide such indirect benefits, these are often not fully understood or accounted for. MoAF recently assessed the economic contribution of forest ecosystem services to Bhutan's national economy. The study estimates that forests provide ecosystem services worth between US\$394 million to US\$1,269 million per year (WMD 2019). This includes provisioning services (food, timber, water and energy), carbon sequestration, and the regulation of water quality. Such large contribution of forests to national economy is yet to be internalized

50 including all trees whether they fall under Bhutan's forest definition.



in the policy making and planning. Further work needs to be done on natural capital accounting. Systematic data on the economic contribution of Bhutan's forests under different management regimes will be important to further inform forest management policies.

Economic Potential

Despite the challenges constituted by Bhutan's steep terrain, a significant forest area is still available for utilization. The 2013 Forest Resources Potential Assessment for Bhutan (FRPA) (MoAF 2014) identified that 11.3 percent (equivalent to 16 percent of the forest area) of the total geographical area having slope of 35° or less, and excluding the protected area network, had the potential to be brought under SFM. This is in addition to the present share of only 7.3 percent of the forest area managed under FMUs. Given that about 20 percent of agricultural land in Bhutan is left fallow (MoAF 2013), private forest plantations could provide an attractive alternative

source of livelihood. However, a conducive policy environment is needed to encourage forest activities on private lands.

Applying the principles of SFM to Bhutan's production forests could significantly increase productivity and improve ecological resilience. While the AAC focuses on sustaining harvesting levels over a long period of time, SFM goes beyond sustaining harvesting levels by also addressing the ecological and economic dimension of forestry. SFM promotes silvicultural management practices for harvesting, such as thinning, selected harvesting (for example, of mature trees to support regeneration), and the removal of dead wood. SFM manages forests as dynamic systems sustainably generating important ecosystem goods and services. Concerns that human interventions linked to SFM cause unalterable (negative) changes to natural processes of forests are not well founded—in fact, silviculture supports these processes with the objective of harvesting timber and non-timber forest products at

sustainable levels without affecting the integrity of the forest ecosystem.

The RGoB is committed to increasing the productivity of its forests. As part of the 12th Five-year Plan, the MoAF intends to increase the area under SFM regime from 357,915 hectares to 425,495 hectares⁵¹; the forest area under scientific thinning from 381 to 15,000 hectares; and the number of SFM plans from 46 to 96. While the plan focuses on strengthening the existing CFs and NWFPs, the plan also commits to increasing the number of CFs and NWFPs groups⁵². To move to implementation and achieve these targets, it will be essential to (i) provide targeted capacity development to various stakeholder groups; (ii) invest in modern technology and infrastructure; and (iii) invest in value-chain addition activities.

Trade data suggest that Bhutan has a substantial trade deficit in wood and wood products, with imports volumes that are eleven times higher than exports. Bhutan's Forest and Nature Conservation Rules (RGoB 2017) explicitly state that the "export of timber in either log form, sawn timber form or as firewood is banned." The only forest products that are currently exported are NWFPs, consisting mainly of Ophiocordyceps, matsutake mushroom, lemon grass oil, Rubia, Chirata and Pipla. The most significant wood-based import item is charcoal. In 2019, Bhutan imported charcoal from India worth US\$24.5 million, comprising 2.7 percent of total imports and 58.8 percent of wood-based imports (MoF 2019). Other wood-based imports include processed wood (for example, furniture) and bamboo (MoF 2019).

Community-based NWFP enterprises have the potential to significantly improve rural life because they would generate income and youth employment opportunities (Cheki 2017). NWFPs hold promising economic opportunities for rural communities. Bhutan has around 400 medicinal and aromatic plant varieties (RGoB 2005). Using these resources to produce high-value products would give Bhutan a distinctive comparative advantage in the international market. For example, Nepal, India and

China account for close to half of all herbal exports to a US\$160 billion global market. Bhutan's herbal exports currently are limited to cross-border trade (RGoB 2005). As the global herbaceutical industry has grown into a trillion-dollar industry today, the government has started exploring opportunities for sustainable commercial cultivation and harvesting of high-value herbal plants.

d. Policy and Institutional Context

Bhutan's Constitution mandates to maintain at least 60 percent of land area in perpetuity under forest cover. Land stability in a country with mountainous geography and seismic activity is a matter of concern. Forest cover not only helps recharging groundwater, but it also maintains land stability and provides other ecological services. However, despite its high forest cover Bhutan faces with timber shortage. SFM is possible even within a mountainous context, without resulting in degradation and deforestation. Hence, a study is necessary to discuss how Bhutan can make better economic use of its forests without jeopardizing the forest conservation agenda, including leveraging synergies with other objectives such as biodiversity conservation.

Policies

Conservation and sound management of forests, natural resources, and the environment are an integral part of Bhutan's development objectives and feature in the Constitution, Bhutan 2020, and other national policies and plans. Bhutan 2020 outlines the country's development goals, objectives, and targets with a 20-year perspective to maximize gross national happiness. It promotes a development path within the limits of environmental sustainability and without impairing ecological productivity and natural diversity. The recently finalized *Reduced Emissions from Deforestation and Forest Degradation, Sustainable Management of Forests, and Enhancement of Forest Carbon Stocks* (REDD+) strategy proposes policies and measures that support the transition to low-emission,

51 This includes all forest management regimes with local forest management plans, including FMUs and CFs.

52 Includes the plans that are to be revised.

climate-resilient, and sustainable development pathways in forestry, agriculture, energy, tourism, and other cross-cutting areas.

The National Forest Policy ensures that forest resources, watersheds, and biodiversity are managed for sustainable production of economic and environmental goods and services to meet the long-term needs of society (RGoB 2011). Emphasis is on a more decentralized and people-centered approach to implementation, with a strong poverty reduction agenda. A key feature of this policy is the application of an integrated landscape-level approach to sustainable forest management.

Through the 1995 Forest and Nature Conservation Act (“Forest Act”), all forests are declared to be SRF (RGoB 1995). The Forest Act “provides for the protection and sustainable use of forests, wildlife and related natural resources of Bhutan for the benefit of present and future generations.” The Forest Act authorizes the MoAF to establish CFs on SRF, and to develop rules regarding the management of CFs. The ministry can also issue social forestry rules to encourage any person to grow or nurture forest crops on his own registered private land, excluding *tsamdrog* (grazing land) and *sokshing* (forest for leaf litter collections). In addition to the Forest Act, there is a comprehensive and periodically updated law of regulations and procedures related to the governance and conservation of Bhutan’s forest, the Forest and Nature Conservation Rules and Regulations of Bhutan (RGoB 2006, 2017).

The 12th Five-Year Plan (2018–2023) targets a “Just, Harmonious and Sustainable Society through enhanced Decentralization.” The plan emphasizes improved coordination, consolidation, and collaboration across all national and subnational agencies; the effective and efficient operation and maintenance of infrastructures already in place, instead of expansion; and an increase in regional cooperation in trade, transit, and energy to give rise to new technologies and opportunities (GNHC 2018). There are five National Key Result Areas (NKRAs) directly relevant to the forestry sector: (1) economic diversity and productivity

enhanced; (2) poverty eradicated and inequality reduced; (3) healthy ecosystem services maintained; (4) carbon-neutral, climate- and disaster-resilient development enhanced; and (5) productive and gainful employment.

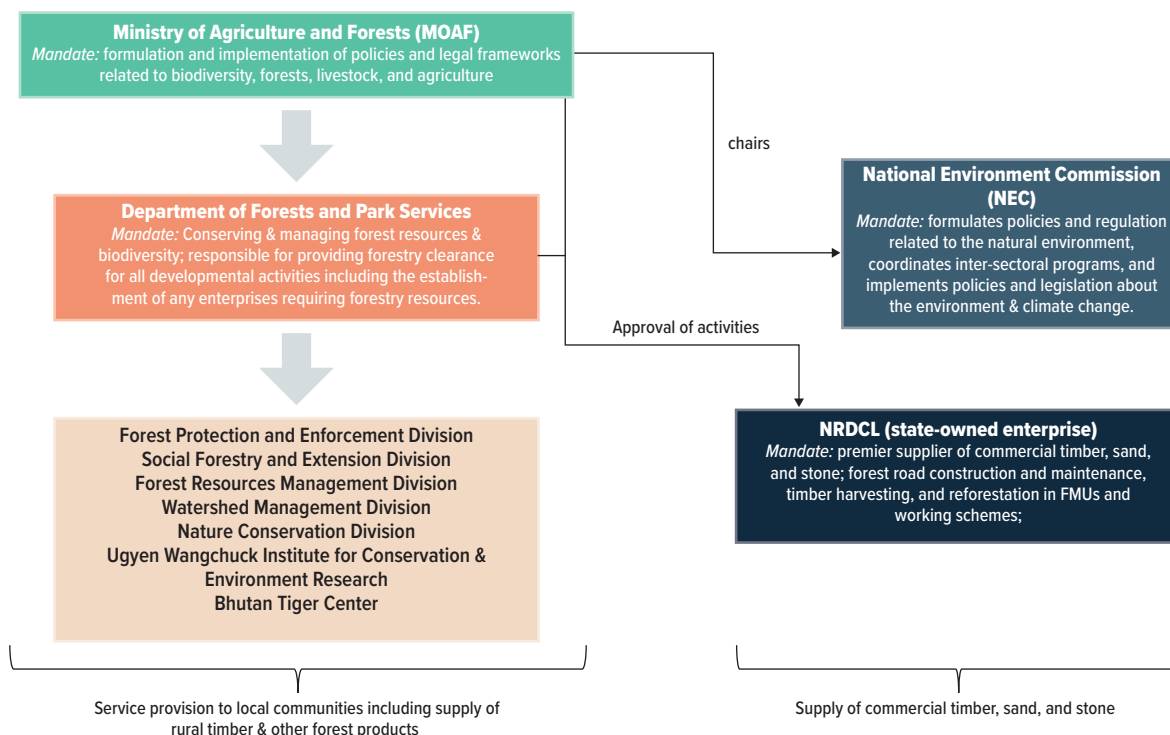
e. Forest Governance

Almost all of Bhutan’s forest area is state-owned and a strict governance system distinguishes between management of forest resources designated for urban (commercial use) and rural areas (subsistence use). The State Reserve Forests (SRF) category encompasses several governance types and management regimes, including FMUs, local forest management areas, and CFs. The MoAF is responsible for resource management, while the commercial extraction and sale of timber is done through the Natural Resources Development Corporation Limited (NRDCL).⁵³ CF groups can sell surplus timber to the commercial market (Feuerbacher et al. 2019). Rural timbers for individual applicants, *dzongs*, *lhakhangs* and other constructions in rural areas are allotted by the Department of Forest and Park Services (DoFPS).

Community forestry is a key component of Bhutan’s forest policy and is important for generating rural income and livelihood opportunities. Community forests are SRF for which rural communities, organized as Community Forest Management Groups (CFMG), receive management and use rights under conditions set out in a management plan and by laws. Following the adoption of a more decentralized and people-centered approach to forestry in the early 2000, the number of CFMG has increased rapidly since 2007. By 2018, there were 781 CFMG involving 32,402 rural households managing 92,165 hectares (3.3 percent) of forest land (MoAF 2018a).

With this transfer of responsibilities, local communities again become custodians of their forests. Studies show that forests provide safety nets during

⁵³ NRDCL is a state-owned enterprise governed under the Company Act 2000. It is the nation’s main supplier of commercial timber, sand, and stone based on the management plans and approval from the DoFPS, MoAF, and it makes these resources available, affordable, and accessible. The NRDCL, as the only authorized agency, is involved in forest road construction and maintenance, timber harvesting, and reforestation in FMUs and working schemes.

Figure 25. Main Forest-Relevant Government Institutions

times of hardship and reduce income gaps during lean seasons (Pullanikkatil and Shackleton 2019). Rural households with forestry-related activities were found to have higher income and to be less prone to poverty (Rahut, Ali, and Behera 2015). The contribution of Bhutan's forests toward rural livelihoods could thus be strengthened because they provide firewood, timber, fodder, and NWFPs. These high-value forest resources could emerge as a key growth area and major source of revenue for rural communities (UNDP 2016).

All forest areas designated for production have a management plan with scientific principle-based prescriptions for harvesting timber and NWFPs. For each FMU, a forest management plan (10-year time frame) is prepared by the respective field divisions with technical support from the Forest Resources Management Division (FRMD). Annual operational plans are prepared by the respective divisions based on the management plan, which is then reviewed and approved by FRMD. There are currently 21 FMUs (RGoB 2018). Besides yearly monitoring by the field divisions and FRMD, a midterm and final

evaluation of the management plan is also conducted by FRMD. For the CFs, the CFMGs prepare the management plans with the technical support from the field divisions while for the local forest management areas, the management plans are prepared by the respective field divisions and approved by the department. The plans are used for sustainable supply of timber especially for rural timber allotments. The plans are used to provide a sustainable supply of timber especially for rural timber allotment.

f. National Forest Challenges

As discussed, Bhutan has one of the highest forest cover in the world (as a proportion) and is a leader in forest and biodiversity conservation, yet Bhutan must deal with various challenges to its forests. These challenges are related to (i) drivers of deforestation and forest degradation, (ii) vulnerability to climate change and natural disasters, (iii) underdeveloped wood and non-wood industries, and (iv) policy and institutional environment.

Table 4. Drivers of Deforestation

Driver	Area affected annually (ha)	Annual greenhouse gas emissions because of forest area loss (tCO ₂ e)
State reserved forest land allotment for various purposes	1,923	604,852
Hydropower projects	1,880	591,327
Agriculture	778	244,709
Roads	820	257,919
Mines and quarries	633	199,101
Electricity transmission lines	542	170,478
Total	6,714	2,111,791

Source: MoAF 2017b.

Drivers of Deforestation and Forest Degradation

While forest loss has been occurring more prominently on the southern border and in valleys, the northern mountains have benefited from forest gains. The results of an analysis of deforestation and forest degradation between 2000 and 2015 (part of Bhutan's engagement in REDD+) indicate a net increase of forest cover of 12 percent at an annual rate of 0.8 percent (MoAF 2017b) but also localized degradation of some forests.⁵⁴ The drivers of deforestation and forest degradation are presented below.

Drivers of Deforestation

The Ministry of Agriculture and Forests (2017b) has identified the following six major drivers of deforestation and ranked them in the order of severity (Table 4). In total, the annual rate of deforestation equals 6,714 hectares, or 0.2 percent of the total forest cover. This loss in forest cover is overcompensated by gains in forest cover elsewhere. Given the low prevalence of deforestation in Bhutan, only the top two main drivers of deforestation are discussed below.

Allotment of SRF land for various purposes and construction of hydropower projects (including transmission lines) are the two main drivers of

deforestation in Bhutan. Together, these two drivers account for 57 percent of total deforestation. The government allocates SRF land for various purposes, including (i) leasing to large projects such as hydropower, private commercial farming, mining, quarrying; (ii) compensation for private registered land acquired for developmental purpose; (iii) government agencies and religious institutions; and (iv) land exchange for special situations, such as to compensate land destroyed by natural disasters. Hydropower investments require large areas to build various components, including access roads, transmission lines, storage, and tunnels to divert river flows (World Bank 2016). Area deforested for transmission lines and access roads is included under the SRF land allotment. On average, about 0.5 hectares of forest are lost for every megawatt of generation capacity. Currently, there are many plans for hydropower investments in Bhutan. Extrapolating the known development plans, it is estimated that 18,380 megawatts may impact about 39,760 hectares of forest (1.5 percent of forest area), or an annual average of 1,880 hectares (MoAF 2017b).

Drivers of Forest Degradation

The MoAF has identified three major drivers of forest degradation (MoAF 2017b). Table 5 provides annual degradation data and resulting annual greenhouse gas (GHG) emissions.

⁵⁴ These figures are currently being updated and validated as part of the Forest Reference Emission Level/Forest Reference Level.

Table 5. Drivers of Forest Degradation

Driver	Annual degradation (m ² /ha)	Annual GHG emissions because of forest degradation (tCO ₂ e/ha)
Timber harvesting	161,008	159,019
Firewood	84,936	83,886
Forest fires	46,397	49,599
Total	369,608	274,103

Source: MoAF 2017b.

Timber and fuelwood harvesting accounts for 67 percent of total degradation of forests in Bhutan.⁵⁵ The applied method relies on the assumption that the total timber harvested, according to national statistics, is associated with forest degradation. In the forest reference emission level, harvesting is identified as a driver of degradation but is part of sustainable forest management.

Forest fires are another causes of forest degradation. The number of forest fires have fluctuated over time, from 34 in 2012–13 to 72 incidences in 2016 and 37 in 2017–18 (MoAF 2017b). Fires are more prevalent in the eastern and western regions, where pine and oak forests are more susceptible to fire incidences. In 2017–18, 73 percent of the fires have unknown causes. Other causes include agricultural debris burning and electrical short circuits. Data suggest that the area burned has been increasing. Because of climate change, fire incidences are projected to increase.

Vulnerability to Climate Change and Natural Disasters

Bhutan's 2011 Climate Change Vulnerability Assessment predicts a warming trend in annual temperature and high levels of variability and uncertainty in annual precipitation. This will lead to shifts in seasonal stream flow, ecosystems, and distributions of species depending on habitat shifts. The 2016 UNDP study identified forest conditions as the most sensitive indicator to be affected by climate change. Forest condition measurements include, in the order of severity, forest fire incidents, decrease in fodder availability, decrease in availability of water in streams/lakes,

availability of timber/firewood, decrease in wildlife diversity, decrease in availability of NWFPs, and plant diversity. As a result, vulnerability at a community level, particularly among subsistence farmers, is high (Lhendup, Wikramanayake, and Freeman 2011).

The development of alternative income sources is thus important to increase the resilience of rural communities. In 2013, an analysis of Bhutan's forest policy framework to mainstream climate change adaptation was conducted (Wangdi, Lhendup, and Wangdi 2013). To enhance resilience, the study proposes the promotion of small-scale cottage industries for generating off-farm income opportunities to supplement communities' livelihoods in the event of climate disasters. These small-scale industries could include forest-based enterprises such as furniture making, handicrafts, wood turning, and lacquering to produce different types of wood products that can be sold to tourists, urban consumers, and other communities.

Challenging Policy and Institutional Environment, including for the Private Sector

Guided by Article 5 of the Constitution, Bhutan has established an extensive legal and regulatory framework aimed at conserving the environment and mitigating adverse environmental impacts. However, effective implementation is lacking. Shortages of law enforcement personnel, ambiguity in institutional mechanisms, and lack of technical and financial resources to implement environment-friendly technology are some of the key reasons for weak law enforcement.

⁵⁵ If timber and fuelwood are harvested sustainably based on SFM principles, this activity should not be identified as a driver of forest degradation.



Bhutan's policy for access to and pricing of extracted wood negatively affects the development of wood-based industries. As noted earlier, substantial quantities of firewood are provided with subsidies. Firewood is regulated by the Forest and Nature Conservation Rules of Bhutan 2006 (RGoB 2006). The rules specify that households are allowed 16 cubic meters of fuelwood per year if they lack electricity or 8 cubic meters per year if they have electricity, irrespective of household size, need, forest type, and availability. Households also have entitlements to 4000 cubic foot of rural timber for construction and 700 cubic foot for renovation. The subsidized provision of wood to individuals impairs the development of specialized enterprises to become an economically viable source of timber and forest products, such as building materials (Narain, Toman, and Jiang 2014).

The current regulatory framework is impeding the development of wood-based industries in the

country. Although rules and regulations are framed to facilitate the smooth provision of services by government agencies to Bhutan's citizens, some people engaged in wood-based industries feel that there is overregulation causing inefficiencies and thereby impeding further development of wood-based industries. NRDCL is a government authorized agency involved in harvesting and distribution of timber (mainly commercial) in the country. The change in policy and regulating harvesting and distribution of timber through NRDCL has ensured that natural resources mainly timber, sand and stones are available, accessible and affordable for all Bhutanese. The current regulation of the forestry sector (i.e., pricing) seems to impede market mechanisms that could provide incentives for efficient resource allocation, training of skilled labor, and investments in state-of-the-art technology and equipment. In addition, since Bhutan produces timber almost exclusively for the domestic market, the NRDCL and sawmills are heavily dependent on national policy decisions. For

example, the housing loan restrictions in 2012 badly affected sawmill owners' business and sale of timber and building components slumped by about 50 percent. The NRDCL was also affected and had to deal with a huge unsold timber stock (also due to the lack of market for the less preferred broadleaved species), which it was able to dispose only in 2014. Bhutan's 2016 Economic Development Policy (RGoB 2016a) makes provisions for subsidies and other fiscal incentives for forest-based industries. However, the lack of implementation and other factors such as outdated technology and methods, lack of value addition and product diversification and lack of skilled labor make the forestry sector uncompetitive.

There are several constraints that hamper the development of a vibrant forest-based private sector.

- **Access to capital (World Bank 2017).** Improving access to capital for forest-based private enterprises includes reducing high banking transaction charges; promoting competitive interest rates; and reducing high collateral requirements for loans.
- **Lack of competitiveness (MoEA 2017).** Forest-based enterprises often deal with locally produced raw materials of low quality; increase in raw material prices, high transportation costs; policy restrictions on employment of foreign workers; and cheap wood imports (mainly from China and India).
- **Underdeveloped NWFP industries.** The small NWFP industry is hampered by lack of technology, management skills, markets and capital for value addition, market information, and quantity and quality requirements. In addition, small and dispersed volumes, irregular supply and demand, poor infrastructure, and high transportation costs impact business development opportunities (Cheki 2017). NWFP resources are also threatened by the impacts of climate change.

g. Opportunities for Bhutan's Forestry Sector

- **Bhutan's forestry sector can be more productive without jeopardizing the goal of maintaining at least 60 percent of Bhutan's land under forested cover in perpetuity and remaining a global leader in environmental conservation.** Transforming the forestry sector has the potential to increase employment opportunities, develop small and medium forest-based enterprises, reduce forest-based product imports, and move to a market-based approach for trading timber and NWFPs.
- **Bhutan's rich forest resources can contribute more to the country's growth and job creation while remaining a carbon-neutral and equitable economy.** Forests provide timber and NWFPs that are already a key element for Bhutan's carbon-neutral development path. Investing in SFM will allow Bhutan to increase its carbon sequestration potential as forests are managed dynamically, creating opportunities for advance regeneration. More investments in wood-substitution technology will allow Bhutan to replace greenhouse gas emission-intense materials like steel and cement with wood (for example, using cross-laminated timber technology), which stores carbon for the lifetime of the product.
- **Potential action areas to modernize and improve Bhutan's forestry sector relate to the most relevant drivers and principles that define the nexus between forests, economic development, and pathways out of poverty.** The implementation of the proposed actions could improve the productivity of Bhutan's forestry sector through SFM, increase investments in forest-based SMEs, and build local capacity for forest-based industries while sustaining the environmental benefits forests provide.
- **There are five opportunity areas that have a high potential to transform Bhutan's forestry sector into a modern and effective economic sector in the short and medium term:**
 - (i) Supporting sustainable forest management in FMUs and CFs;
 - (ii) Investing in modern forest technology and infrastructure in FMUs and CFs
 - (iii) Exploring a market-based approach for timber (rather than price fixing) and NWFP sales;
 - (iv) Establishing SMEs for timber and NWFPs and value addition including exploring technologies for utilizing less preferred timber species; and
 - (v) Supporting the development of a curriculum for wood engineering and wood architecture



Implementing these activities could lead to the following illustrative results:

- Production forest quality is improved, while forest cover is sustained.
- Forest-dependant jobs are created, including in the private sector.
- Institutional and human capacity for SFM has increased.
- Improved technologies and equipment for timber harvesting and processing, product diversification and value addition to increase roundwood production and reduce wood-based imports.
- The carbon sequestration potential and carbon stock has increased.
- The resilience of forest ecosystems against the impacts of climate change and other natural disasters has increased.

In the long-term, the RGoB could explore the feasibility of pursuing additional opportunities to further enhance the role of the forest sector in Bhutan's economy and contribution to Bhutan's GNH, including (i) a feasibility study for domestic charcoal production with improved technologies; (ii) the development of a high-value furniture industry; and (iii) an online timber and NWFP auctioning system. There are also opportunities for building regional and local partnerships e.g. for combating forest fires.

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