HEALTH FINANCING ASSESSMENT

A. Background

1. **Macroeconomic context.** The Bhutanese economy has been growing rapidly in recent years, largely due to expansion in the tourism and hydropower sector. The gross domestic product (GDP) per capita increased from $560 in 1992 to $2,656 in 2015 (or from $1,508 to $8,370 in purchasing power parity prices during the same period).[1] Value added in industry has risen sharply in recent years (from 36.0% in 2000 to 43.2% in 2015), reflecting the importance of the hydropower sector, while agriculture's share decreased from 27.4% to 17.4% and the service sector's share increased from 36.6% to 39.3%, reflecting the importance of tourism. The poverty headcount ratio at $1.90 per day (2011 purchasing power parity) decreased rapidly from 35.2% (2003) to 2.2% (2012), while the Gini coefficient decreased from 0.47 to 0.39 during the same period. However, not all economic indicators are positive. Although the national unemployment rate is about 2.5% (2016), youth unemployment is considerably higher (13.2%). Tax revenue as a percentage of the GDP was only 13.2% (2016), while the current account deficit was 29.1% of the GDP in 2015, mainly due to significant investments in hydropower construction.[2] Future hydropower revenue is expected to expand government fiscal space for health.

2. **Health policy in Bhutan.** The Government of Bhutan is constitutionally committed to providing free basic health care for all in Bhutan. Health policy has evolved from its early emphasis on expanding coverage to its current focus on improving the quality of care and equity in access (footnote 1). Objectives are implemented through five-year strategic plans, which emphasize an intersectoral planning approaches. The government health sector strategy focuses on (i) fulfilling its commitment to provide the population with free access to basic health care, including government-financed treatment abroad for care not available in Bhutan; (ii) decentralization of health service delivery and planning, with a progressive shift in the role of the Ministry of Health (MOH) from an implementing agency to one focusing more on regulation, policy, and oversight; (iii) expanding access to health care among currently underserved populations, through investments in both infrastructure and in health human resources; and (iv) use of innovative financing mechanisms, such as the Bhutan Health Trust Fund (BHTF) (footnote 1).

3. **Health financing trends.** The total health expenditure (THE) was 3.09% of the GDP in 2014–2015 and 2.97% of the GDP in 2015–2016, compared to 3.68% of the GDP in 2009–2010.[3] The government is the main financier for health care in Bhutan, followed by households and external aid. General government health expenditure was 8.0% of total general government expenditure in 2014 compared to 5.0% in India, 11.2% in Nepal and Sri Lanka, and 15.6% in Thailand.[4] Household out-of-pocket expenditure accounted for 25% of THE in 2014–2015, almost half of which was due to transportation costs (footnote 3). Private sector plays a minor role in service delivery and is limited to 14 diagnostic centers and a few pharmacies in major towns. The BHTF is an innovative and increasingly important source of health care financing, accounting for 5% of THE in 2014. There is currently very little health insurance coverage in Bhutan, all of which

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[1] World Health Organization (WHO). 2017. *The Kingdom of Bhutan Health System Review*. Health Systems in Transition. New Delhi.
[2] International Monetary Fund. 2016. *Staff Report for the 2016 Article IV Consultation.* Washington, DC.
[3] Government of Bhutan, Ministry of Health. 2017. *National Health Accounts Bhutan: Fiscal Years 2014-15 and 2015-16*. Thimphu.
[4] WHO. 2017. *Monitoring Health in the Sustainable Development Goals: 2017 Update*. Regional Office for Southeast Asia, New Delhi.

is private and voluntary.[5] Expenditure on government-financed health care obtained abroad currently absorbs 5%–6% of THE (footnote 1).

4. **Health care needs.** Bhutan is undergoing an epidemiological transition in which relatively expensive noncommunicable diseases (NCDs)—including diabetes, cancer, and mental illness—account for an increasing share of the total disease burden. According to the most recent National Health Accounts, NCDs accounted for 35% of all current health expenditure in 2015–2016.[6] This transition is manifested in higher rates of health care utilization, particularly among the elderly, who often require specialized care (including overseas care) and more expensive medications over an extended period. It is reported that expenditure on drugs has increased by 15%–20% annually during the past 3 years. Overall health care utilization has also increased due to substantial investments in health, transportation, and communications infrastructure. In addition, both income growth and increased contact with the outside world has resulted in a large unmet need for specialized care.[7] Due to Bhutan's small population size, it is reasonable for some specialized services to be obtained abroad. However, there is no systematic assessment of the types of specialized care that should be available domestically.

5. **Health infrastructure.** Bhutan has invested heavily in health infrastructure in recent years, including both secondary and tertiary hospitals and a large network of primary health facilities serving both urban and rural areas. Currently, there are three referral hospitals, 28 district hospitals (including one traditional medicine hospital), 23 basic health units level 1 (BHU-Is), 186 BHU level 2 (BHU-IIs), 28 sub-posts, 562 outreach clinics, and 54 traditional medicine units (most of which are integrated into public hospitals) (footnote 1). Primary health care (PHC) (allopathic and traditional) is delivered in all facilities, including the National Referral Hospital (NRH) in Thimphu. An estimated 95% of the population are within 3-hour walk from the nearest health facility (footnote 1). Although the poor are greatly disadvantaged in terms of physical accessibility to health care, the situation is improving. According to data from the Bhutan Living Standards Survey (BLSS) (2007), the mean time to reach the nearest health facility was 115 minutes for the poorest income quintile versus 33 minutes for the richest quintile.[8] However, data from the BLSS (2012) indicate that the same differential narrowed to 83 minutes for the poor and 29 minutes for the rich in only 5 years. Health infrastructure effectiveness has been greatly enhanced by parallel investments in road transport and communications infrastructure.[9] Mobile phone penetration has increased from 0% in 2003 to 87% in 2015, while internet penetration has increased from less than 1% in 2008 to 62% in 2015. Furthermore, innovations such as the Health Help Centre is an emergency response and health care helpline service that operates 24/7 and is accessible to mobile phones, fixed land lines, and public call offices. The Health Help Centre monitors the location of ambulances (including helicopters) through a vehicle tracking system and can dispatch an ambulance to the right place at the right time. However, while connectivity of patients to health facilities has certainly improved, a large proportion of out-of-pocket spending is still spent on transportation costs by patients (50% of total out-of-pocket spending is 2015), indicating a continued need to focus on improving access to health facility infrastructure (footnote 1).

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[5] During FY2012–2013, private health insurance premiums accounted for 0.31% of THE covering about 1.00% of the population (footnote 1). About one-quarter of the claims were for overseas treatment in India (footnote 3).

[6] Government of Bhutan, Ministry of Health. Forthcoming. *Benefit Incidence of Public Health Expenditure in Bhutan."* Thimphu.

[7] S. Thinley, J. Sharma and K. Wangmo. 2017. "Sustainability of Bhutan's Health Services." *The Druk Journal* (June 28, 2017).

[8] World Bank. 2013. *Kingdom of Bhutan: Human Development Public Expenditure Review. Report No. ACS2873.* Washington, DC.

[9] Government of Bhutan, Ministry of Health. 2016. *A Qualitative Study to Determine and Characterize Factors Associated with Use or Non-Use of Essential Primary Health Care Services by Unreached Population in Bhutan.* Thimphu.

6. **Health human resources.** Health human resources are deployed nationally according to the Human Resources for Health Master Plan (2013–2023). However, each district has the authority to re-deploy human resources to meet evolving population needs. Bhutan still faces an acute shortage of health personnel, with only 20 health workers per 10,000 population (compared to 30 in India and 29 in Nepal, Sri Lanka, and Thailand).[10] The master plan estimates the requirement of health personnel at more than 10,000 compared to the actual number of 4,626 registered health professionals in 2016 (footnote 1). Bhutan faces an acute shortage of specialists, while many rural PHC facilities are under-staffed. Although the overall situation is improving due to the development of in-country medical training facilities, Bhutan still depends on other countries for undergraduate and most post-graduate training.

B. Main Financing Sources for Health Care

7. Health care resources are currently obtained from four main sources: (i) BHTF, (ii) government expenditure, (iii) household out-of-pocket spending, and (iv) external financing.

(i) The BHTF was established as an innovative source of health financing designed to ensure uninterrupted access to critical vaccines and essential medicines.[11] Its income sources include (a) investment income from its donated assets, which amounted to $2.50 million in 2018; and (b) an earmarked tax (i.e., the Health Contribution; a 1% tax on the salaries of corporate private sector employees and civil servants), the revenue from which has been earmarked for the BHTF since 2015 (footnote 6). Concerns have been expressed about the BHTF's financial sustainability, due to the (a) gradual decline in donor funding; (b) rising cost of drugs and vaccines; (c) BHTF's investment practices (i.e., investments exclusively in local currency fixed income assets); and (d) BHTF's need to finance its own operations, now that it has become de-linked administratively from the MOH.[12] The most recent projections of the BHTF income and expenditure, which reflect expected additional capital grants by 2020 of $17.52 million (including $10.00 million from Asian Development Bank [ADB]), indicate that without it, the BHTF would have a growing financing gap of $2.77 million by 2027.

(ii) Government health expenditure remains the dominant source of sector financing (70.0% of THE in 2015–2016), remaining relatively stable between 2008 and 2017 at around 3.3% of the GDP and around 8.5% of general government spending. Although government health expenditure has increased in recent years in absolute terms, it may not increase similarly in the future because the (a) rate of growth in the GDP is vulnerable to external shocks and further delays in the completion of several large hydropower projects, (b) government revenue collection is low in relation to the GDP, (c) accelerated decentralization process mandated in the 12th 5-year plan risks reducing the health sector's share of local government expenditure, and (d) heavy government borrowing in support of ongoing hydropower investments constrains future government spending.

(iii) Household expenditure as a source of sector revenue is relatively low, due to the absence both of a significant private sector and of user fees for most services

[10] WHO. 2017. *Monitoring Health in the Sustainable Development Goals: 2017 Update*. Regional Office for Southeast Asia, New Delhi.
[11] Results for Development. 2017. "Bhutan: A National Trust Fund for Immunization." Immunization Financing: A Resource Guide for Advocates, Policymakers and Program Managers. Washington, DC.
[12] Global Vaccine Alliance. 2015. *Bhutan Joint Appraisal*, Geneva.

obtained at public health facilities. Out-of-pocket expenditure was equal to 20% of THE in 2015–2016 (almost half of which was for medicines purchased from private pharmacies), compared to 62% in India, 48% in Nepal, 42% in Sri Lanka, and 12% in Thailand (footnote 1 and 3). Most reported household out-of-pocket expenditure related to health care (but not included in the National Health Accounts) is for religious rites (*rimdo* or *puja*) and transportation. Data from the BLSS (2012) indicate that payments for *rimdo/puja* alone accounted for 57% of all reported household health-related expenditure, with transportation expenditure accounting for another 23% and out-of-pocket payments for health care accounting for the remaining 20%. Although 80% of this household expenditure is not included in out-of-pocket payments as conventionally measured, it does constitute a large financing burden on households and suggests that Bhutanese households place considerable value on their health (footnote 1).

(iv) External financing has decreased both relatively and absolutely (from 18% of THE in 2009–2010 to 5% in 2015–2016), reflecting Bhutan's entry into the ranks of lower-middle income countries. This downward trend in external financing is expected to continue.

(v) Private diagnostic centers are functioning in some large towns. By regulation, they can only do diagnostic tests prescribed by public health facilities, although it is reported that some diagnostic centers run by medical doctors are charging consultation fees and prescribing medicines (footnote 1). The 2010 Economic Development Policy called for the establishment of high-end private sector hospitals to provide health services not provided by public hospitals. However, such investments have not occurred, and patients in need of such services continue to be referred for treatment abroad.

8. Three main health-financing factors that currently constrain continued health sector progress in Bhutan are (i) the challenge of mobilizing the financial resources needed to meet increasing health care needs, (ii) sector inefficiency reducing the productivity of health care resources, and (iii) sector inequity contributing to poor health outcomes among disadvantaged groups. [13]

C. Health Sector Inefficiency

9. Bhutan spends a higher share of its public resources on health than other neighboring countries, but has not achieved commensurately positive outcomes, largely due to efficiency reasons (footnote 8). Key sector inefficiencies include (i) underutilization of PHC due to limited available services and poor quality, leading to individuals bypassing primary health facilities for more expensive secondary and tertiary level care; (ii) fragmented health information systems (HIS) that are under-developed and prevent proper functioning of the referral system; (iii) inefficient allocation of key resources and acute shortage of health workers in remote areas and of specialist doctors; and (iv) continuing use of line-item budgets based on historical trends to purchase services (footnote 1).

[13] In addition to these three main health-financing constraints, other important factors constraining continued health sector progress include (i) difficult mountainous terrain, (ii) low population density, (iii) low adult literacy, and (iv) poor nutritional status (stunting).

10. The BLSS (2012) data indicate that more than half of even minor diseases that could be treated in a primary health facility (e.g., diarrhea, conjunctivitis, common cold, skin infections) are treated in hospital outpatient facilities. The tendency to bypass primary health facilities in favor of hospitals has probably been accelerated by recent improvements in the road infrastructure (footnote 8). The HIS also remain highly fragmented, paper-based, and pose a key constraint to improved overall sector efficiency. Poor HIS also hinders effective monitoring of infectious diseases, and care provided to patients at different facility levels.

11. Inefficient allocation of key resources is a key constraint as well as use of line-item budgeting based on historical trends. A recent study of inefficiency in Bhutan's health sector, based on both facility-level and district-level data, found numerous instances in which resources (including capital and recurrent) are not effectively linked to actual output levels.[14] For example, facility-level data indicate that 65% of estimated building costs, 54% of equipment and vehicle costs, 33% of personnel costs, 232% of medicines and supplies cost, and 54% of other recurrent costs are misallocated when compared to reported annual utilization levels.[15]

D. Health Sector Inequity

12. Health sector inequity is manifested in inequitable health outcomes and largely driven by difficult terrain and differential access to health services between income groups. In 2015, children in the poorest quintile were 6.2 times more likely to be stunted than children in the richest quintile. In addition, women's health status is poorer than men's, both in terms of average life expectancy at birth (69.2 male versus 69.7 female) and adult mortality rates (210 male versus 216 female) (footnote 1). Available household survey data (Multiple Indicator Cluster Survey, 2010 and BLSS, 2012) show sharp urban-rural and socioeconomic differentials in health outcomes and in the utilization of health care, including inpatient and outpatient curative care and obstetric delivery care.[16] The BLSS (2012) data also indicate that the richest quintile reports more than 2.5 times the number of outpatient visits reported by the poorest quintile. The issue is not that the richest quintile over-utilizes outpatient care, given that its annualized rate of outpatient care utilization is only about 3.6 visits per year. Instead, the issue is that the rest of the population under-utilizes outpatient care, most seriously in the case of the poorest quintile, with only about 1.4 outpatient visits per year. However, the richest quintile does over-utilize relatively expensive NRH care at more than twice the rate of the next richest quintile. In addition, the richest quintile obtains 80% of its outpatient care from hospitals, whereas the poorest quintile obtains 67% of its outpatient visits from primary facilities (BHUs), making investments in primary care pro-poor (footnote 6).

13. A recent study of the benefit-incidence of public health expenditure using data from 2010–2012 finds that the distribution of benefits is only weakly pro-poor over all in the case of outpatient, inpatient, and obstetric delivery services. Only services obtained from the BHUs are consistently pro-poor, whereas the services of the NRH are consistently pro-rich (footnote 6). According to this study, the poorest 20% of the population in Bhutan receives 11% of total public benefits from outpatient, inpatient and obstetric delivery care, compared to 5% in Bangladesh, 20% in Nepal, 21% in Sri Lanka, and 23% in Thailand. The richest 20% of the population in Bhutan receives 29% of total public benefits, compared to 15% in Malaysia, 17% in Thailand, 18% in Sri Lanka, 31% in Indonesia, 33% in India, 35% in Bangladesh, and 46% in Nepal. The same study finds that females receive a substantially higher share of public benefits (64%), compared to their share

[14] ADB. Forthcoming. *The Dimensions of Health Sector Inefficiency in Bhutan.* Manila.
[15] The estimates of misallocation cited refer to the mean absolute difference between actual and expected input levels, with the latter based on reported output levels.
[16] The BLSS (2017) data were not yet available at the time this report was prepared.

of the population (51%). Overall, rural residents and regular paid employees receive shares of public benefits that are approximately equal to their population shares. However, rural residents of hard or very hard to access locations receive a much lower share of benefits (17%) than their share of the population (24%).

14. The main rationale often given for the observed inequity is that the utilization of health care in Bhutan is mainly driven by location and that those living in remote rural areas are seriously disadvantaged relative to those living in urban or more accessible rural areas. Such a view suggests that inequitable outcomes may be unavoidable. Although primary health facilities can be brought closer to the population in remote areas, it is not possible to build secondary hospitals in every sub-district or tertiary hospitals in every district. However, one recent study reaches a different conclusion, i.e., that location and household income interact to produce inequity in Bhutan's health care system. This study finds that the utilization rates of the rich are uniformly high (i.e., largely invariant with respect to measures of physical accessibility), whereas the utilization of the poor is sharply lower in hard or very hard to access locations (footnote 6).

E. Sustainability of Health Sector Financing

15. Financial sustainability of the health sector can be addressed by (i) improving health sector efficiency through increased PHC utilization and well-connected HIS, (ii) strengthening the BHTF management and investment strategies to ensure self-sustainability and sufficient stream of funding for essential drugs and vaccines, and (iii) increasing future government fiscal space for health through revenues from hydropower investments and by increasing the Health Contribution from 1% to 2%.

16. Strengthening PHC would be an important factor to improve efficiency and increase financial sustainability of the health sector. PHC strengthening can improve utilization of primary health facilities that have relatively low service delivery costs. Overutilized costly hospital care and uneven resource allocation to hospitals will lead to growing financial needs that will be challenging to sustain, especially as Bhutan also undergoes an epidemiological transition with the rise of NCDs, which require regular managed care and expensive and prolonged drug regimens. An improved HIS would also improve referral of patients and avoid duplication of services, which will be crucial to contain costs.

17. The BHTF was established in 2000 as an innovative financing instrument with a core mandate to ensure continued and timely supply of vaccines and essential medicines. While governance of the fund was earlier under the Royal Civil Service Commission, the fund is now completely autonomous and will hire its own staff and fund its own operational expenses in the future.[17] Capitalization targets during its inception were $24 million. Since then, the fund has reached its target and is expecting additional capital grants equivalent to $17.52 million by 2020 (with ADB and government support). The additional income from these grants will be used to fund required vaccines and essential drugs and toward self-sustainability (operational costs). Possible increases in the Health Contribution from 1% to 2% may also help reduce any BHTF financing gap that is likely to arise in the future, however increases in the contribution have not been finalized. The MOH can contribute as well by reducing vaccine wastage and by linking its allocation of drugs more closely to actual facility needs. The large capital grants that the BHTF is

[17] A 2015 Global Alliance for Vaccines and Immunization joint appraisal recommended that the performance of BHTF be improved through (i) governance and organizational re-structuring (e.g., de-linking the BHTF from the MOH, implementing a new organogram); (ii) developing a five-year operational plan; and (iii) developing a resource mobilization strategy (footnote 12).

expected to receive in 2018 and 2020, particularly when matched by strengthened institutional capacity and investment and resource mobilization strategy, may encourage other donors to contribute to the capital fund of the BHTF.

18. Increasing the employee health contribution from 1% to 2% can substantially increase the financial resources available to the sector. Since 2015, the 1% tax has been earmarked for health. Financing that are tied to government taxation is a reliable stream of financial resources. Additionally, future revenues from hydropower investments may also increase the fiscal space for health in the future. Other possible options to increase financial sustainability of the health sector include introduction of user fees for certain types of services and encouraging expansion of the private health sector to attract patients with the ability to pay and reduce the financial burden on the public health system.

19. Shifting from inefficient line-item budgeting to needs-based allocation practices, strengthening referral networks between primary care and higher levels, increasing the scope and participation of the private sector in delivery of services, and subsidizing transportation costs for populations in remote areas are additional options to improve efficiency and access to services (footnote 1). The Government of Bhutan is also moving toward increased decentralization which will shift the allocation from 20% to 50% to districts under the 12th 5-year plan. This shift will provide more opportunity to respond to local health needs and improve service delivery.

20. **Conclusion**. Immense and growing cost pressures to Bhutan's predominantly public-financed health system requires close review to identify opportunities to increase fiscal space and optimize use of existing resources. Key constraints to increasing fiscal space and efficiency of health resources in Bhutan include (i) limited and underutilized primary health services in favor of costlier secondary and tertiary facilities, (ii) risks to sustainability of the BHTF, (iii) fragmented HIS, and (iv) inefficient line-item budgeting practices. To address fiscal space constraints, investment to strengthen primary care services enhance connectivity of the HIS and improve management, and investment returns of the BHTF can generate additional resources for health through efficiency gains. Efficiency gains from PHC and HIS, as well as more financial resources from a better-managed BHTF, will make additional and critical resources available as Bhutan experiences rising health care demand in the future and while basic health care remains constitutionally free, the government must recognize the immense pressure on the financing system to maintain this commitment and appropriately plan and design future policies to ensure fiscal sustainability.

Financial Sustainability of the Bhutan Health Trust Fund

Founded in 2000, the Bhutan Health Trust Fund (BHTF) is mandated to ensure free and uninterrupted supply of essential drugs and vaccines. The fund has surpassed its capitalization target of $24 million and in 2018, will reach $35 million with Asian Development Bank (ADB)and Government of Bhutan's contributions. By 2027, this is expected to rise to $46.6 million. Currently, the entire share of capital is invested domestically in fixed deposits due to limited market availability and while interest income was close to 10% in 2015–2016, in 2016–2017, it was significantly lower at 5% after adjusting for inflation. This is expected to continue decreasing further as the country's interest rate structure shifts.

Key factors exist that will increase the need for additional financial resources for the BHTF. The BHTF expenditure is expected to rise due to rising disease burden of noncommunicable diseases, which typically require prolonged and costlier drug regimens. Expenditure on essential drugs has been increasing annually by 7.5% from 2015–2017. The trend is expected to continue increasing by 6.6% every year and in 2027, this will be an estimated $6.19 million. Vaccine expenditure is also expected to increase as donors gradually withdraw support and new vaccines (pneumococcal, rotavirus, and influenza) are introduced. In 2017, vaccines accounted for 3% of the total BHTF expenditure and by 2021, this is expected to increase to 34%—a sharp increase in only 4 years. Previously, the BHTF was under the Royal Civil Service Commission which financed its operational costs and provided human resources. However, since gaining autonomy, the BHTF will now fund its operational costs from its reinvestment income. Operational costs in 2018 are estimated $181,000 (this includes salary increases for existing employees and recruitment of two additional staff) and $300,000 by 2027.

If there is no ADB or government support of $17.52 million, the BHTF will face a funding gap of $2.77 million by 2027. The capital stock will be significantly lower and therefore grow at a lower rate and by 2024, the BHTF would face a revenue deficit and consequential depletion of its capital base. ADB support will also be linked to better fund management, development of a resource mobilization strategy, additional human resources, and improved investment strategies. The forecasting analysis assumes that ADB capitalization contributions will be invested outside Bhutan and yield a return of 3.0% until 2022 and annual rate of return of 3.5% in subsequent years. It assumes the revenue surplus of the BHTF will be put back into the BHTF's domestic capital and earn returns of 7% per year and that the health contribution will be revised upward from 1% to 2%. Under these conditions with ADB support, total investment income would remain steady between $2.5 million in 2018 to $4.25 million in 2027. Due to legalization and upward revision, the health contribution will rise from $2.96 million in 2018 to $5.92 million in 2019 and then will continuously rise to $7.34 million in 2027. Due to larger increases in its annual income, the BHTF will experience revenue surplus from 2018 to 2027. The capital stock of the BHTF will more than double from $35.2 million in 2018 to $68.8 million in 2027. Steep augmentation in the capital stock of the BHTF will take place due to consistent revenue surplus. It is promising that the BHTF will achieve greater sustainability with ADB support and a rise in the health contribution from 1% to 2%.