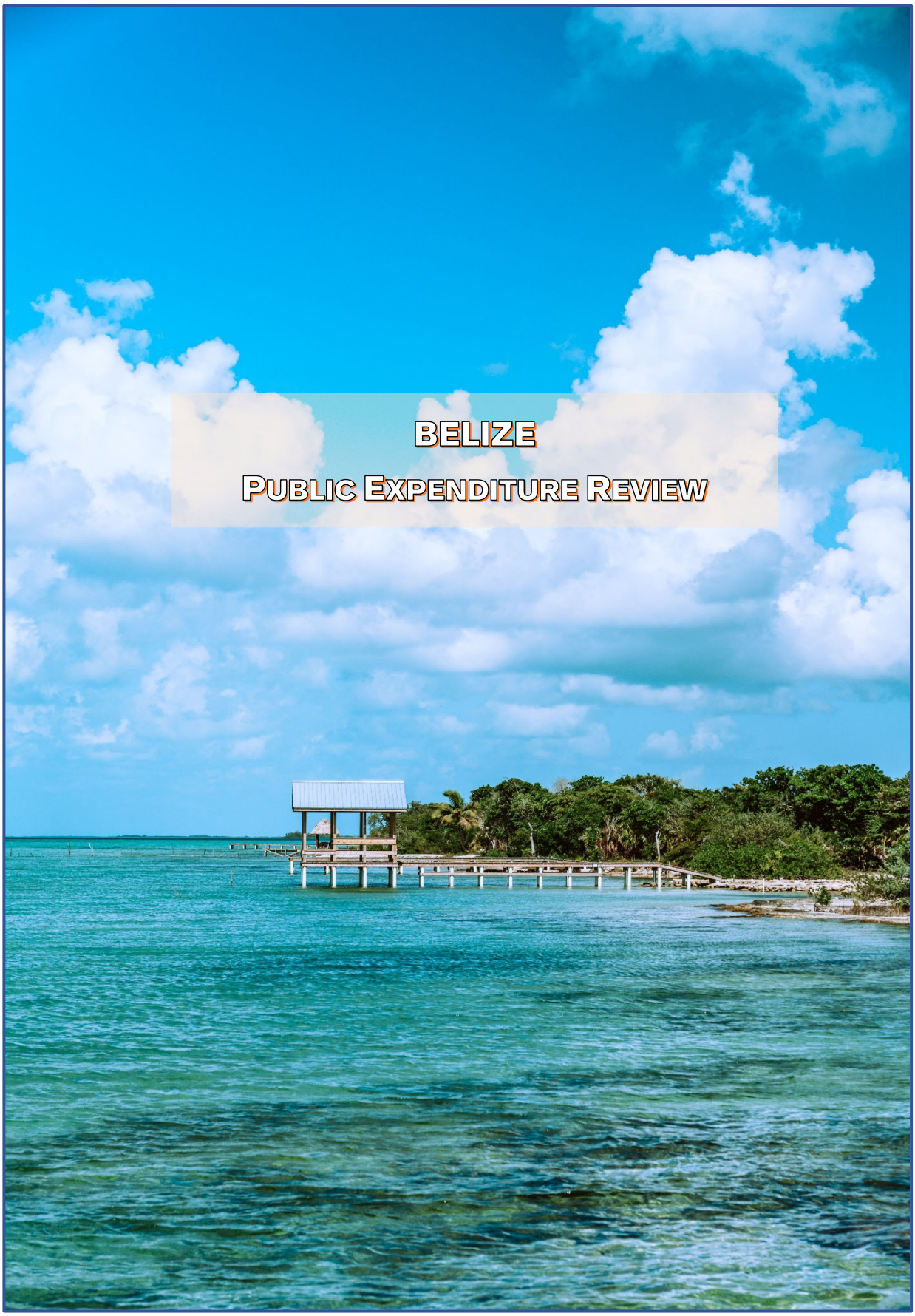
# BELIZE

## PUBLIC EXPENDITURE REVIEW



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## ACRONYMS

| | |
|---|---|
| AAL | Average Annual Loss |
| ALOS | Average Length of Stay |
| BBR | Balance Budget Rule |
| BDAT | Belize Diagnostic Achievement Test |
| BHIS | Belize Health Information System |
| BOR | Bed Occupancy Rate |
| BTR | Bed Turnover Rate |
| CBE | Competency-based Education |
| CCRIF | Caribbean Catastrophe Risk Insurance Facility |
| CEO | Chief Executive Officer |
| CERC | Contingent Emergency Response Component |
| CSEC | Caribbean Secondary Education Certificate |
| CRIP | Climate Resilient Infrastructure Project |
| CSME | Caribbean Single Market and Economy |
| CXC | Caribbean Examinations Council |
| DMSP | Defense Meteorological Satellite Program |
| DR | Debt Rule |
| DRS | Disaster Resilience Strategy |
| DSA | Debt Sustainability Analysis |
| EGMA | Early Grade Mathematics Assessment |
| EGRA | Early Grade Reading Assessment |
| EMIS | Educational Management Information System |
| ER | Expenditure Rule |
| FPP | Fiscal Policy Paper |
| FRL | Fiscal Responsibility Law |
| FSP | Fiscal Strategy Plan |
| GoB | Government of Belize |
| GDP | Gross Domestic Product |
| GFNs | Gross Financing Needs |
| GHED | WHO Global Health Expenditure Database |
| GHG | Greenhouse Gas |
| GNI | Gross National Income |
| GST | General Sales Tax |
| HF | Health Facility |
| HRH | Human Resources for Health |
| HRM | Human Resource Management |
| IDB | Inter-American Development Bank |
| IMF | International Monetary Fund |
| KHMH | Karl Heusner Memorial Hospital |
| LAC | Latin America and the Caribbean |
| MAC | Market Access Countries |
| MDAs | Ministries, Departments, and Agencies |
| MICS | Multiple Indicator Cluster Survey |

| | |
|---|---|
| MIDH | Ministry of Infrastructure, Development and Housing |
| MoECST | Ministry of Education, Culture, Sport, and Tourism |
| MoED | Ministry of Economic Development |
| MoF | Ministry of Finance |
| MoHW | Ministry of Health and Welfare |
| MTFF | Medium-Term Fiscal Framework |
| NCCPSAP | National Climate Change Policy, Strategy, and Action Plan to Address Climate Change in Belize |
| NCD | Noncommunicable Disease |
| NCRIP | National Climate Resilience Investment Plan |
| NDC | Nationally Determined Contribution |
| NDRF | Natural Disaster Reserve Fund |
| NHA | National Health Accounts |
| NHI | National Health Insurance |
| OECD | Organisation for Economic Co-operation and Development |
| OLS | Operational Linescan System |
| PAHO | Pan American Health Organization |
| PEFA | Public Expenditure and Financial Accountability |
| PER | Public Expenditure Review |
| PFM | Public Financial Management |
| PHC | Primary Health Care |
| PIM | Public Investment Management |
| PIMA | Public Investment Management Assessment |
| PIRLS | Progress in International Reading Literacy Study |
| PISA | Program for International Student Assessment |
| PIU | Project Implementation Unit |
| PPP | Public-Private Partnership |
| PPPO | Pension Plan for Public Officials |
| PPRE | Policy, Planning, Research and Evaluation Unit |
| PSE | Primary School Examination |
| PSIP | Public Sector Investment Program |
| SAN | Special Academic Needs |
| SCD | Systematic Country Diagnostic |
| SDA | Seventh Day Adventist |
| SEN | Student Economic Support Program |
| SIB | Statistical Institute of Belize |
| SPC | Segregated Portfolio Company |
| TIMSS | Trends in International Mathematics and Science Study |
| TNC | The Nature Conservancy |
| TPE | Total Public Expenditures |
| TVET | Technical and Vocational Education and Training |
| UECB | Union of Evangelical Churches of Belize |
| UHC | Universal Health Coverage |
| UIS | UNESCO Institute for Statistics |
| UNESCO | United Nations Educational, Scientific, and Cultural Organization |

| | |
|---|---|
| UNICEF | United Nations Children's Fund |
| VET | Vocational Education and Training |
| WDI | World Development Indicators |
| WEO | World Economic Outlook |
| WHO | World Health Organization |

# EXECUTIVE SUMMARY

**Belize, a small nation heavily reliant on tourism and agriculture, is gradually emerging from a challenging period of economic instability and large fiscal imbalance.** This period included multiple debt restructurings due to fiscal indiscipline and external shocks. Before the onset of the COVID-19 pandemic, Belize faced sustained fiscal deficits leading to mounting public debt and its fourth debt restructuring in just 15 years. Fiscal imbalance was primarily driven by rising wage bills, interest payments, and goods and services costs, while public investment took a backseat. Vulnerability to climate shocks further strained public finances. Despite some tax policy reforms that boosted revenue, the debt burden persisted due to ongoing fiscal deficits, sluggish GDP growth, and realization of contingent liabilities. Procyclical fiscal policy amplified volatility of growth and led to increase in budget rigidities.

**Despite being hit hard, Belize recovered relatively quickly from the COVID-19 pandemic.** The economy contracted by a staggering 13.4 percent in 2020. Revenues fell steeply and spending soared as the Government of Belize (GoB) took decisive action to support the tourism sector and other struggling industries. The fiscal deficit rose to 9.8 percent of GDP and public debt soared by nearly 25 percentage points of GDP. Real GDP, however, surged by 15.2 percent in 2021 and 12.1 percent in 2022, led by retail and wholesale trade, tourism, and business process outsourcing. The removal of extraordinary fiscal measures and measures to control the public sector wage bill reduced primary spending. Revenues reached pre-pandemic levels already in 2021. While it remains elevated, debt-to-GDP fell below pre-pandemic levels, also aided by a debt-for-marine-protection swap with The Nature Conservancy (TNC) and a significant discount on debt owed to Venezuela under PetroCaribe.

**Yet, fiscal management will need to improve if Belize wants to achieve higher, inclusive, and sustainable growth**:

- **Budget credibility and fiscal discipline remain a challenge.** Gaps between approved and actual spending are large, particularly in categories like goods and services and capital spending. Budget credibility is weak at the ministry. Inconsistencies in budget reporting, lack of a multiyear planning horizon and medium-term fiscal strategy make it difficult to plan and to align policy goals with fiscal envelopes. Institutional coordination and capacity are lagging. While the budget documentation transparent, it is not effective.
- **A high public sector wage bill continues to limit fiscal space**. As of 2022, the wage bill (including transfers to public high schools and public hospitals allocated for salaries) accounted for 41 percent of total public spending, 50 percent of total revenue, and 55 percent of recurrent expenditure. This large wage bill is largely the result of persistent employment growth, especially education, police, and defense, with larger than usual share of positions in the lower pay grades. Pay grades are highly compressed, limiting incentives for staff occupying positions with high levels of responsibility and expertise. While permanent (establishment) positions are subject to explicit controls by the MoF, it exercises less oversight over others.
- **Although Belize has been able to boost much needed public investments, some concerns remain regarding their efficiency.** Spending on public infrastructure doubled over the last five years. The Public Sector Investment Program (PSIP) enhanced their transparency. While economic infrastructure projects dominated the portfolio, the focus is expected to shift to economic services. The share of capital expenditure funded by domestic sources declined from 62 percent in FY2015 to 42 percent in FY2021, owing to the higher weight of capital expenditure funded by external sources during the COVID-19 pandemic. Despite delays in some public investment projects, overall project durations align with the average completion time of 3.3 years, but larger

projects can extend beyond 6 years. While budget allocations for public investment projects often differ from actual expenditures, the total expenditure to complete projects generally aligns with the original estimated costs, reflecting effective cost management practices.

- **Education outcomes deteriorated over time despite increased spending.** Although total public expenditures for education in Belize are high relative to Latin American countries and Caribbean small states and has been in an upward trend, the percentage of test-takers averaging 'inadequate' across core subjects increased in recent years. While primary education demonstrates relatively lower per capita costs, secondary education expenditures are substantially higher, with tertiary education costs falling below comparators. The structure and governance of Belize's education system present complexities with challenges in ensuring accountability due to the influence of powerful players such as teachers' unions. Most schools are owned by churches, with significant costs borne by households, which further complicates the accountability landscape.
- **Quality gaps limit effective health care coverage and health human resources remain scarce although Belize's total health expenditure as a share of total government expenditures is among the highest in the Caribbean.** The country faces an increasing burden of noncommunicable diseases, communicable diseases, and climate-sensitive vector-borne diseases, as well as high mortality rates among male adults due to homicides and road accidents. Despite progress in maternal and child health, disparities in access, services, and outcomes persist. Belize's health system ranks low globally, scoring 52 out of 100 in the Effective Coverage Index. Inefficiencies, limited capital expenditure, productivity issues, and underused hospitals underscore the system's fragility, spotlighted by the COVID-19 pandemic. While emergency funding mechanisms have been introduced, strengthening resilience remains a challenge. Decentralization efforts face obstacles, data gaps hinder effective policymaking, and challenges in recruiting and retaining health workers due to migration to other nations contribute to low density of physicians and nurses.
- **Belize's spending on initiatives aiming to combat climate change is limited and needs a reprioritization.** The level of spending is below the Nationally Determined Contribution (NDC) spending targets. In FY2021/22, the total cost of these climate-relevant activities covered by the budget amounted to about 1.5 percent of total expenditure. The level of spending incurred due to climate change is below the level necessary to fund the current NDCs. Assuming the latest estimates are accurate, public funding for climate change fell short by 39 percent in FY2021/22, creating fiscal pressure in years to come. Also, while the updated NDC provides a reasonable basis for climate change adaptation and mitigation sector priorities, budget allocations are not well aligned with identified priorities. They seem much closer aligned with the priorities of the National Climate Change Policy, Strategy, and Action Plan to Address Climate Change in Belize, which is now outdated.

**Policy recommendations**

**To maintain its current positive trend in the quality of fiscal policies and to avoid return of fiscal indiscipline in the future, Belize needs to take the following five interrelated key steps:**

- Move to a more rules-based approach in fiscal policy.
- Increase the government's fiscal ability to respond to external shocks such as natural disasters or health emergencies.
- Improve value for money in key social and investment programs.

- Contain growth of the large and rigid components of public expenditures such as public sector wage bill.
- Optimize the expenditures related to climate change.

**Making fiscal policy more rules based**

**Belize could derive significant advantages from the implementation of a Fiscal Responsibility Law (FRL) featuring explicit rules to guide transparent and predictable debt reduction**. This law could be augmented by a mechanism for public oversight and accountability, within a comprehensive fiscal rule framework. The framework should integrate well-defined escape clauses and automatic correction mechanisms while emphasizing augmented fiscal transparency and accountability. It should also accommodate the establishment and periodic replenishment of NDRF, accompanied by specific clauses linking fund disbursements to natural disasters.

**However, the implementation of this rules-based fiscal framework necessitates certain pre-conditions, with a functioning Medium-Term Fiscal Framework (MTFF) being the minimum essential requirement**. The MTFF, in turn, should form part of a Cabinet-approved Macroeconomic Framework or Fiscal Strategy Plan (FSP), lending political commitment and credibility to budget estimates and the MTFF. The MTFF should encompass fiscal projections for a minimum of 4 years, with a Fiscal Policy Paper (FPP) serving as the tool for Parliament and the public to monitor FSP, budget, and MTFF implementation and updates. To ensure the efficacy of the fiscal rules in the medium term, robust budgetary and PFM institutional structures, including transparent budget credibility and coverage, procedural norms, and strong fiscal accounting systems, are imperative. Finally, an independent fiscal council with a mandate to produce unbiased projections and evaluate compliance with fiscal rules would enhance transparency and accountability of fiscal operations and buttress credibility of the fiscal management framework.

**Central features of a rules-based fiscal management framework in Belize could comprise debt anchor combined with either balance budget rule (BBR) or primary expenditure rule:**

**Debt anchor.** Under a 'maximum debt limit' of 60 percent of GDP, adopt a debt target of below 50 percent of GDP to ensure that government debt remains below the 'maximum debt limit' with high probability even when negative shocks occur over the medium term. The framework could target a reduction in government debt to below 50 percent of GDP over 10 years.

**Balance Budget Rule.** The framework could target an increase in the overall budget balance that attains the debt target of below 50 percent of GDP in 10 years, from 62.1 percent of GDP in FY2022.

**OR**

**Primary Expenditure Rule.** The framework could impose a limit to the expansion of primary expenditure in real terms that attains the debt target of below 50 percent of GDP in 10 years, from 62.1 percent of GDP in FY2022.

**The fiscal rule needs to include an escape clause and an automatic correction mechanism and should be underpinned by establishment of an independent fiscal council.** To permit a rapid response to natural disasters, the fiscal rule should include an escape clause, limited to major adverse shocks, and triggered only with Parliamentary approval. The escape clause should primarily be used for the Balance Budget Rule or Primary Expenditure Rule, but not for the Debt anchor, which already has a ten-percentage margin

built-in to provide flexibility in achieving the targeted debt-to-GDP ratio. The fiscal rule could also establish an automatic correction mechanism that would be triggered by substantial cumulative deviations from the annual primary fiscal balance target. Finally, an independent fiscal council with a mandate to produce unbiased projections and evaluate compliance with fiscal rules would enhance transparency and accountability of fiscal operations and buttress credibility of the fiscal management framework.

**Improving the government's fiscal ability to respond to external shocks**

**The establishment of an NDRF presents a mechanism for self-insurance against the impacts of natural disasters.** The contingencies fund established by the Finance and Audit (Reform) (Amendment), Act, 2021, could be operationalized as an NDRF. A fund of approximately 1 percent of GDP, replenished annually, holds the potential to expedite the financing of immediate recovery and response expenses linked to the anticipated annual average losses from government contingent liabilities arising from flood and hurricane shocks. To bolster Belize's long-term climate change resilience, the government should implement a series of investments and regulations. Concurrently, fostering financial resilience to climate change requires adopting a layered approach that encompasses building buffers and carefully managing the financial risk inherent in natural disasters.

**Achieving the delicate equilibrium between fiscal responsibility and adaptability necessitates endowing the GoB with the authority to recalibrate the budget in response to evolving conditions, without requiring a supplemental budget request to the National Assembly.** However, this prerogative must be bounded by specific limitations. To this end, the annual budget should encompass a designated reserve allocation intended to address unforeseen and immediate expenditure imperatives. This reserve can be judiciously deployed to cater to emergent demands for unanticipated goods or services that fall beyond the current budgetary confines or surpass the allotments earmarked for those services or goods in the budget or supplementary budget. Urgent and unpredicted expenses stemming from external shocks, excluding natural disasters like pandemics or global financial crises, can be sustained via the budget reserve, preserving budgetary integrity. If unforeseen outlays are linked to a natural disaster aligning with NDRF criteria, the required resources should derive from the NDRF. In such circumstances, the budget will remain unaffected.

**Improving value for money in key social and investment programs**

**Limited fiscal space necessitates enhancing value for money on key social and investment programs.** Improving efficiency, effectiveness, and equity of public expenditures on education and health will be critical for achieving inclusive and sustainable economic recovery.

***Education***

**To improve value for money on public education spending, the GoB needs to address deficiencies within the Secondary Finance Reform.** This entails deploying rigorous analytical studies and engaging in consultations with key education stakeholders, including high school principals, which should aim at appraising the efficacy of the existing funding formula, discerning its functional strengths and limitations, and conducting an evaluation of the support programs' effectiveness in targeting underprivileged students and those facing academic challenges.

1. **The GoB should also proactively foster a culture of continuous improvement within schools, underpinned by transparent performance metrics.** As suggested by the Belize Education Sector Strategy 2021–2025, create and publicly disseminate a 'report card' for each school, featuring its efficiency rating,

enrollment vis-a-vis its catchment area, and its students' learning achievements. Participate in an international learning assessments to show how the Belize education system performs relative to those of other countries, as measured by the learning achievemnts of the students in each country participating in the assessment. Enlist influential figures in a nationwide campaign to advocate for a culture of continuous improvement and enrol high-level representatives from impactful institutions to champion betterment at the school level. These figures could mitigate domestic opposition to this paradigm shift. Delve into the core reasons behind learning stagnation and probe whether higher-qualified, better-compensated teachers outperform their counterparts.If this isn't the case, a thorough reevaluation of training programs, hiring criteria, and promotion standards for teachers is imperative.

**In addressing the challenge of academically struggling students, schools need to transcend the practice of grade repetition.** Across the globe, countries grapple with this issue, and while many resort to repeating grades as a remedy, this approach has proven ineffective. It also exacerbates dropout rates among repeaters. The Organization for Economic Co-operation and Development (OECD) identified viable alternatives to grade repetition, some of which the GoB has contemplated but not yet fully implemented. For instance, the practice of identifying students at risk of retention through ongoing assessment during the academic year offers promise. Repetition should be limited to specific subjects or modules that were not successfully completed, as opposed to the entire year. While this alternative approach entails costs, they are notably lower than those associated with repeating an entire grade, and the approach yields greater effectiveness.

***Health***

**To improve health outcomes, the GoB should consider several health financing reforms.** These could include: (a) forging a tangible link between payments to health regions and the attainment of key performance indicators; (b) introducing strategic procurement strategies that encompass quality-of-care objectives; (c) permitting hospitals to, at least partially, retain revenue from user fees for adaptable use; and (d) delving into and mitigating the factors contributing to the differences in budget execution rates across catchment areas.

**Given the shortage of health workers in Belize, improvement of service delivery would require developing effective policy strategies to retain the health workers in the country, particularly in rural areas.** The development of retention policies should address the lack of financial incentives, geographical remoteness, poor road access and communication, unavailability of goods and services, and lack of adequate support for education of children and appropriate accommodations. The GoB also needs to strengthen health and multisectoral financing and service delivery models to improve NCDs' outcomes and broader public health issues.

**Elevating the health sector governance demands a concerted effort.** This can be achieved by making strategic investments in health management and information systems, bolstering human resource capacity to facilitate the timely and quality generation of data, and harnessing their potential for informed planning, budgeting, reporting, performance monitoring (including fund utilization and outcomes), and comprehensive sector-wide benchmarking. Strengthening the policy, regulatory, and oversight capacity of the Ministry of Health and Wellness (MoHW) will be paramount in moving forward to ensure that patients receive effective and safe care in a cohesive manner.

**The country's experience of the COVID-19 pandemic demonstrated the importance of creating surge capacity in the health sector for future emergencies.** Along with improving the financial response

capacity, the GoB should introduce mechanisms to fast-track the creation of surge capacity in the health sector (for example, for the recruitment of health personnel).

***Public Investments***

**Belize has the potential to bolster its institutional capacity for effective Public Investment Management (PIM) over the medium term.** Aligning strategic planning documents with the government's medium-term fiscal strategy would enhance project identification and selection, facilitating informed policy choices across sectors. Strengthening budget processes supporting public investment implementation should focus on enhancing consistency between yearly project projections, approved budgets, and actual expenditures. Enhancing information systems for project monitoring would provide swifter and comprehensive data to the MoF and other central entities.

**Rather than comprehensive legislative overhaul, Belize could pursue a targeted reform approach, concentrating on select technical reforms to enhance data for decision-making and project accountability.** For instance, modifying existing regulations to clarify the roles of various institutions in the project cycle could empower the MoF with requisite data for effective fiscal management. With the expanding project portfolio, human resource capacity gains prominence. In the short to medium term, capitalizing on existing project management expertise by forming centralized pools of specialists deployed across sectors based on risk considerations could be considered. Over the long run, enhancing technical skills within PIM could be part of a broader initiative to elevate recruitment and retention of adept personnel in the public sector through pay and benefits system improvements. Furthermore, advancing transparency in public investment spending to enhance accountability of project implementers remains pivotal.

**Containing growth of the public sector wage bill**

**Improving fiscal control over the public sector wage bill demands resolute policy choices to restrain growth in employment and wage levels**. Well-executed early retirement and voluntary departure programs, previously successful in other nations, offer potential for workforce reduction. Nonetheless, these programs carry inherent limitations, with immediate fiscal returns not always assured. It is crucial to target employees with surplus skills rather than those already in short supply. While attrition presents a more straightforward avenue for downsizing, careful planning is paramount to optimize fiscal outcomes while minimizing operational disruptions. The GoB should contemplate freezing replacement for roles in low-priority functions or where skill adequacy is already established. This targeted approach would facilitate necessary replacements in critical roles. Further revisions to personnel regulations are also worth considering, aimed at curbing the recruitment of temporary or unestablished positions in the future, with constraints on term duration.

**In the medium to long term, modernizing the pay system is prudent to confront external competitiveness and internal equity challenges.** The prevalent practice of uniform wage hikes sustains structural imbalances. A review of pay grade classification, and potential market-based adjustments for select specialized positions, could rectify this.

**To ensure fiscal viability of the public sector wage bill while augmenting productivity, the GoB needs to enhance its human resource management (HRM) capacity.** Streamlining data collection, bolstering strategic HR planning, and anchoring public sector personnel costs within a medium-term fiscal framework can foster predictability and facilitate alignment with external stakeholders like trade unions.

**Optimizing the expenditures related to climate change**

**In enhancing its climate resilience, Belize must ensure that climate-related expenditures are harmonized with National Determined Contributions (NDC) priorities, unless clear private sector funding alternatives exist**. Current disparities between sectoral priorities and budget allocations underscore the need for strategic alignment. To bridge this gap, Belize could incorporate climate change-relevant expenditures into its strategic planning and budgeting processes. By utilizing an updated list of sectoral climate priorities, the MoF could request line ministries to identify and quantify resources for climate adaptation and mitigation when submitting budget proposals. Consolidating this data would facilitate monitoring and align spending with national climate goals.

**Transparency and accountability would be promoted through the publication of climate spending information.** Additionally, Belize's program and performance-based budgeting model offers a strong foundation to identify climate-relevant expenditures. Integrating climate objectives into program reports and aligning them with performance indicators would allow the nation to not only assess allocation efficiency but also program effectiveness. Alternately, periodic expenditure reviews could gauge the alignment of budgeting with climate policy goals. Through these mechanisms, Belize can pave a sustainable path forward, weaving climate resilience into its fiscal fabric.

**Summary of the recommendations**

| | | Short term | Medium term | Longer term |
|---|---|---|---|---|
| **Making fiscal policy more rules-based** | | - Preparing and enacting fiscal responsibility law (FRL)<br>-Putting in place minimum pre-conditions for fiscal rules such as an MTFF | - Putting in place all pre- conditions for fiscal rules<br>- Launching fiscal rules | - Implementing the FRL |
| **Improving the government's fiscal ability to respond to external shocks** | | - Designing the escape clause of the fiscal rule<br>- Legislating budget reserve allocation<br>-Operationalizing the Contingencies Fund as an NDRF | Maintaining balance of the NDRF to the tune of 1 percent of GDP in FY2024-FY2026, replenished annually | Operating the NDRF |
| **Improving value for money in key social and investment programs** | **Education** | - Moving away from repetition to help lagging students toward interventions such as after-school assistance, Saturday tutoring, and mandatory summer instruction | - Remedying flaws in the functioning of the Secondary Finance Reform by improving the funding formula and student support programs | - Establishing a culture of continuous improvement at the school level with multiple, publicized performance measures |
| | **Health** | - Creating surge capacity in the health sector for future emergencies<br>- Developing effective policy strategies to retain the health workers in the country<br>- Improving health information management systems | Designing and implementing health financing reforms that maximize the results by linking payments to health regions to the achievement of key performance indicators, introducing strategic purchasing methods that also incorporate quality of care targets, and allowing hospitals to retain some revenue from user fees | - Strengthening the policy, regulatory, and oversight capacity of the Ministry of Health and Wellness |
| | **Public Investments** | - Clarifying the roles and responsibilities of various institutions | - Strengthening institutional capacity for effective PIM, | - Improving technical skills within the PIM function through |

| | | | | |
|---|---|---|---|---|
| | | - Creating centralized pools of experts to be deployed across sectors | including strategic planning, budget processes, and information systems | recruitment and retention of highly skilled staff |
| **Containing growth of the public sector wage bill** | | - Implementing policy actions that reduce the current size of the public service, including early retirement and voluntary departure programs<br>- Putting in place the measures to tighten future entry | -Reviewing the classification of positions across the various pay grades and | - Modernizing pay system to address challenges to external competitiveness and internal equity |
| **Optimizing the expenditures related to climate change** | | - Including objectives and activities related to climate change in the program and performance reports prepared for budget purposes | - Systematically identifying climate change-relevant expenditures as part of strategic planning and budgeting processes<br>- Updating the list of sectoral priorities for climate change adaptation and mitigation in order to strengthen the link between national climate change policies and strategies and budgeting | - Improving alignment of climate-related expenditures with the NDC priorities considering availability private funding |

# BELIZE PUBLIC EXPENDITURE REVIEW

1. **The Belize Public Expenditure Review (PER) provides a comprehensive analysis of the country's fiscal policies and spending patterns over the last decade and offers a road map for policy makers to achieve more sustainable and equitable development outcomes and enhance the performance of public institutions.** The review highlights the significant progress made by Belize in recent years, particularly in terms of fiscal consolidation and debt management. It also identifies several challenges that need to be addressed, including deficiencies in the public financial management (PFM) framework and high levels of expenditure rigidity, especially related to the public sector wage bill. The review also emphasizes the need to improve the efficiency and effectiveness of public spending in key sectors such as education and health by addressing challenges such as the decline in learning outcomes and participation rates despite the high levels of public expenditure allocated to the education sector, as well as limited availability of human resources in the health sector, inefficient health financing and service delivery models, and deficiencies in health sector governance.

2. **To address these challenges, the report recommends a range of policy measures, including the adoption of a rules-based fiscal management framework, improvements in value for money on key social and investment programs, and the containment of growth in the public sector wage bill.** The report also recommends enhancing the government's fiscal ability to respond to external shocks, such as natural disasters or health emergencies, improving coordination among stakeholders to enhance effectiveness of public investment, and reducing fiscal risks related to climate change by optimizing expenditures and increasing the economy's resilience. The report's specific recommendations include the adoption of a Fiscal Responsibility Law (FRL), the establishment of an independent fiscal council, and allocation of sufficient funding to the Natural Disaster Reserve Fund (NDRF). The report also suggests developing effective policy strategies to improve the productivity of schools and hospitals and to retain health workers in the country and strengthening accountability in health and education sectors.

## CHAPTER 1. RECENT FISCAL TRENDS AND MACRO-FISCAL PERFORMANCE

3. **This chapter provides the macro-fiscal context for the subsequent chapters of the report.** It examines recent fiscal trends (trends in composition of Belize's public expenditures and revenues in the recent past, the main drivers of fiscal pressure on both expenditure side and revenue side, budget rigidities and sources of fiscal volatility, and the trade-offs between capital and recurrent spending) and their implications for macro-fiscal management and performance. It also looks at whether budgets are implemented as planned; presents a baseline scenario for key determinants of current account, primary, nominal fiscal balances, and indebtedness indicators; and identifies risks to debt sustainability.

### 1.1 Background and macroeconomic trends

4. **Belize is a small country that is particularly vulnerable to external economic shocks and climate change.** It has the smallest population in Central America, with an estimated 405,273 people as of 2022.[1] The country's public expenditures amounted to 23 percent of its gross domestic product (GDP) in FY2021.[2] As a small economy that is primarily reliant on tourism[3] and the export of agricultural products and with

[1] Besides Belize, the Central America region includes Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.
[2] FY2021 refers to FY2021/22.
[3] Tourism is estimated to account for 37 percent of GDP directly and indirectly in 2019 (World Travel and Tourism Council. Economic Impact - Belize Country Report, 2019).

an energy sector that is dependent on oil imports, Belize is highly vulnerable to fluctuations in international commodity and energy prices and external economic shocks.[4] Between 1999 and 2008, real GDP growth averaged 5.6 percent, supported by expansionary monetary and fiscal policies, before falling to 1.7 percent between 2009 and 2021, which, combined with a similar rate of population growth, resulted in GDP per capita near stagnation over the past decade.[5] Vasilyev (2019) identified several constraints to growth in Belize, including the high cost of finance, risks of fiscal and debt sustainability, deficiencies in human capital, crime, natural disasters, and infrastructure gaps. Climate change poses a significant economic and social risk to the country due to its reliance on agriculture and low-lying coastline, where half of the population resides, as hurricanes, flooding, droughts, sea level rise, coastal erosion, and coral bleaching increase in frequency and intensity.[6]

5. **A substantial share of Belize's ethnically, linguistically, and religiously fragmented population is poor and more than half of it is rural.** Members of the country's small population belong to multiple distinct ethnic groups[7] and religious denominations[8] and speak multiple languages. As a result of the country's underperforming economy, the poverty rate at a national poverty line increased from 34 percent in 2002 to 52 percent in 2019, with 9 percent of the population living in extreme poverty, and 11 percent were at risk of falling into poverty (Statistical Institute of Belize 2021).8F9 About 55 percent of its population live in low density rural areas,9F10 making economies of scale for the delivery of public services in these areas hard to achieve. An extensive Multidimensional Poverty Index analysis conducted in 2021 shows a reduction in poverty to 35.7 percent of the population.

6. **Belize has experienced sustained fiscal deficits and low economic growth, leading to high levels of public debt and four sovereign debt restructuring episodes in 15 years.** In FY2006, due to an acute external liquidity shortage caused by the global financial crisis and high debt service burden, the government exchanged its external commercial debt into a single bond with a face value of 43 percent of GDP. In FY2012, the authorities launched a second external debt restructuring due to a substantial increase in coupon rates and concerns about fiscal solvency. This restructuring resulted in a new bond with a face value of 33 percent of GDP and a modest face value haircut of 10 percent, as well as cash-flow relief through changes in both coupon and maturity structures. Belize's third sovereign debt restructuring occurred less than four years after its second debt restructuring and within ten years of its first restructuring. This third restructuring of debt to private bondholders was worth about 30 percent of GDP. In FY2020, debt distress circumstances were renewed due to the adverse economic consequences of the

[4] Carneiro 2016.

[5] World Bank's 'Macro Poverty Outlook for Belize' of Spring 2022, https://www.worldbank.org/en/publication/macro-poverty-outlook/mpo_lac, and the International Monetary Fund's 'World Economic Outlook Database' of October 2022.

[6] The United Nations Framework Convention on Climate Change (UNFCCC) has identified that Belize is among those countries most vulnerable to the negative effects of climate change. Between 1994 and 2013, for example, annual losses from hydro-meteorological disasters were estimated at approximately 4 percent of GDP.

[7] The main groups are Mayan, Creole, Garfuna, Mestizo, and German-speaking Mennonite. About 5 percent are Chinese, Indian, or white.

[8] Denominations include Roman Catholic; Protestant (Pentecostal, Adventist, Anglican, Mennonite, Baptist, Methodist, and Nazarene); Jehovah's Witnesses; and other religions such as the Maya religion, the Garifuna religion, the Church of Jesus Christ of Latter-Day Saints, Hindus, Buddhists, and Muslims.

[9] The institute classified households as 'poor' if their annual expenditures were below the General Poverty Line of US$7,961 and as 'critically poor' if their annual expenditures were below the Minimum Food Basket of US$2,682.

[10] The Operational Linescan System (OLS) flown on satellites of the US Defense Meteorological Satellite Program (DMSP) has a unique capability to record low light imaging data at night worldwide. Analyses of DMSP-OLS night-time lights data for Belize show how thinly populated it is (Carneiro 2016).

COVID-19 pandemic, and the authorities conducted a fourth restructuring process. Few countries have restructured their debt so frequently or the same instrument repeatedly in such a short period.

7. **Before the COVID-19 pandemic, Belize's continued fiscal deficit was driven by dynamic recurrent expenditures and low domestic revenue mobilization efforts to increase fiscal space for public investment.** The overall fiscal deficit grew from an annual average of 1.5 percent of GDP between FY2010 and FY2014 to 3.6 percent of GDP between FY2015 and FY2019, driven by rising costs of the wage bill, interest payments, and goods and services, as well as revenue stagnation. In contrast, public investment was strongly adjusted during the second half of the decade by 2.8 percent of GDP to compensate for recurrent expenditure growth (+2.3 percent of GDP). On the revenue side, there was a temporary increase of 2 percent of GDP between FY2015 and FY2019 due to tax policy reforms that raised the rates of excise taxes and import duties on selected products and an increase in the general sales tax (GST) base by removing zero-rate items and exemptions. Belize's vulnerability to climate shocks added to public spending, as natural disaster-related spending was annually between 0.4 and 0.7 percent of GDP during the analyzed period. Due to continued fiscal deficits, low GDP growth, and contingent liabilities realizations, the debt stock increased from 64 percent of GDP in FY2015 to 77 percent of GDP in FY2019, while it remained stable at 65 percent of GDP between FY2010 and FY2014.

8. **Highly procyclical fiscal policy increased budget rigidities and growth volatility.** According to empirical evidence produced by the Systematic Country Diagnostic (SCD) team using the methodology of Frankel, Vegh, and Vuletin (2014), fiscal and budgetary policies in Belize were strongly procyclical for the majority of the 1990s (Carneiro and Garrido. 2015).[11] An empirical analysis of the IMF (2019) also shows that fiscal policy in Belize has been significantly procyclical and unsustainable for much of the period 1976–2018. The analysis indicates that discretionary fiscal policy was highly procyclical and failed to meet the necessary condition of fiscal sustainability, although there has been a fiscal adjustment between FY2016 and FY2018.[12] In the last decade, fiscal policy and economic activity were also strongly correlated: while the economic activity grew and tax reforms were introduced between FY2015 and FY2019, the Government of Belize (GoB) collected more revenues and public expenditure (mostly recurrent) increased at higher rates than GDP and public incomes, with rising GDP growth volatility. Most rigid public expenditures surpassed 80 percent of the total expenditure, reducing the fiscal space to respond to shocks and increase public investment. This trend was only recently reverted, with the GoB adopting a mild countercyclical stance. Consequently, under the GDP downturn of FY2020, automatic stabilizers activated, revenue collection declined, budget pressures rose, and fiscal sustainability was severely damaged. Finally, monetary policy is not actively used to dampen the business cycle in the presence of a fixed exchange rate to the US dollar.

9. **The COVID-19 pandemic hit severely when the economy was already in recession due to drought and a slowdown in tourism in the second half of 2019.** Among the Caribbean countries, Belize had the highest numbers of cases and deaths per capita. The impact of the pandemic on the economy was severe due to the collapse in tourism activity and the indirect effects of the necessary containment and mitigation measures. The pandemic led to a 72 percent fall in tourist arrivals in 2020 and, as a result, the country experienced a deep recession in 2020 and the economy contracted by 13.4 percent. The GoB acted quickly and decisively to mitigate the pandemic's epidemiological and economic consequences and

[11] Carneiro and Garrido 2015.

[12] These findings are consistent with the literature focusing on developing countries in general but contrary to the empirical evidence from the rest of the Caribbean where fiscal policy tends to be countercyclical and account for sustainability considerations over the past four decades.

to assist more than 40,000 employees in the sectors most affected by international travel restrictions and internal containment measures, particularly those in the tourism sector.[13] Additional support to the health care sector and the unemployed has been financed with loans from bilateral and multilateral creditors. Its fiscal stimulus package amounted to 1 percent of GDP in 2020. The Central Bank also adopted monetary and macro-financial prudential measures to maintain the flow of credit in the economy.

10. **The COVID-19 pandemic had a severe impact on fiscal deficit and public debt when the fiscal position was already weak.** The COVID-19 pandemic led to a sharp rise in public debt, both domestic and external, from 77 percent of GDP in 2019 to 101 percent in 2021, due to a 13.4 percent decline in nominal GDP and a strong fall in the overall balance from −3.8 percent of GDP in FY2019 to −9.8 percent in FY2020. However, the rebasing of the national accounts led to a large reduction in the public debt-to-GDP ratio in 2020, from 133 percent of the old GDP to 101 percent of the new GDP. As part of the impacts and the fiscal package introduced by the GoB to tackle the COVID-19 pandemic, tax revenues declined by 3.3 percentage points of GDP and expenditures increased 3.2 percentage points of GDP (+4.5 percentage points capital and −1.4 percentage points recurrent mainly on interest payments).

11. **Economic activity has rebounded strongly after the pandemic.** The rebased national accounts show that, after contracting by 13.4 percent in 2020, real GDP rebounded by 15.2 percent in 2021 and 12.1 percent in 2022,[14] driven by retail and wholesale trade, tourism, and business process outsourcing. As a result, the unemployment rate declined from 13.7 percent in 2020 to 4.0 percent in September 2023. Visitor arrivals reached 74 percent of pre-pandemic levels in 2022 as COVID-19 restrictions eased amid vaccination efforts in Belize and source markets. Inflation increased from near zero in 2020 to 3.2 percent in 2021 and 6.3 percent in 2022, led by higher global food and fuel prices despite measures to fix domestic diesel and regular gasoline prices at the pump at relatively high levels since April 2022.

12. **The fiscal position has strengthened, and the debt-to-GDP ratio has declined significantly after the pandemic, in line with the strong recovery in economic activity and fiscal consolidation efforts**. While the economy recovered the government removed those extraordinary fiscal measures and, despite the reinstatement of the 10 percent public sector wage cut and an increase in capital expenditures including one-off spendings related to Hurricane Lisa, primary expenditures declined by 8.8 percent of GDP (about half of which is recurrent, and another half is capital) and revenue rose by 1 percent of GDP. Fiscal deficit dropped from 9.8 percent of GDP in FY2020 to 1.4 and 0.6 percent of GDP in FY2021 and FY2022, while public debt declined to 80 percent of GDP at end of-2021 and 63.7 percent at end of-2022, due to the mentioned sizable expenditure adjustments, the strong economy recovery, and other factors discussed below in this chapter.

13. **Assuming no tax policy reform is in place, public expenditures must increase under nominal GDP growth to preserve recent fiscal savings and restore debt sustainability in the medium term.** Non-interest recurrent expenditure must remain constant in terms of GDP at 16.2 percent, then by FY2033, wages and salaries, goods and services, and transfers will be below the last eight fiscal years, averaged by 1.3, 0.7, and 0.5 percentage points of GDP, respectively. No tax policy reform challenges the fulfillment of the fiscal consolidation. Accordingly, the primary balance will remain constant at 0.9 percent of GDP and the overall deficit will stay below 1 percent of GDP. As a result, public debt stock declines gradually from

[13] https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#B
[14] https://sib.org.bz/wp-content/uploads/GDP_2022_04_Quarter.pdf

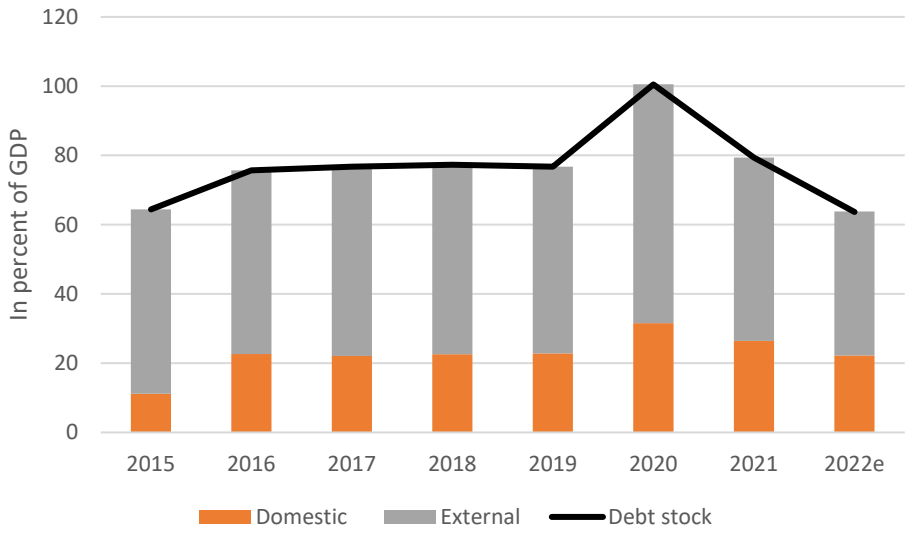
61.3 percent of GDP in FY2023 to 51.9 percent by FY2033, and public debt is assessed to be sustainable but sensitive to natural disaster and other risks.

14. **Lack of fiscal space forces to pursue revenue mobilization and value for money on key social and investment programs.** Revenue collection is stagnant in Belize, lower than in the past and that of its peer Caribbean countries. Belize's total revenues were 22.5 percent in FY2022, while its peer countries from the Caribbean region collected revenues that were an average of 25 percent of GDP. Budget rigidities are high because of the weight of the wage bill and operating costs. The GoB allocates 41 percent of total expenditures on wages and salaries, including transfers to public and private schools and hospitals (see Chapter 3). Public expenditures on the education and health sectors constitute about one-third of the total public expenditures (TPE) and are one of the highest among the Caribbean countries, the sectors' outcomes are declining, and quality gaps limit effective coverage (see Chapters 6 and 7). Based on the lack of fiscal space and to avoid adjusting public investment, the country should focus on the means to increase domestic revenue mobilization and extract greater value out of the existing programs (see Chapter 4).

### 1.2 Recent macro-fiscal and public debt performance

15. **Over the last several years before the COVID-19 pandemic, Belize has been increasing its public debt.** Public debt stock stayed stable, close to 80 percent of the new GDP, in the last few fiscal years, although it had averaged 65 percent over FY2010–FY2015; however, it surpassed 100 percent of GDP during the COVID-19 pandemic and subsequently declined to previous levels (Figure 1). Public debt stock increased from 64.4 percent of GDP in FY2015 to nearly 77 percent of GDP between FY2016 and FY2019. It is worth mentioning that 90 percent of this public debt stock growth is because of higher domestic debt. Additionally, public debt stock increased by 25 percent of GDP during the COVID-19 pandemic and reached 101.4 percent of GDP at end-2020, owing to both higher domestic (30.6 percent) and external debt (69.9 percent). The rebasing of the national accounts led to a large reduction in the public debt-to-GDP ratio in 2020, from 133 percent of the old GDP to 101 percent of the new GDP. Public debt fell further to 80 percent of GDP in 2021, due to sizable fiscal consolidation, the debt restructuring for marine protection swap with The Nature Conservancy (TNC), and the strong GDP growth. Public debt declined further to 63.7 percent of GDP at end-2022, led by revenue mobilization and recurrent expenditure adjustment efforts, a material discount on the debt owed to Venezuela under PetroCaribe of US$129 million or 4.4 percent of GDP, and strong GDP growth. Over the analyzed period, the GoB borrowed mostly with domestic debt, and the share of domestic debt in total public debt almost doubled, from 17.3 to 33.3 percent in 2015–2021. However, since 2020, the government has actively reduced domestic debt interest rates by fully repaying overdrafts with the Central Bank and discontinuing the issuance of Treasury securities. This has supported a decrease in interest rates within the domestic financial system.

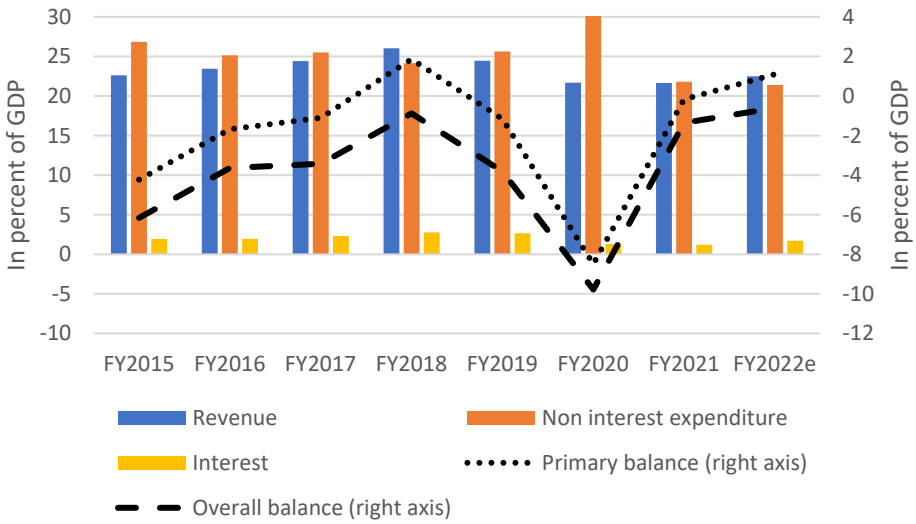
**Figure 1. Public debt stock**




*Source*: World Bank, International Monetary Fund (IMF), and Ministry of Finance (MoF).

16. **Fiscal consolidation efforts undertaken before the COVID-19 pandemic were postponed in FY2019–FY2020 and restored later once the economy rebounded.** Overall and primary balances improved from FY2015 to FY2018, from −6.2 and −4.2 percent of GDP to −0.9 and 1.9 percent of GDP, respectively. Drivers of this fiscal consolidation were revenue growth of 3.4 percent of GDP and non-interest total expenditures decrease of 2.6 percent of GDP; however, interest payments increased by 0.9 percent of GDP over the same period owing to continued fiscal deficit and the rising public debt. The COVID-19 pandemic severely affected the economic activity and consequently public revenues and expenditure, to contain the spread of the virus and support affected households and firms, increasing overall and primary deficits to 9.8 and 8.5 percent of GDP, respectively, in FY2020. In FY2021, fiscal performance improved substantially due to the strict expenditure containment, including a temporary 10 percent cut in public sector wages and the suspension of wage increments in FY2021–2023, transfers and public investment adjustments, and the recovery of the economic activity and public revenues. Therefore, the primary balance improved from a deficit of 8.5 percent of GDP in FY2020 to a deficit of 0.2 percent of GDP in FY2021 and a surplus of 1.1 percent of GDP in FY2022, led by a fall of 8.8 percent of GDP in non-interest expenditure due to fiscal consolidation efforts (Figure 2).

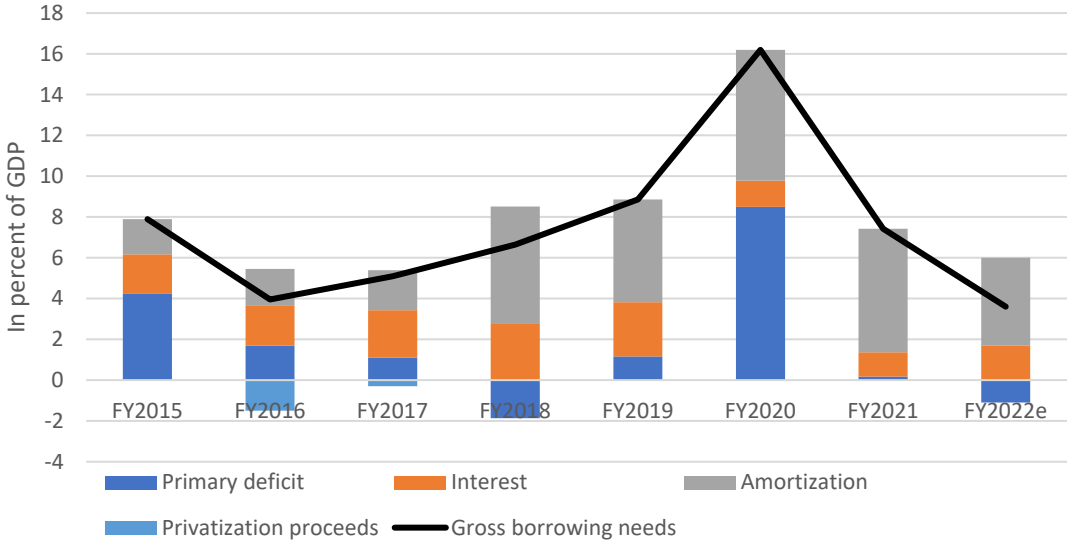
**Figure 2. Macro-fiscal trends (percent of GDP)**




*Source*: World Bank, IMF, and MoF.

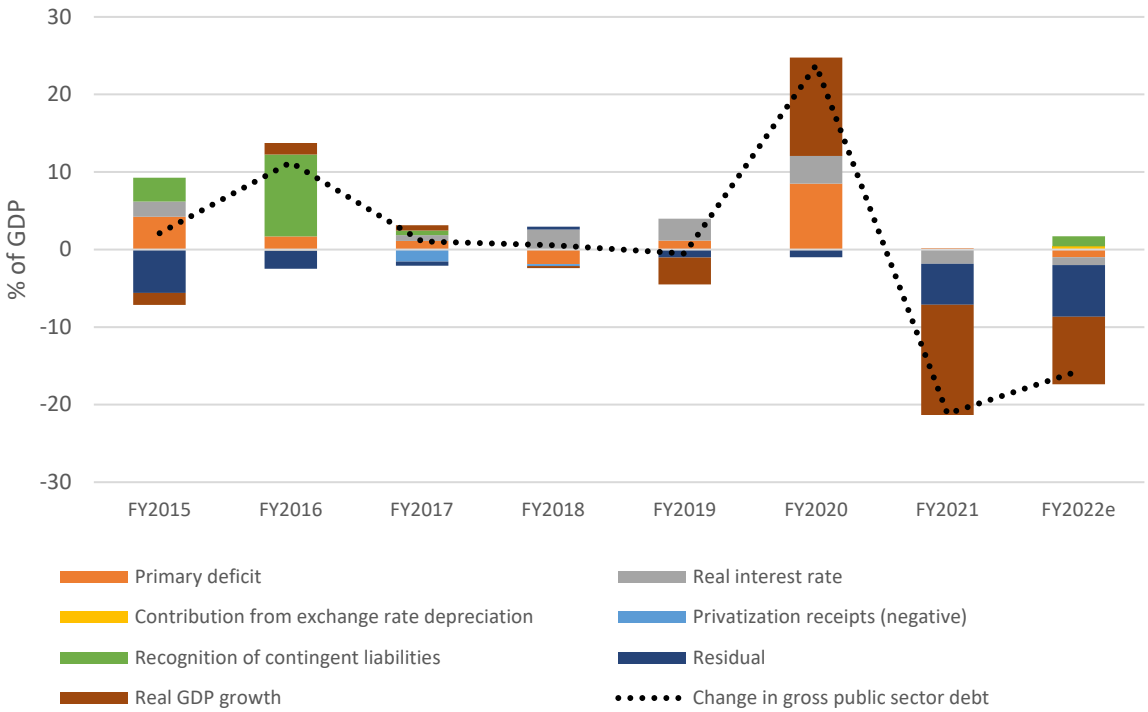
17. **Gross financing needs (GFNs) grew systematically until FY2020, owing to higher amortization payments and primary deficits generated by the recognition of contingent liabilities and later by the COVID-19 pandemic.** GFNs reduced from 7.9 percent of GDP in FY2015 to 5.4 percent of GDP in FY2017 as primary deficit declined by 3.1 percent of GDP (Figure 3). Next, GFNs and liquidity risks rose to 6.6 percent of GDP in FY2018 despite a primary surplus of 1.9 percent of GDP, as amortization payments increased by 3.8 percent of GDP because of the indemnities and compensation that the GoB undertakes for Belize Telemedia Limited nationalization. In FY2020, the fiscal position deteriorated because of the COVID-19 pandemic and GFNs jumped significantly to 16.2 percent of GDP. Lastly, GFNs declined to 7.4 and 3.6 percent of GDP in FY2021/22 as primary balance improved by 9.6 percent of GDP. Figure 4 illustrates the resulting public debt dynamics.

**Figure 3. Gross financing needs**




*Source*: World Bank, IMF, and MoF.

**Figure 4. Public debt dynamic**

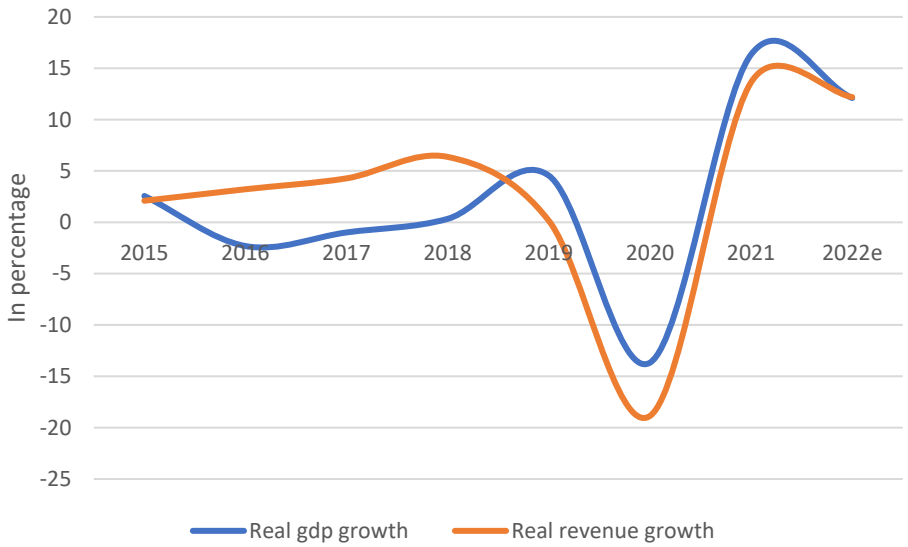



*Source*: World Bank, based on joint World Bank-IMF Debt Sustainability Analysis, 2022 article IV consultation reports, IMF.

### 1.3 Revenue performance

18. **Revenue and economic activity were strongly correlated in the last few years.** Revenue real growth closely followed GDP real growth (Figure 5). The calculated correlation coefficient between revenue and GDP real growth is 0.889 for the analyzed period. Between FY2015 and FY2018, revenue real growth was relatively stable around an annual average of 4 percent following the tax policy reforms on excise tax, import duties, and GST, while GDP real growth was lower and negative in some fiscal years. The COVID-19 pandemic and its quick recovery had a significant impact on the volatility of GDP and revenue real growth.

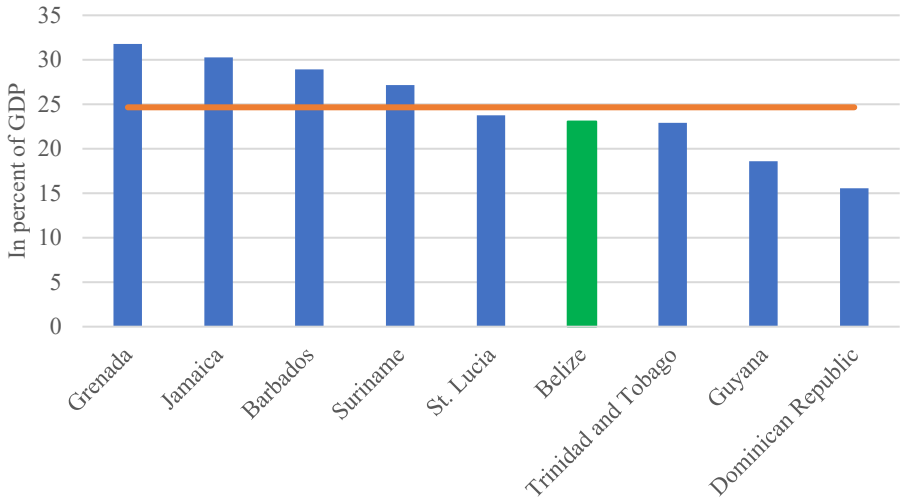
**Figure 5. Overall revenue and GDP trend**




*Source:* World and IMF.
*Note:* GDP real growth corresponds to calendar year and revenue to fiscal year.

19. **Revenue collection is lower in Belize than in its peer Caribbean countries.** Belize's total revenues were 23.1 percent of GDP in 2021 (calendar year), while the revenues of its peer countries from the Caribbean region were an average of 24.7 percent of GDP (Figure 6). Grenada's and Jamaica's public revenues surpassed 30 percent of GDP while they were lower than 20 percent of GDP in Guyana and the Dominican Republic.

**Figure 6. Total revenue by peer countries (2021)**

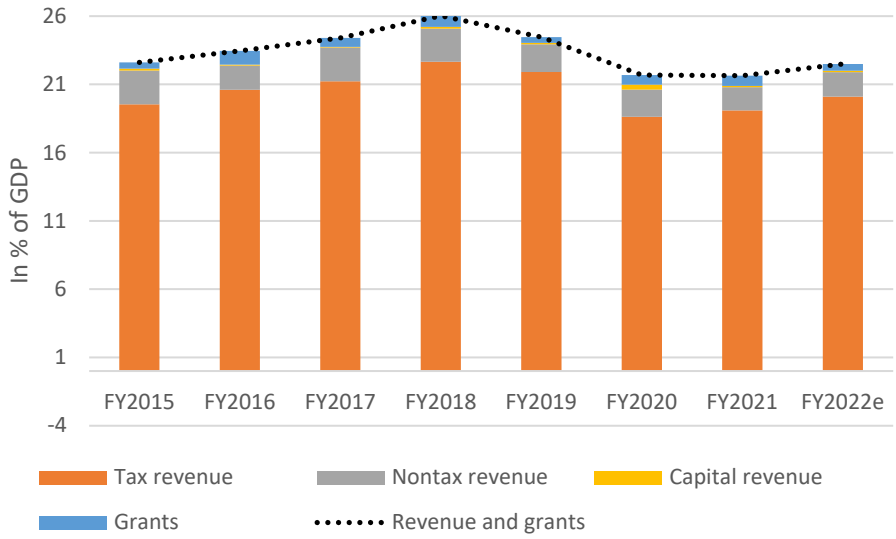



*Source*: World Bank and IMF.

20. **Revenues improved almost 3.5 percent of GDP until FY2018 under several tax reforms, but they were severely affected by the COVID-19 pandemic.** Revenue-to-GDP ratio increased from 22.6 percent of GDP in FY2015 to 26 percent in FY2018, given higher excises on fuel, beer, sugary drinks, and

construction materials; higher import duties on selected products, including cigarettes; an increase in an environmental tax (a levy on most imported goods); and an increase in the GST base, removing zero-rate items and lowering the social exemption for household electricity use. In FY2019 and FY2020, revenues declined nearly 4 percent of GDP, based on the impact of the COVID-19 pandemic on both tax and nontax revenues. Finally, revenue stagnated in FY2021–FY2022, well below the average levels of FY2016–FY2019 (24.6 percent). Tax revenue averaged 88 percent of total revenues and mostly explained the overall trend over the period. Non-tax revenue declined from 2.5 percent of GDP in FY2017 to 1.8 percent in FY2022 and its share was 9 percent of total revenues. Grants averaged 0.7 percent of GDP in the last three fiscal years and were 2 percent of FY2022 total revenues. Figure 7 illustrates the trend.

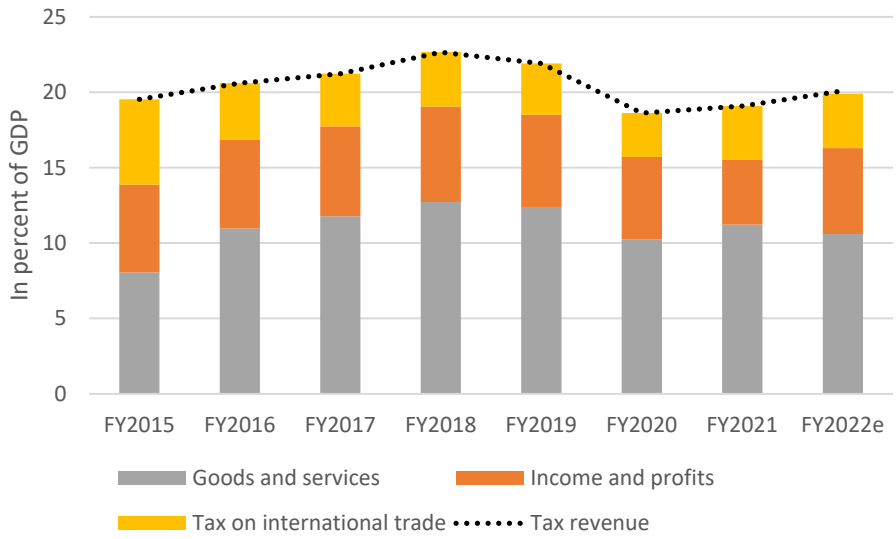
**Figure 7. Revenue trend by type**




*Source*: World Bank, IMF, and MoF.

21. **Indirect taxes are three times higher than direct taxes in Belize, given the growing importance of tax on goods and services in the last decade** (Figure 8). Indirect taxes in Belize are on goods and services and on international trade. Its share in total tax averaged 72 percent in the analyzed period. On the other hand, direct taxes in Belize are mainly on income and profits, which explained the remaining 28 percent of total tax collection. Tax on goods and services grew from 8.1 percent of GDP in FY2015 to 10.6 percent of GDP in FY2022 and reached 47 percent of total revenue. Tax on international trade decreased from 5.7 percent of GDP to 3.6 percent of GDP in the same period, achieving nearly 16 percent of total taxes in FY2022. Tax on income and profits increased from 5.8 percent in FY2015 to 6.3 percent of GDP in FY2018 and declined to 5.7 percent of GDP in FY2022, reaching 25 percent of the total tax collection.

**Figure 8. Tax revenue by direct and indirect tax**

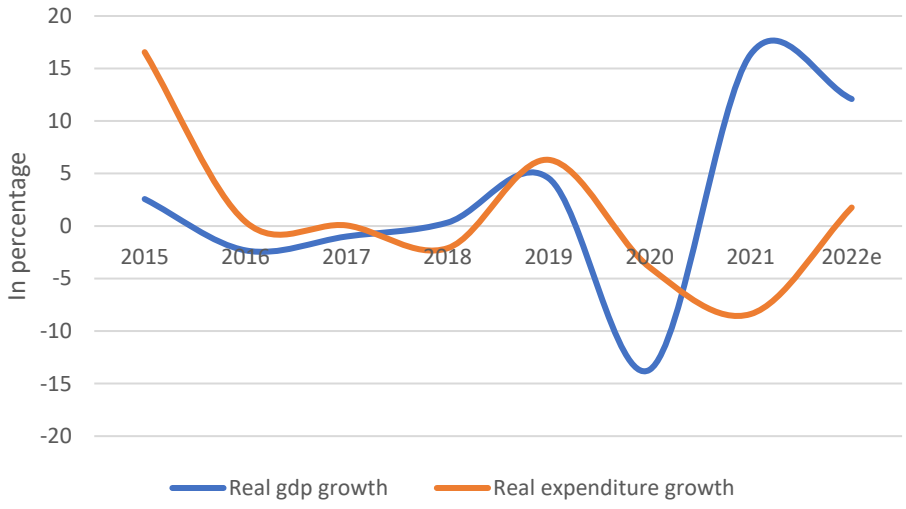



*Source*: World Bank, IMF, and MoF.

## 1.4 Public expenditure performance

22. **Public expenditure real growth followed GDP real growth until FY2020 but experienced lower volatility.** While the economic activity grows, the GoB collects more revenues and public expenditure increases. The procyclicality of Belize's fiscal policy increases volatility and budget rigidities. Between FY2015 and FY2019, real public expenditure (mostly recurrent components) grew at higher rates than real GDP, but the opposite happened after the COVID-19 pandemic, when certain countercyclicality was observed on the expenditure side. The gap among the growth rates of real GDP and public expenditure over the analyzed period explains that the correlation coefficient between public expenditure and GDP real growth was practically null (Figure 9).

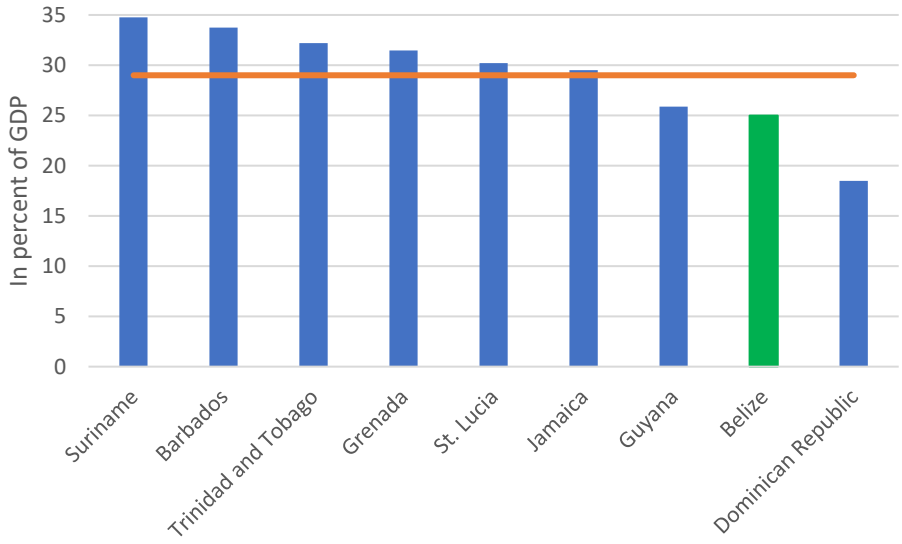
**Figure 9. Overall public expenditure and GDP trend**




*Source*: World Bank, based on World Economic Outlook (WEO) (October 2022), IMF.
*Note*: GDP real growth corresponds to calendar year and expenditure to fiscal year.

23. **Belize is one of the Caribbean countries with the lowest public expenditure level.** Total expenditure in Belize reached 25 percent of GDP in 2021 (calendar year), which was 4 percent lower than the average of its peer Caribbean countries. In Suriname, public expenditure was almost 35 percent of GDP in 2021, while the Dominican Republic's public expenditure was 6.5 percent below Belize's level (Figure 10).

**Figure 10. Public expenditure by peer countries (2021)**

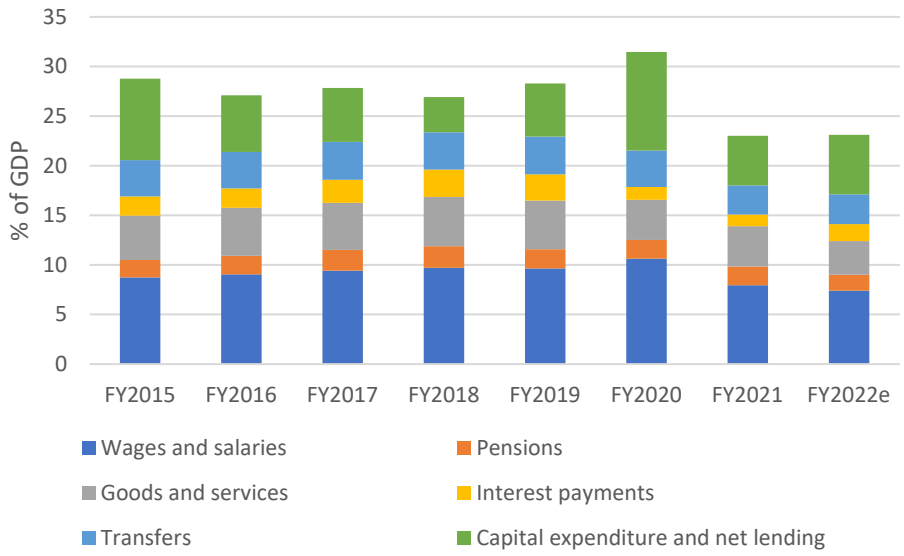



*Source:* World Bank, based on WEO (October 2022), IMF.

24. **Public expenditure stayed stable at a higher level of 28 percent of GDP between FY2015 and FY2019, increased during the COVID-19 pandemic, and adjusted strongly afterward.** Public expenditure decreased 0.5 percent of GDP between FY2015 and FY2019, from 28.8 percent to 28.3 percent. However, it is worth mentioning that the public expenditure level was lower between FY2010 and FY2015 at an average of 24 percent of GDP. During the COVID-19 pandemic, as part of the fiscal package introduced by the GoB to tackle the economy lockdown, non-interest expenditure jumped by 4.6 percent of GDP and surpassed 30 percent. Nevertheless, when the economy recovered in FY2021, the government removed those extraordinary measures and non-interest expenditures declined by 8.4 percent of GDP. COVID-19-related expenditure dropped from 11.3 percent of the total expenditure in FY2020 to 1.9 percent in FY2021.

25. **Public investment was adjusted to compensate recurrent expenditure growth before the COVID-19 pandemic; however, FY2021 expenditure cuts were on both capital and recurrent components.** Capital expenditure was the most volatile component of public expenditures, and this explains the overall trend over the analyzed period (Figure 11). It was 8.2 percent of GDP in FY2015, adjusted to 3.5 percent of GDP in FY2018, increased to 9.9 percent of GDP in FY2020 for purchase of assets and supplies during the COVID-19 pandemic, and fell again to 6.0 percent in FY2022. Recurrent expenditures expanded by 2.3 percent of GDP between FY2015 and FY2019, from 20.6 to 22.9 percent, and declined to 21.5 percent and 17.1 percent of GDP in FY2020 and 2022, respectively. In terms of the total, recurrent expenditure grew from 71.5 to 74 percent between FY2015 and FY2022, with rising budget rigidities, while the capital expenditure (most discretionary component of spending) declined from 28.5 to 26 percent.

**Figure 11. Trends in public expenditures by economic classification**




*Source*: World Bank, IMF, and MoF.

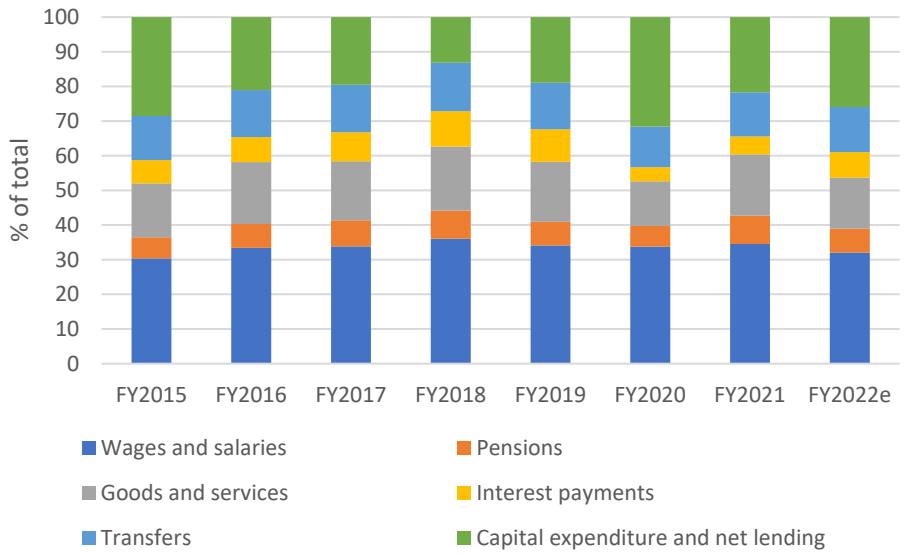
26. **Wages and salaries were the biggest driver of recurrent expenditures for the past fiscal years.** Expenditure related to wages and salaries continuously increased until the COVID-19 pandemic, from 8.7 percent of GDP in FY2015 to 10.6 percent of GDP in FY2020. However, it was adjusted sharply to 7.9 percent of GDP in FY2021 through the 10 percent temporary cut on salaries. Pensions expenditure stayed stable at 2 percent of GDP in the analyzed period.[15] Between 2005 and 2015, Belize's wage bill[16]-to-GDP ratio ranged between 9.0 percent and 10.3 percent, according to data from the Bureaucracy Lab. It is worth mentioning that budget pressures in Belize come from not only personal emoluments but also other parts of the operating budget such as the rising cost of goods and services. In addition, new policy commitments to increase the provision of services to the poor (for example, in education) have implications for both staffing and operating costs going forward. Besides wages and salaries, goods and services, transfers, and interest payments increased continuously during FY2015–FY2019 and then adjusted in FY2021.

27. **The GoB allocates 41 percent of total expenditures on wages and salaries, including transfers to private schools and hospitals, and its ability to maintain control over personnel costs has come under pressure in the last decade.** Though small economies tend to devote a higher share of resources to public sector employment, Belize's spending in recent years marks an increase over historical patterns and is crowding out other critical expenditures. Data from the BOOST database (Figure 12) showed that all spendings related to wages and salaries and pensions had risen from 37.5 percent of expenditure in FY2015 to 41 percent for FY2022. Increases in public sector employment in the wage bill emerged as the key driver of cost and contributed to this upward rigidity. Employment grew by over 30 percent from 2015 to 2021, but the total cost of personal emoluments grew by only 11 percent. Contract workers who are hired—in principle on a temporary basis—are viewed as the hardest to control. Historically, governments

[15] The Pension Plan for Public Officials (PPPO) is a non-contributory defined-benefits pension system with a retirement age of 55 years and replacement rate of 67.5 percent. The PPPO deficit totaled 1.1 percent of GDP in FY2022 and is projected at 4.1 percent of GDP by 2072, with the present value of the cumulated deficits estimated at 77.1 percent of GDP (IMF 2023).
[16] Pensions and gratuities have been reclassified to wage bill (wages and allowances) from goods and services.

of the day have used this flexibility to bring in workers before or after general elections are completed. Currently, there are neither instruments available for the MoF to exercise greater control nor legislative provisions that would limit a given ministry's ability to contract workers through this 'open vote' mechanism.

**Figure 12. Public expenditure composition**

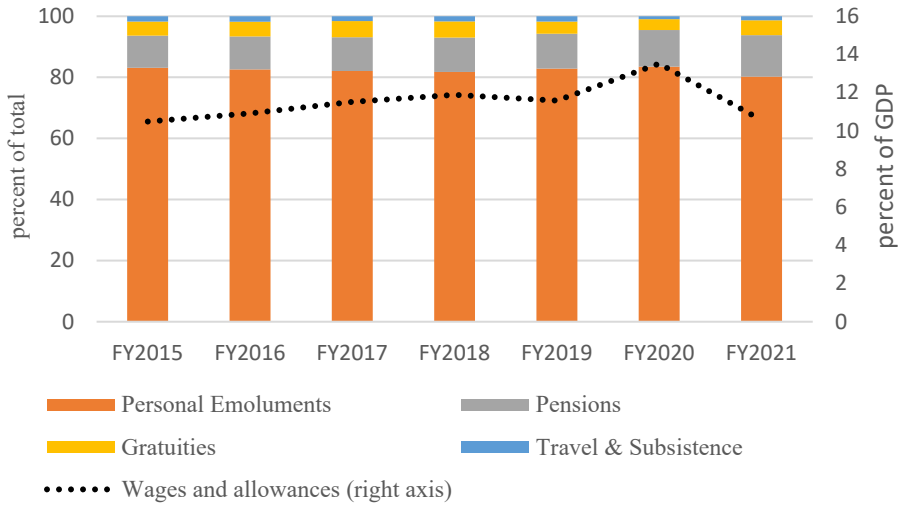



*Source*: World Bank, IMF, and MoF.

28. **Personal emoluments make up the largest share of the wage bill by far, averaging 82.3 percent over the last seven fiscal years.**[17] A distant second is pension at 11.5 percent, gratuities at 4.6 percent, and travel and subsistence at 1.6 percent. Although it is a small share of the wage bill, pension payment has increased from 1.4 percent GDP in FY2013 to 2.0 percent of GDP in FY2021 (see Figure 13).

[17] Personal emoluments consist of salaries, allowances, social security, wages (unestablished staff), overtime, wages (honorarium), and ex-gratia payment to staff.

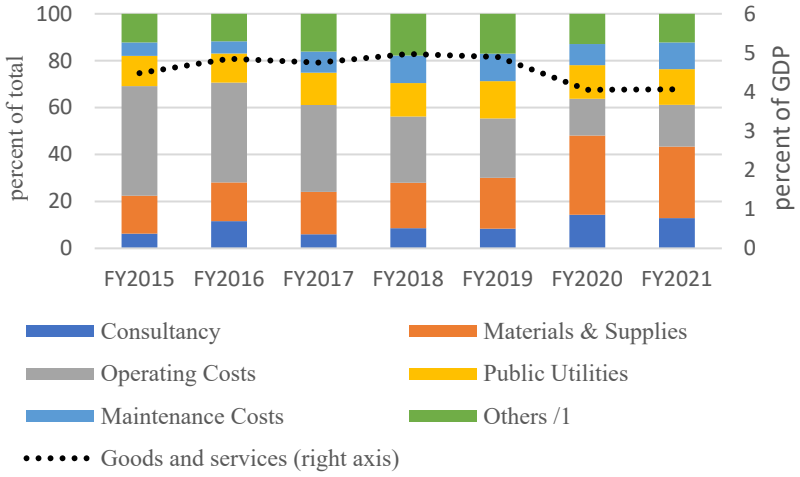
**Figure 13. Wages and salaries by type**




*Source*: World Bank, IMF, and BOOST database.

29. **It was once the government's top priority to stabilize goods and services expenditure, and the allocation was modified for materials and suppliers and against operating costs.**[18] After wages and allowances and capital expenditures, goods and services make up the bulk of expenditures, averaging 17 percent (4.7 percent of GDP) over the last seven fiscal years. Operating cost (30.5 percent) and material and supplies (22.3 percent) make up 53 percent of the total; the share of the former is on the decline and the latter is on a rise. The other relevant components of goods and services are public utilities (14.3 percent), consultancy (9.7 percent), and maintenance costs (9.1 percent), all on the rise in the last fiscal years (Figure 14).

**Figure 14. Goods and services by type**

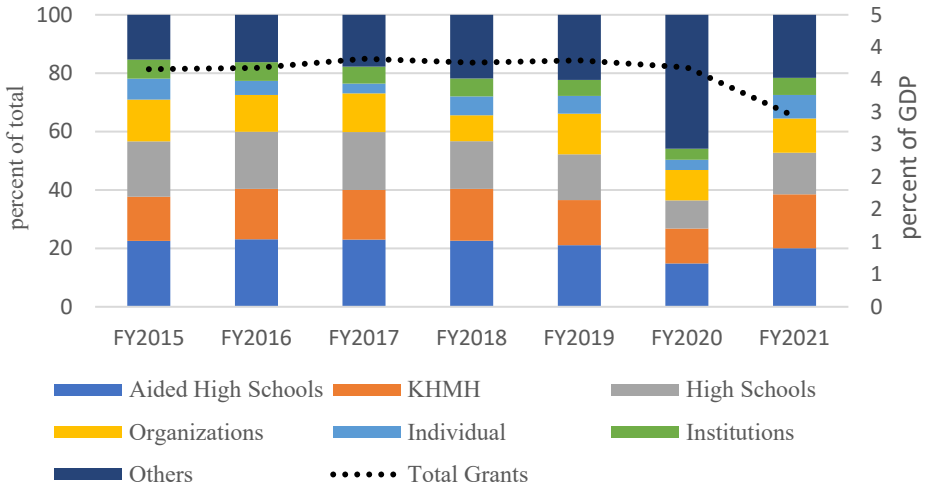



*Source:* World Bank, IMF, and BOOST database.
*Note:* (1) Includes rents and leases, training, contributions and subscriptions, and ex-gratia payments.

[18] Payment to contractors and compensation and indemnities have been reclassified to capital expenditures from goods and services.

30. **Transfers make up on average 13.3 percent of total spending and 3.7 percent of GDP.** The top 6 transfer recipients are grant-aided high schools; Karl Heusner Memorial Hospital (KHMH);[19] and GoB high schools, organizations, individuals, and institutions and they received on average 80 percent of total transfers (Figure 15). The decline in the share of transfers across all categories in FY2021 was because 30 percent of total transfers were temporarily allocated to unemployment relief transfers related to the COVID-19 pandemic.[20]

**Figure 15. Transfers by receiver**

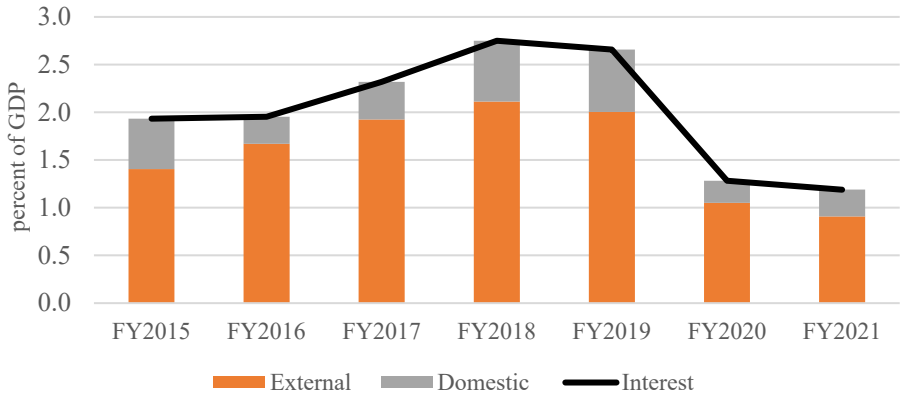



*Source*: World Bank, IMF, and BOOST database.

31. **Interest payment was previously dominated by external sources but shifted to domestic sources in the last fiscal years.** The GoB spent on average 7.7 percent of total expenditures (2.1 percent of GDP) on interest payments between FY2015 and 2021 (Figure 16). The share in total expenditures had peaked in 2018 at 10.2 percent but declined sharply to 4.5 percent in 2020 and 5.2 percent in 2021. According to the model for marine protection swap with TNC, the U.S. Development Finance Corporation provided political risk insurance, allowing the loan to have low interest rates, a grace period of 10 years, and a maturity of 19 years. Interest payment was the only expenditure type that recorded a negative real growth of −3 percent over the period.

[19] The KHMH is the only tertiary referral hospital and has been a Statutory Authority since 1999.
[20] Unemployment relief grants' weight on total COVID-19 expenditure was 60 percent in FY2020.

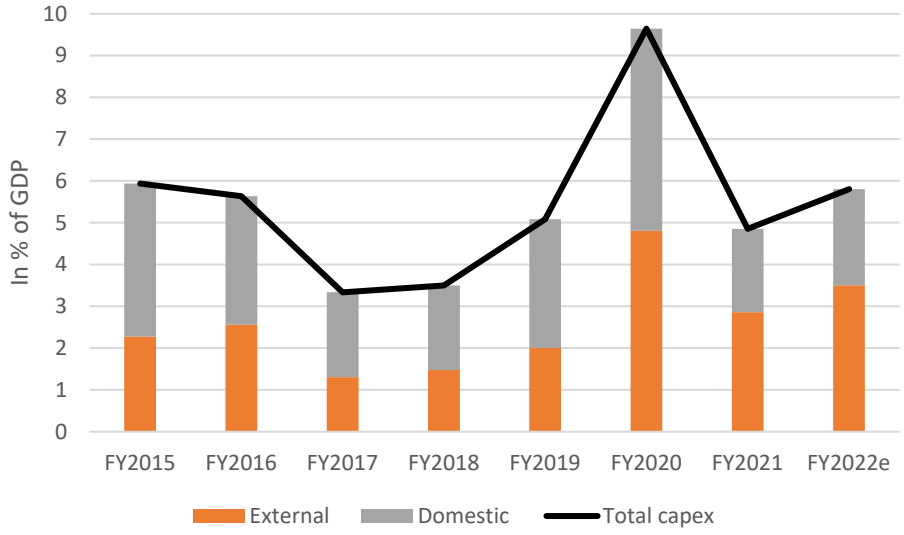
**Figure 16. Interest payments**




*Source*: World Bank, IMF, and BOOST database.

32. **The level of public investment in Belize has varied over the past years in the context of existing fiscal constraints; it has been trending upward in recent years and relies heavily on external financing.** The sharp increase in public debt has limited available fiscal space for public investment. This has resulted in an increase in externally financed investments as a share of the capital budget and a growing interest in public-private partnerships (PPPs) to help achieve the GoB's national strategy objectives. The GoB annually spent an average of 22.6 percent of total expenditures or 6.1 percent of GDP on capital expenditure between FY2015 and 2022.[21] Its lowest share was recorded in FY2018 at 13.2 percent and its highest in FY2020 at 31.6 percent (Figure 17).

**Figure 17. Capital expenditure by source of financing**




*Source*: World Bank, IMF, and BOOST database.

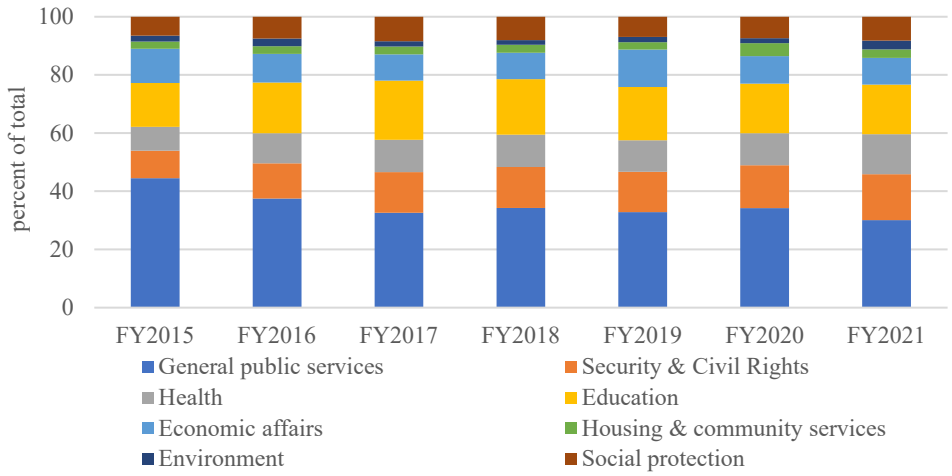
[21] As was mentioned in footnote #18, capital expenditures include 'Payment to contractors' and 'Compensation and indemnities', which were classified under goods and services.

33. **Yielding returns from its public investment program requires Belize to focus not only on the volume of spending but also on the means to extract greater value out of the existing program.** The efficiency and effectiveness of program will be a product of the policies and procedures that form the public investment management framework. This starts with identifying and appraising potential projects, but it also extends to how project implementation is carried out and assessed. The IMF's 2019 Public Investment Management Assessment (PIMA) report revealed opportunities for Belize to enhance the effectiveness and efficiency of public investment spending. Among its findings, it states that the GoB has not been able to introduce new standards for project appraisal, selection, and reporting. The MoF and the Ministry of Economic Development (MoED) do not regularly monitor how the actual expenditures for a project (and/or its physical progress) during a given period (or over the life of the project) compare with the original planned levels, while there is no ministry or unit that specifically looks at the public investment management process itself and recommends improvements (for more detail, see Chapter 4).

34. **Almost 80 percent of TPE was allocated to general public services, education, security, and health.** General public services got on average of 34 percent of the total, split mainly among public debt (10 percent) and, to a lesser extent, governance and democracy, international relations, and other general administration services (accounting, justice, revenue collection, policy, planning and resourcing management, and trade regulations). Health and education received on average 29 percent of the total (11 percent and 18 percent, respectively). Security and civil rights share in the total was on average 13 percent, surpassing by 2.5 percentage points the public funds allocated yearly to health. The weightage for economic affairs, including roads, streets, and drains (6 percent), agriculture, and bridges, averaged 11 percent of the total, while the average was 8 percent for social protection (pensions and poverty and welfare). Finally, public expenditure on environment and housing and community services averaged 3 and 2 percent of the total, respectively.

35. **The general trend shows a fall in the relative importance of general public services and economic affairs, while security and health-related expenses have increased, followed by education and social protection, and housing and community services and environment have remained stagnant**. After regrouping the program classification by function, the most obvious observation over FY2015–FY2021 is the fall in the functions of general public services and those related to economic affairs (infrastructure, energy, production, and commerce). On the contrary, security almost doubled its weight and the functions related to social policies (health and, to a lesser extent, education and social protection) have increased in importance. Housing and community services and environment have remained stagnant in their participation between FY2015 and FY2021 (see Figure 18).

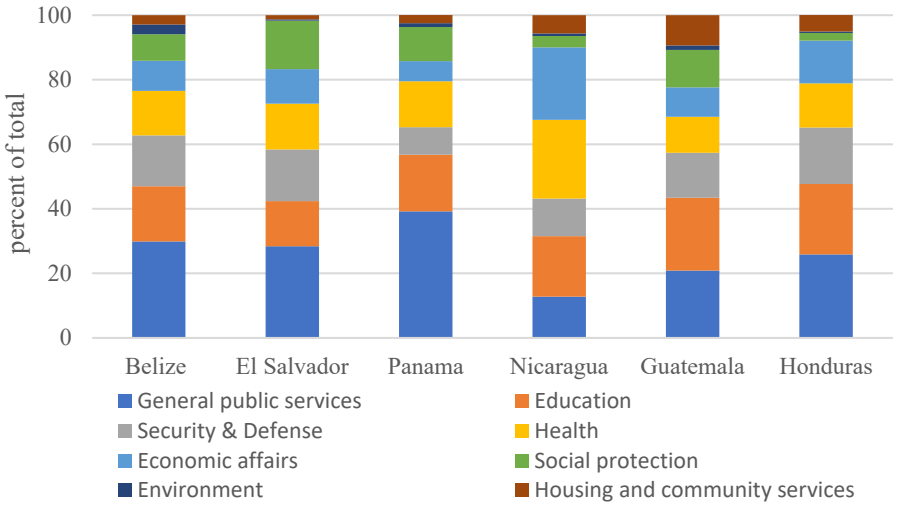
**Figure 18. Expenditure by function**




*Source*: World Bank, based on BOOST database.
*Note*: The program classification was regrouped and converted to functional classification (Classification of the Functions of Government, COFOG).

36. **In the structure of public expenditures according to functional classification, Belize does not stand out in the region.** None of the spending functions are in the extremes when compared with the spending structure of El Salvador, Panama, Nicaragua, Guatemala, and Honduras. However, Belize allocates relatively less resources to economic affairs and social protection than its peers but more on public administration general services and security. The share of general public services spending is the second highest among regional peers (Figure 19). This poses a difficulty in reallocating more resources toward social sectors such as social protection and housing and community services and to economic affairs—much needed to increase human and productive capital accumulation. Indeed, the expenditure share of these sectors is lower relative to the regional peers. Indeed, Belize records the second lowest share of spending in economic sectors and housing and community services.

**Figure 19. International comparison of expenditure by function (2021)**

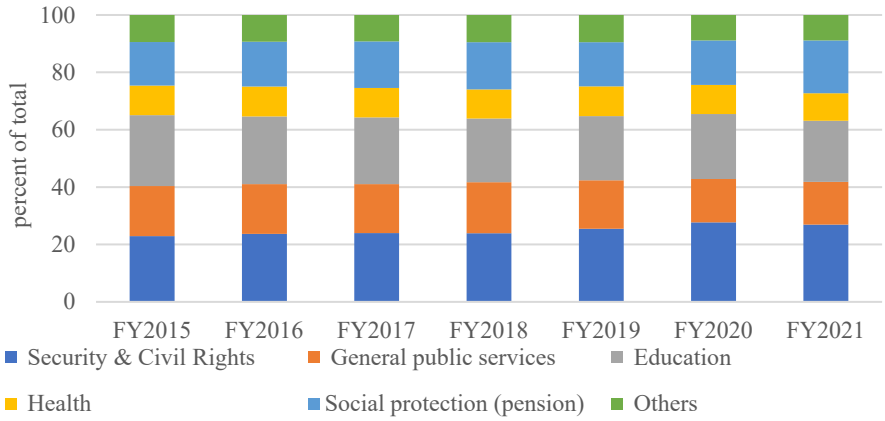



*Source:* World Bank, based on Functional Expenditure (COFOG), Government Finance Statistics IMF, and Belize BOOST database.

*Note:* Panama and Honduras data are for 2020.

37. **Expenditures on education, health, security, pension, and general public services make up almost 80 percent of the total wage bill.** Currently, about 23 percent of public employees are classified as teachers, and another 34 percent are employed in the police, coast guard, or defense sectors. The remaining 43 percent are classified as public servants. On average, security and civil rights received one-quarter of total expenditure on wages and salaries, increasing its share in the total from 23 to 27 percent in the analyzed period, crowding out other social or development functions (Figure 20). This includes salaries allocated to the Airport Camp facility which oversees the border area known as the Adjacency Zone that has become increasingly dangerous because of illegal natural resource harvesting and an increase in armed civilians. General public services absorbed on average 16.7 percent of the total and its participation declined from 17.5 to 14.9 percent in the last seven fiscal years. Excluding transfers to government-aided private schools and hospitals, 21.3 percent of wages and salaries were for public preschool and primary, secondary, and tertiary education, and this declined by 3.4 percent, while the share of health was stable at 10.0 percent.

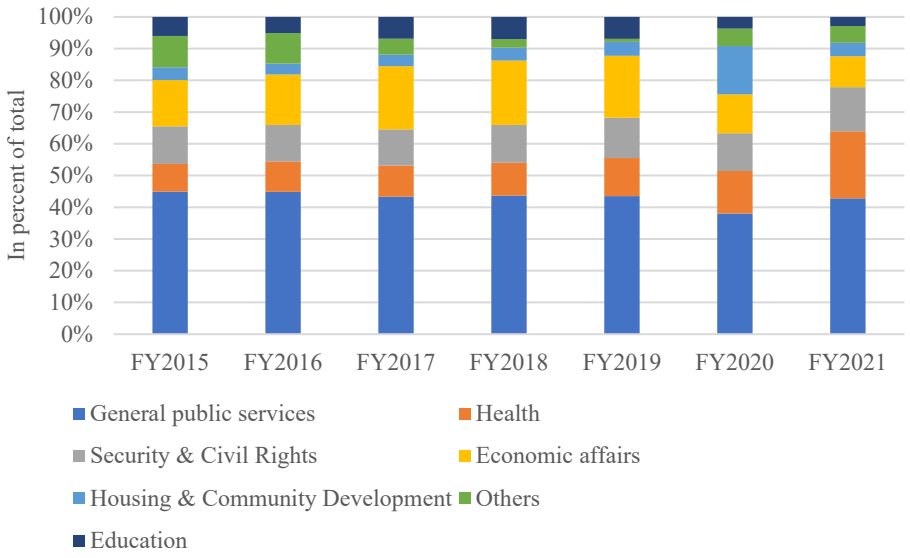
**Figure 20. Wages and salaries by function**




*Source:* World Bank, IMF, and BOOST database.

38. **General public services and economic affairs received on average 60 percent of the total public spending on goods and services, although this weight has declined over the last seven years.** The composition of goods and service expenditure was modified for health and against poverty and welfare and agriculture. General public services and economic affairs reached on average 43 and 16 percent of expenditure, respectively, on goods and services in the last seven fiscal years, and the share declined by 2.1 and 4.9 percentage points, respectively. On average, security and civil rights received 12 percent of the total during FY2015–FY2021, and this stayed stable. On the other hand, under the category 'Others', poverty and welfare, agriculture and environment, tertiary education, and adult and community education services reduced shares from 7, 6, 5, and 4 percent to 0.3, 0.8, 1.4, and 2 percent, respectively, over the analyzed period. The total weight of roads, streets and drains, international relations, and community development in the total was stable over the period, at 19 percent of the total (Figure 21).

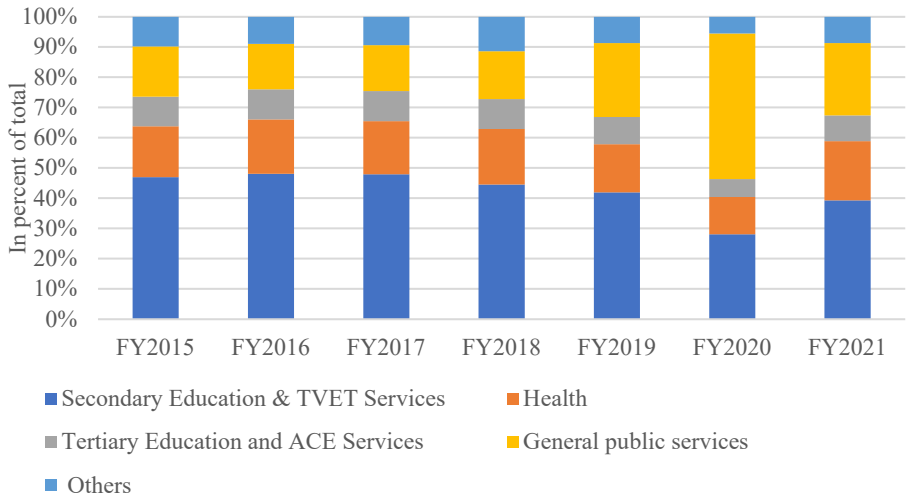
**Figure 21. Goods and services by function**




*Source:* World Bank, IMF, and BOOST database.
*Note:* 'Others' includes poverty and welfare and environment, among others.

39. **Health and education are the largest transfer beneficiaries.** Belize has government-funded, private, specially assisted, and government-aided denominational schools, with the latter dominating provision at all levels of education. In the last seven fiscal years, the education sector received on average 51.4 percent of the total transfers, mainly for the secondary level (42.4 percent), and the tertiary level received 9 percent. Finally, 16.9 percent of the total was for health and 10.5 percent for governance and democracy, under the general public service function (Figure 22).

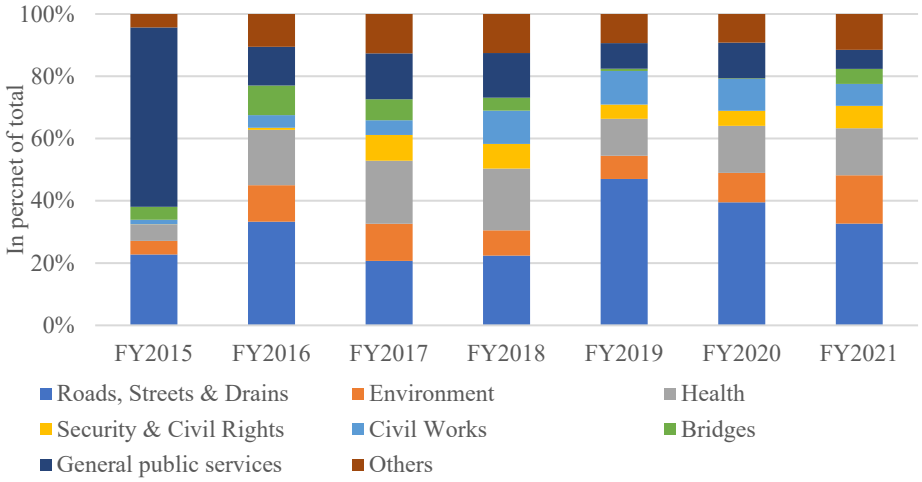
**Figure 22. Transfers by function**




*Source:* World Bank, IMF, and BOOST database.
*Note*: TVET refers to technical and vocational education and training.

40. **The Public Sector Investment Program (PSIP), adopted in September 2021, has introduced a high degree of transparency and reveals that Belize's public investment projects are spread across a wide range of sectors, mainly funded by bilateral and multilateral partners**. On average, almost 70 percent of public investment was spent on roads, streets, and drains (31.2 percent); health (15 percent); environment (10 percent); civil works (7 percent), and security and civil rights (5 percent). The share of capital expenditure funded by domestic sources declined from 62 percent in FY2015 to 42 percent in FY2021, owing to the higher weight of capital expenditure funded by external sources during the COVID-19 pandemic. In FY2015, 53.9 percent of the total was allocated for the BTL nationalization in 2010, which was recorded as 'Others' under the fiscal management program (compensation and indemnities). Finally, the poverty and welfare weight of the total decreased significantly from 6 percent in FY2015 to 0 percent in FY2021 (Figure 23).

**Figure 23. Capital expenditure by function**




*Source*: World Bank, IMF, and BOOST database.

41. **The GoB spent on average only 2 percent of the total expenditure on natural disaster management in the last seven fiscal year, mainly on the following services: solid waste management, national fire, and forestry resources.** Natural disaster management expenditure rose from 1.7 percent of total expenditure in FY2015 to 2.6 percent in FY2019 and then declined to the initial level in the last seven fiscal years. During the last seven fiscal years, natural disaster expenditure was mainly for solid waste management (25 percent), national fire service (22 percent), forestry strategic management and administration (19 percent), office of emergency management (14 percent), and forestry resource management (11 percent). According to accumulated data at end-January 2023, Hurricane Lisa rehabilitation expenditure was only 0.4 percent of the total.

42. **Improving efficiency, effectiveness, and equity of public expenditures on education and health will be critical for achieving inclusive and sustainable economic recovery.** Public expenditures on these two sectors constitute about one-third of the TPE, and these sectors have been affected in a major way by the COVID-19 pandemic. A significant amount of the health sector's resources was devoted to combatting the COVID-19 pandemic.[22] The GoB allocated resources to fight the pandemic by reallocating

[22] Health expenditure related to COVID-19 (purchase of material and supplies and assets) reached 14 percent of total health expenditure in FY2020 and FY2021.

expenditures for operational costs, thus affecting the availability and quality of routine health services. Pandemic-driven school closures distorted education services in Belize as much as they did across the world.

43. **Public expenditures allocated to education represent a large of GDP and have been increasing over time, but the sector's outcomes (participation and learning) are declining.** As demonstrated in Chapter 6, Belize's TPE for education, which amounted to 6.8 percent of GDP and 20.4 percent of TPE in 2019, are high relative to Latin American and Caribbean small states excluding high-income members (4.0 and 4.4 percent and 15.7 and 14 percent, respectively). In FY2019, 97 percent of TPE for education were recurrent, with almost 90 percent of the recurrent budget on salaries. However, gross participation rates declined at the preschool (from 43.0 percent in 2015–2016 to 37.3 percent in 2019–2020), primary (from 95.0 percent to 81.7 percent during the same period), and secondary (from 66.0 percent to 59.9 percent) education, the most concerning being the decline at the primary level. Between school years 2013–2014 and 2018–2019, the percent of test-takers averaging 'inadequate' across the four core subjects increased from 22.6 percent to 32.8 percent. At the primary level, 21 different denominational entities provide services, a governance fragmentation that carries the potential for significant inefficiencies.[23]

44. **Belize's total health expenditure as share of total government expenditures was among the highest in the Caribbean, but quality gaps limit effective coverage and health human resources remain scarce.** As demonstrated in Chapter 7, the GoB spent 4.2 percent of its GDP on health in 2019, which is higher than countries with similar or higher gross national income (GNI) per capita, such as Dominica (2.7 percent), Guatemala (2.4 percent), Guyana (3.0 percent), Mexico (2.7 percent), and Trinidad and Tobago (3.2 percent).[24] With respect to the health sector's share of TPE, Belize spent 12.2 percent in 2019, which was higher than most of the comparators such as Dominica (10.5 percent), Grenada (9.2 percent), Guyana (9.2 percent), and Trinidad and Tobago (8.2 percent).[25] With a score of 52 of 100 in the Institute for Health Metrics and Evaluation's Effective Coverage Index, Belize ranked second to last in Central America and 122 out of 204 countries globally.[26] Belize's spending on human resources for health (HRH) accounts for 63 percent of the recurring health spending, which is higher than the average share of total government health spending in comparable countries,[27] but Belize continues to suffer from shortages in health personnel that affect access to and quality of care. Spending on the health workforce in Belize is constrained by challenges in recruiting and retaining health workers due to migration to other nations, facilitated by the Caribbean Single Market and Economy (CSME) which enables employment of skilled workers within the Caribbean Community (CARICOM) system. This might also explain Belize's extremely low density of nurses (11.1 nurses per 10,000 people) compared to its peers in the region where the density of nurses ranges between 4.3 in Suriname to 81.7 in Martinique. Similarly, density of physicians is low at 11.5 per 10,000 people.

[23] The intersection between the type of government school funding and the management of the school is messy. Some privately managed schools receive government transfers as 'specially assisted' schools. Although most denominational schools are government aided, some are only privately funded (see Chapter 6).

[24] The Ministry of Health and Welfare (MoHW) manages seven public regional and community hospitals, 10 polyclinics, 32 health centers, and many health posts associated with the health centers. Users have access to free services among a package of essential primary and secondary services provided by the MoHW such as maternal and childcare and are charged a nominal fee for the others. For more detail, see Chapter 7.

[25] For the latest year for which data on comparators are available (2014).

[26] Lozano et al. 2020.

[27] Hernandez-Peña et al. 2013.

### 1.5 Budget rigidities

45. **A large share of public expenditure in Belize can be classified as highly rigid and the fiscal space for flexibility is limited.** Based on a broad estimate of budget rigidity, non-discretionary line items account for 81 percent of the total central government expenditure during FY2015–FY2021. While rigidity levels across countries should be interpreted with caution due to differences in their identification approach and budget structure, Belize is, with St. Vincent, Guyana, St. Lucia, and Grenada, one of the Caribbean countries with the highest expenditure rigidity.[28] High rigidity spending includes personal emoluments (41 percent in FY2021 including transfers to the granted schools and hospitals), interest payments (5.2 percent), externally financed capital expenditure (12.6 percent), pensions (5.8 percent), and public utilities (2.7 percent). Other spending that can be considered partially rigid—such as gratuities; travel and subsistence (both recorded under the wage bill); operating costs; maintenance costs; and transfers to organizations, institutions, individuals, and others—represented 13.9 percent of total expenditure in FY2021 (Table 1). Overall, there is little margin and discretion to reallocate resources to respond to shocks that may demand different policy responses. Overall, high levels of rigidity imply that expenditure rationalization efforts cannot be applied on that portion of the budget in the short to medium term, and any redistributive allocations may only be realized in the medium to long term. Though the space for flexibility in Belize is limited in the short run, implementing sound fiscal policy will depend on how the legal and other institutional frameworks affect the level of budgetary rigidity.

[28] Herrera and Olaberria (2020) have introduced and applied a new measure of spending rigidity to 120 countries for 2000–2017, including Belize. This new measure focuses on the categories of public spending that are naturally inflexible—such as wages, pensions, and debt service—and separates them into two components—a structural component and a nonstructural one. The structural component is determined by economic, demographic, and institutional fundamentals, while the nonstructural component is determined by short-run transitory or political factors associated with business or political cycles. The degree of rigidity of spending is then proxied by the ratio of structural spending to total spending.

**Table 1. Budget rigidities, percent of total expenditure**

| | FY2015 | FY2016 | FY2017 | FY2018 | FY2019 | FY2020 | FY2021 | 2015-2021 average | Standard deviation |
|---|---|---|---|---|---|---|---|---|---|
| **High Rigidity** | **61.0** | **64.7** | **65.0** | **67.4** | **65.2** | **67.7** | **67.3** | **65.5** | **2.3** |
| Personal Emoluments | 30.3 | 33.2 | 33.9 | 36.1 | 33.9 | 33.2 | 34.3 | 33.6 | 1.7 |
| Pensions | 3.8 | 4.3 | 4.6 | 5.0 | 4.7 | 4.8 | 5.8 | 4.7 | 0.6 |
| Interest | 6.7 | 7.2 | 8.3 | 10.2 | 9.4 | 4.1 | 5.2 | 7.3 | 2.2 |
| Capital expenditure - financed by External Grants and Loans | 10.9 | 9.6 | 7.6 | 5.5 | 7.5 | 19.5 | 12.6 | 10.5 | 4.6 |
| Transfers to High Schools | 5.3 | 5.8 | 5.9 | 5.4 | 4.9 | 2.9 | 4.4 | 4.9 | 1.0 |
| Transfers to hospital (KHMH ) | 1.9 | 2.3 | 2.3 | 2.5 | 2.1 | 1.4 | 2.4 | 2.1 | 0.4 |
| Public utilities | 2.0 | 2.2 | 2.4 | 2.6 | 2.7 | 1.8 | 2.7 | 2.4 | 0.4 |
| **Medium Rigidity** | **16.0** | **16.7** | **16.2** | **16.5** | **15.2** | **12.4** | **13.9** | **15.3** | **1.6** |
| Gratuities | 1.7 | 1.9 | 2.2 | 2.3 | 1.6 | 1.4 | 2.1 | 1.9 | 0.3 |
| Travel & Subsistence | 0.6 | 0.7 | 0.7 | 0.8 | 0.7 | 0.4 | 0.6 | 0.6 | 0.1 |
| Operating costs | 7.3 | 7.6 | 6.3 | 5.2 | 4.4 | 2.0 | 3.1 | 5.1 | 2.1 |
| Maintenance costs | 0.9 | 0.9 | 1.5 | 2.2 | 2.0 | 1.2 | 2.0 | 1.5 | 0.5 |
| Transfers to organiz. & inst. | 2.6 | 2.6 | 2.6 | 2.1 | 2.6 | 1.7 | 2.2 | 2.3 | 0.4 |
| Transfers to individuals | 0.9 | 0.7 | 0.5 | 0.9 | 0.8 | 0.4 | 1.0 | 0.7 | 0.2 |
| Other transfers | 2.0 | 2.2 | 2.4 | 3.1 | 3.0 | 5.4 | 2.8 | 3.0 | 1.1 |
| **Non-rigid (flexible)** | **23.0** | **18.6** | **18.8** | **16.1** | **19.6** | **19.9** | **18.9** | **19.3** | **2.1** |
| Consultancy | 1.0 | 2.1 | 1.0 | 1.6 | 1.5 | 1.8 | 2.3 | 1.6 | 0.5 |
| Materials & Suppliers | 2.5 | 2.9 | 3.1 | 3.6 | 3.8 | 4.3 | 5.4 | 3.7 | 1.0 |
| Others good and services | 1.9 | 2.1 | 2.7 | 3.3 | 2.9 | 1.7 | 2.2 | 2.4 | 0.6 |
| Capital expenditure - financed by Domestic Sources | 17.6 | 11.5 | 11.9 | 7.6 | 11.5 | 12.0 | 9.0 | 11.6 | 3.1 |
| **TOTAL** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | |

*Source:* IMF, article IV staff reports, and BOOST database.

### 1.6 Medium-term projections and risks to debt sustainability

46. **Economic activity has rebounded strongly from the COVID-19 pandemic, while inflation has risen.** The rebased national accounts show that, after contracting by 13.4 percent in 2020, real GDP rebounded by 15.2 percent in 2021 and preliminary figures indicated that the economy grew by 12.1 percent in 2022,[29] driven by retail and wholesale trade, tourism, and business process outsourcing. Visitor arrivals reached 74 percent of pre-pandemic levels in 2022 as COVID-19 restrictions eased amid vaccination efforts in Belize and source markets, while the unemployment rate fell from 10.2 percent in 2021 to 5.0 percent in the second half of 2022. It is worth mentioning that the 2022 GDP output has exceeded 2019 levels even though tourism arrivals remain materially below this key subsector's 2019 performance. On this basis, there appears to be inbuilt capacity for continued growth in 2023. Inflation increased to 3.2 percent in 2021 and 6.3 percent in 2022, driven by higher global food and fuel prices despite the fixing of domestic diesel and regular gasoline prices at the pump since April 2022.[30] Still, these rates were far below the global rates of 8.8 percent in 2022 and 4.7 percent in 2021.

47. **The primary balance is projected to become a surplus of 1.1 percent of GDP in FY2022/23 due to a containment of recurrent expenditure and strong recovery of revenues.** The primary balance is

[29] https://sib.org.bz/wp-content/uploads/GDP_2022_04_Quarter.pdf.

[30] The Russian invasion of the Ukraine and the attendant impacts on fuel and food prices and supply chains provoked the return of high inflation after two decades of relative price stability.

projected to surpass the original budget by 0.9 percentage points of GDP and reach 1.1 percent of GDP in FY2022 despite the reinstatement of the 10 percent public sector wage cut in July 2022, the fuel tax cut to fix diesel and regular gasoline prices at the pump, and an increase in capital expenditures, including one-off spendings related to Hurricane Lisa (Table 1).[31] This was more than offset by the recovery of tax collection and the containment of recurrent expenditures. Total revenues and grants are estimated at 22.5 percent of GDP for FY2022/23. Actual revenue and grants exceeded the original budget by 0.8 percentage points of GDP. This over-performance was mainly explained by higher collection of income and profit tax and of international trade taxes. Total spending, including supplementary allocations approved during the fiscal year, is expected to reach 23.1 percent of GDP, which is 0.2 percentage points below than the original projections. Recurrent expenditure will be −1.5 percentage points of GDP lower than the initial budget, owing to the decline in all line items, mostly on wages and salaries, while investments in capital projects will strongly surpass the initial budget by 1.2 percentage points.

48. **The government has achieved a large reduction in public debt owing to its fiscal consolidation efforts and the strong GDP recovery.** The rebasing of the national accounts led to a large reduction in the public debt-to-GDP ratio in 2020, from 133 percent of the old GDP to 101 percent of the new GDP. Public debt fell further to 80 and 63.7 percent of GDP at end-2021 and 2022 (62.1 percent at end-FY2022/23), respectively, due to sizable fiscal consolidation, the debt for marine protection swap with TNC, and strong GDP growth.[32] The primary balance increased from −6.5 percent of GDP in FY2020 to −0.2 and 1.1 percent in FY2021 and FY2022, respectively, as previously mentioned, due to strict expenditure containment, including a temporary 10 percent cut in public sector wages and the suspension of wage increments during FY2021–FY2023. Total financing needs in FY2022/23 are estimated at 4.9 percent of GDP, compounded by principal payments of 4.3 percent of GDP and a fiscal deficit of 0.6 percent of GDP, and were met by external sources (57 percent) and domestic borrowing (43 percent).

**Table 2. Operations of the Central Government (percent of GDP)**

| **Central Government** | **Approved Budget FY2022/23** (1) | **FY2022/23 Estimate** (2) | **(2) – (1)** |
|---|---|---|---|
| **Total Revenues and Grants** | **21.7** | **22.5** | **0.8** |
| Revenues | 21.0 | 22.0 | 1.0 |
| Tax revenue | 19.2 | 20.1 | 0.9 |
| Income and profits | 4.6 | 5.7 | 1.1 |
| Taxes on property | 0.2 | 0.1 | −0.1 |
| Taxes on international trade | 3.2 | 3.6 | 0.4 |
| Taxes on goods and services | 11.2 | 10.6 | −0.6 |
| Non-taxes revenue | 1.7 | 1.8 | 0.1 |
| Capital revenues | 0.1 | 0.1 | 0.0 |
| Grants | 0.6 | 0.5 | −0.1 |
| **Total Expenditures** | **23.3** | **23.1** | **-0.2** |

[31] Hurricane Lisa made landfall just south of Belize City last November 2022, causing substantial losses. National Emergency Management Organization (NEMO) estimates damages totaling $212.4 million (7.3 percent of GDP) with 172,000 affected by the storm. However, Hurricane Lisa related spending reach only 0.4 percent of total expenditures.

[32] Disaggregated, 67 percent of the public debt stock at end-2022 represented loans to external lenders, while 33 percent was owed to domestic creditors.

| Central Government | Approved Budget FY2022/23 (1) | FY2022/23 Estimate (2) | (2) – (1) |
|---|---|---|---|
| Recurrent expenditure | 18.6 | 17.1 | −1.5 |
| Wages and salaries | 7.9 | 7.4 | −0.5 |
| Pensions | 1.7 | 1.6 | −0.1 |
| Goods and services | 3.8 | 3.4 | -0.4 |
| Interest payments | 1.9 | 1.7 | −0.2 |
| Transfers | 3.2 | 3.0 | -0.2 |
| Capital expenditure and net lending | 4.8 | 6.0 | 1.2 |
| Domestically financed expenditure | 2.7 | 3.5 | 0.8 |
| Foreign financed expenditure | 2.0 | 2.3 | 0.3 |
| Net lending | 0.0 | 0.0 | 0.0 |
| **Recurrent balance** | **2.3** | **4.8** | **2.5** |
| **Primary balance** | **0.2** | **1.1** | **0.9** |
| **Overall balance** | **−1.8** | **−0.6** | **1.2** |

*Source:* World Bank, based on the FY2023/24 Budget Speech and IMF 2023 Article IV Consultation.

49. **Economic activity and inflation are projected to moderate going forward.** Real GDP growth is projected at 2.4 percent in 2023, as tourism activity returns to pre-pandemic levels and the business process outsourcing sector continues to develop. The output gap is projected to close in 2023, with real GDP growth stabilizing at a modest level of 2 percent over the medium term, which implicitly assumes no structural reforms are implemented. Average inflation is projected to moderate to 4.1 percent in 2023 and 1.2 percent over the medium term, in line with the projected decline in global commodity prices and global inflation. Table 3 shows GDP growth and inflation assumptions for the medium term.

**Table 3. National income and prices (annual percentage change, calendar year)**

| | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|---|---|---|---|---|---|---|---|
| GDP at constant prices | 12.1 | 2.4 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Consumer prices (average) | 6.3 | 4.1 | 2.5 | 1.6 | 1.2 | 1.2 | 1.2 |
| Nominal GDP (BZD, millions)/1 | 6,037 | 6,404 | 6,679 | 6,914 | 7,138 | 7,370 | 7,609 |

*Source:* World Bank, based on IMF 2023 article IV Consultation.

1/ Fiscal year.

50. **The budget for FY2023/24 forecasts a slight reversion of the fiscal gains achieved in FY2022/23 owing to lower tax collection and the resumption of wage increments for public officers.** The primary balance is projected at a surplus of 0.4 percent of GDP and the overall fiscal deficit at 1.4 percent of GDP (Table 4). Total revenues and grants are projected at 22.5 percent of GDP, which is the same level achieved in FY2022/23 estimates. On the expenditure side, a total of 23.4 percent of GDP is projected, which

includes the resumption of wage increments for public officers,[33] a full 12 months before the original date for restoration, offset by an adjustment on transfers and subsidies. Budget financing requirements, including amortizations payments of 1.7 percent of GDP, will achieve 3.1 of GDP, from which 61 percent will be sourced from multilateral institutions, 14 percent from bilateral partners and 25 percent from domestic financing. The public debt stock is projected to decline to 59.9 percent of GDP in FY2023/24.

51. **In an unchanged policy scenario for the medium term that preserves the fiscal savings achieved in the last two fiscal years, the primary balance is projected to remain stable at 0.9 percent of GDP and public debt will fall gradually to 55.0 percent of GDP by 2028.** Into the 5-year projection horizon (FY2024/25–FY2028/29), revenue and grants are expected to remain stable at 22.5 percent of GDP, which assumes no tax policy and administration reform is introduced. Under the baseline scenario, revenues and grants will be below the last eight fiscal years' average by 0.8 percent of GDP. On the expenditure side, wages, pensions, goods and services, and subsidies and transfers are projected to remain constant at 16.1 percent of GDP, debt servicing at 1.8 percent of the GDP, and capital investments at 5.5 percent of GDP. Therefore, the GoB is committed to approve recurrent expenditure increase under nominal GDP growth, mainly on wages and salaries, goods and services, and transfers, which by FY2028/29 will be below the last eight fiscal years' average by 1.3, 0.7, and 0.5 percent of GDP, respectively, while capital expenditure will surpass the last eight fiscal years' average by 0.5 percent of GDP. At these levels, the primary balance remains at 0.9 percent of GDP, and the overall deficit stays below 1 percent of GDP. As a result, public debt stock declines gradually from 59.9 percent of GDP in FY2023/24 to 55.0 percent in FY2028/29.

**Table 4. Operations of the Central Government (percent of GDP)**

| Central Government | 2023/24 Budget | 2024/25 (p) | 2025/26 (p) | 2026/27 (p) | 2027/28 (p) | 2028/29 (p) |
|---|---|---|---|---|---|---|
| **Total Revenues & Grants** | **22.0** | **22.1** | **22.5** | **22.5** | **22.5** | **22.5** |
| Revenues | 21.5 | 21.6 | 21.9 | 21.9 | 21.9 | 21.9 |
| Tax revenue | 19.7 | 19.8 | 20.1 | 20.1 | 20.1 | 20.1 |
| Income & Profits | 5.6 | 5.7 | 5.8 | 5.7 | 5.8 | 5.8 |
| Taxes on Property | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Taxes on Int'l trade | 3.5 | 3.5 | 3.6 | 3.6 | 3.6 | 3.6 |
| Taxes on goods & services | 10.4 | 10.5 | 10.6 | 10.6 | 10.7 | 10.6 |
| Non-taxes revenue | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| Capital revenues | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Grants | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 |
| **Total Expenditures** | **23.4** | **23.4** | **23.4** | **23.4** | **23.4** | **23.3** |
| Recurrent Expenditure | 17.8 | 17.9 | 17.8 | 17.9 | 17.8 | 17.8 |
| Wages and salaries | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 |
| Pensions | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| Goods and services | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |

[33] About 14,000 public officers, teachers, and security personnel received a restoration of their full wages in July 2022 and starting April 1, the GoB will restore increments for public officers, teachers, police, BDF and coast guard.

| | | | | | | |
|---|---|---|---|---|---|---|
| Interest payments | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.7 |
| Transfers | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Capital expenditure & net lending | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Domestically financed | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| Foreign financed | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 |
| Net lending | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Recurrent Balance** | **3.6** | **3.6** | **3.9** | **3.9** | **4.0** | **4.0** |
| **Primary Balance** | **0.4** | **0.5** | **0.9** | **0.8** | **0.9** | **0.9** |
| **Overall balance** | **-1.4** | **-1.3** | **-0.9** | **-0.9** | **-0.9** | **-0.8** |

*Source:* World Bank projections based on FY2023/24 Budget Speech and IMF (2023).

**Table 5. Public debt stock (end of the fiscal year)**

| | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|---|---|---|---|---|---|---|---|
| Public debt (BZD, millions) | 3,746 | 3,835 | 3,920 | 3,984 | 4,052 | 4,117 | 4,181 |
| Public debt (percent of GDP)/1 | 62.1 | 59.9 | 58.7 | 57.6 | 56.8 | 55.9 | 55.0 |

***Source:*** World Bank projections based on IMF 2023 Article IV Consultation and 2023-2028 World Bank Projections.

1/ For FY2022/23 Public debt to GDP ratio = Public debt stock at end of calendar year/Nominal GDP corresponding to FY period, i.e., April to March of the following calendar year. For FY2023/24 through FY2028/29, public sector debt to GDP ratio = Public sector debt at end of FY/Nominal GDP corresponding to FY period.

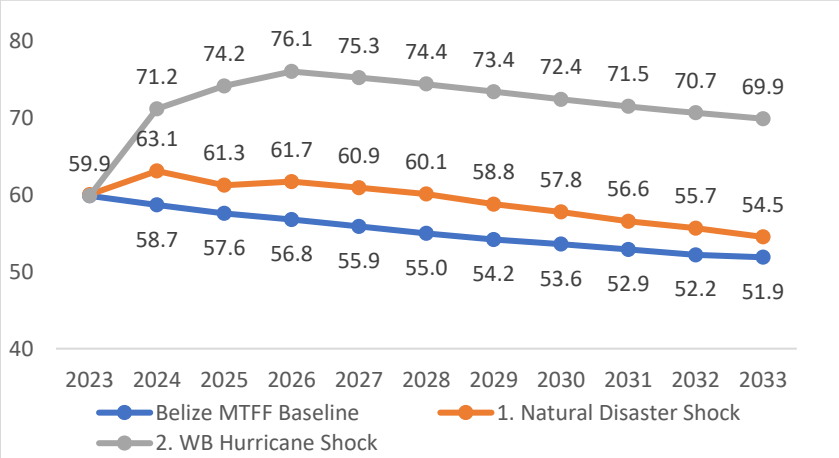
52. **Belize's overall risk of sovereign debt stress is assessed to be moderate, and public debt is assessed to be sustainable but subject to multiple risks.** On its current trajectory, public debt is projected to fall to 53 percent of GDP by 2028. Consequently, the probability of debt stabilization is high in the medium term. GFNs are low after the debt-for-marine protection swap, with most debt now owed to official creditors. Still, debt and GFNs are vulnerable to natural disasters, costs associated with climate change mitigation, and the path of public pension deficits. Further, Belize still has a sizable debt stock and high share denominated in foreign currency, which makes it vulnerable to sharp exchange rate adjustments. In the medium and long term, the risks to debt sustainability are moderated by several factors: a constant growth rate and small fiscal deficits in the projection period, a favorable repayment profile for the blue loan, and a large share of public debt owed to official creditors which carries low rollover risk. GFNs are expected to average 3.8 percent of GDP over the medium term. Additional mitigants would be higher growth or larger fiscal consolidation than envisaged in the baseline scenario, which would reduce these risks further.

53. **Sustainability of public debt remains, however, quite sensitive to the natural disaster shocks.** The World Bank - IMF Debt Sustainability Analysis Template for Market Access Countries (MAC-DSA template) was used to model the debt impact of two climate and natural disaster-related shocks**,** a standard one and a Belize-specific one. These scenarios and their motivations are described in detail in Annex 1. Neither of them included any mitigating factors such as catastrophe insurance policies that can be drawn upon nor significant fiscal buffers. Neither of them attempts to model the most extreme natural disasters in Belize's recent history—certain hurricanes (in 2000, 2001, and 2007) caused damage between 25 and 40 percent of GDP.[34] Yet both scenarios demonstrate a significant impact of natural disasters on public debt over the 10-year trajectory period. Scenario 1 shows an increase on average of over 9 percent

[34] World Bank 2018, Chapter 3.

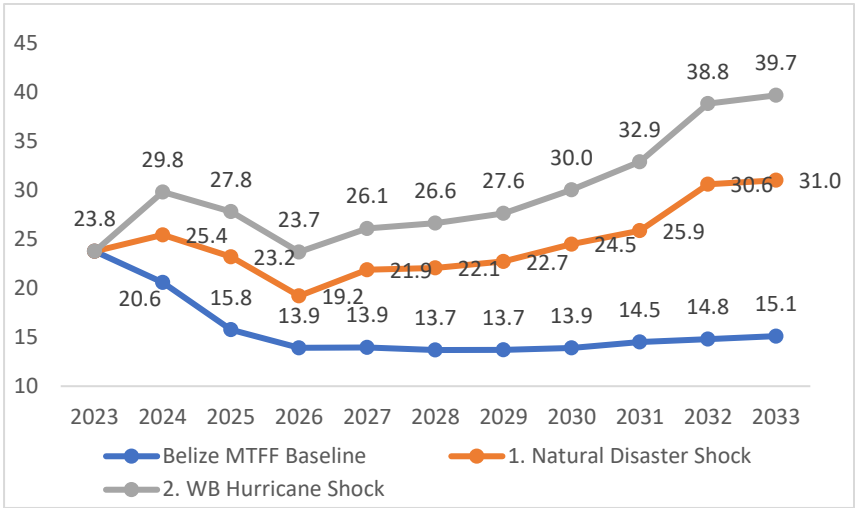
of GDP over the projection period. Scenario 2 shows an increase on average of over 11 percent of GDP over the projection period. Both scenarios only consider an initial shock and no repeated shocks over the projection horizon (Figure 24). The higher levels of debt are driven in a large part by increase in debt service in the short term (Figure 25).

**Figure 24. Public debt (percent of GDP)**




*Source:* World Bank staff calculations.

**Figure 25. Debt service (in percent of revenues)**




*Source:* World Bank staff calculations.

54. **Continued fiscal consolidation will help further reduce public debt and ensure adequate buffers to respond to the adverse external shocks.** Measures to enhance revenues and improve efficiency of expenditures, while preserving priority spending on infrastructure, social sectors, and law and order, will be important. Strengthening institutional basis for fiscal management should also contribute to enhancing debt sustainability. Important measures include expanding the tax base, strengthening revenue administration, and pension reform. Strengthening public financial management (PFM) and public investment management (PIM) can also contribute to enhancing debt sustainability.

## CHAPTER 2. FISCAL MANAGEMENT FRAMEWORK

55. **This chapter reviews the institutional context of public expenditures in Belize and proposes fiscal and institutional measures needed to enhance fiscal sustainability.** With the increasing importance of disaster resilience and climate change adaptation, the chapter will also review the extent to which disaster preparedness has been integrated into the MoF's core PFM functions. It also explores the possible need for development in the medium term of the fiscal rules consistent with undertaking investments in climate change adaptation and mitigation.

56. **Fiscal management frameworks are an important tool to support fiscal sustainability and make policies more predictable.** Fiscal management frameworks consist of a set of institutions, rules, targets, regulations, and procedures that define how fiscal policy is planned, conducted, and assessed. Fiscal management frameworks also guide the definition of long-term policy fiscal objectives, including the acceptable debt levels and fiscal balances that should guide fiscal policy and other government objectives, including output stabilization.

57. **The design of fiscal management frameworks should achieve three goals:** (a) sustainability of public finances; (b) stabilization of the economy through countercyclical fiscal policy, when appropriate; and (c) for fiscal rules in particular, simplicity, to facilitate communication and accountability to the public. Further desirable features include resilience, ease of monitoring operational guidance, and enforcement.

58. **Strengthening underlying fiscal institutions, technical capacity, and transparency can help improve the credibility of fiscal management frameworks.** Transparent reporting of macroeconomic and fiscal projections, their underlying assumptions, and deviations from them is critical for underpinning market confidence and access to finance. Disclosing risks around these forecasts, for example, in fiscal risk statements, can also raise awareness of those risks and, along with their regular monitoring and assessment, encourage better management. For developing countries, the enhancement of core PFM systems such as sound annual budget processes, medium-term forecasts, financial controls, and reporting mechanisms is crucial. In advanced economies and emerging markets, better-designed medium-term frameworks, more comprehensive budgets, and better risk analysis and management can support more predictable and credible fiscal policy.

59. **Sound fiscal management frameworks can enhance credibility, market access, and ultimately fiscal space.** If a government's budget plans are credible, private sector expectations on budget balances and debt should be based on the government's projections, and disagreement among forecasters should be minimal. Credible official announcements are beneficial in terms of lowering borrowing costs, and therefore strong fiscal management frameworks and fiscal rules are expected to enhance the credibility of official projections.

60. **Another relevant aspect of a fiscal management framework is the assessment and management of fiscal risks.** To be credible, governments should design fiscal management frameworks that account for and manage fiscal risks. Understanding the magnitude and source of fiscal risks is thus essential to designing fiscal management frameworks, considering the possibility that unexpected fiscal costs will be incurred in the years ahead, whether from a global crisis or country-specific shocks. Risk analysis should inform the fiscal targets and the flexibility embedded in frameworks to allow for countercyclical response to crises, budgets should account for expected costs of loan guarantees, and frameworks should cover at least the general government and be complemented by fiscal data for the whole public sector.

61. **Limitations in the institutional framework for public finance management in Belize has significant impact on the ability of fiscal policy to ensure fiscal sustainability, credibility, and predictability of the budget.** The strong budget rigidity in the recurrent budget not only limits fiscal space for new spending initiatives or to expand existing services but also prevents policy makers from promoting adjustments aimed at ensuring fiscal sustainability. Expenditures on personnel and debt financing already consume a significant portion of the recurrent budget, leaving limited space for purchase of goods and services**.** Furthermore, operating budgets are facing increased input costs due to global supply chain issues, meaning that higher budgets are needed simply to secure the same quantity of goods. Belize has also been challenged by demographic changes that put pressure on core public services. The authorities believe that government is obliged to deliver services to a growing population in underserved rural and marginalized communities. When personnel costs increase at a faster rate than revenues, there are additional pressures on operating budgets and increased risk that government runs arrears with suppliers.

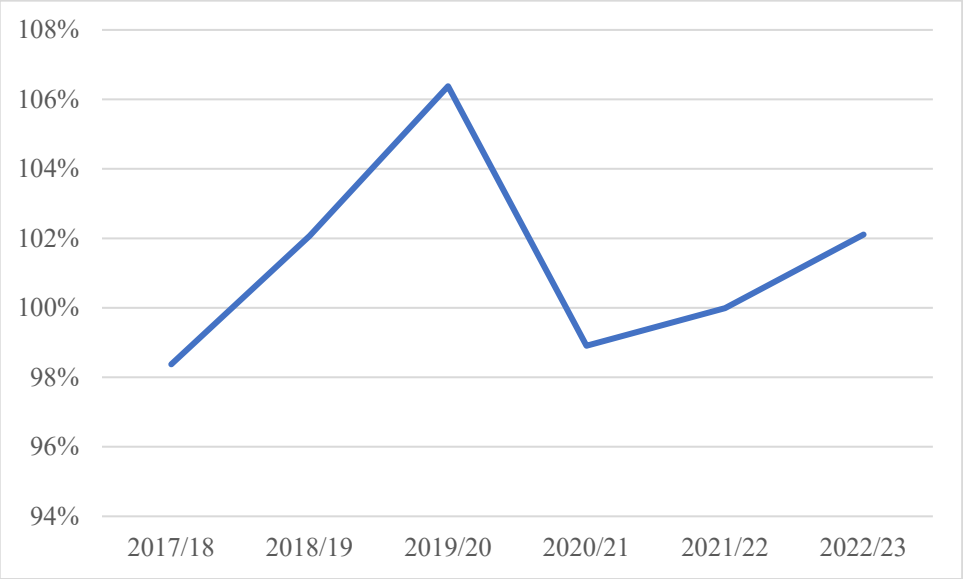
### 2.1 Budget credibility

62. **Maintaining fiscal discipline has proven to be a particular challenge for Belize's MoF.** Expenditure returns from the past several years show that there are large variances between approved budgets and actual expenditure at both an aggregate level and for major categories of expenditure. Since personnel expenditures are relatively stable, the volatility is more profound for categories like 'goods and services. Capital spending also tends to be subject to greater volatility. As will be discussed in Chapter 4, budgets for individual public investment projects are not necessarily a good predictor of actual spending. Depending on the nature of the project and the structure of the vendor contract, such uncertainty could contribute to inefficient project planning. While the economic upheaval caused by the pandemic may explain variances in some cases, data show similar patterns before and since the pandemic. Predictability in budget funding is needed by line ministries to facilitate an optimal planning of program activities, as well as efficient management of public investment projects.

63. **The MoF lacks sufficient influence over some key drivers of budget pressure.** The MoF needs to identify and assess potential sources of fiscal pressure and input into the policy decisions that could control them. Some of the key drivers of fiscal pressure in Belize are well known; they include rising personnel costs, increased public investment spending, and increased demand for public services due to demographic trends and greater concern for urban-rural imbalances. As elaborated in Chapter 3, personnel costs have risen steadily as a share of the budget, because of increases in wage rates as well as increases in the size of the workforce. Though negotiations with labor unions include the MoF, the ministry has less influence on the number of people who enter the public service in 'open-vote' positions, where there is no permanent position being filled.

64. **In the past Belize has done well on international measures of budget credibility such as Public Expenditure and Financial Accountability (PEFA) and the most recent data show similar results**. Ministries of Finance globally are assessed on the extent to which the approved budget estimates are a credible and reliable reflection of the government's policy priorities. Actual outturns should be broadly consistent with the original approved budget. Financial statements for Belize show that for the recent fiscal years aggregate spending does not deviate substantially from the approved budget estimates.

**Figure 26. Total budget outturns as percent of approved budget**




*Source:* World Bank.

65. **Despite the MoF's success in maintaining fiscal discipline at an aggregate level, budget credibility appears to be under threat at the ministry level.** BOOST data show that there are frequent and significant variations within the individual chapters of the budget. For example, in the 2022 budget data, there are new allocations for goods and services—especially for operating costs—where there was nothing previously budgeted. In some cases, where there was a nominal allocation, the adjusted budget shows an increased allocation of 5 to 10 times the original amount.

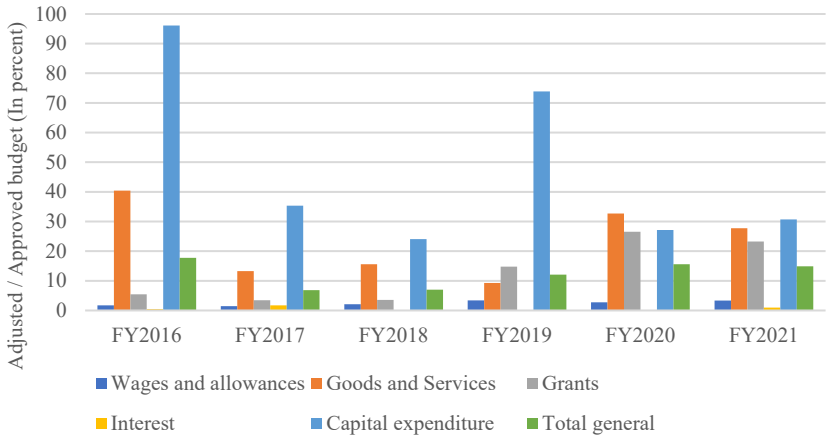
66. **Belize needs to strengthen budget planning and budget discipline within year.** Variations between the original approved budget and the adjusted budget are large. The goods and services category is especially vulnerable to exploitation by line ministries who are seeking ways to increase their budget beyond the original budget estimates. The requests for additional budget during the year may be presented to the MoF as an unexpected or unplanned cost. In some cases, this may be true, and unexpected price hikes are not uncommon due to global supply chain challenges. However, experience also shows that ministries may intentionally under-budget or not report expenditures that they can and should reasonably be expected to anticipate. The more pressing the need, the more difficult it would be for a Budget Office to say 'no'. Similarly, if the Cabinet does not provide the political support to the MoF to withhold additional funding—or if they encourage additional funding—then it may not be realistic for the MoF to avoid making budget adjustments. Inevitably, the more often ministries can succeed in this form of supplemental budgeting, the greater the incentive to do it again. The incentive for ministries to under-budget at the start of the year need not be limited to goods and services, as there could be similar practices in bringing on contract workers to fulfill roles that might otherwise require a public officer.

67. **Inconsistencies in budget reporting across data sources may impede the ability to accurately understand budget dynamics and could justify a review of data management and data reporting practices.** Data from the BOOST database do not always reconcile with the data reported in the budget estimates. Within the BOOST, there are some line items where there is no allocation either in the approved or adjusted budget, but the database still shows that an expenditure was incurred. If this is an accurate recording of financial events, then it probably points to some deficiencies in the budget control

and reporting processes. The MoF may also wish to explore how capital projects are recorded in BOOST and whether it provides sufficient information for planning and analysis.

68. **With these caveats, original budgets were underestimated by an annual average of 12 percent in the last seven years.** Major increases were for capital expenditures and good and services, and higher amendments occurred during the COVID-19 pandemic. Amendments on the approved recurrent expenditure budget reached an average of 9.4 percent in the last seven years, while upside revisions on the approved capital expenditure reached almost 50 percent (see Figure 27). Among recurrent expenditure categories, budget adjustments were higher for goods and services (+23.2 percent) and grants (+12.8 percent) and lower for wages and allowances (2.5 percent) and interest (+0.5 percent).

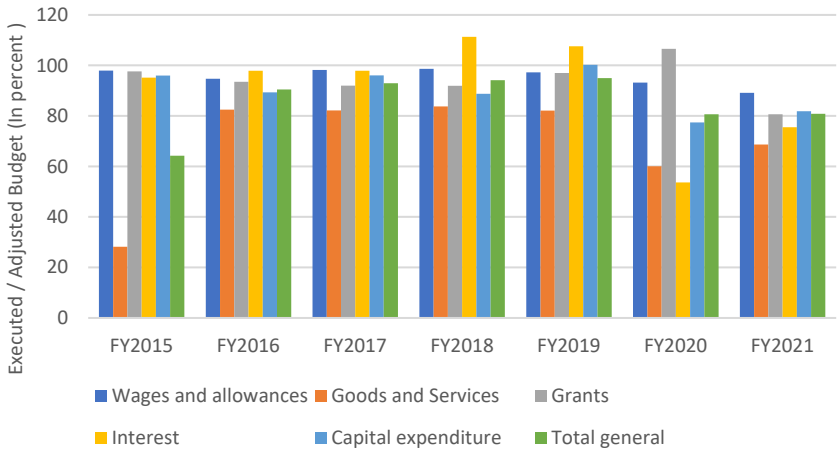
**Figure 27. Budget amendments by economic classification**




*Source*: World Bank, based on BOOST database.

69. **The GoB executed on average 85.5 percent of its revised budget between FY2015 and FY2021, but execution rates vary significantly across expenditure categories.** Figure 28 illustrates the trends. The execution rate ranged from only 64 percent in FY2015 to 95 percent in FY2019. The GoB was better at executing capital expenditures (averaged 90 percent) than recurrent expenditures (averaged 84 percent). Execution rate for goods and services averaged 70 percent. Wages and allowances' execution rate was 96 percent, which is better than all the other categories. Among the components of the wage bill, travel and subsistence payments were under-executed at a low rate of 45 percent. Goods and services expenditure is the worst-executed category, with an average rate of 69.6 percent. Among the components of goods and services, operating cost was the least at a rate of 59 percent. Grants' execution rate averaged 94.2 percent, while interest payment is the third best executed category with an average rate of 91.3 percent.

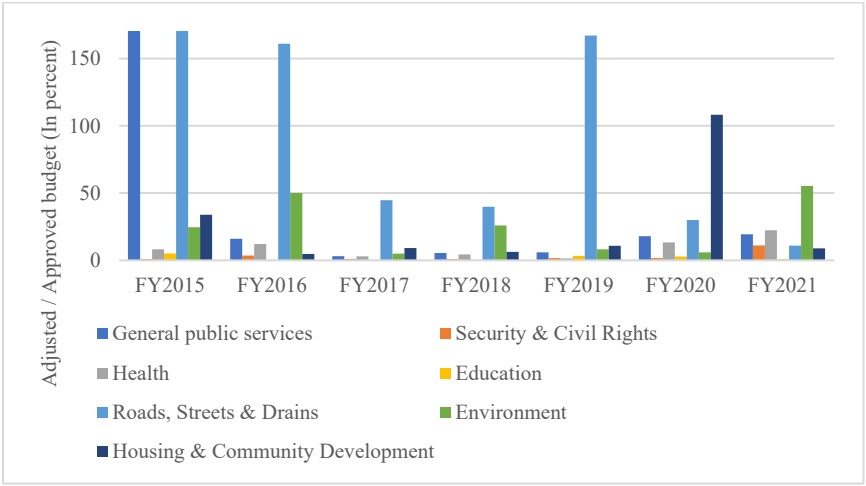
**Figure 28. Budget execution by economic classification**




*Source*: World Bank, based on BOOST database.

70. **Road, streets, and drains expenditures as well as governance and democracy, environment, and community services expenditures were overestimated in the approved budget.** Approved budget amendments on roads, streets, and drains were on average 76 percent. Other programs with high amendments were governance and democracy (+24 percent), environment (+25 percent), and housing and community development (+28 percent). Education-related programs recorded the lowest adjustments, while health reached 9.4 percent of the approved budget (Figure 29).

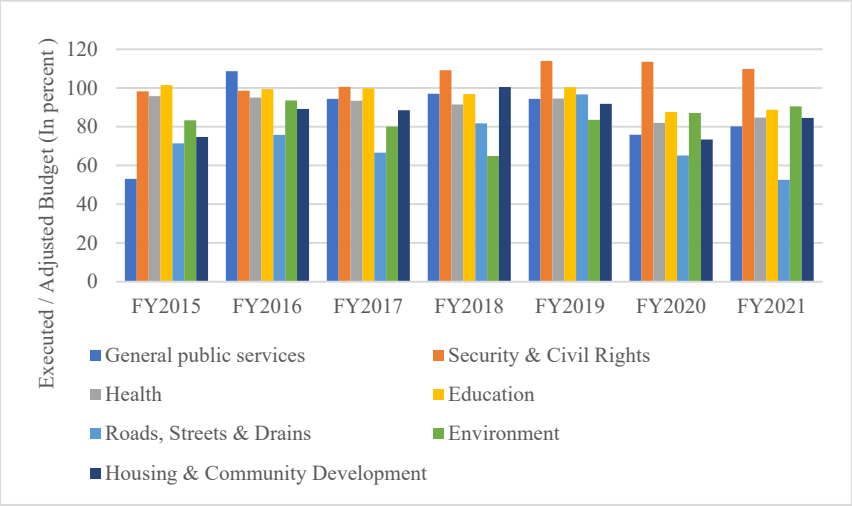
**Figure 29. Budget amendments by functional classification**




*Source*: World Bank, based on BOOST database.

71. **Roads, street, and drains and governance and democracy had under-execution rates with over-execution rates for security and civil rights.** The average budget execution rate for security and civil rights was 106.3 percent. Roads, street, and drains expenditure is the worst-executed program, with an average rate of 72.8 percent over FY2015–FY2021. Fiscal management and preschool and primary education average execution rates were close to 100 percent. The average execution rates for health and secondary education and TVET services were 91 and 95 percent, respectively. Figure 30 provides further details.

**Figure 30. Budget execution by function**




*Source:* World Bank, based on BOOST database.

72. **Enhancing budget credibility requires a collective responsibility that goes beyond the authority of the MoF and could require legislative changes**. While governments should have the ability to adjust the budget to changing circumstances, this typically must be done within certain authorizing limits or via a supplemental budget request to Parliament. Generally, governments strive to limit the frequency and magnitude of supplemental budgets. In the case of Belize, the government has been relatively unrestricted in being able to present supplemental budgets before Parliament. In this context, the Parliament's responsibility to review and approve budgets is undermined. Moreover, when budgets can be adjusted relatively painlessly, it undermines the incentive for line ministries and other budget holders to prepare and negotiate credible budgets at the start of the year. Unforeseen expenses and 'emergencies' become more commonplace in a context where supplemental funds can always be found with the 'right' justification. Though Cabinet has a collective responsibility to maintain budget discipline, it could be potentially reinforced by making changes to PFM regulations to limit the timing and frequency of supplemental budget requests. Agreeing with Parliament to limit the timing and frequency at which supplementary budgets can be presented is a policy option that could be considered.

## 2.2 Medium-term fiscal strategy

73. **Efforts by the MoF to create fiscal space for financing new initiatives in the line ministries budgets have had limited effectiveness.** The budget circular calls for ministries to identify administrative savings (of 5 percent) within the budgets. However, ministries have little incentive to offer savings within their budget without some assurance that they will benefit in the budget negotiations from doing so. By limiting budget planning to an annual basis, Belize lacks some mechanisms to encourage ministries to identify structural savings and reallocate from lower to higher priority activities. Belize's budget benefits from a programmatic structure which should help facilitate policy trade-offs in the future so that it can better align policy goals with medium-term fiscal envelopes.

74. **To strengthen fiscal sustainability and budget credibility, Belize needs to adopt and implement a medium-term fiscal strategy.** This could help enhance political commitment on the budget and the policy trade-offs that are embedded in it. A medium-term fiscal strategy should highlight the key budgetary and economic assumptions on which the budget is based and the broad allocations of expenditure across the budget. It could include some of the potential threats, the areas of uncertainty,

and how the government expects to address them. Most importantly, the strategy—and the numbers that flow from it—must be agreed as a political statement of policy and not be viewed merely as a technical exercise.

75. **A requirement to share the medium-term fiscal strategy with the Parliament as a prior condition to submitting the detailed budget estimates would help enhance political commitment.** In the countries which are doing this, it encourages debate around the higher-level goals, the core assumptions, and sometimes even the broader sectoral allocations. After the medium-term fiscal strategy is accepted, then the MoF can finalize estimates for the budget year that conform to it. The Medium-Term Fiscal Framework (MTFF) that underpins the strategy should be binding for the upcoming budget year but indicative for the outer years. In principle, the first year after the budget year should be the starting point for the following year's budget preparation, though subject to macroeconomic updates and exogenous shocks. Currently, Belize provides forecasting of future expenditures in the annual budget estimates, but these are simple extrapolations and are not used in practice by any institution.

76. **Some policy trade-offs needed to balance the commitments of government against the fiscal constraints would benefit from a multiyear planning horizon that feeds into the annual budget cycle**. As things exist now, medium-term projections are an afterthought, merely a technical exercise that flows from the budget year decisions. Without a forward-looking budget planning horizon, the GoB risks postponing difficult policy trade-offs that need to be considered across sectors (and within sectors). Moreover, some structural or policy changes are more easily accommodated when they have a time horizon of more than a year to take effect. For example, changes in the composition or size of the public sector workforce could be agreed in one year, but the implementation may span multiple years. Similarly, closing a program or a department may be better to undertake through a phased approach, giving time for alternative structures to be put in place.

77. **Although forward estimates are included in the annual budget documentation, there is no functioning MTFF in place.** As a result, sustained political commitment by the Cabinet to a specific level of fiscal balance or aggregate expenditure is limited. One of the most important elements to use the MTFF would be to build political consensus among major stakeholders (in government and in society) on the macro-fiscal context facing the country and the trade-offs that must be made with respect to revenue, expenditure, and overall fiscal balance. Additional discussion would be needed with authorities to assess how the technical capacity and institutional conditions could be put in place for implementing a credible MTFF process.

### 2.3 Institutional coordination

78. **Close institutional coordination is essential for preparation of the fiscal strategy and accompanying MTFF.** Multiple institutions would need to provide inputs. For example, the Central Bank may be relied upon for confirming macroeconomic projections and debt payments. The MoED is likely to continue to take the lead in providing data on the PSIP. The Public Service Department will continue to have a role in providing data on public sector employment. Line ministries need to provide medium-term spending projections based on costs of service delivery and projections of demand for them. While the participation of all these agencies is critical, the MoF should lead and coordinate the process. The MoF needs to have a full picture of the commitments implied by the ongoing implementation of capital projects. It also needs to ensure that there is a reliable statistical capacity to simulate the cost implications of any changes in personnel policy, including changes to wage rates, benefits, or employment terms.

79. **For an accurate assessment of the fiscal space for new commitments, the MoF requires a sound understanding of future commitments in each sector.** This is true regardless of whether the commitments are recurrent or capital. The PSIP inherently comprises multiyear spending commitments. Not all projects in the PSIP meet the definition of a capital project, but the assumption is that they reflect an activity with a clear start and completion. For infrastructure projects, there is often an implementation schedule for the contractor to keep costs low. The MoF needs to have information allowing it to project the future disbursement needs of the active projects, so that they can proceed in a cost-efficient manner. It also needs to anticipate the point at which assets will be brought online and costs shift from capital to recurrent.

80. **Close coordination is needed between the MoED and the MoF so that annual project spending levels are integrated into fiscal planning.** Line ministries who are the project owners will generally have insights into contractual commitments and the pace at which vendors propose to implement the project. However, there is no centralized database that enables the MoF to confirm the annual commitments that are required for the projects that are ongoing and adjusted for any delays or cost variations. In the best-case scenario, if an individual line ministry shares such information with the MoF during budget preparation, it is primarily to justify its budget envelope for capital. There is no systematic way for the MoF to view the entire GoB portfolio or to verify the annual disbursement requirements. Before new projects can enter the portfolio, the MoF should have established a medium-term baseline of ongoing commitments and calculated the available 'space' for new projects. It also needs to have a full picture of the expected recurrent cost implications once construction of the asset is completed (see Chapter 4). In this respect, an important development has been the establishment in February 2023 of a Central Executing Unit (CEU) within the MoED. The CEU is responsible for the coordination and implementation of new IDB funded loan projects and will serve as the primary point of contact for all stakeholders involved in each project. The CEU seeks to facilitate the management of the projects, ensuring that all phases are completed on time and on budget. Additionally, the CEU will provide oversight of the financial and operational aspects of the projects, while also ensuring that all relevant regulations and standards are followed. The CEU will also ensure that all project stakeholders are kept informed and updated on the progress of the project.

81. **Capacity for medium-term budget planning at the sectoral level remains a necessary condition for establishing credible ceilings at both the sector and central levels.** For example, if demographic changes are expected to create new pressures on service delivery within a sector, that information is relevant to the policy and budget deliberations. Similarly, expanding access to education—for example, to poor and marginalized communities—has implications over the medium term with respect to staffing and operating costs. It is still possible for policy makers to decide not to maintain the same level of service, but those decisions should be as explicit as possible. Some unplanned expenses are inevitable, but the MoF's goal should be to draw Cabinet's attention to the trade-offs before the start of the budget year—and to reduce the number of urgent demands during the year. Getting to this point may require capacity building for the MoF and the line ministry, so that sectoral pressures can be exposed and considered.

### 2.4 Budget documentation

82. **Budget documentation submitted to Parliament generally presents a transparent and accessible picture of public finances across government programs and across fiscal years.** Many elements of international good practice are reflected in Belize's budget documentation. Budget year estimates are accompanied by planned and actual expenditures for the immediate prior years, and this includes indicative estimates for future years. The budget is presented in a program format, with the

mission and priorities of each ministry spelled out, followed by a summary of expenditures by object and program classifications. Financial data are accompanied by data on staffing levels of the ministry. Program-level data follow, and each program presents its strategies and activities for the prior year and the achievements realized for that year. Performance indicators are typically provided with the target values displayed and, in some cases, the actual performance recorded.

83. **While the framework for program budgeting is well established, there are some gaps and inconsistencies in how it is applied in practice.** Budget documentation shows some anomalies in how the budget was executed that are not necessarily explained in the documentation. For example, there are instances where the actual expenditures exceed the original and revised estimates for the year. The same occurs with staffing levels, where the actual number of positions is reported to be higher than the revised estimate. Among the program and performance information, some programs only report indicative targets but do not account for actual performance in the prior years. In some cases, all indicators are left blank, suggesting that capacity to collect the data was lacking or that the indicators were not considered important.

84. **There is little evidence that program budgeting is used consistently within the GoB to assess performance or to facilitate budget decisions.** Budget documentation does not show a consistent comparison of planned versus actual performance. The budget preparation calendar most likely prevents ministries from having accurate data to report for the current year, but there is also no reporting on the prior year. Given capacity constraints within the public finance functions, the number of indicators presented by ministries could be an obstacle to effective analysis on the ones that matter most. Without capacity to analyze performance information and draw policy lessons from it, there is a risk that program and performance information is seen as merely a burdensome requirement rather than a value-added tool. If the government aims to use program and performance information to improve policy-making and operational approaches, they may want to identify and extract a few core indicators that can be monitored easily and invest capacity in understanding what drives and/or what inhibits their performance.

### 2.5 Enhancing resilience to natural disasters

85. **Fiscal policy can be instrumental to building resilience to climate change and natural disasters.** Belize is highly vulnerable to natural disasters and climate change, including floods, droughts, hurricanes, sea level rise, coastal erosion, and coral bleaching. Investments in (a) infrastructure resilience to storm and sea level rise, (b) an early warning system, and (c) coastal and broad ecosystem conservation would help build resilience, especially in agriculture and tourism. Access to financing from multilateral creditors, the Green Climate Fund, and The Conservation Fund for resilience-building initiatives can be enhanced with the adoption of a Disaster Resilience Strategy (DRS) that focuses on improving structural, financial, and post-disaster resilience and is based on a multiyear macro-fiscal management framework.

86. **The government can strengthen Belize's structural resilience to climate change through a set of investments and regulations.** The authorities are making substantial investments into infrastructure to limit the impact of natural disasters and adapt to climate change, guided by Belize's 2013 National Climate Resilience Investment Plan (NCRIP). About 40 percent of the investment projects in the FY2018/19 budget (1.6 percent of GDP) focused on adaptation infrastructure, including through retrofitting roads and bridges to higher climate resilience, with more than 80 percent foreign financing on concessional terms. Maintaining this level of investment going forward would allow Belize to cover the bulk of the needs identified in the NCRIP for addressing future climate scenarios although getting financing will require

continued efforts. Costing and prioritization of resilience-building projects are under way and could benefit from further technical support from development partners with the relevant expertise and global knowledge. Given the limited fiscal space, it will be important to prioritize these projects and increase access to grants and climate funds. Indeed, authorities are also developing an investment promotion strategy to increase access to grants and climate funds. In addition, regulations on building codes and land use would further reduce vulnerability to weather shocks, attenuating fiscal costs of natural disasters.

87. **In addition to enhancing its structural resilience, Belize needs to build its financial resilience to climate change by adopting a layered approach for building buffers and managing the financial risk of natural disasters.** An NDRF of about 1 percent of GDP is needed to finance the response to high-frequency, low-severity events to accelerate the financing of immediate recovery and response costs associated with the projected average annual loss (AAL) arising from flood and hurricane hazards.[35] The fund would need a governance framework based on international best practices, including well-enforced national guidelines on which events can trigger disbursements. The Contingencies Fund established in 2021 lacks adequate funding to function as an NDRF, even though it has the potential to do so.

88. **The remaining risks associated with medium- to high-severity events should be cost-effectively managed through a mix of risk-transfer and risk-retention instruments such as ex ante contingent lines of credit and optimized participation in regional insurance options.** The authorities reached an agreement with the Inter-American Development Bank (IDB) in 2019 on a US$10 million 'Contingent Credit Facility for Natural Disaster Emergencies' and a Contingent Emergency Response Component (CERC) has been incorporated into Belize's World Bank-financed climate resilient infrastructure projects to allow quick access to resources should a disaster strike. Belize also participates in the Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC). Addressing under-insurance of public and private assets is needed. The total buffer needed to provide timely financing for the fiscal costs of disasters without endangering debt sustainability is estimated at about 7 percent of GDP, inclusive of the natural disaster fund and risk management instruments.

89. **The adoption of a DRS would enhance access to financing.** Belize should continue seeking funding for its mitigation and adaptation plans from bilateral and multilateral creditors, the Green Climate Fund, and The Conservation Fund. The institutional framework created as part of the government's debt for marine protection swap with TNC can help enhance access to these sources of financing. Access to financing would be enhanced further with the swift adoption of a DRS that focuses on improving structural, financial, and post-disaster resilience and is based on a consistent multiyear macro-fiscal management framework.

90. **An NDRF may provide self-insurance against natural disasters.** The Contingencies Fund established by the Finance and Audit (Reform) (Amendment), Act, 2021, could be operationalized as an NDRF and funds could be appropriated in the budget for an amount of 1 percent of GDP over FY2024-FY2026, to be replenished annually.

### 2.6 Toward the adoption of fiscal rules in Belize

91. **The government has recently taken some important steps to improve the PFM framework.** Although there is no functioning MTFF in place, the MoF included a medium-term 4-year forecast in the

[35] See actuarial analysis of historical direct and indirect damage to each sector from wind and flood-related events (World Bank 2018).

budget for FY2022/23 with targets through to FY2026/27. In PFM, enhancements have been adopted in introduction of active cash/money management of government's finances to minimize interest expenses and finance charges and market-based yield curve management of government-issued securities has been introduced. The 2021 draft PFM Act has a set of provisions that could contribute to improved fiscal discipline and public sector efficiency. It defines a fiscal strategy as a document of the Cabinet that would be presented to the National Assembly for consideration and debate before the tabling of the annual budget. The draft empowers the National Assembly to propose changes to the fiscal strategy but makes it the sole responsibility of the Cabinet to determine which changes are acceptable. It is, however, uncertain whether the draft will be passed in its present form. The legislative agenda planned for the near term also includes several key pieces of legislation aimed at improving the efficiency and effectiveness of public finance management and administration, such as a Procurement and Assets Disposal Act, a Public Financial Management Act, a Property Transaction Tax Act, and tax administration legislation.

92. **Belize could benefit from an FRL with explicit rules designed to guide the debt reduction process in a transparent and predictable manner while creating a mechanism for public oversight and accountability.** The fiscal rule framework should include limited and well-defined escape clauses and automatic correction mechanisms and emphasize enhanced fiscal transparency and accountability. It should also accommodate the buildup of the NDRF and its annual replenishment and include specific clauses linking disbursements from the fund to natural disasters. Relevant pre-conditions in terms of the institutional and technical PFM capacities of the country need to be considered in the design and adoption of a fiscal rule. These include the implementation of an MTFF and an agenda for enhancing PFM in the short run that may precede the adoption of a fiscal rule to ensure its compliance and effectiveness in the medium run. Sound budgetary and PFM institutional arrangements such as the credibility and the coverage of the budget, clear procedural arrangements including norms for the preparation and execution of the government budget, and strong fiscal accounting systems favor the compliance and effectiveness of fiscal rules.

93. **The implementation of a rules-based fiscal management framework requires minimum necessary pre-conditions.** Considering the benefits that fiscal rules could bring to guide the debt reduction process in a transparent and predictable manner, it could be advantageous to allow for implementation of fiscal rules earlier than permitted by the prior adoption of the whole set of sound budgetary and PFM institutional arrangements listed in the preceding paragraph. The implementation of fiscal rules requires, as a minimum pre-condition, a functioning MTFF in place. In turn, a functioning MTFF requires to be part of a Macroeconomic Framework or Fiscal Strategy Plan (FSP) which has been approved by Cabinet, thus ensuring political commitment and providing credibility to the budget estimates and the MTFF. The MTFF will consist of fiscal projections for no less than four years, including the budget year, to be presented to Parliament in the form of a Fiscal Policy Paper (FPP) in February before the tabling of the budget estimates in March. The FPP is also the instrument for Parliament and the public to monitor the implementation and updating of the FSP, the budget, and the MTFF. To this effect, an interim FPP would be presented to Parliament at the middle of the fiscal year focusing primarily on the mid-year outturn and the implications for the remainder of the financial year and the medium term. This information will inform discussions relating to the ensuing financial year while providing a preliminary and indicative view of that year's estimates of revenue and expenditure. Moreover, for an accurate assessment of the fiscal space for new commitments, the MoF requires a sound understanding of future commitments in each sector, regardless of whether they are recurrent or capital in nature. Pre-conditions regarding PFM legislation on budget execution are required to provide flexibility while not resulting in an executed budget significantly different than the approved one damaging budget credibility and a functioning MTFF and the FSP. Annex 2 details all pre-conditions for implementation of the fiscal rules.

94. **The authorities prefer simpler and transparent fiscal rules that establish a clear and strong link to fiscal sustainability.** These are more convenient than more sophisticated options favoring countercyclical fiscal stances which demand more stringent requirements in terms of institutional and technical capacities. The mission mentioned that the combination of a simple expenditure and a debt rule replicates the countercyclical effects of a structural balance rule while preserving the strong link with fiscal sustainability. Together with accurate revenue projections, this can be translated to overall or primary balance targets which are preferred by authorities. The mission also stressed the need to include a well-defined escape clause which should enable flexibility to address adverse shocks including natural disasters, pandemics, or negative terms of trade shocks.

95. **Central features of a rules-based fiscal management framework in Belize could comprise the following:**

- **Debt anchor.** Under a 'maximum debt limit' of 60 percent of GDP, adopting a debt target of below 50 percent of GDP to ensure that government debt remains below the 'maximum debt limit' with high probability even when negative shocks occur over the medium term.[36] The framework could target a reduction in government debt to below 50 percent of GDP in 10 years.

- **Balance Budget Rule (BBR).** The framework could target an increase in the overall budget balance that attains the debt target to below 50 percent of GDP in 10 years, from 62.1 percent of GDP in FY2022.

**OR**

- **Primary Expenditure Rule.** The framework could impose a limit to the expansion of primary expenditure in real terms that attains the debt target to below 50 percent of GDP in 10 years, from 62.1 percent of GDP in FY2022.

96. **Annex 3 provides an analysis of pros and cons of these options illustrated by simulations.**

97. **Escape clauses.** To permit a rapid response to natural disasters, the rule should include an escape clause, limited to major adverse shocks and triggered only with Parliamentary approval. The clause would predefine a clear list of events or shocks that could have a serious adverse impact on public finances and specify measurable conditions for triggering the clause such as declines in projected GDP or fiscal revenues from previous estimates. The escape clause should primarily be used for the Balance Budget Rule or Primary Expenditure Rule, but not for the Debt anchor, which already has a ten-percentage margin built-in to provide flexibility in achieving the targeted debt-to-GDP ratio.

98. **Automatic correction mechanism.** The rule could establish an automatic correction mechanism that would be triggered by substantial cumulative deviations from the annual primary fiscal balance target. Once the cumulative deviations exceed a prespecified threshold, additional fiscal adjustment would be required in subsequent fiscal years to correct for these deviations and bring fiscal performance back in line with the rules.

[36] See the IMF-Belize—Staff Report for the 2023 Article IV Consultation SM/23/96, April 16, 2023, Annex V. Debt Sustainability Analysis.

99. **Oversight, transparency, and accountability.** An independent fiscal council with a mandate of an advisory body producing unbiased projections and evaluating compliance with fiscal rules would enhance transparency and accountability of fiscal operations and buttress credibility of the fiscal policy framework. The Minister of Finance could be required to explain deviations that are inconsistent with the fiscal rules in a mid-term budget review in Parliament and outline corrective steps. A public-private forum to monitor and comment on the conduct of fiscal policy could further strengthen public awareness and consensus regarding fiscal policy goals.

# CHAPTER 3. EXPENDITURES ON PUBLIC SECTOR EMPLOYMENT

100. **This chapter delves into the critical issue of personnel spending in the public sector**. It offers insights into the key drivers of the public sector wage bill, the composition of the public sector workforce, and the challenges and opportunities in controlling personnel spending. The chapter also explores strategies for rightsizing the public service and increasing the share of higher skilled positions, modernizing the pay system to enhance productivity, and enhancing capacity for effective management of the public service.

101. **Public service employs a large portion of labor force in Belize and public sector employment has increased over the past decade.** According to the government's labor statistics, about 12 percent of people employed in Belize work in the public sector.[37] Since 2016, public employment has grown in nominal terms from about 11,574 to 15,692 in 2022,[38] or almost 36 percent. However, such figures can be misleading due to data relabeling/reclassification. For example, most of that growth was due to a policy change that brought almost 3,000 parochial schoolteachers onto the payroll for the first time, after they were previously paid by the schools via government grants. Controlling for this change, public employment levels would have grown by only 9.9 percent over the six-year period. Collective bargaining with public sector trade unions plays a critical role in determining the rate of annual wage adjustments, and past governments have struggled to recognize the rights of workers while responding to global macroeconomic pressures that affect domestic resources.

102. **The challenges for Belize now and into the future are to assess** (a) whether the level of spending on public sector employment is fiscally optimal, (b) whether the composition of public sector workforce supports the short and long-term needs of government to deliver services, and (c) whether the policies and practices for managing the public service are likely to contribute to an effective public administration. Though public employment can contribute to important social welfare goals, this chapter examines how Belize's management of the public service may be affecting fiscal sustainability and public sector performance.

## 3.1 Personnel spending as dominant element of the budget

103. **Expenditures on personnel have become an increasing share of the budget and risk crowding out space for other development needs.** As of 2022, public sector wage bill expenditures[39] were 44 percent of the total expenditures, 50 percent of total revenue, and 55 percent of recurrent expenditure. Public sector wage bill expenditure for 2022 equated to 13.8 percent of GDP. This is only a small increase of the 12.9 percent of GDP it required in 2015/16. In general, public sector wage bill growth can be correlated with GDP growth, though there are some years where it has increased at a faster rate (see Figure 31 a and b).

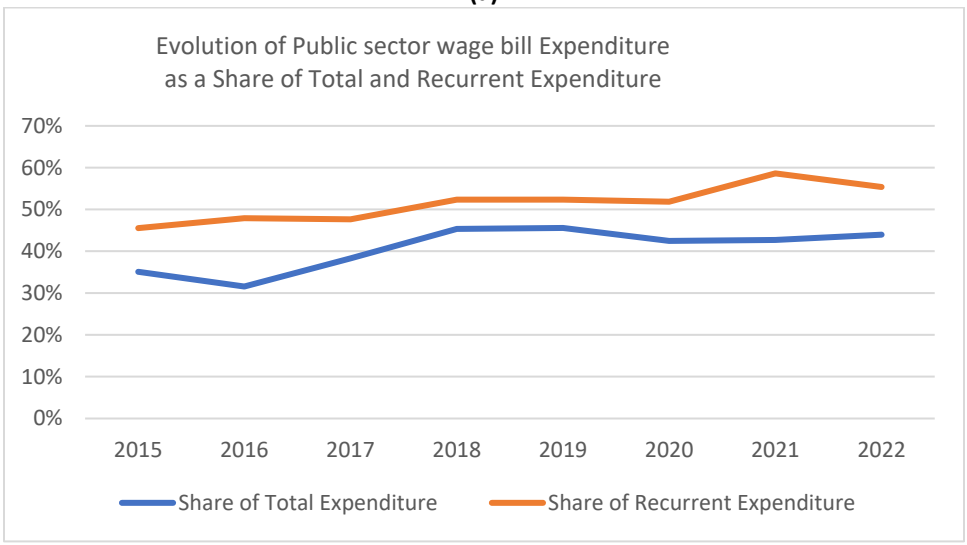
104. **Belize's spending on the public sector wage bill appears to place it slightly above other countries.** The level of spending on the public sector wage bill varies across countries and regions around the world, reflecting differences in per capita GDP and the role of the State. Data definitions also make comparisons with other countries challenging as well. One of the most comprehensive databases

[37] Labor Force Survey, Statistical Institute of Belize. Data as of October 2022, published on January 11, 2023.
[38] Figures provided by the GoB based on the number of people on the payroll within the year. Some may have been on the payroll for less than a year.
[39] The public sector wage bill includes salaries, pensions, and non-salary payments.

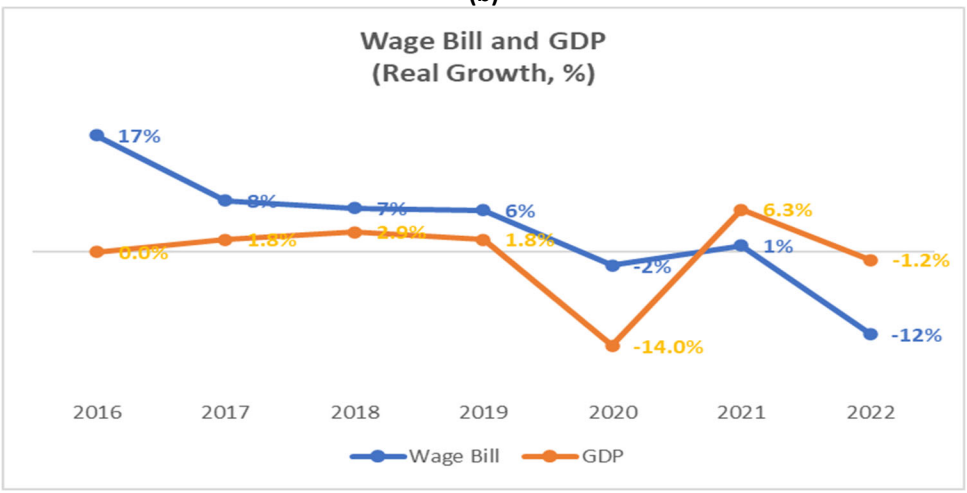
assembled is from the World Bank's Bureaucracy Lab. Data from 2020 aggregated for countries in Latin America and the Caribbean showed that Belize tended to be on the higher end of spending. Figure 32 a and b show scatter plots of countries in the region, comparing GDP per capita with public sector wage bill as a share of GDP and public expenditure respectively.[40]

**Figure 31. Public sector wage bill expenditure as a share of the budget and GDP**

**(a)**




**(b)**

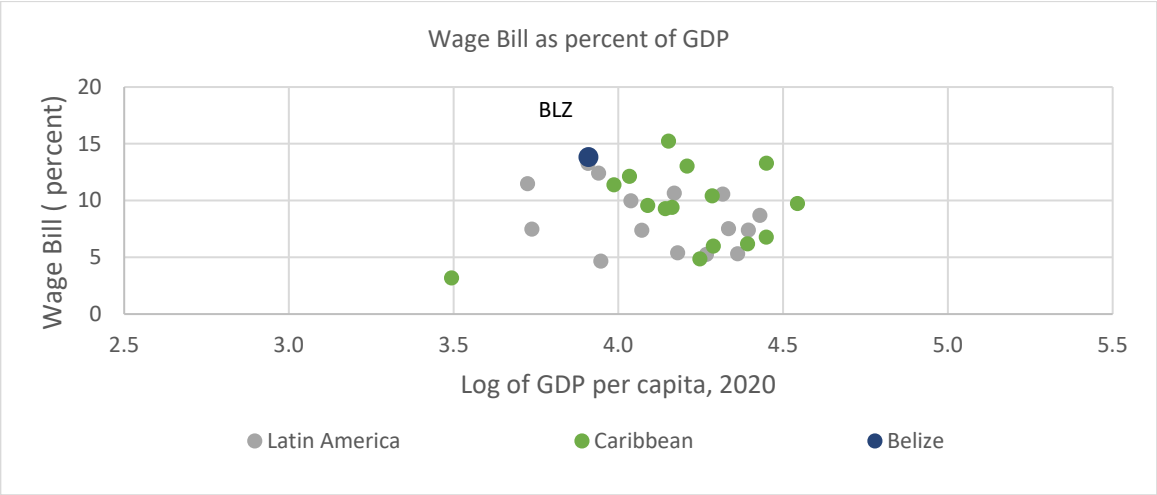



*Source:* World Bank and GoB.

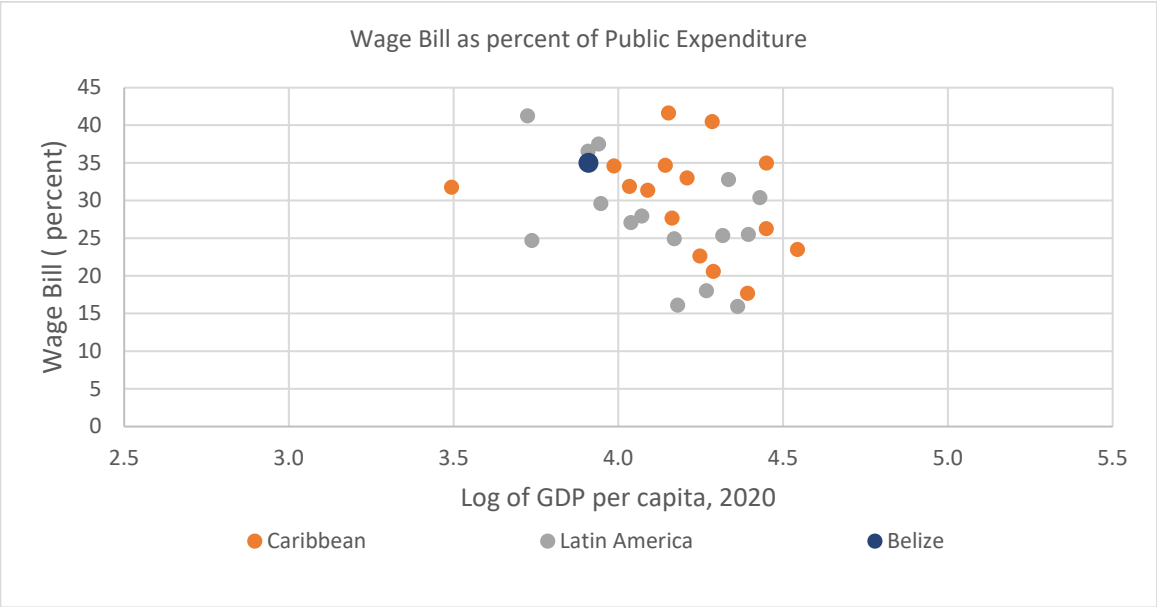
[40] GDP per capita in the graphic is adjusted based on purchasing power parity for comparison.

**Figure 32. International comparisons of public sector wage bill expenditure by national income level**

**(a)**




**(b)**




*Source:* World Bank.

### 3.2 Key drivers of the public sector wage bill in Belize

105. **Personal emoluments represent the largest portion of the public sector wage bill.** Four-fifths of the public sector wage bill goes to personnel emoluments (salary and non-salary payments), while pensions make up the next largest portion at around 13 percent in 2022 (see Figure 33a). Although relatively small in comparison to personal emoluments, spending for pensions has been the fastest growing share of the public sector wage bill, growing at an average of 6 percent per year. In contrast, spending on salaries rose 1.6 percent per year on average and non-salary personal emoluments about 2.5 percent (see Figure 33b).

106. **The cost of personal emoluments is driven by both wage rates and employment levels, but data limitations prevented the World Bank from reliably separating the contributions of each to wage bill growth.** Ideally, growth in the wage rates would be measured against a constant population, but the World Bank did not have access to micro-level data to assess this. Growth in the wage rates is determined by two factors: the annual pay increments that employees receive for good performance (or additional qualification in the case of teachers) and the adjustment in pay scales resulting from collective bargaining. While it is tempting to divide total expenditure on personal emoluments by the number of people employed as a proxy for average wage rates, the results are not necessarily reliable. [41]

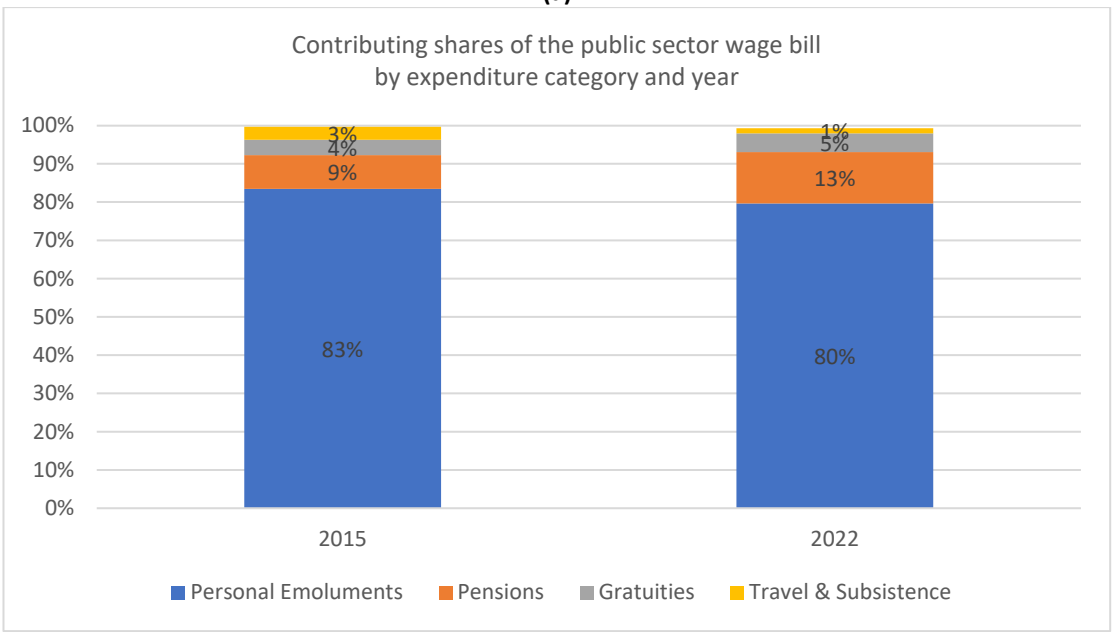
107. **Growth in the level of public sector employment contributes to increases in the public sector wage bill.** The five job families or categories that Belize uses have seen some increase in absolute numbers (see Figure 34 and Annex 4). The reclassification of teachers in 2019 produced a spike in that job category, but total numbers gradually declined after that.[42] The largest category of workers—public officers—grew from about 6,734 people in 2016 to 7,201 in 2022, an increase of almost 500 workers. The total number of public officers had peaked at 7,418 in 2021 before falling back a year later. Figure 34 b and c illustrate the relative change for each of these job families. The fourfold increase in teachers distorts the scale in Figure 34 b, but it is possible to see the decline in the years since then. The number of teachers fell from 3,933 in 2019 to 3,612 in 2022. Public officers and police have seen modest increases since 2016, rising a cumulative rate of 7 percent and 14 percent, respectively. The biggest cumulative rates of increase have been with defense (47 percent) and coast guard (32 percent). Defense experienced the biggest jump from 2017 to 2018, while coast guard saw a steady rise from 2017 to 2019.

[41] Employment in 2016 was reported as 11,574 at a cost of BZD 403 million (actual outturns). This compares with employment of 15,692 in 2022 and a proposed budget of BZD 462 million. Without any other adjustments, this would imply that average pay declined from BZD 34,819 to BZD 29,442. However, it does not reflect any changes in the composition of the workforce such as an increase in lower skilled positions and relative reduction in higher-skilled positions over the period or complexities in the way some teachers were accounted for.

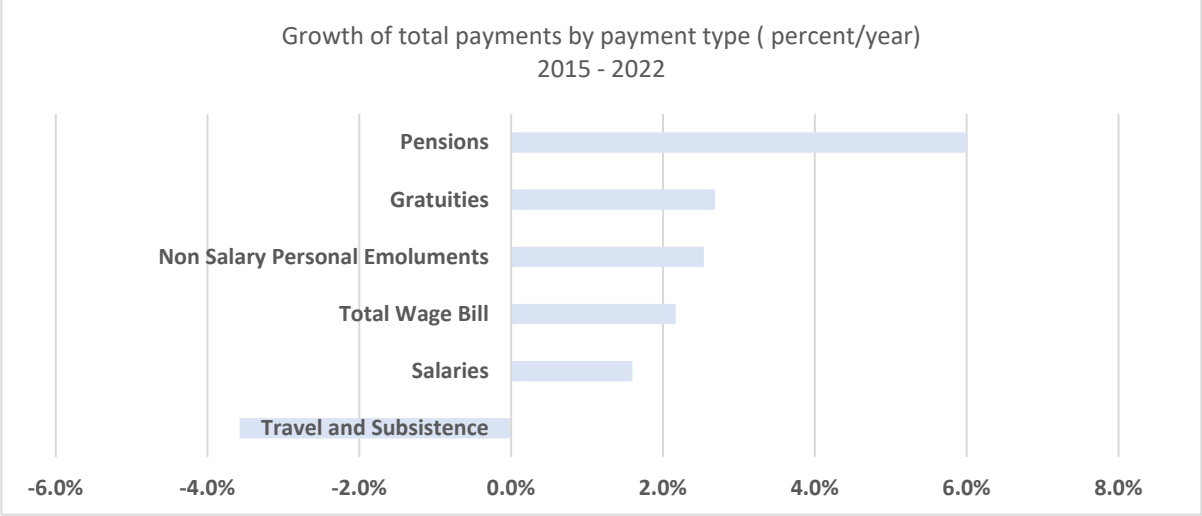
[42] There may have been other smaller reclassifications that took place during this period that are not accounted for, but this would have been the largest.

**Figure 33. Composition of the public sector wage bill and growth in public sector wage bill components**

**(a)**



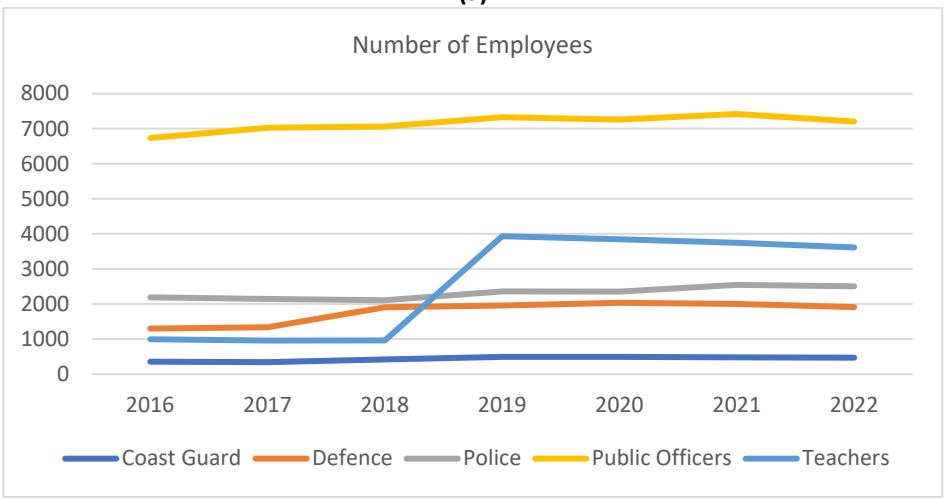

**(b)**



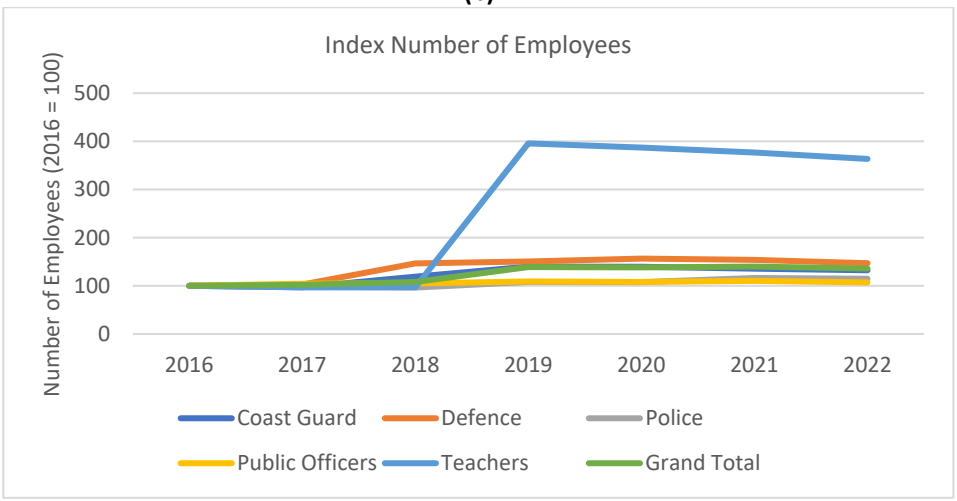

*Source:* World Bank and GoB.

**Figure 34. Number of public employees by job category and cumulative growth rate in public employment by job category (with and without teachers)**

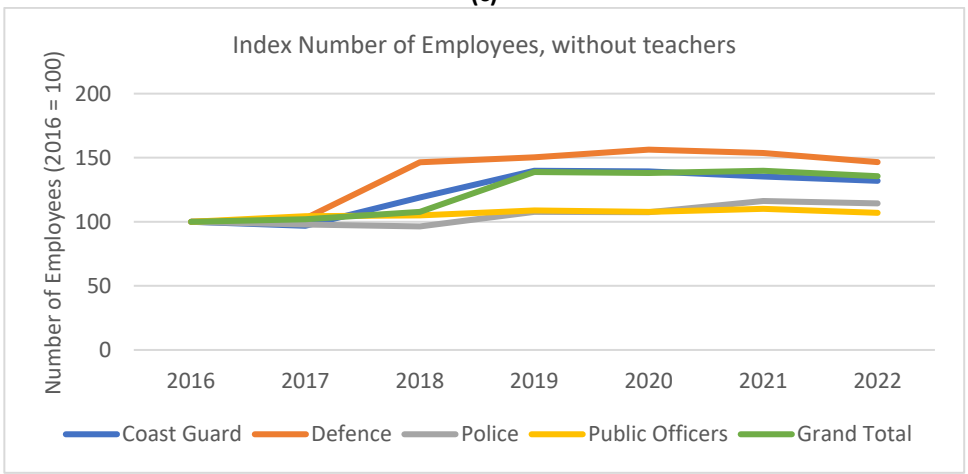
**(a)**




**(b)**




**(c)**



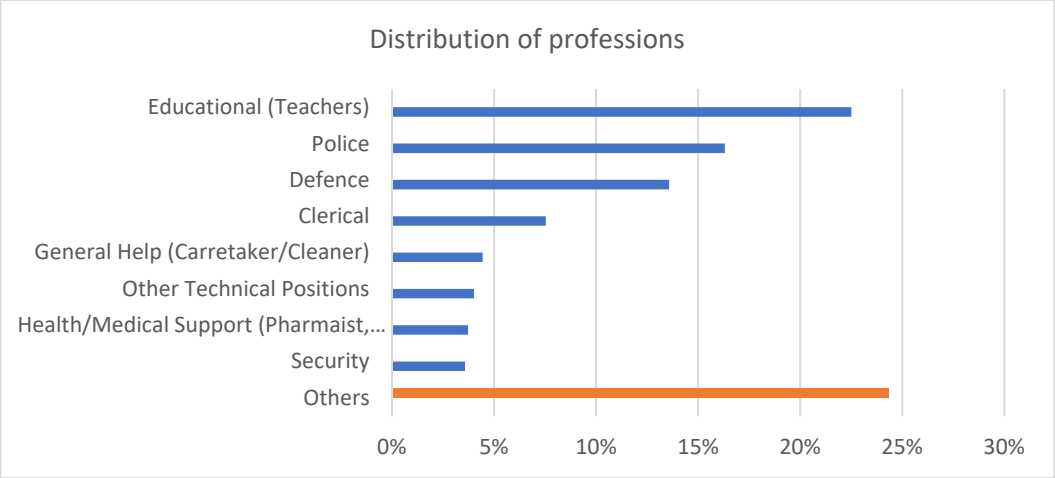

*Source*: World Bank and GoB.

### 3.3 Composition of the public sector workforce

108. **While the Belizean public service has a variety of positions, the eight largest professions comprise 75 percent of the total workforce.** Positions in education make up 22.5 percent of the total employees, while police and defense-related positions are responsible for another 16.3 percent and 13.6 percent, respectively (see Figure 35). A substantial number of positions under 'others' also appear to be low-skilled positions, referred to as clerical and general help. Employment needs in education are—in principle—guided by the number of school-age children and the ministry's policies on teacher-student ratios. (See Chapter 6 for more on the education sector.)

109. **According to the available data, most positions are classified in the lower skilled grades**. Belize has 26 pay scales in the general schedule for public officers, plus a category of unclassified for about 20 percent of the public servants. Most jobs are assigned to the lower pay grades. The data indicate that about 50 percent of employees are in pay grade 5 or lower (see Figure 36 a). Cleaners, clerks, and drivers are some of the most common positions in these highly populated grades 1 to 4. In contrast, the upper half of the grading scale (grades 14–26) have very few positions. When positions are distributed across pay ranges, rather than grade levels, the distribution of the workforce becomes clearer. About 49 percent of positions have total remuneration of BZD 20,000 or less, and 92 percent of the positions are paid at BZD 40,000 (Figure 36b). Only about 8 percent of the public sector workforce have pay that falls in the range between BZD 40,000 and BZD 152,000 (the highest level in the public officer scale). Most teachers fall within grades 8 and 17.

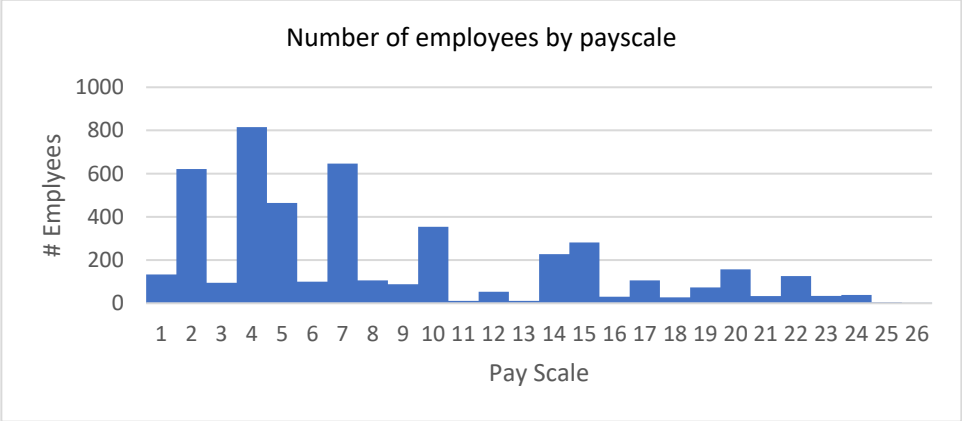
**Figure 35. Distribution of professions or job titles in the public service**



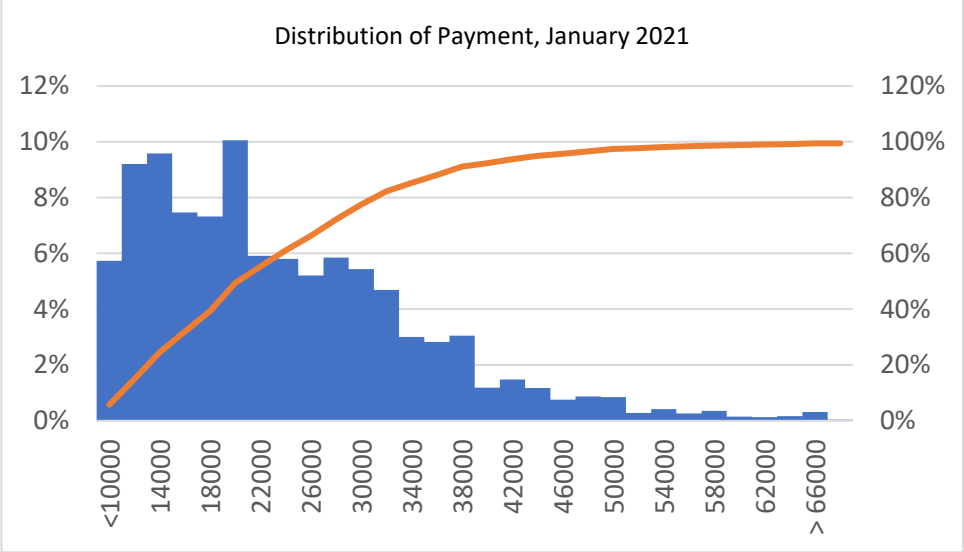

*Source:* World Bank and GoB.

**Figure 36. Distribution of public servants by pay grade (public officers scale) and distribution of public servants by total pay**

**(a)**




**(b)**

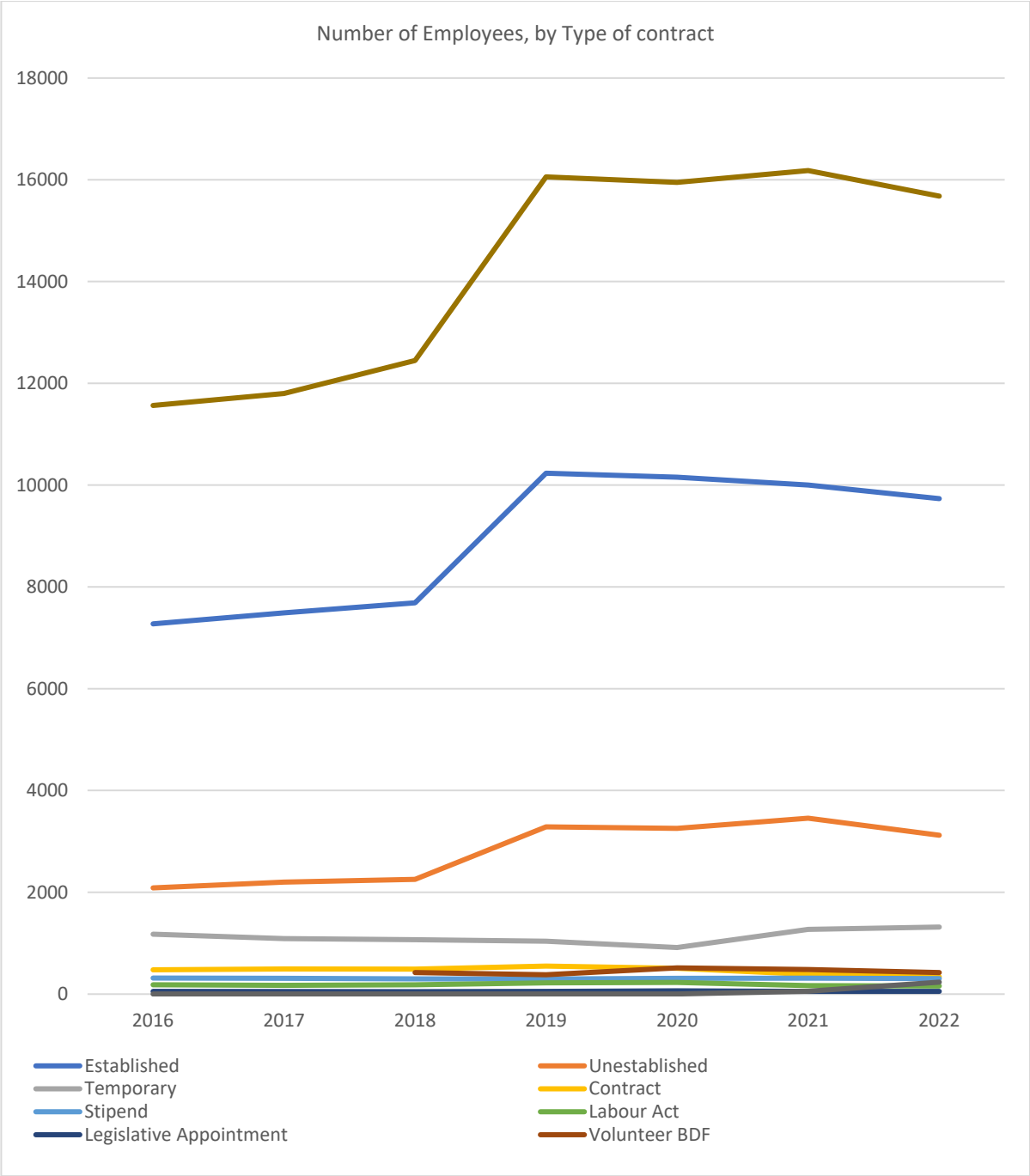



*Source:* World Bank and GoB.

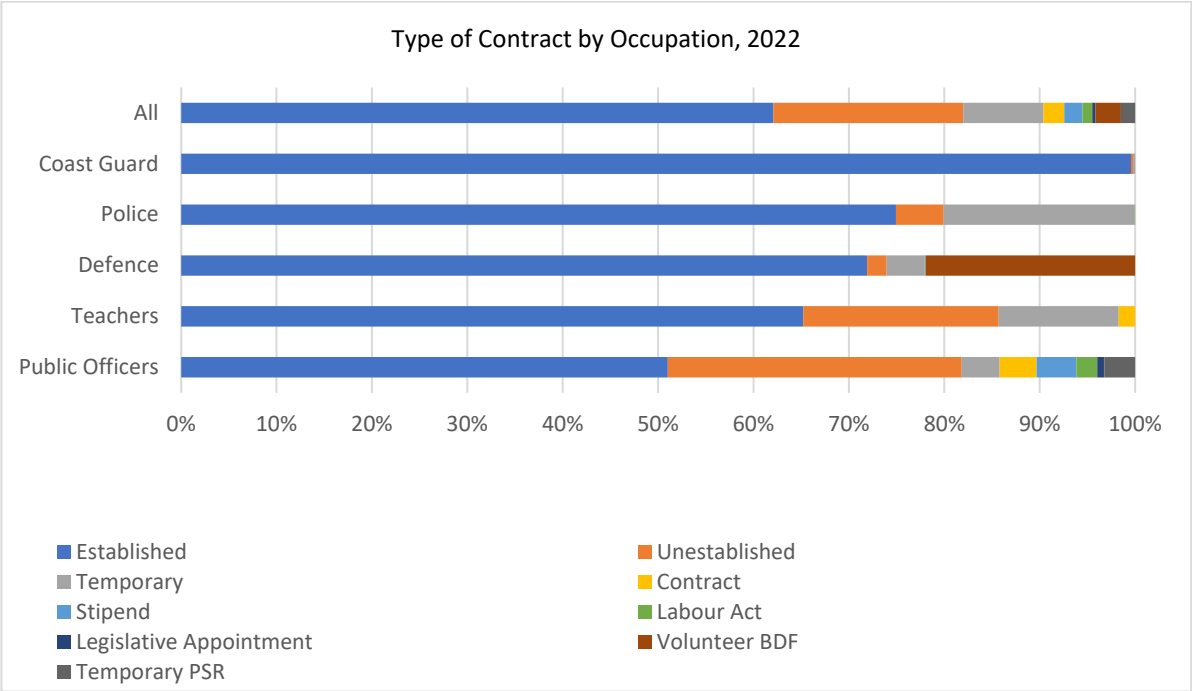
110. **The largest employment category is establishment position, although the number of staff who are under different employment terms is substantial** (see Figure 37 and Annex 4). Growth in employment in the establishment positions has been about 34 percent from 2016 to 2022, but it has been relatively flat—even declining slightly since the teacher reclassification in 2019. In principle, ministries are not able to employ a person if there is no vacant position in the establishment. Other employment categories have more relaxed rules—in particular, contract workers, unestablished positions, and temporary workers can be added more flexibly.

**Figure 37. Number of employees**

**(a)**



**(b)**

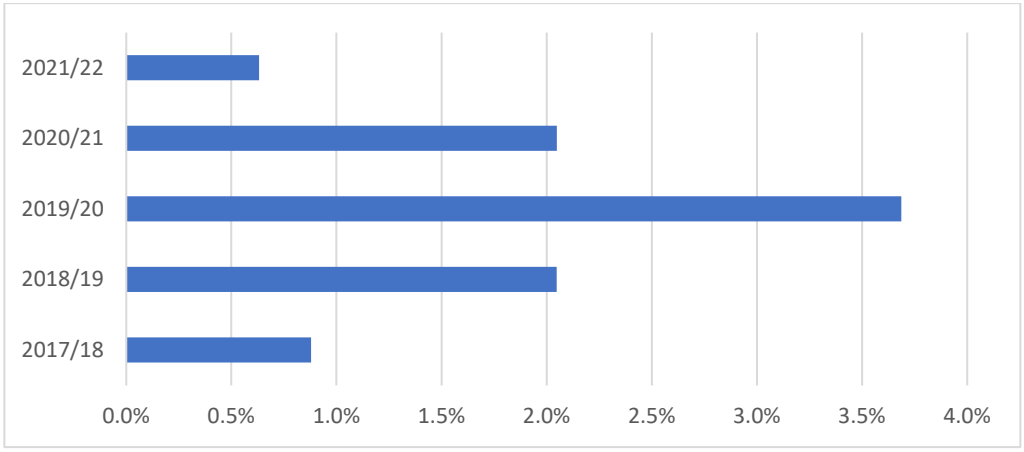



*Source*: World Bank and GoB.

### 3.4 Challenges and opportunities in controlling the public sector wage bill

111. **Belize's annual expenditures on personnel have tended to exceed the original budget estimates.** As Figure 38 demonstrates, actual expenditures have tended to run about 2 percent higher than the original budget allocation. It shows how actual expenditures have exceeded budget estimates for each of the years since 2017/18, including the year in which the COVID-19 crisis led to cuts in actual wage rates. Collective bargaining agreements that are agreed after the budget preparation process has begun could be contributing to a measure of uncertainty. Unplanned changes in employment may also affect the final public sector wage bill cost.

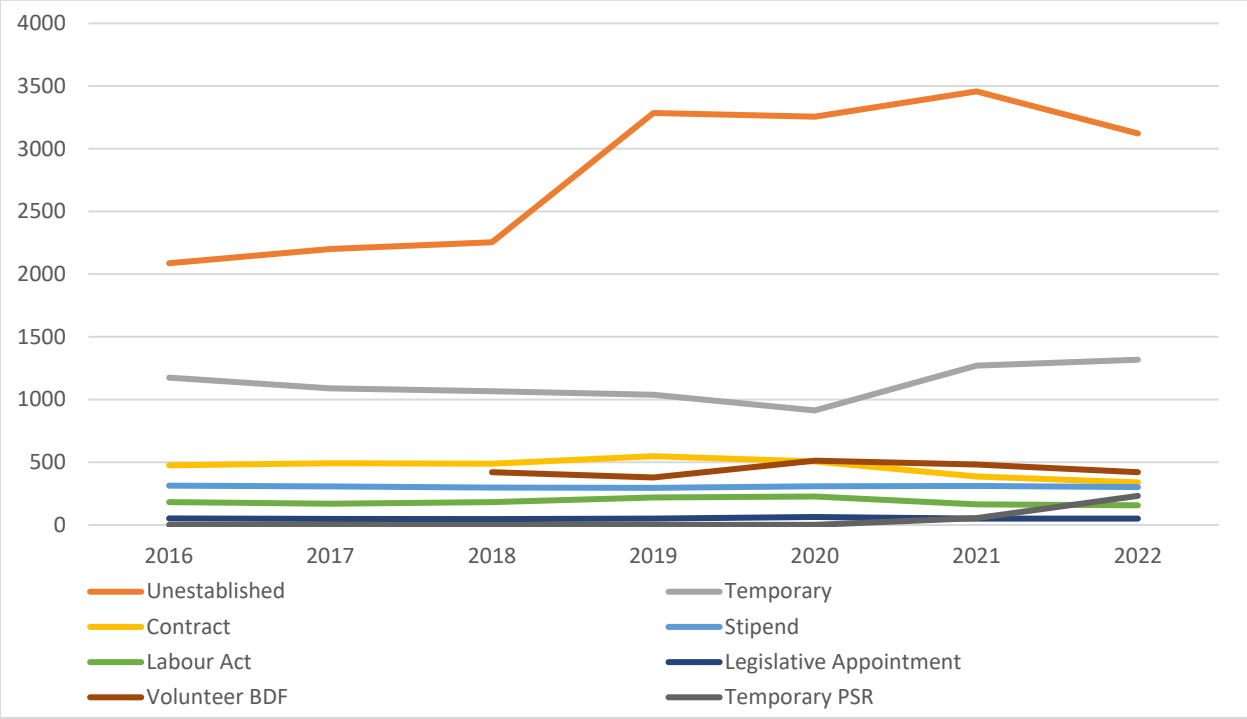
**Figure 38. Spending on personal emoluments generally surpasses the budget estimates.**




*Source:* World Bank and GoB.

112. **Changes in employment levels vary by contract type, with some experiencing relatively large increases.** Less than three-fifths of the public service are establishment positions and these are governed by Public Service Commission regulation or regulations specific to their commission. In contrast, ministries, departments, and agencies (MDAs) have greater flexibility to employ people under other contract types, and this is likely reflected in higher growth rates. Figure 39 shows the total number of people for each contract type—excluding establishment—and how that has changed over time. The biggest growth in absolute numbers since 2016 has clearly been through *unestablished* positions, also referred to as 'open vote workers'. Since 2020, the *temporary* positions category has also seen a relatively high growth rate though starting from a smaller base.[43]

**Figure 39. Trend - Number of employees, by type of contract (excluding establishment)**




*Source:* World Bank and GoB.

113. **The MoF has less authority to control entrance of workers who work under temporary employment conditions into the payroll.** In practice, there appears to be no formal termination period for such positions. Thus, it is possible for staff to be in a permanent (establishment) position for many years, and authorities indicate this is sometimes used by the staff as justification for conversions to permanent staff. Data show that the increase in unestablished temporary positions coincides with the period leading up to and immediately after the November 2020 General Election. Though there may be legitimate reasons for having this employment category, there is a risk that the practice is abused in its frequency or used to place someone within the public service who would otherwise not be qualified.

[43] These are temporary positions for unestablished officers for a specific period, with an end date determined. In practice, the period of employment can be extended.

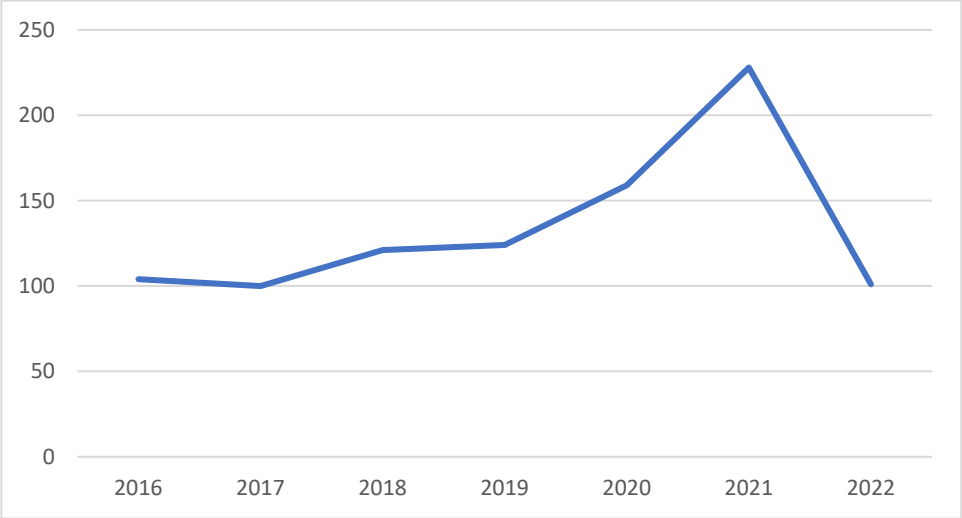
114. **The GoB could consider updating personnel policies or budget policies to enable the MoF to restrict the number of open votes and/or temporary workers that a ministry can add in a year.**[44] This would provide some upper limits on the additional payroll cost, especially where contract workers take on long-term roles within the public administration. Apart from capping the number of workers in unestablished positions who can be engaged in a year, the government could also set limits on their tenure so that they do not function as de facto permanent staff. For example, they could consider limiting the number of renewals a person may have or limiting the total number of successive years one can work in an open vote or temporary position. To the extent that there is a problem with such workers being converted to the establishment, the GoB could consider adding some guidance or restrictions to review the positions to ensure that they really meet the minimum requirements for the post.

### 3.5 Rightsizing the public service and increasing the share of higher skilled positions

115. **The GoB could consider a variety of policy options to gradually reduce the size of the public service in the short to medium term.** While any policy options need to consider the political economy and institutional constraints of Belize, other countries have found it helpful to offer policy tools that encourage civil servants to voluntarily separate from the public service. This could include a voluntary departure program for those who are relatively new to the public service or early retirement for those who have many years of service and are close to meeting the eligibility requirements. In the case of early retirement, the government already has data to estimate the number of people who could be eligible. Figure 40 shows the reported number of people who have retired in recent years, and Box 1 indicates the estimated population that are approaching eligibility. The main attractiveness of an early retirement program would be to separate staff who no longer have the skills that are needed within the public service. This could be because they performed functions that are no longer needed or the nature of the work itself has changed and their skills are not in demand. On the other hand, some staff with highly specialized skills may be difficult to part with and should not be considered for early retirement until there is a succession strategy in place. However, the budgetary benefits of an early retirement program may be delayed, as some budget transfer may be required to make up the shortfall in contributions the person may have had to the pension fund. Thus, some fiscal analysis is needed to weigh the relative costs and benefits.

[44] The World Bank did not review the differences and similarities between these contract types. Some findings related to contract workers may pertain to others, such as temporary or unestablished. Further research is warranted.

**Figure 40. Retirements**




*Source:* World Bank and GoB.

**Box 1: Future retirement pipeline**

Public servants within 5 years of retirement and meet the minimum number of years of service:

- 879 with 15+ years
- 177 with 10–14 years.

116. **An alternative strategy would be to offer a voluntary departure program that targets new entrants into the public service.** Personnel laws in many countries require the government to pay a predefined number of months of salary for each year of service if a person is separated from the public service. Even if this were adequate for a forced separation, it may not be sufficient for a voluntary department program. Government may need to find a combination of incentives to motivate workers to take the package. Obviously, the higher the number of months of severance per year of service, the longer it may take government to 'break even'. Second, the program could be targeted toward those staff in positions that are less critical to the public service's mission and/or where the skills are already well supplied. High-skilled staff are generally not offered the option to participate in such programs. Government would need to start with a sound inventory of its positions (and key staff) and who should be encouraged to participate. Incentives to participate will be stronger if the rewards for participation (that is, payout) are also accompanied with some 'sticks' such as stricter performance standards going forward. Some countries go beyond the cash compensation by helping recipients with outplacement services to connect to potential private sector employers. Data show that in 2022, there were almost 4,700 people who had less than five years of tenure within the public service.

117. **Typically, the easiest—although not the fastest—option for reducing employment is to rely on attrition and restrictions on new hiring.** No data were available on the number of (long-term) vacancies within the public administration. A preliminary step would be to ensure that the number of authorized positions is in line with the actual number of staff—especially for lower priority or low-skilled positions—so that ministries do not have an authorization to engage additional staff. As staff leave, government can restrict their replacement with new hires. The most stringent application is a full hiring freeze, but this is not practical for many institutions who have critical positions that cannot be left vacant. Therefore, a more pragmatic approach would be to set a target that allows some limited replacement, for example 1 in 3 positions or 1 in 5 positions can be replaced. That ratio could be applied consistently across or vary by the

type of ministry/position. Unfortunately, since data on actual turnover in Belize proved unreliable, it was not possible to assess how many positions are vacant each year. Data shared with the World Bank team showed an average turnover of 3 to 7 percent per year, but as the procedures for recording exits is not consistently applied, the figures must be used with modesty.

118. **To guide the prioritization of posts that are protected from reductions, the GoB needs a framework that considers its future staffing needs.** Inevitably, there are functions and roles that may have been important 10–20 years ago but are no longer required. Likewise, there should be skills and functions that are more important now than a decade ago. In some cases, there may be opportunities to streamline work processes and improve efficiency with fewer people. The GoB needs to have some indicative estimates of what positions and skill sets are needed and what is not.

119. **The education sector may merit special consideration because of its contribution to the public sector wage bill and because of the demographic-driven pressures to further increase teaching numbers.** As noted earlier, the sectors with the largest share of the public service are education, police, and defense. The latter two are beyond the scope of this analysis. In the case of education, the Ministry of Education, Culture, Sport, and Tourism (MoECST) has indicated that policy commitments will require it to have more teachers available to meet the needs of underserved populations in rural areas and among recent immigrant populations. In addition, it has been the policy of the sector to increase hiring as needed to maintain pupil-teacher ratios. Chapter 6 explores the dynamics and trends within the sector, including the current pupil-teacher ratio. However, the public sector wage bill is to be brought within fiscally sustainable levels, but it is difficult to see how that is possible if the teaching population is completely removed from consideration. The sector may need to consider options for increasing ratios in some circumstances and lowering ratios in others. School authorities in some areas may value having more flexibility in the budget system to weigh the relative advantages and costs of replacing a teacher versus providing other operational inputs—including equipment and supplies—to support the school.

### 3.6 Modernizing the pay system to enhance productivity

120. **While the public sector's ability to attract and retain staff depends in part on the degree of external competitiveness of the pay system, Belize lacks reliable data to assess this.** There has not been a formal wage survey for several years that would enable the GoB to compare public sector salaries with the private sector labor market.[45] Officials recall that the survey showed patterns broadly like those in other countries, where low-skill jobs are paid a premium relative to the private sector, while higher-skill and managerial positions are paid at a significant deficit. Belize's approach to annual wage adjustments over the years would only perpetuate this trend, if not exacerbate it.

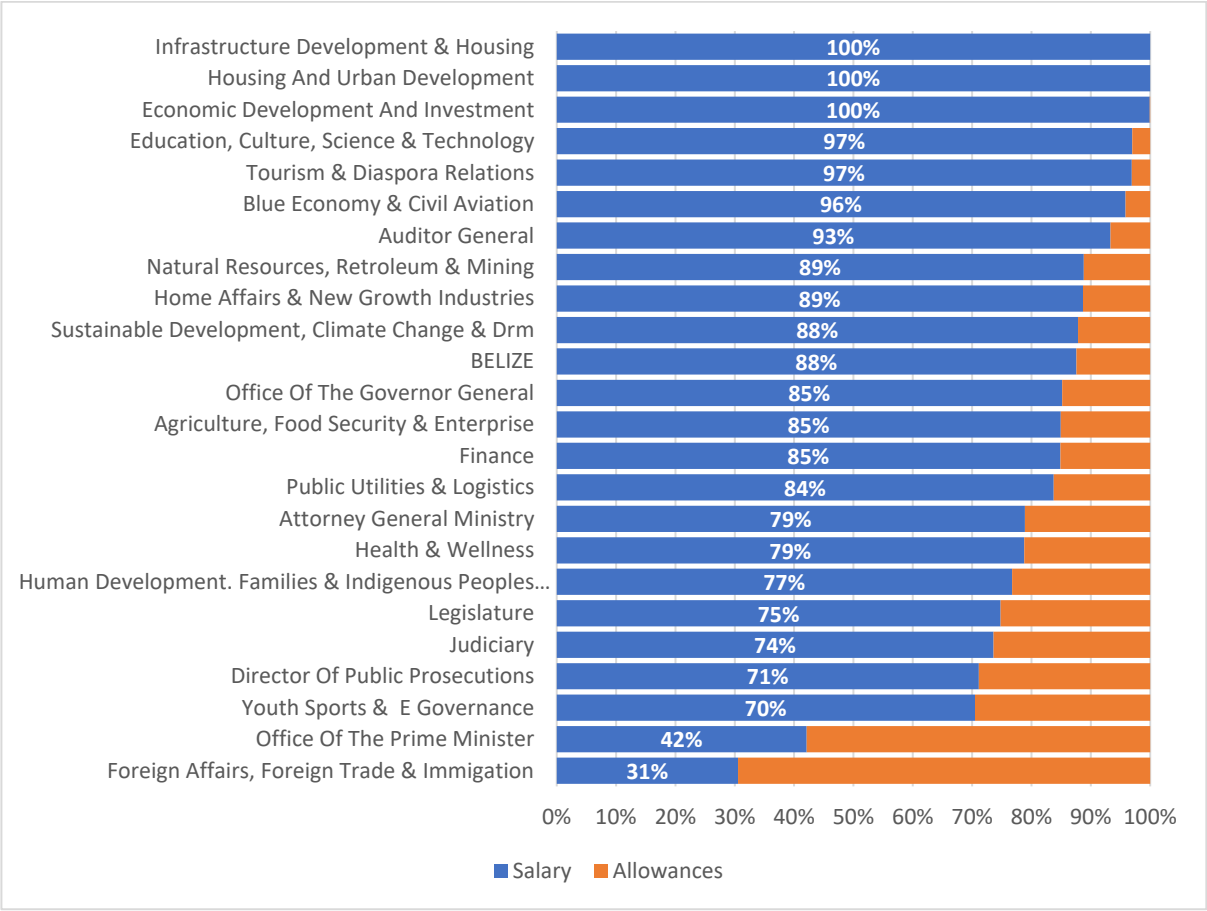
121. **Compression of pay scales creates a structural impediment to improving competitiveness.** According to the government's pay data, the ratio between the lowest paid positions and the highest ones is on the public officer scale at 9.4:1, which is relatively low for such a wide range of positions as it spans from office cleaners up to ambassadors. Yet, when one examines the actual distribution of pay within this scale, it suggests the compression is far worse. The fact is that very few people are in the highest pay bands while more than 90 percent of the workforce are paid less than BZD 40,000. The lack of salary advancement as one progresses in responsibility could be a significant impediment to retaining well-

[45] The last survey was conducted as part of a Job Classification and Compensation (JCCU) project.

performing staff, while the lack of prospects for rapid advancement may also be a factor that affects recruitment of college-educated staff.

122. **Allowances play an important role in total compensation and could be undermining internal equity across positions with similar levels of job content.** Figure 41 shows how allowances vary across ministries as a share of total compensation. For ministries such as Foreign Affairs, the high proportion of allowances to total pay is not surprising. Other ministries may perform other functions that require some special payments related to the tasks to be performed (for example, travelling to remote areas). Even though MoF officials indicate that the policies for each allowance are regulated, it would be appropriate to review whether the justification for each of the allowances is still valid. It is not uncommon to find that over time, the limitations under which allowances were originally given have been relaxed and they have come to resemble an entitlement for certain jobs. There is a risk that allowances become a more significant differentiator of pay than the differences in responsibility or required skill. This could be a contributing factor in inequity within a job category (for example, education) or across job categories or job types. Officials could start assessing internal equity by analyzing the micro data for the degree of pay dispersion for positions in the same pay grade.

**Figure 41. Share of basic payments and allowances over total pay**




*Source:* World Bank and GoB.

123. **Summary data on each job grade highlight significant challenges to internal equity.** Jobs that are classified in the same pay scale—that is, similar levels of responsibility or skills—have widely different

levels of pay. The spread between the minimum and maximum pay is more than 90 percent for the first 10 pay grades that apply to public officers and teachers (see Table 6). Wide pay ranges would be more appropriate in jobs where productivity and effectiveness vary substantially based on the individual's skills and experience—typically those with high technical requirements or managerial responsibilities. However, for unskilled and low-skill positions such as janitor and security guard, it would be unusual that differences in skills or productivity could justify this level of variation in pay.[46]

124. **At the same time, jobs that have very different levels of skill and responsibility show fairly similar levels of pay.** For example, the data show an individual in grade 2 (which has positions like janitor and hospital attendant) earning more than someone in grade 10 (which includes positions like pharmacist and nursing assistant). There are very few conditions of work that would justify an equivalent level of pay between these grades. The pay system overall is highly compressed, with positions in grade 25—which includes Heads of Department, Accountant General, Postmaster General—generally earning barely 3 times more than those in Grade 7, which includes clerks and secretary II positions. Hence, there are issues not only with horizontal equity but also with vertical equity in the pay system.

125. **Belize may consider conducting a review of the classification of jobs and relative ranking of them in the medium term.** Teachers, for example, populate at least 6 different grades, going from grade 8 to grade 17. Some of the largest numbers of teachers and principals are in grade 16. The ministry may want to review whether the differences in qualifications and responsibility across the teaching profession merit the large differences in grading. Administrative assistant positions go as high as grade 10, which is higher than some teaching positions. Pay practices also seem to vary when comparing across the scales, with positions with the highest responsibility on the public officer scale being paid lower than those for defense and coast guard. For example, while the pay for Heads of Department (in grade 25) ranges from about BZD 43,000 to BZD 71,000, the pay for the top grades in defense and coast guard exceeds BZD 100,000. Job satisfaction is affected by both external competitiveness and internal equity. Rather than focusing exclusively on pay increases for the whole of the public service, the government could reap long-term benefits from more targeted policy interventions to enhance pay competitiveness within the public service, especially for the most hard-to-fill positions.

[46] As Belize does not have a well-functioning system to distinguish and reward individual employee performance, most annual increases in pay within grade are related to tenure rather than merit.

**Table 6. Minimum and maximum pay received by pay grade for public officers and teachers scale (data as of May 2022)**

| Pay Grade | More prominent position | Staff count (11 May 22) | Min | Max | Spread |
|---|---|---|---|---|---|
| 1 | Offie Assistant, Cleaner | 134 | 8,059 | 16,333 | 103% |
| 2 | Janitor, Hospital Attendant, Security Guard | 669 | 9,740 | 19,129 | 96% |
| 3 | Assistant Terminal Supervisor, Ranger, Storekeeper | 91 | 10,902 | 21,645 | 99% |
| 4 | Clerk, Sectretary, Driver | 846 | 11,928 | 23,201 | 95% |
| 5 | Driver/Machanic, Firefigther, Security Oficer, Office Assistant/Driver, Assistant Registering Officer II | 559 | 11,837 | 25,365 | 114% |
| 6 | Meteorological Officer IV,Community Rehabilitation Officer, Forest Ranger, Terminal Supervisor | 110 | 13,606 | 28,407 | 109% |
| 7 | Clerks, Basic Crime Scene Technician, Patient Care Assistant, Secretary II | 743 | 15,908 | 31,336 | 97% |
| 8 | Teacher, Leading Fireman, Extension Officer | 227 | 17,677 | 33,960 | 92% |
| 9 | Teacher, School Principal | 1537 | 18,022 | 34,514 | 92% |
| 10 | Administative Assistant, Medical Technologist II, Pharmacist, Nursing Assistant, Secretary I | 469 | 18,367 | 35,049 | 91% |
| 11 | District Coordinator NDACC | 11 | 19,301 | 36,211 | 88% |
| 12 | Information Technology Technician, Nursing Assistant I, Teacher, School Principal | 646 | 20,302 | 37,649 | 85% |
| 13 | Medical Technologist I | 10 | 21,303 | 39,486 | 85% |
| 14 | Administrative Assistant I, Customs and Excise Examiner I, Senior Secretary, Teacher | 254 | 24,663 | 44,100 | 79% |
| 15 | - | 0 | | | |
| 16 | Administrative Officer III, Finance Officer III, Customs and Excise Officer III, Staff Nurse,Teacher, School Principal | 1574 | 27,154 | 49,555 | 82% |
| 17 | Teacher, School Principal, Education Officer II | 105 | 28,968 | 52,224 | 80% |
| 18 | Administrative Officer II, Finance Officer II, Customs and Excise Officer II, Nurse Specialist II, Tax Officer II | 175 | 29,223 | 53,315 | 82% |
| 19 | Systems Administrator II, District Lands and Surveys Officer | 28 | 31,482 | 56,201 | 79% |
| 20 | Medical Officer II, Dental surgeon | 73 | 32,193 | 60,313 | 87% |
| 21 | Administrative Officer I, Finance Officer I, Customs and Excise Officer I, Nurse Specialist I, Tax Officer I, Medical oficer I | 165 | 34,296 | 62,416 | 82% |
| 22 | Assistant Comptroller of Customs, Supervisor of Audit, Nursing Administrator | 40 | 35,286 | 63,406 | 80% |
| 23 | Medical Specialist, Crown Counsel, Magistrate, Assistant, Deputies and Heads of Units position | 132 | 36,554 | 64,674 | 77% |
| 24 | Senior Crown Counsel, Senior Magistrates and Deputies Heads of Departments | 35 | 37,800 | 65,920 | 74% |
| 25 | Heads of Departments such as Accountant General, Postmaster General | 41 | 42,862 | 70,982 | 66% |
| 26 | Ambassador | 4 | 45,120 | 73,240 | 62% |
| 27 | Clerk National Assembly | 2 | 51,772 | 75,452 | 46% |

*Source:* **GoB**

126. **With limited resources to add to the public sector wage bill, Belize should strive to target resources in a way that could enhance productivity and facilitate talent retention.** Continuing a policy of across-the-board wage rate increases may appear equitable to some stakeholders, but it will not help Belize develop the public service it needs to support future growth. Flat rate increases for all salary grades only reinforce the inequities that already exist, and they will have only marginal impact on the competitiveness for hard-to-fill positions or on motivating staff. The GoB's current approach to performance management—where almost all staff receive an annual performance increment—only contributes to the existing rigidity and diverts resources. Staff benefit uniformly from the annual increment and the annual wage rate adjustment. International experience shows that performance management in the public sector is challenging to implement well, and it may not be feasible to change that aspect of the pay system. Rather than rewarding performance, it will continue to reward tenure or longevity.

127. **Several targeted policy interventions could be considered.** For example, some refinements to the policy of annual adjustment could be considered to make pay more closely aligned with the additional skills or responsibilities the positions require.[47] One option could be to 'stretch' the grade structure in the middle and upper ends so that there is more differential in salary as people's responsibilities increase. Another option is to review the classification for some highly skilled positions and decide whether they might merit placement in a higher grade. A third option could be to create a special wage differential or market premium for a limited number of job titles that are especially competitive with and transferable to the private sector. Salaries for the positions could be benchmarked relative to the private sector equivalent. The market differential or special allowance may be a way of recognizing the special characteristics of the position without having to seek resolution through the collective bargaining process for the entire public sector. Which of these could be adopted will depend on the political economy of pay and job classification reforms.

128. **There are some categories of positions, such as those in the judiciary, that were not reviewed in detail for the PER but could be included in a subsequent analytical study**. It is common for countries to have special provisions for setting the salaries of those working in the judiciary in order to preserve the sector's independence. Usually there will be a law that sets out a framework for how the budget and the salaries are determined for the sector. Moreover, many countries will differentiate between judges and non-judicial staff in establishing pay regimes. The key overarching principle is for countries to strike a balance between autonomy and accountability of the sector -- both need to be present in the legislative and institutional arrangements. In some countries, the Bank has supported public expenditure reviews for the justice sector to help identify opportunities to enhance efficiency and effectiveness in its operations.

### 3.7 Enhancing capacity for effective management of the public service

129. **Systems used to generate data on the public service have significant shortcomings and should be enhanced to enable better control.** Consistent numbers on core metrics of the public service, such as employment by year, are not easy to obtain. Data on turnover, including annual entries and exits from the public service, do not reconcile with the annual changes in the public service. Numbers of staff employed in each ministry by grade level were incomplete, with a large number of staff unaccounted for.

[47] Performance-based pay awards are not considered because the current performance evaluation system is not able to make distinctions in performance among employees and the annual increments function as an entitlement.

Reports from the system also showed that about 10 percent of all staff are not linked to a specific pay scale. At least in the case of data on entry and exit from the public service, the issue is not about the systems themselves but the administrative procedures for when people should be recorded in the system. Thus, improving data quality is not merely an issue of software but more broadly around the systems and procedures for collecting, maintaining, and controlling quality of data.

130. **Strengthening data analytics could help officials develop a menu of policy options that can contribute to a stronger public service.** Data and data analysis skills could support policy development and decision-making from multiple angles. First, data analytics would support the MoF to cost various wage adjustment scenarios—beyond the single rate increases that have generally been applied to date. For example, officials may want to know the fiscal impact if certain grades (or positions) were increased at differential rates than others. Second, quality data could help officials understand the current capacities and skill gaps that exist within the public service. For example, they may want to enhance whatever data currently exist on the skills and experience of individual staff, including within specific job categories. Third, officials could use data to assess overall human resource management (HRM) performance and identify potential problem areas to target. For example, government could be measuring the rate of turnover for different types of positions, the time it takes to recruit staff for specific types of positions, and how people with certain profiles are able to progress in their careers. Fourth, in the education sector, it would help support development and employment of teachers with anticipated increases or decreases in school-age population.

131. **Belize needs to enhance its medium- to long-term HRM planning to reflect emerging needs and opportunities that Government faces.** To be able to improve productivity and capacity of the public service in the medium term, the GoB needs to articulate the types of positions and skills that are most needed, as well as those that may be oversupplied. For example, digitalization of public services and reduction in manual processing creates opportunities to enhance value to citizens requesting government services. It will also alter the types of positions that are needed in the public sector. For functions that require a high level of expertise and for which recruitment is difficult, the GoB officials may need to reorganize the way in which staff are deployed across ministries and to create pools of expertise so that skills can be leveraged across institutional lines. The GoB has already taken steps in this direction by creating a Central Executing Unit within the Ministry of Economic Development so that scarce project management skills can be targeted to those areas that are most important or at risk. The GoB could also consider special initiatives that facilitate recruitment of university graduates for a fixed term in exchange for government experience while helping to offload day-to-day administrative tasks from more senior officials.

132. **The GoB needs to enhance its capacity to engage key stakeholders on the medium- and long-term challenges and opportunities facing the public service.** The needs of public administrations evolve over time as citizen expectations and technology change. HR professionals should be encouraged to acquire the skills that enable them to go beyond merely administering the system and instead helping senior officials and external stakeholders develop a common vision for HR planning. Discussions with public sector unions could include discussions on improving internal equity within the public service, as part of a longer-term objective to enhance job satisfaction while developing a more dynamic and productive public administration. Bringing more data and analysis on the current state of the public service could be a starting point for future planning. To the extent that Belize can adopt a medium-term fiscal strategy as part of its budget planning process, that would provide a reference point for HRM policy

planning. Development needs of the country and fiscal constraints could thus be balanced against each other and supporting HR policies can be established.

### 3.8 Conclusions and recommendations

133. **Improving fiscal control over the public sector wage bill may require difficult policy choices to restrain growth in employment and wage levels.** The share of Belize's expenditure on personnel expenditures is already high compared to other countries and reduces the fiscal space for other government needs, including expenditure for operations and maintenance to support program implementation. Employment growth has been one of the primary sources of pressure on the wage bill. Demographic changes in Belize may increase demand for some types of public sector employees, but this cannot explain all the growth in employment. Though establishment positions are subject to explicit controls by the MoF, other forms of public sector employment have offered the MoF with fewer tools to exercise limits.

134. **Belize should consider implementing policy actions that reduce the current size of the public service while putting in place explicit measures to tighten future entry.** Other countries have successfully used early retirement and voluntary departure programs to reduce employment. Admittedly, these programs have limitations because the fiscal returns are not necessarily immediate, and they need to be targeted exclusively to those employees whose skills and expertise are not already in short supply. Attrition is an easier way for many governments to realize reductions in employment, but this should be carefully planned to optimize the fiscal impact while minimizing operational disruption. Specifically, the GoB should consider freezing replacement of all positions that are in low priority functions or where skills are already adequately supplied. A targeted freeze would enable ministries and departments to still replace those who occupied critical positions. Other changes to personnel regulation could be considered that would make it harder for line ministries to bring on board people into temporary and/or unestablished positions in the future and limit the duration that they may be employed.

135. **In the medium to longer term, Belize should consider modernizing its pay system to address challenges to external competitiveness and internal equity.** Pay grades are highly compressed, which limits the incentives for staff occupying positions with high levels of responsibility and expertise. Pay data also show wide variation between positions which require similar levels of pay. Public sector productivity may be adversely affected by the current system of remuneration, and the common practice of granting across-the-board wage increases tends to perpetuate the structural misalignments that exist. Belize may want to review the classification of positions across the various pay grades, but it could also consider special market-based differentials for select hard-to-fill positions.

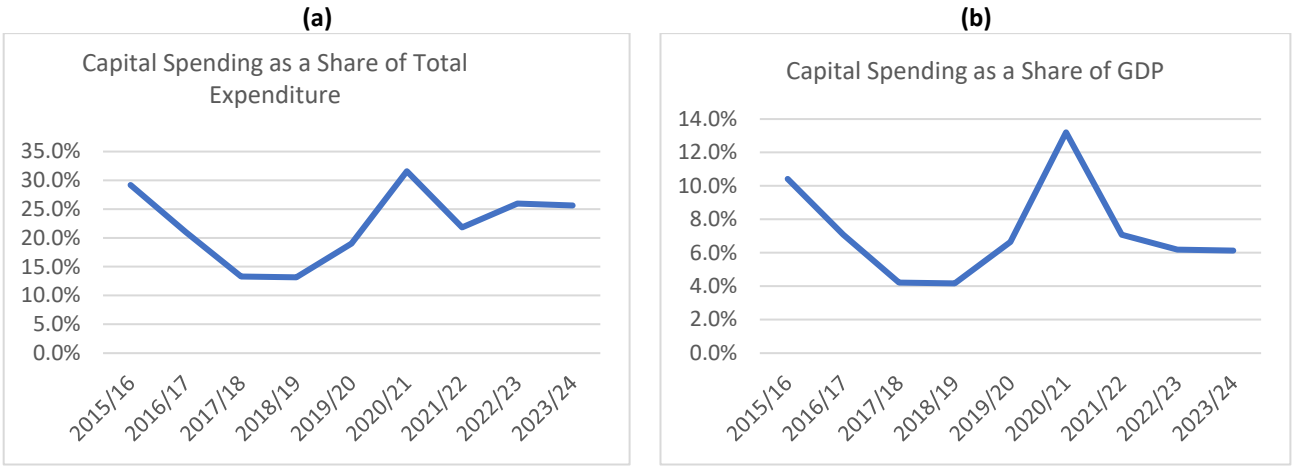
136. **Making the wage bill more fiscally affordable while increasing public sector productivity requires the GoB to enhance the institutional capacity for HRM.** The GoB would benefit from having more comprehensive and accurate systems for collecting and managing pay and employment data. Belize could develop a strategic blueprint for the types of skills and positions it needs in the public sector over the long term, and then gradually change the composition of the public service to reflect that. Moreover, by anchoring the overall cost of public sector personnel within the framework of a medium-term fiscal strategy, the MoF may be able to inject greater predictability into the wage bill and establish a set of fiscal assumptions with external stakeholders such as trade unions.

## CHAPTER 4. PUBLIC INVESTMENTS AND THEIR MANAGEMENT

137. **This chapter provides an analysis of the trends in the composition of the portfolio of public investments on Belize and provides recommendations on improving the efficiency and effectiveness.** The chapter looks at the expansion of the PSIP and its implications. It explores the challenges and opportunities in managing public investments and discusses the issues such as strengthening the links between planning and budgeting, enhancing the quality of spending, further improvements to public transparency, and improving the legal and institutional framework for PIM.

138. **Public investment has been an important part of Belize's strategy to accelerate economic growth, and its share in the budget has been increasing.** From FY2017/18 to FY2022/23, Belize's spending on public investment[48] increased by 138 percent or more than double. FY2017/18 saw a sharp decline in capital spending relative to the two previous two fiscal years; it measured only 13.3 percent of total budget expenditure or 4.2 percent of GDP in 2017/18 (see Figure 42 a and b). However, in the year that closed just before the pandemic, spending had already risen to 19.0 percent of budget and 6.6 percent of GDP. Capital spending peaked during the pandemic at BZD 434.5 million or 32 percent of total expenditure (13 percent of GDP). Though that level was not sustainable, capital expenditure remained a significant share of the budget. For the fiscal year that closed on March 31, 2023, capital spending is estimated to be BZD 362 million, which equates to 26.0 percent of total expenditure and 6.2 percent of GDP. The GoB anticipates another small increase (5.9 percent) in capital spending in the 2023/24 budget estimates, which would bring the capital budget to BZD 383.4 million. In the year that just closed, three-fifths (61 percent) of the capital budget came from domestic resources (Capital II), while most of the remainder (39 percent) was from external sources (development partners). This represents a reversal from 2017/18, when 60 percent of the capital budget was externally financed.

**Figure 42. Capital spending**




*Source:* World Bank and GoB.

139. **The Medium-Term Development Plan 2022–2026 aims to provide a very high-level strategic framework for public investment in Belize in the years to come.** Developed by the MoED in consultation

[48] Public investment is defined as capital spending in Belize's budget nomenclature, even though not all activities reflected in the PSIP are strictly for capital formation.

with other stakeholders, the plan lays out six strategic objectives which aim to guide project selection. It also includes projections on the budgetary and resource mobilization required for implementing ministries to realize the goals of the plan, with indicative amounts for recurrent spending, as well as Capital II and Capital III. The current development plan builds upon similar multiyear planning efforts prepared in the past (for example, Growth and Sustainable Development Strategy for Belize 2016–2019) and longer-term vision documents (for example, Horizon 2030). However, it does not have a direct link to the individual projects in the current or planned portfolio.

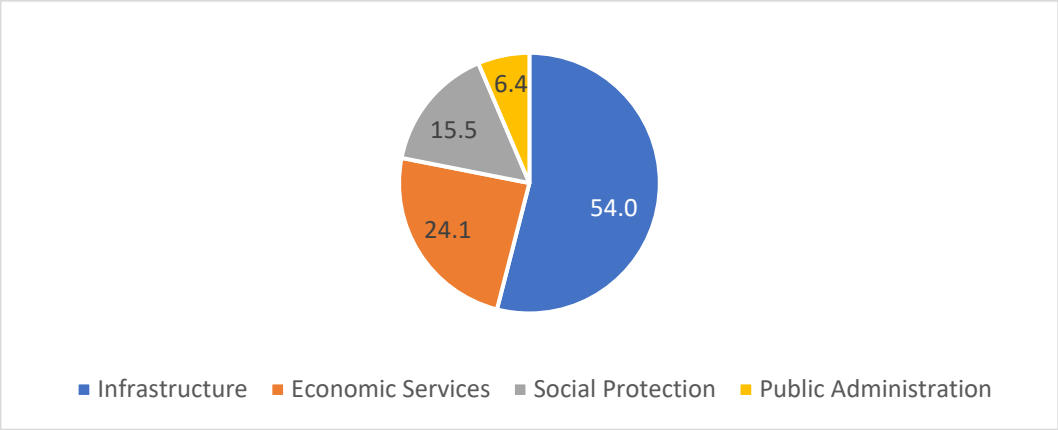
140. **Selection and funding of projects across the sectors may not necessarily be aligned with national priorities because most of the GoB's sectoral strategies are either incomplete or nonexistent.** Many remain at a high level, focused on identifying needs, while only a few sectoral plans have cost estimates for implementing the strategy and for major individual projects.[49] Even then, the cost of implementing the program is not informed by a realistic top-down funding envelope for the sector. Thus, the aspiration reflected in the strategy could exceed current levels of projected financing. Ministries are not expected to update them or to take stock of challenges that could affect implementation. As a high-level policy document, the strategies facilitate dialogue with development partners around potential increases in funding for the sector. Ministries propose new projects to development partners, who in turn verify alignment with their country partnership strategies or propose alternatives.

### 4.1 Trends in the composition of the portfolio of public investments

141. **Public infrastructure has been the single largest block in the composition of the current portfolio.** Belize's PSIP categorizes public investment projects into four categories, with projects support for economic infrastructure representing more than half the portfolio (54 percent), with respect to the expected value/cost of the projects (Figure 43). Economic services is the next largest segment (24 percent) followed by social services. Economic services projects include support for agricultural development, business market development, and environment and natural resource development. The social services category focuses on health, education, and social assistance. Projects that support climate change resilience and adaptation tend to fall in economic services. Projects that support strengthening public administration are the smallest share of the portfolio (6 percent), with just two projects accounting for more than 80 percent of the total value. The 10 largest projects in the portfolio (Annex 5) account for 61.8 percent of the total value of the portfolio. These projects are mainly for economic infrastructure and are under the execution of the Ministry of Infrastructure, Development and Housing (MIDH).

[49] Public Investment Management Assessment, IMF Country Report No 20/221, International Monetary Fund, Washington, DC, July 2020.

**Figure 43. Composition of the PSIP based on cost of projects**



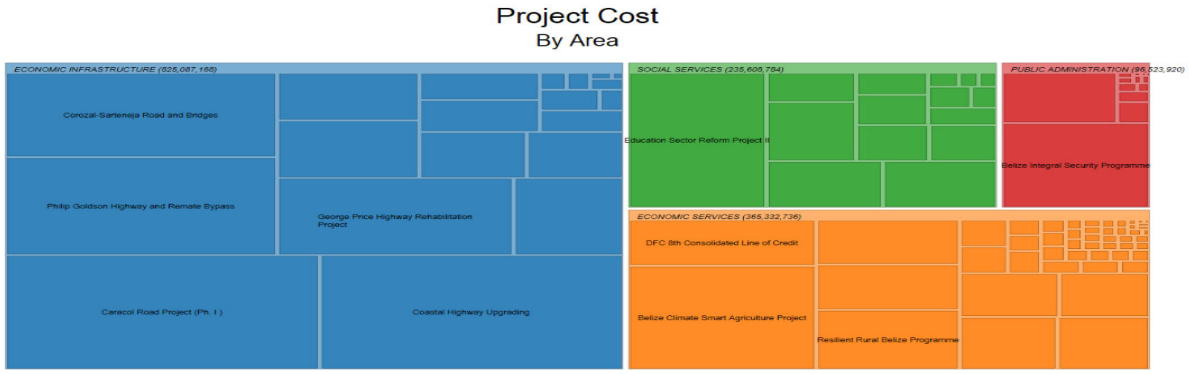

*Source:* World Bank and GoB.

142. **Execution rates for different categories of projects in the current PSIP portfolio differ significantly.** The actual execution rate of economic infrastructure is at about 55 percent, meaning that those projects currently in the portfolio are more than half executed (this is relative to their current cost estimates). In contrast, execution rates for the other sectors are not as high: social service (33 percent), economic service (23 percent), and public administration (19 percent). The reason for the differences has not been explored, but it could be a function of the maturity of the projects (for example, the infrastructure projects are older) or the design of the project implementation with more extended spend patterns projected.

143. **Unless new projects are brought into the portfolio, spending in the future will be less heavily weighted toward infrastructure.** Evolution of spending that can be projected into the future, assuming the composition of the PSIP were not to change. Figure 44a shows the composition as presented in the PSIP based on the value of the projects. Figure 44b shows the composition of spending to date based on the current portfolio of ongoing projects and shows that 72 percent of spending has been on economic infrastructure. The remaining 28 percent of the portfolio expenditure is allocated to economic services (13 percent), social services (12 percent), and public administration (3 percent). Figure 44c shows what to expect in future spending patterns if the portfolio were to remain constant. In this scenario, economic infrastructure remains the biggest share of spending (42 percent), but economic services take on a much bigger role than before (32 percent), followed by social services (18 percent) and public administration (9 percent).

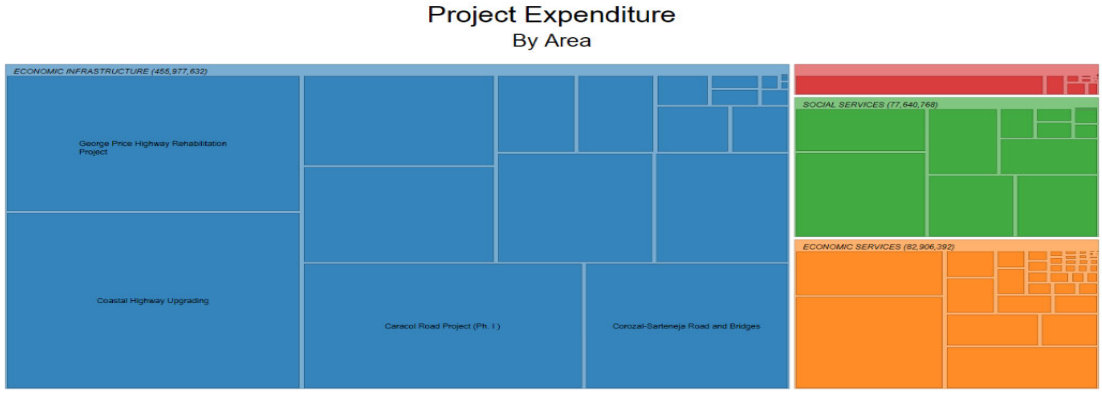
**Figure 44. Composition of PSIP**

(a) Composition of PSIP based on nominal cost of projects



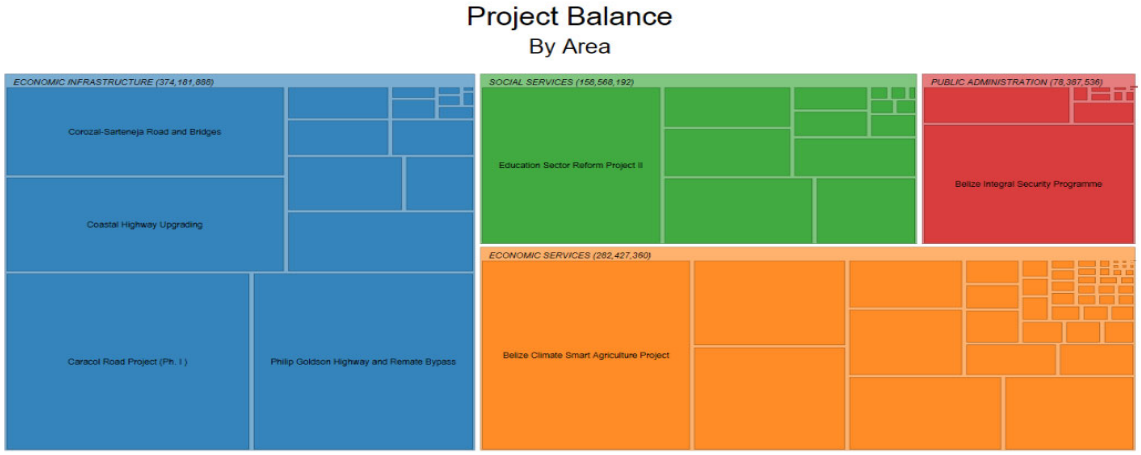

Source: Government of Belize - PSID Reports
Nominal Values - June 2022

(b) Composition of the PSIP based on expenditures incurred to date




Source: Government of Belize - PSID Reports
Nominal Values - June 2022

(c) Composition of PSIP based on project balances remaining to be spent




Source: Government of Belize - PSID Reports
Nominal Values - June 2022

144. **A greater share of PSIP spending will be directed to smaller projects based on the current composition.** The size of projects varies across sectors (see Figure 45). Not surprisingly, the portfolio for

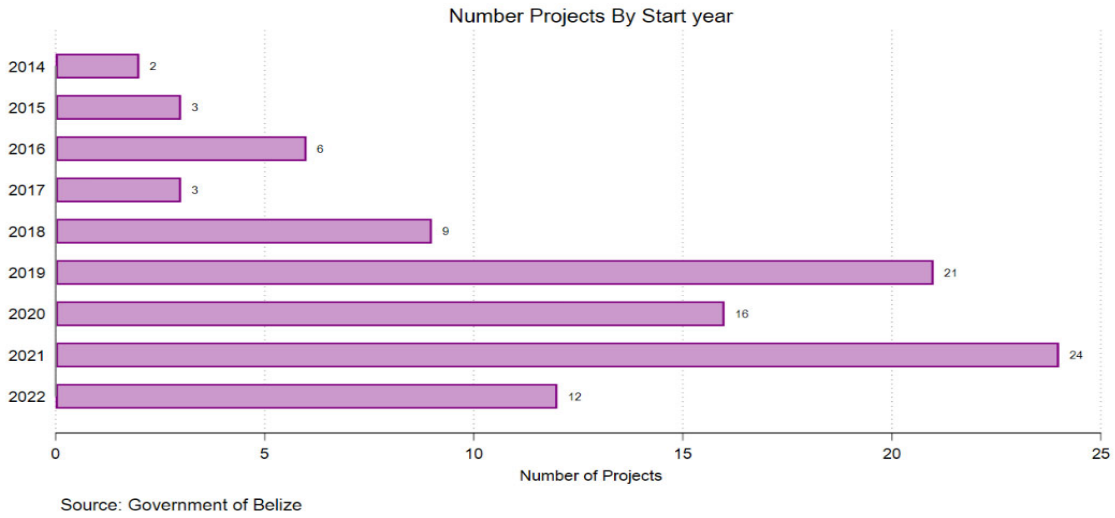
economic infrastructure comprises a relatively smaller number of large projects, while social services and public administration have a relatively high number of small projects. This is likely to reflect some inherent differences in the nature of the projects and a greater focus on projects in the other sectors that involve consulting services rather than public works. This larger volume of small projects could have some implications for staffing capacity to ensure project monitoring and oversight. Though small projects may be less complex to manage, an abundance of small projects could create additional workload for monitoring.

145. **Projects can take a long time to complete.** The data show that there are projects with relatively long durations, with some projects that started in 2015 or earlier that are still ongoing. Figure 45a shows the number of projects that remain in the active portfolio based on the year in which they were started. It shows that 11 projects that were started between 2014 and 2016 are still under execution. While most of the projects in the active portfolio were started in 2019 or later, it should raise some concerns as to why some projects have taken so long to exit the portfolio.[50] Not surprisingly, these 'mature' projects appear to have been ones with high expected cost. According to Figure 45b, the average cost of the older projects ranges from BZD 32 million to BZD 48 million, depending on the year in which they were initiated. These tend to be larger than the average cost of projects started in the years since 2017 (see Box 2 for the names of the projects). Without information on the circumstances of individual projects, it is not possible to know whether the exceptionally long period to complete a project was planned or a result of project implementation decisions, for example, financing constraints, technical capacity, or unexpected delays on the project site. However, one can conclude that even while these older projects are still under way, authorities in Belize are adding new ones.

[50] Note: More projects may have been started in an individual year than shown here. If projects were started and completed, they are no longer within the database used for this analysis.

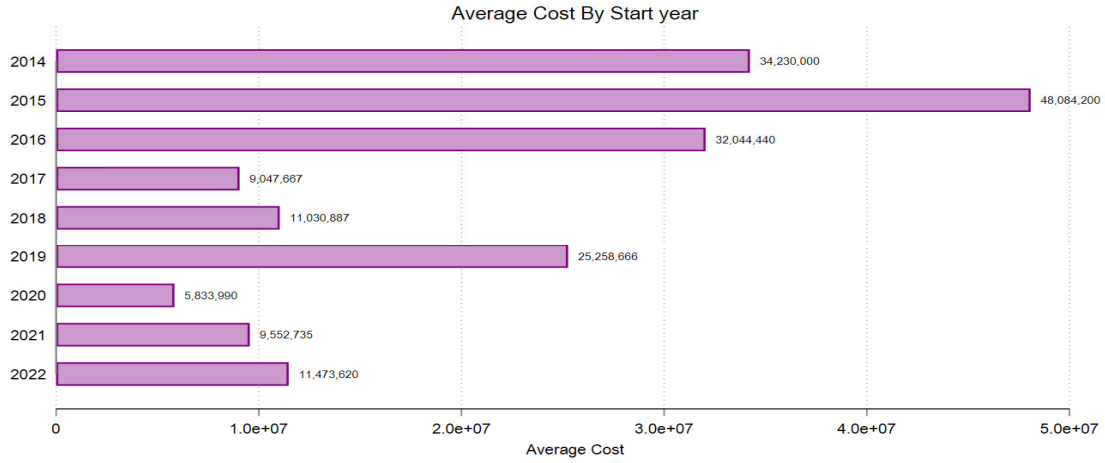
**Figure 45. Number of projects and average costs by start year**

**(a)**




Source: Government of Belize

**(b)**




Source: Government of Belize

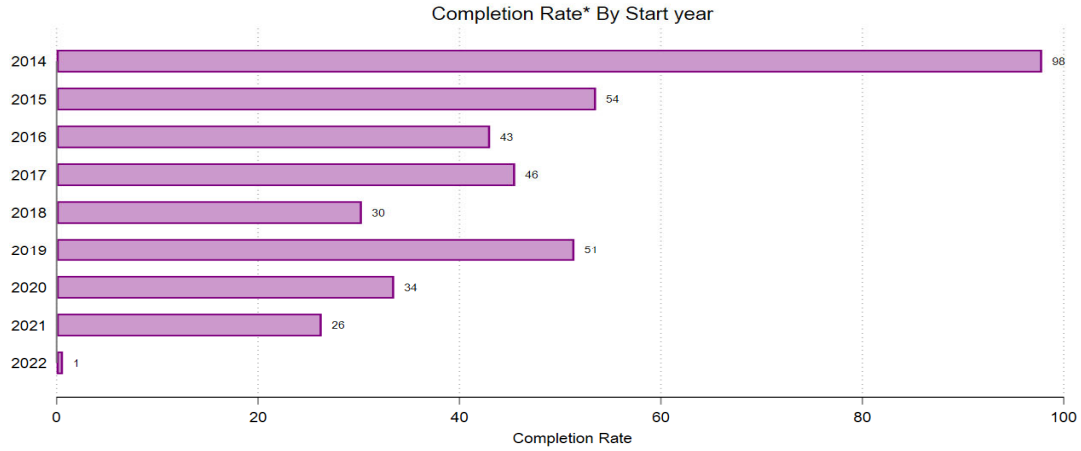
**Box 2: Projects remaining in the portfolio that started in 2014 or 2015**

- George Price Highway Rehabilitation Project - November 2015
- Belize City Southside Poverty Alleviation Project (Ph. 3) - October 2014
- Sixth Power Project - Electricity System Upgrade and Expansion - May 2014
- Belize Integral Security Program - August 2015
- Evidence-based Information Management on Citizen Security in Central America and the Dominican Republic (Infosegura Project) - August 2015

146. **Some of the older projects in the portfolio still have a long way to go before they are completed.** Figure 48 presents the average completion rates based on the year the projects were started. Projects initiated in 2014 are virtually complete, but those that started in 2015 are only 54 percent executed on average. The execution rate is even more tepid (43 percent) for those projects started in 2016. The age or

maturity of the projects is not necessarily a guide to the rate of execution, because projects that were started in 2019 have reached a similar level of execution (51 percent) as projects that were started years earlier. This begs the question as to why some of the older projects have been implemented relatively more slowly compared to projects initiated in more recent years.

**Figure 46. Completion rate of projects by start year**




Source: Government of Belize
*Completion Rate of ongoing projects defined as the ratio of Total expenditure to june 2022 over Cost

147. **While the average duration of projects in the active portfolio is only 3.3 years, some of the largest projects are expected to take much longer than this.** Data show that among the nine largest ongoing projects, the average duration is expected to be 6.1 years and the median age is over 7 years (see Table 7). Three projects are projected to be completed in under 5 years, but two were projected to require almost 8 years to complete. Long duration projects are not limited to infrastructure; one is the Education Sector Reform Project II.

**Table 7. Largest ongoing public investment projects and their duration**

| Project | Start month | End date | Duration (years) |
|---|---|---|---|
| George Price Highway Rehabilitation Project | November 2015 | June 2023 | 7.6 |
| Belize City Southside Poverty Alleviation Project (Ph. 3) | October 2014 | December 2021 | 7.2 |
| Sixth Road (Coastal Highway Upgrading) Project | April 2019 | June 2023 | 4.2 |
| Upgrading of the Corozal-Sarteneja Road and the Construction of the Pueblo Nuevo and Laguna Seca Bridges | November 2019 | July 2024 | 4.7 |
| Upgrading of Caracol Road Project (Ph. I) | January 2019 | December 2026 | 7.9 |
| Philip Goldson Highway and Remate Bypass Upgrading Project | July 2021 | December 2024 | 3.4 |
| Resilient Rural Belize Program | November 2018 | March 2026 | 7.3 |
| Education Sector Reform Project II | January 2016 | August 2023 | 7.7 |
| Belize Integral Security Program | August 2015 | August 2022 | 7.0 |
| **Average** | | | 6.1 |

*Source:* GoB and World Bank staff calculations.

148. **A sample of large projects that have been completed reveals that this lengthy duration is not unusual.** Among the five largest projects that have been completed, the average duration was 5.8 years

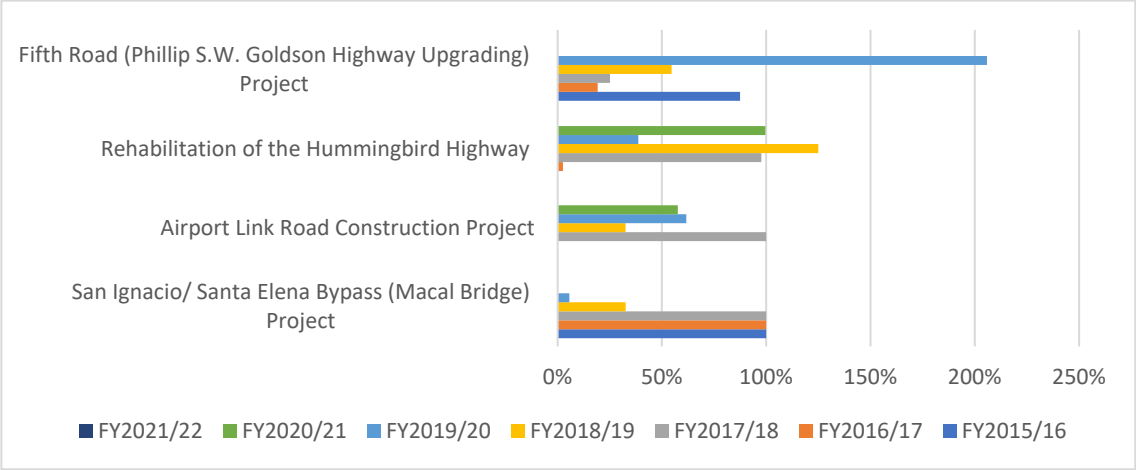
and the median, 6.5 years. Obviously, the size and complexity of the projects would affect the duration, and the small sample includes projects as short as 2.4 years and as long as 8 years. Further analysis would be needed to determine whether the project durations were consistent with the initial forecast or whether there were delays.

149. **Some, but relatively few, active projects have experienced delays in expected completion time.** Of the 97 projects in the active portfolio, the data show that 13 have experienced delays, with only 1 of these being among the top 10 projects in the portfolio. Together, these projects correspond to 7.7 percent of the total value of the active portfolio and 12.3 percent of the executed expenditure. The average length of the delay in the projected end-date is 2 years. Two projects are expected to be delayed by 4 years, and all other projects are expected to be delayed a maximum of 2 years. The 'Belize City Southside Poverty Alleviation Project (Ph. 3)' is the largest project in the active portfolio that was delayed. It was supposed to be finished in December 2017 and was extended to December 2021. It accounts for 2.5 percent of the total expected value of the active portfolio.[51]

150. **Budget allocations are not guided by projected spending needs.** As a principle, MoFs would strive to align budget allocations to the pattern of disbursement in the project plan so that project owners can assure timely mobilization of people and equipment. The available data on completed projects and the largest ongoing projects suggest that this is not always achievable. The data on proposed spending must be interpreted with caution, as it is unclear whether the data represent only the expectation at the project start or whether it may be updated annually based on physical progress or contract commitments. Where there are data, they show that the budget allocations have varied widely from the planned level submitted to MoF from the project owners. Figure 47 shows that for four of the largest completed projects, budget allocations have often fallen short of the projected needs; only in the final year of the 'Fifth Road' project was there a large spike in the budget relative to the projected need for that year. For projects that are still ongoing, budget allocations have tended to be significantly below the projected amounts needed. See Figure 48.

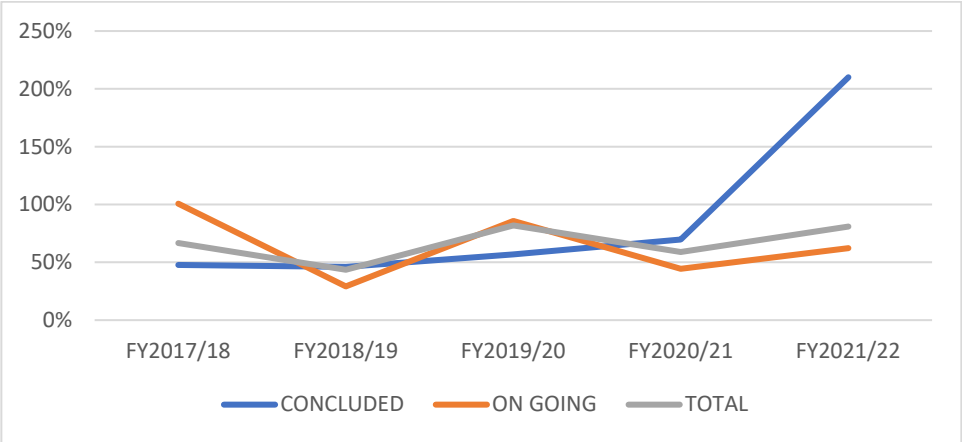
[51] Even though the project was completed in December 2021, it remained in the active portfolio as of June 2022.

**Figure 47. Budget/projected - Largest**




*Source:* World Bank and GoB.

**Figure 48. Budget as share of proposed need**




*Source:* World Bank and GoB.

151. **Project expenditures bear little similarity to annual budget allocations.** Annual budget allocations for public investment projects are not binding, and there are often wide discrepancies between budget and expenditure. As Table 8 shows, the actual annual expenditures have often exceeded the budgeted allocation—but at other times, they fell far short of the budget. For example, the San Ignacio project had multiple years in which expenditures exceeded budgets, while in the final year expenditures were under budget. The Airport Link Road project had three of its five years in which there were apparently no expenditures at all despite budget allocations being set aside. The Hummingbird project and the Climate Resilient Infrastructure Project (CRIP) had some years in which budgets did not come close to reflecting the actual spending. This begs the question whether the budgets for projects are intended to be binding or merely indicative. Alternatively, does it reflect limitations in the accounting system for projects, meaning that the system is not systematically recording budget data at the project level. Ongoing projects in the portfolio show similar patterns, where there is no strong correlation between project budgets and actual expenditure (see Table 9). For the nine largest projects in the portfolio (Table 10), there are many instances where expenditures for the project are more than double what the budget was. On the other hand, there are projects such as Caracol Road and the Integral Security

projects where the project is considered active but no expenditures are recorded for the first two years. For the Education Sector Reform Project II, positive expenditures are recorded in the first two years, but they are only about one-fifth of the budgeted totals.

**Table 8. Total annual expenditure compared to total annual budget (%)**

| Completed project | Fiscal years | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 |
| San Ignacio/Santa Elena Bypass | 131 | 138 | 208 | 181 | 82 | | |
| Airport Link Road | | 0 | 0 | 235 | 201 | 79 | 0 |
| Rehabilitation Hummingbird Highway | 2,067 | 1,077 | 117 | 71 | 310 | 88 | |
| Fifth Road | 0 | 300 | 135 | 158 | 59 | | |

*Source*: World Bank and GoB.

**Table 9. Total lifetime expenditure compared to total lifetime budget**

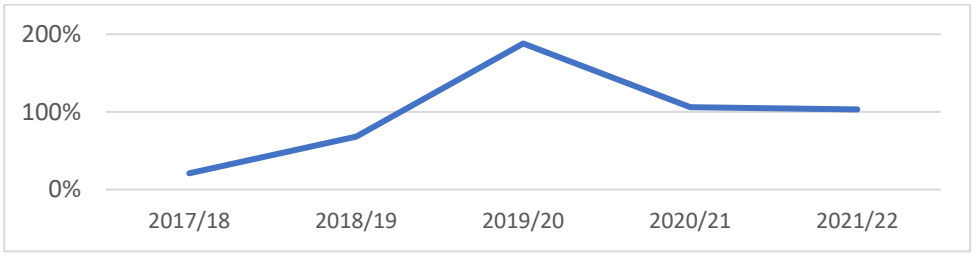
| Completed projects | Total Expenditure/Total Budget (%) |
|---|---|
| San Ignacio/Santa Elena Bypass | 152 |
| Airport Link Road | 118 |
| Rehabilitation Hummingbird Highway | 169 |
| Fifth Road | 145 |

*Source:* World Bank and GoB.

**Table 10. Total annual expenditure compared to total annual budget (ongoing projects) (%)**

| Ongoing Projects | Fiscal Years | | | | |
|---|---|---|---|---|---|
| | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 |
| George Price Highway Rehabilitation Project | 3 | 150 | 394 | 429 | 408 |
| Belize City Southside Poverty Alleviation Project (Ph. 3) | 64 | 114 | 216 | 691 | 30,722 |
| Sixth Road (Coastal Highway Upgrading) Project | | | 117 | 286 | 235 |
| Upgrading of the Corozal-Sarteneja Road and the Construction of the Pueblo Nuevo and Laguna Seca Bridges | | | 250,000 | 338 | 739 |
| Upgrading of Caracol Road Project (Ph. I) | 0 | 0 | 49 | 161 | 221 |
| Philip Goldson Highway and Remate Bypass Upgrading Project | | | | 6 | 124 |
| Resilient Rural Belize Programme | | 0 | 74 | 58 | 156 |
| Education Sector Reform Project II | 17 | 21 | 645 | 152 | 180 |
| Belize Integral Security Programme | | 0 | 0 | 5 | 20 |

**Figure 49. Actual project expenditure as percent of budget (nine largest ongoing projects)**

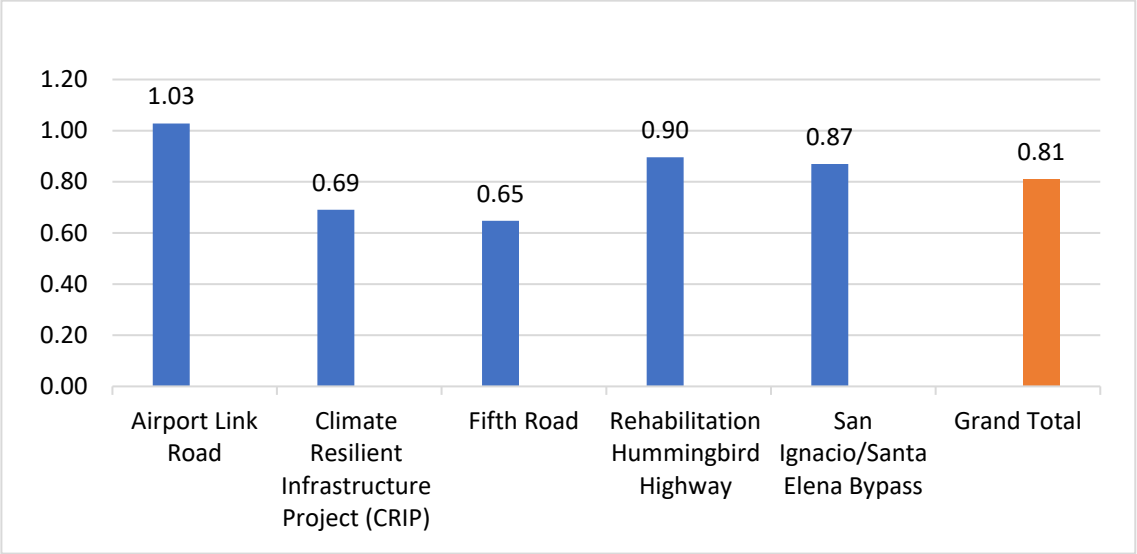



*Source*: World Bank and GoB.

152. **Projects are typically completed within the estimated project cost.** Even though annual expenditures for projects exceed annual budgets on a regular basis, the total expenditure to complete projects is usually in line with the original estimated cost. If projects were consistently over budget, it would be a potential signal of problems with cost control in the project management. However, that is not what the data show for some of the very largest of projects. Instead, there appears to be a high degree of discipline in managing cost. The data show that most of the projects had total expenditure levels that were below the total estimated cost. Among the largest completed projects, the total expenditures over the life of the project appear to have been consistent with the total forecasted cost of the project and even slightly below (see Figure 50). The Fifth Road project spent only 65 percent of the original project value, while the CRIP was only 69 percent of original cost. Only the Airport Link Road project came out slightly above the original cost (103 percent). One interpretation of the data would be that there were cost savings or efficiencies realized during execution. However, it is also possible that there could have been either reductions in scope or, more likely, that the original cost estimates were generous and provided for deviations that did not materialize.

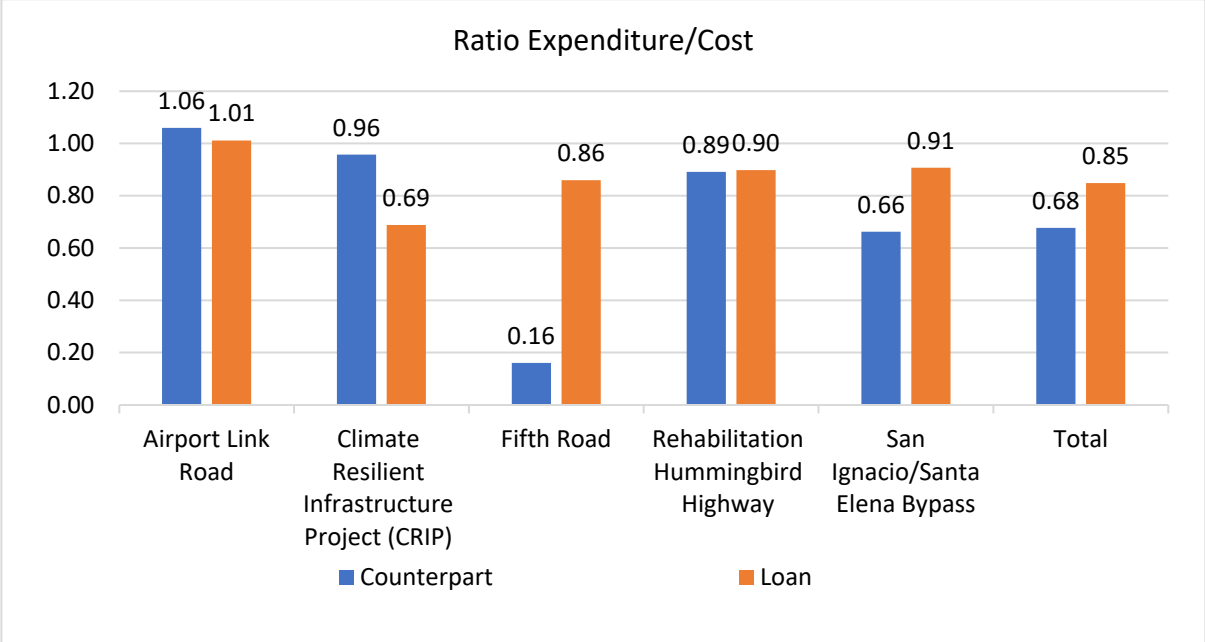
153. **Within the overall expenditure level, the source of funding made a difference in the rate of spending.** For the completed projects, the expenditures from loan resources were more in line with the forecasts that were the expenditures from counterpart funds (see Figure 51). For the Fifth Road and San Ignacio projects, expenditures from counterpart funds were significantly below the projected amount. Total cost of the Fifth Road project was only 65 percent of the planned cost, but counterpart funding was only 16 percent of planned expenditure.

**Figure 50. Five largest completed projects: Total expenditure as percent of total cost**




*Source:* World Bank and GoB.

**Figure 51. Counterpart versus loan funding for the five largest completed projects: Total expenditure as percent of total expected cost**




*Source:* World Bank and GoB.

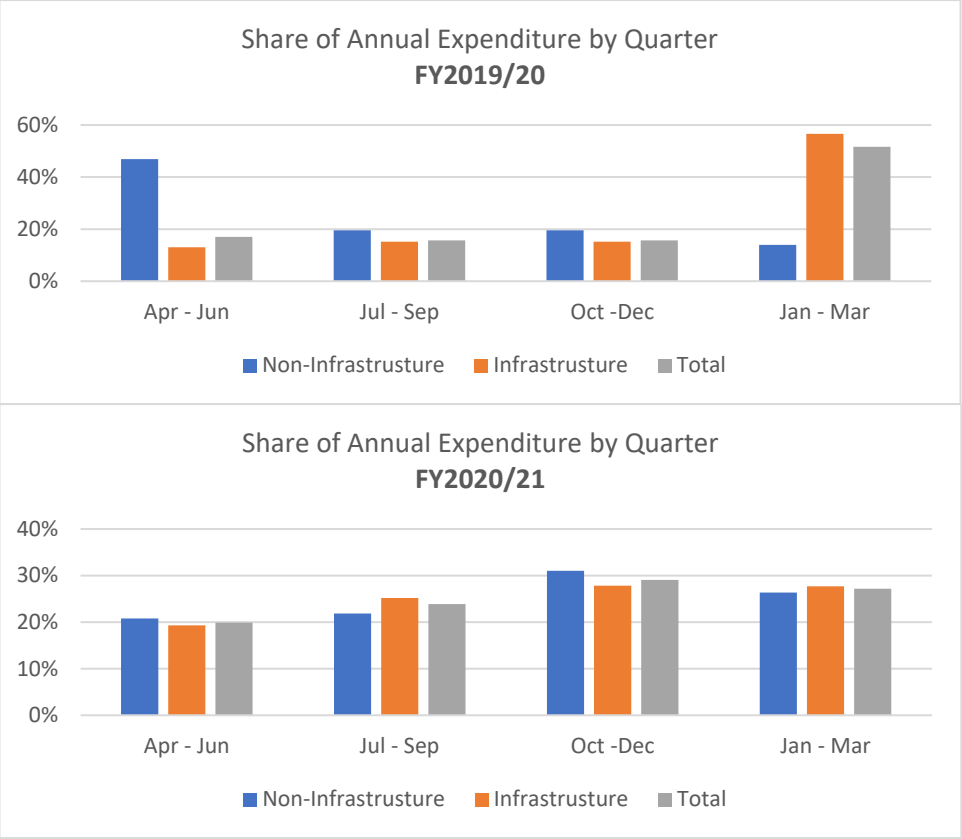
154. **Project spending is uneven during the year and sometimes slow to start.** Expenditure data within the budget year suggest that projects are being funded unevenly from quarter to quarter. For the quarterly expenditure report ending June 2022, no expenditures were recorded for 37 projects. An alternative explanation could be that the accounting system does not pick up the quarterly data on a consistent basis. While it is possible that project disbursements are not steady from quarter to quarter, it is unusual that so many of them of them would have gaps in funding. This phenomenon, however, is not

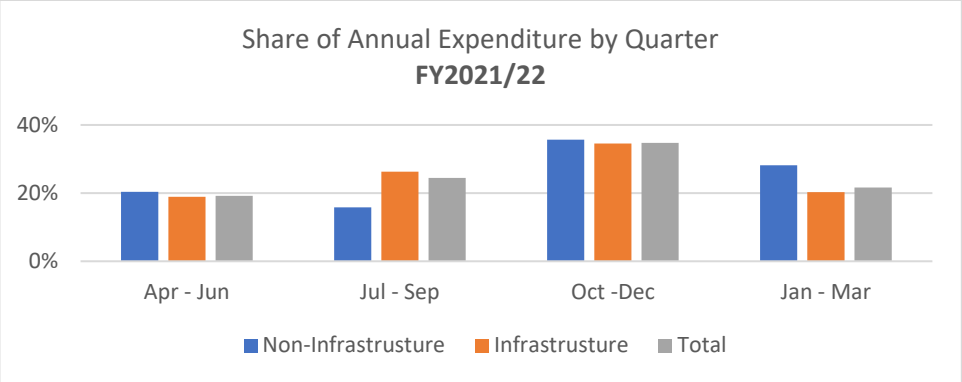
unique to only Q2 2022, as other quarterly reports showed a high proportion of projects without expenditures.

155. **Expenditures for the PSIP also show seasonal patterns over the course of the year.** Expenditures tend to be the highest in the third and fourth quarters of the year. Expenditures for infrastructure projects are consistent with that pattern, but there is a slight difference among other projects. For example, with projects categorized as economic services, the pattern of spending in the first and third quarters is generally the same. Spending on economic services tends to be lowest in Q2 and highest in Q4. This suggests that there may be more discretion in the expenditure commitments for these projects, and the GoB could be holding back on the pace of these activities until later in the fiscal year.

156. **A small number of projects are experiencing delays in starting well after they have been included in the budget.** Of the 97 projects in the portfolio of active projects, 14 have no expenditure. Among these, 8 should have started in 2021 or earlier. Of the 14 projects, 11 are categorized as economic services, and 3 are for social services; none of them is in infrastructure.

**Figure 52. Three-year pattern of quarterly PSIP spending by type of project**






*Source*: World Bank and GoB

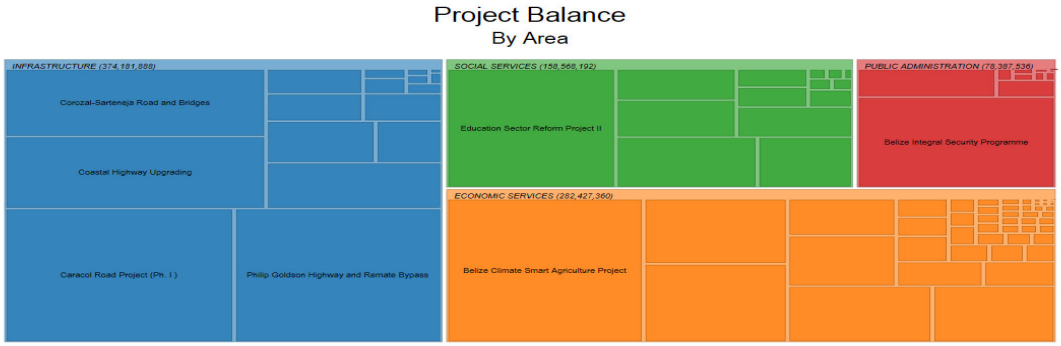
### 4.2 Expansion of the PSIP and its implications

157. **The scope and the size of the PSIP is expanding and this will have both fiscal and institutional implications.** With the current PSIP containing outstanding commitments of about BZD 845 million, it would take roughly four years to complete the existing portfolio if the current rate of implementation remains the same. The current pipeline is expected to total BZD 637 million, while proposed projects—which are only partially costed—could add some BZD 303 million. Currently, the GoB spends on average about BZD 55 million per quarter on public investment or about BZD 220 million annually. While it depends on how quickly they became active, these new projects could essentially double the size of the PSIP's expenditures. Expanding the PSIP with the designated pipeline and proposed projects would rebalance the program back toward a focus on infrastructure (see Figure 53). Among the 48 projects in the pipeline, 18 are linked to economic infrastructure, 18 to economic services, 6 to public administration, and 6 to social protection. Costs remain undefined for 7, of which 4 are for economic infrastructure. Of the 84 proposed projects, 37 are expected to support infrastructure. This expansion is aligned with the GoB's medium-term development strategy, but it could have an impact on its ability to complete the existing portfolio in a timely manner. This has an obvious fiscal implication because of the likely need for counterpart financing, but it might also expand the time required to complete projects.

158. **The GoB needs to maximize the economies of scale in project management.** Since 2022 the GoB has worked with selected donors to establish and operationalize a Central Executing Unit within the Ministry of Economic Development to share resources across new projects financed by those donors. As lessons are learned from that experience, the GoB should consider applying it to other parts of the PSIP. While strengthening project implementation units (PIUs), the GoB also faces challenges to recruit and retain technical skills within the public sector. Until there are reforms to the public sector compensation system to enhance incentives for high-skilled staff, the GoB may need to consider how to streamline some work processes, accelerate training, and share knowledge and expertise across institutional boundaries. If not already done, the GoB may want to take a risk-based approach to target skills to those projects with greater complexity, risk, or impact.

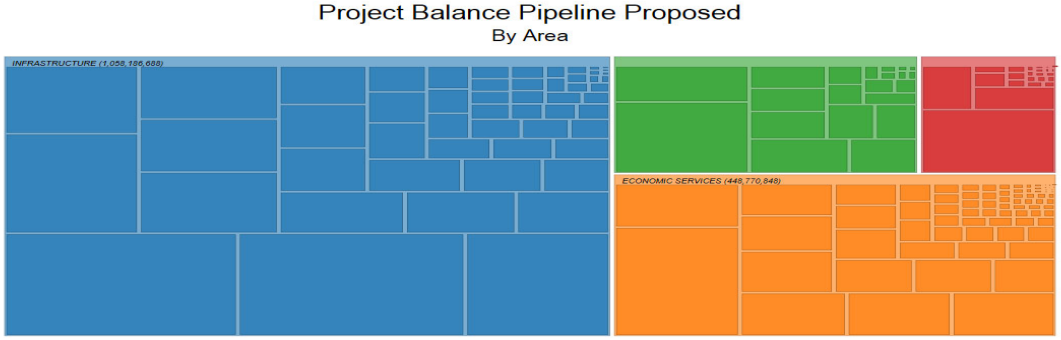
**Figure 53. Composition of the PSIP**

(a) Composition of the PSIP based on outstanding balances to be spent




Source: Government of Belize - PSID Reports
Nominal Values - June 2022
Projects: (1) on-going projects

(b) Composition of the PSIP after including all pipeline and proposed projects




Source: Government of Belize - PSID Reports
Nominal Values - June 2022
Projects: (1) On-going projects; (2) Pipeline Projects; (3) Proposed Projects

## 4.3 Strengthening the links between planning and budgeting

159. **The PSIP provides a snapshot of on ongoing projects, pipeline projects, and proposed projects, but it is not integrated into a medium-term budget planning horizon.** In principle, the MoF should be able to prepare medium-term projections for capital that are informed by the aggregate annual spending commitments/needs of the individual projects. Line ministries or project owners should know the level of spending to keep projects implemented in a timely and efficient manner. But if that information is at the ministry level, there is no formal process by which the MoF collects it to determine the existing project commitments. Nor is there a unified database available to the MoF with which to consolidate, review, and reconcile such information.

160. **Multiyear budget planning would help the MoF anticipate future spending commitments and estimate the available fiscal space for introducing new projects.** In countries where sectoral/ministerial envelopes are established for public investment without bottom-up information on cashflow requirements, it leaves significant discretion to the line ministries to decide what to fund within the portfolio. While that flexibility can be useful in some cases, it could create the incentive for ministries to spread resources across more projects—including new projects—rather than be compelled to expedite implementation of existing projects.

161. **Central guidelines for project appraisals are not available and ministries often rely upon development partners to conduct feasibility studies for externally financed projects.** For domestically financed projects, the decisions on project appraisal rest with the government entity in charge of the project (project owner). According to the PIMA, the Ministry of Works does incorporate some limited forms of appraisal as part of its own project selection decisions. General capacity and resource constraints have limited the GoB's ability to prepare central guidelines or to establish a 'challenge' function for the MoED or MoF to approve projects. There is a risk of inadequate consideration of alternative (that is, more cost-effective) policy options or project design options to fulfill the development objectives.

162. **The lack of a unified information system for PIM limits the ability of the MoF and MoED to exercise oversight of PSIP implementation.** Information is submitted to the MoED by project owners, and it is used to produce quarterly expenditure reports. However, there is no management information system to securely and accurate capture data over the lifecycle of the project. Instead, there is a heavy reliance upon Excel files to manage historical information about the projects. Though the portfolio is not extremely large, it limits the ability of central agencies to analyze the data and address potential issues in project implementation. An in-depth analysis of data from the quarterly reports and extracts from the Excel database revealed multiple inconsistencies in the data.[52] Establishing clearly defined protocols and standards for data quality and data management would be a practical next step for the MoF and MoED to consider.

163. **Mechanisms that integrate budgetary limits into the strategic planning can be helpful to highlight policy trade-offs that need to be made within a sector and across sectors.** Strategic plans without realistic costing trend toward becoming a wish list, and they give broad discretion in identifying future projects. In short, because they are high level and the needs are significant, many types of projects can be identified later and aligned with the strategy. To be effective, strategic planning needs to compel necessary trade-offs among worthwhile policy goals; otherwise, strategies risk linking achievement to financing and thereby shifting responsibility to the MoF (or other central entities) to find the financing. In addition, where the strategies are high level and do not include explicit criteria for project prioritization, there is a risk that some projects enter the PSIP primarily because of financing availability rather than strategic needs or highest returns on investment.

### 4.4 Enhancing the quality of spending

164. **Evaluating project implementation ex post—and in some cases mid-term—could provide lessons for improving the quality and impact of public investment spending in general.** The current institutional arrangements in Belize do not encourage ex post evaluation or a whole-of-government approach to PIM. There is no institution that has the responsibility or the capacity to evaluate project performance and to draw lessons that could improve portfolio performance going forward. While increasing the magnitude of public investment spending is a strategic objective for the GoB, a complementary goal could be to obtain greater value out of the existing resource envelope. The GoB may benefit from a review of the ongoing and pipeline activities to ensure that it can optimize the value of those investments. For example, some projects within the PSIP are not infrastructure related and therefore do not have a distinct completion point; instead, they are more recurrent in nature and have

[52] For example, the CRIP was one of the five largest projects that had been completed. However, there were enough anomalies and potential gaps that it often had to be omitted from analysis. In addition, for active projects, many quarters showed no expenditure whatsoever.

been ongoing for at least several years. An evaluation could be done to assess whether those programs are meeting their objectives in a cost-effective manner and, if not, to propose closing or restructuring the activity so that resources can be deployed more effectively.

165. **An important, but often neglected, element of PSIP review could be the procurement outcomes.** Whether projects are related to infrastructure or not, the methods used to obtain goods and services and the results of the procurement choice should be reviewed across the portfolio. Central institutions should ensure that competitive procurement practices were used as much as possible, and that where direct procurement was allowed, the justification was appropriate. (For example, project owners should not subdivide procurement packages to avoid thresholds or stress urgency of procurement when it is not called for.) In addition, oversight institutions should work together to review major awards across the portfolio to confirm that there is sufficient breadth of competition and contracts are not awarded to the same beneficial owners. As interest grows in PPPs as a procurement option, it will be critical for the GoB to ensure it has the technical capacity and policy framework in place to prepare and administer such contracts while minimizing risk of contingent liabilities to the public sector.

166. **Belize's approach to managing public investment should eventually be integrated into a larger framework of management of public assets and liabilities.** Developing a public asset registry has many benefits, as detailed by the PIMA, and this could be one of the medium- to longer-term objectives of the government. However, in the shorter to medium term, the GoB may want to focus on a limited number of critical infrastructure assets and consider how to better integrate decisions on repairs and rehabilitation within the broader decision-making process on public investment. In virtually all countries, political and institutional incentives favor new investment over rehabilitation or reinforcement of existing assets. The goal of the public investment planning cycle should be to bring visibility to the needs of existing infrastructure, so that early investments are made to preserve their condition and to avoid more costly reconstruction later. Central institutions need to have visibility over the conditions and the potential liabilities that may arise from neglected spending on major infrastructure assets. As natural hazard risks increase in the region, reinforcing and strengthening existing infrastructure may become more important to make them more resilient to natural disasters.

### 4.5 Further improvements to public transparency

167. **Quarterly reports published by the MoED since 2019 provide an excellent level of transparency around Belize's PSIP.** For each active project, the reports provide start and end dates, sources of financing, total cost of the project, expenditures for the quarter, expenditures to date, and a general description of progress. The reports also helpfully provide a summary of the financial data categorized by type of project and sources of financing. In addition to accounting for the progress on ongoing projects, the PSIP quarterly reports also detail the list of pipeline projects that have reached an advanced stage of discussion with development partners but are pending approvals. The MoED also displays a table of proposed projects, which are early-stage ideas. The reports are generally easily understandable and present information that appears to be comprehensive for the active projects.

168. **Despite the obvious strengths in reporting on public investment, there are some limitations.** For example, it would be helpful if the GoB published the annual reports as well as a summary of the quarterly data. The MoED website has a placeholder for annual reports, but the page is empty. Second, it is not possible to see whether the projects are on track relative to the expected funding levels or expected timing. For example, there are no budget data for the year for comparison. The GoB's projects database

appears to have that information, even though it is not in the published reports. Third, the project reports show quite a few blanks in the expenditure data, but there are no explanatory notes as to whether that denotes zero expenditure or an absence of data.

### 4.6 Improving the legal and institutional framework for PIM

169. **Enhancing the broader institutional and technical capacity for PIM is important to improve quality of spending, but Belize has been able to make only limited progress since the IMF's 2020 PIMA.** Several key recommendations revolved around strengthening the overall strategic framework for selecting projects, improving project appraisal and selection guidelines, and developing standardized guidelines for the management of projects. These recommendations reflect the need to have more centralized oversight over the selection of projects that enter the PSIP and that accountability for project implementation is integrated with other budgetary systems. The mission found that the MoF is often lacking information on project expenditure, and there is no institutional mechanism or procedure to receive project-specific information. The MoF recognizes that there is a need for a PIM law that would clarify the roles and responsibilities of different institutions in the project cycle. While a technical draft was prepared, it was never presented to Cabinet and needs to be updated now.

170. **Other PIMA recommendations are beyond the scope of this analysis but could also be significant to improving the impact of PIM in the long term.** These include, but are not limited to,

- Improving oversight investment done through PPPs and SOEs,
- Improving reporting on maintenance of capital assets,
- Improving public access to procurement information,
- Developing a procurement monitoring system for all public entities,
- Preparing annual cash plans, and
- Developing capacity to conduct ex post evaluation of projects.

171. **Notwithstanding the opportunities to improve PIM, any development of a reform action plan would need to consider the limited institutional and human resources available.** Belize has benefited from technical assistance on PFM from multiple development partners, including the IMF's (Caribbean Regional Technical Assistance Centre (CARTAC), the European Union, and IDB. The limited number of skilled technical staff in the PFM function inevitably affects the absorptive capacity to engage intensively with reform efforts. Reforms that require changes in legislation encounter delays in many countries, and Belize is unlikely to be an exception. Though technical guidance on PIM may not require the same legislative passage, it could still require extensive consultations across government, depending on the magnitude of changes proposed. As a result, the GoB may wish to adopt a varying targeting approach to reform, identifying only a few key technical reforms that can generate better information for decision-making. In addition, the GoB could identify ways to leverage the limited project management skills that are available, for example, by creating a centralized pools of experts who can be deployed across sectors on the more complex projects. Improving technical skills within the PIM function could also be part of a broader effort to improve recruitment and retention of high-skilled staff within the public sector through changes to the pay and benefits system.

### 4.7 Conclusions and recommendations

172. **Over the medium term, there are measures that Belize could take to strengthen its institutional capacity for effective public investment management.** First, strategic planning documents that guide the identification and selection of projects could benefit from being more closely tied to the medium-term fiscal strategy of the government. This would help facilitate policy trade-offs across sectors and within sectors. Second, budget processes that support implementation of public investment projects could be strengthened. The MoF should strive to improve the correlation between annual project forecasts and approved budgets as well as between the approved budgets and the actual annual spending. Third, information systems to monitor project implementation could be enhanced to provide more timely and complete information to the MoF and other central entities to monitor project implementation.

173. **In lieu of major legislative reform, the GoB may wish to adopt a targeted approach to reform, identifying only a few key technical reforms that can generate better information for decision-making and project accountability.** For example, the GoB could consider amending existing regulations to clarify the roles and responsibilities of various institutions in the project cycle, so that the MoF can obtain the data it requires for effective fiscal management. As the portfolio grows, human resource capacity becomes even more important. In the short to medium term, Belize may consider leveraging the limited project management skills that are currently available, for example, by creating centralized pools of experts who can be deployed across sectors using a risk-based approach. However, over the longer term, improving technical skills within the PIM function could be part of a broader effort to improve recruitment and retention of high-skilled staff within the public sector through changes to the pay and benefits system.

174. **Transparency of public investment spending is an important element of accountability for project implementers that could be strengthened even further.** Quarterly PSIP reports that are published on the web provide an excellent foundation for understanding the composition of spending and the progress on individual projects. Yet, Belize may wish to consider monitoring and reporting on project implementation over the life of the project, so that it is assessing financial and physical progress relative to plan. Moreover, evaluating project implementation ex post—and in some cases mid-term—could provide lessons for improving the quality and impact of public investment spending in general.

## CHAPTER 5. CLIMATE CHANGE EXPENDITURES

175. **This chapter provides an analysis of Belize's budget allocations and initiatives to combat climate change.** It benchmarks the level of spending on climate-relevant activities against Belize's climate change risks and commitments. The chapter explores the challenges and opportunities related to aligning climate-related expenditures with Nationally Determined Contribution (NDC) priorities, incorporating them into strategic planning and budgeting processes, and promoting transparency and accountability in climate spending information.

### 5.1 Belize's climate change risks and commitments

**Belize is a country highly exposed to climate change and risks from natural hazards**. In 2018, Belize ranked 3rd for risk from natural disasters and 5th for risk from climate change among small states.[53] It was identified as the 61st highest-exposed country for relative mortality risk from multiple hazards in the world and ranked 8 out of 167 countries for climate risk.[54] Most of its housing stock and its major infrastructures, such as public buildings and health, commercial, and transportation facilities, are located on or near the coast, making them highly susceptible to sea level rise. Also, coastal regions, in particular Corozal, have a higher proportion of vulnerable structures and potentially higher hurricane intensity, due to their construction types (mostly wood-made).[55] Climate change can destroy life and property and disrupt links.[56] Opportunities exist particularly in informal settlements to upgrade them and increase resilience, and also reduce use of resource, offering a chance of low-carbon transition.[57]

176. **A variety of hazards pose threats to Belize.** The country is particularly vulnerable to hurricanes, storms and associated flooding, wind damage, and storm surge, especially in Belize City.[58] Belize is also at risk of extreme temperature events. Table 11 shows the probability of occurrence of different hazards in Belize in comparison to other countries of the Caribbean. AAL from hurricanes is US$17.9 million (1.05 percent of GDP) and from earthquakes is US$1.4 million (0.08 percent of GDP). The Probable Maximum Loss for hurricanes (250-year return period) is US$791 million (46.6 percent of GDP) and for earthquakes (250-year return period) is US$63 million (3.7 percent of GDP).

[53] IMF 2018.
[54] World Bank Climate Change Knowledge Portal. Belize Country Page. https://climateknowledgeportal.worldbank.org/country/belize/vulnerability

[55] World Bank 2017.
[56] Ibid.

[57] IPCC 2022.
[58] Ibid.

**Table 11. Probability of occurrence of different hazards in Belize compared to other countries in the Caribbean**

| | River flood | Urban flood | Coastal flood | Hurricane | Landslide | Earthquake | Tsunami | Wildfire | Volcano | Extreme heat | Water |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antigua and Barbuda | | | | | | | | | | | |
| Bahamas, The | | | | | | | | | | | |
| Barbados | | | | | | | | | | | |
| **BELIZE** | | | | | | | | | | | |
| Dominica | | | | | | | | | | | |
| Dominican Republic | | | | | | | | | | | |
| Grenada | | | | | | | | | | | |
| Guyana | | | | | | | | | | | |
| Haiti | | | | | | | | | | | |
| Jamaica | | | | | | | | | | | |
| St. Kitts and Nevis | | | | | | | | | | | |
| St. Lucia | | | | | | | | | | | |
| St. Vincent and the Grenadines | | | | | | | | | | | |
| Sint Maarten | | | | | | | | | | | |
| Suriname | | | | | | | | | | | |
| Trinidad and Tobago | | | | | | | | | | | |
| Turks and Caicos Islands | | | | | | | | | | | |

**LEGEND**

**High:** Users should be highly aware of potentially severe damage from this hazard for the project location. Without taking measures to mitigate the hazard and risk, high levels of damage can be expected to occur within the project or human lifetime (and potentially frequently in that time frame, for hydrometeorological hazards, for example, floods, extreme heat).

**Medium:** Users should be aware of potentially damaging effects of this hazard for the project location. Potentially damaging events can be expected to occur within the project or human lifetime and measures to mitigate the hazard and risk should be considered. For hydrometeorological hazards, damaging effects could occur frequently in that time frame.

**Low:** Potentially damaging events are less likely or unlikely to occur within the project or human lifetime but are still possible. Measures to mitigate the hazard and risk would be prudent at critical locations. Hazard has been classified based on long-term averages, and there is still potential that damaging events could occur in this time frame.

**No data:** No dataset covering the chosen location is currently available.

*Source:* Rozenberg et al. 2021. Based on data from ThinkHazard!

177. **In 2001, Hurricane Iris struck Belize; if this historical event were to happen in 2015, it would have caused a loss of US$105 million, amounting to 6 percent of GDP.**[59] Table 12 compares the risks to assets in Belize to selected other countries in the region. In all countries, hurricane risk constitutes a larger threat than earthquakes, yet estimated losses are significant for both. In Belize, there is a 46.6 percent

[59] World Bank 2017.

chance each year of direct losses due to hurricanes, the highest of all the countries analyzed. In all examined countries, vulnerable single-family buildings make up a large share of AAL—20 percent in Belize.

**Table 12. Risks to assets in Belize compared to selected other Caribbean countries**

| | | AVERAGE ANNUAL LOSS | | | | PROBABLE MAXIMUM LOSS | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Building stock | Hurricane | | Earthquake | | Hurricane | | Earthquake | |
| | US$, millions | U$, millions | percent of GDP | U$, millions | percent of GDP | US$, millions | percent of GDP | US$, millions | percent of GDP |
| **BELIZE** | **4,600** | **17.9** | **1.05** | **1.4** | **0.08** | **791** | **46.6** | **63** | **3.7** |
| Grenada | 2,100 | 8.2 | 0.9 | 1.8 | 0.2 | 397 | 43.6 | 96 | 10.5 |
| Jamaica | 36,400 | 67.3 | 0.5 | 36 | 0.3 | 3,500 | 25.3 | 2,000 | 14.6 |
| St. Lucia | 3,000 | 9.5 | 0.7 | 2.6 | 0.2 | 382 | 27.2 | 148 | 10.5 |

*Source*: Rozenberg et al. 2021. Based on data from Global Facility for Disaster Reduction and Recovery (GFDRR).

178. **Climate change is expected to threaten every sector of Belize's economy.** Belize's habitat is particularly vulnerable to global warming. It is home to the world's second-largest coral reef system after Australia's Great Barrier Reef. Climate change threatens the local economy and livelihoods, particularly in tourism and fishing, employing around 28 percent and 15 percent of Belize's workforce, respectively. Coastal erosion and coral bleaching are major threats to tourism, primarily nature based and dependent on natural resources. Climate change is also projected to affect electricity generation in Belize, particularly hydropower, which provides around half the country's electricity. Changes in precipitation and evaporation would affect river flows, reservoir inflows, and power production.[60] Key projected climate change impacts for Belize are summarized in Table 13.

**Table 13. Projected climate change impacts for Belize**

| Type of impact | Projected changes |
|---|---|
| Temperature rise | • Rise in temperature between 2°C and 4°C by 2100.<br>• Disruptions to marine ecosystems, including coral bleaching, seaweed invasion, and fish population are expected to cause significant costs to the tourism and fisheries sectors. |
| Precipitation | • 7–8 percent decrease in the length of the rainy season<br>• 6–8 percent increase in the length of the dry season<br>• 20 percent increase in the intensity of rainfall in short periods<br>• Changes in rainfall patterns are projected to increase the likelihood of water shortages and heighten the risk of draught |
| Sea level rise | • Sea level rise is projected to exceed 10 cm in low, medium, and high emission scenarios by the 2030s.<br>• Sea level rise is projected to exceed 22 cm in low, 23 cm in medium, and 38 cm in high emission scenarios by 2050.<br>• Sea level rise is projected to exceed 34 cm in low, 56 cm in medium, and 120 cm in high emission scenarios by 2100. |
| Extreme weather events | • Projections show increased inter-annual variability, with more intense effects of each severe weather event, particularly strong winds from storms, tropical depressions, and hurricanes. |

[60] IMF 2018.

| Type of impact | Projected changes |
|---|---|
| | • Greater intensity could accelerate soil erosion, leading to the contamination of groundwater, the salinization of water sources, and the sedimentation of dams and reservoirs, adversely affecting the quality of the country's water resources. |
| Agriculture | • Projected loss of production between 10 and 20 percent, which could lead to million dollars in lost revenue by 2100 |
| Fisheries | • Decline in this industry is expected to affect over 3,500 licensed fishers, which could lead to an annual loss of approximately US$12.5 million per year. |
| Tourism | • The combined effects of reduced tourism demand, loss of infrastructure, loss of beaches, and the loss of the barrier reef can result in the reduced income of approximately US$24 million per year. |

*Source:* Belize's Updated NDC; World Bank Climate Change Knowledge Portal, https://climateknowledgeportal.worldbank.org/country/belize; and IMF (2018).

179. **Housing ranks as the third most-affected sector, and the recovery of lost assets for extended periods leaves firms and individuals without their homes and incomes.** Typically, this creates gaps in service provision and slows down economic growth. Strong hurricanes, such as category 4 hurricane Dean for instance, which hit Belize in 2007, cause structural losses and damages in the housing sector amounting to 19 percent of annual losses on average (equivalent to USD 19 Mln. in 2007).[61]

180. **Belize formally committed to acting on climate change by signing the Paris Agreement in 2016, a legally binding international treaty.** One of the long-term goals of the Paris Agreement is to support climate change mitigation, strengthen resilience, and enhance abilities to adapt to climate impacts. In pursuit of these commitments, Belize, like many governments, had set national goals unique to its local contexts and capabilities.

181. **Belize has made notable efforts to formulate climate plans and strategies, implement them, and access climate finance.** This includes the NCRIP of 2013, the National Climate Change Policy, Strategy and Action Plan of 2014, and the Climate Finance Strategy of 2021, covering 2021 to 2026. These are accompanied by a considerable number of sector strategies focusing on their relationship with and vulnerability to climate change (for example, for the water sector, solid waste management, deforestation, degradation, and energy) and how it could be mitigated. In addition, in 2021, Belize updated its NDCs, initially submitted in 2016, to reflect greater ambitions. Table 14 summarizes key policy documents on climate change in Belize**.**

**Table 14. Key climate change policy documents in Belize**

| Policy document | Key characteristics |
|---|---|
| **Horizon 2030** | The national development framework with four key pillars. One of them is responsible environmental stewardship with a focus on integrating environmental sustainability into development planning and promoting sustainable energy. |
| **The National Energy Policy Framework** | Lists options for pursuing energy efficiency, sustainability, and resilience for the next 30 years |

[61] World Bank 2017.

| Policy document | Key characteristics |
|---|---|
| **The National Climate Resilience Investment Plan of 2013** | The national framework for building economic and social resilience with a focus on reducing disaster risks |
| **The National Climate Change Policy, Strategy and Action Plan, 2015–2020** | Policy guidance for developing an administrative and legislative framework for climate change. |
| **The Climate Finance Strategy, 2021–2026** | Provides an approach to accessing resources required toward enhancing climate resilience and climate change mitigation |
| **Roadmap for the Development of a Low Carbon Development Strategy** | Identifies technical capacity gaps and presents institutional needs to strengthen the resilience to the impacts of climate change |
| **The National Solid Waste Management Policy** | Provides guidance on solid waste management, including municipal, industrial, and hazardous types of waste |
| **Updated Nationally Determined Contribution** | Update on national contributions under the Paris Climate Change Agreement. It includes climate change adaptation and mitigation targets and actions. |

*Source:* World Bank staff's review of policy documents.

182. **Belize's efforts to mainstream climate change into national development processes were initially guided by the now-outdated National Climate Change Policy, Strategy, and Action Plan to Address Climate Change in Belize (NCCPSAP).** The document covers the period from 2015 to 2020. It guides processes of climate change adaptation and mitigation using an integrated and coordinated approach in accordance with the country's sustainable development objectives as well as regional and international commitments. The government agency in charge of coordinating its implementation is the Ministry of Forestry, Fisheries and Sustainable Development. While it was envisaged that this document would be reviewed periodically using new scientific findings, development priorities, and the outcomes of international negotiations,[62] no progress reports have been published and neither has a follow-on strategy replaced it. Instead, the government is still funding and implementing activities initially planned to be completed by 2020.

183. **At the center of the NCCPSAP is its action plan for eleven sectors identified as key for low-carbon development of the country.** These are agriculture, forestry, fisheries and aquaculture, coastal and marine resources, water resources, land use and human settlements, tourism, human health, energy, transportation, and solid waste management. The NCCPSAP specifies the strategic aim, overall strategy, detailed activities, the lead agency, time frame, and estimated costs for each sector. Table 15 summarizes NCCPSAP priorities and indicates that the total cost of implementing climate change-related activities in four of the eleven sectors over the five years was estimated at BZD 41.8 million (the equivalent of BZD 8.4 million per year, on average) before adding the cost of activities from the remaining seven sectors.

**Table 15. Belize's priority sectors to meet climate change objectives and estimated costs**

| Sector | Strategic aim, time frame, and lead agency | Estimated costs |
|---|---|---|
| **Agriculture** | Development of climate-resilient cropping/livestock agricultural systems, to be completed by 2020. (Ministry of Agriculture) | BZD 26 million |
| **Forestry** | Ensure the conservation, utilization, and sustainable use of forest resources by mainstreaming climate change into the Revised Forest National Plan and supporting the development and enhancement of a low carbon economy by limiting greenhouse gas (GHG) emissions resulting from deforestation | BZD 10.316 million |

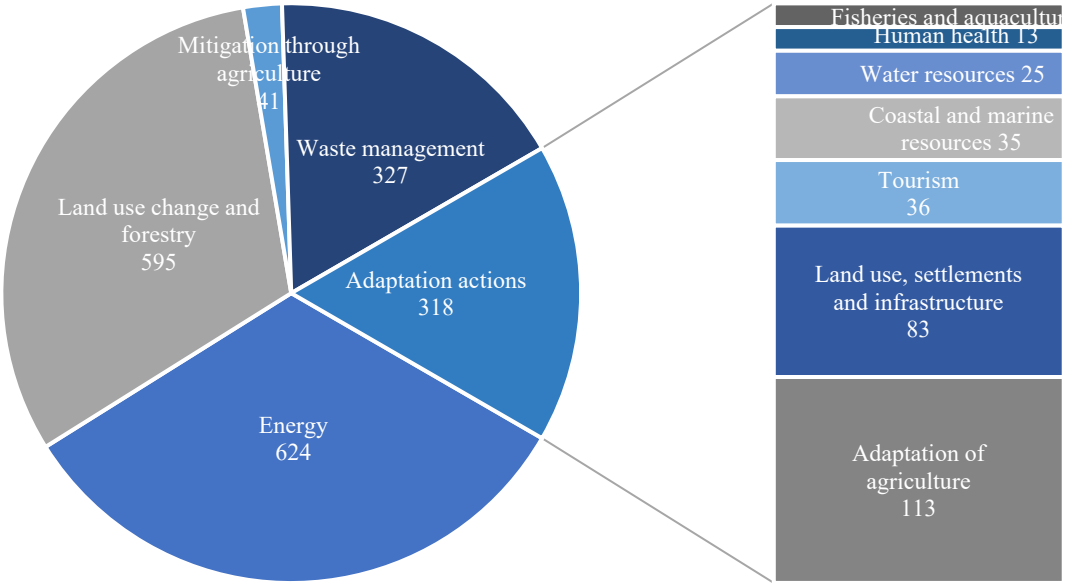
[62] Caribbean Community Climate Change Centre and the GoB 2014.

| Sector | Strategic aim, time frame, and lead agency | Estimated costs |
|---|---|---|
| | and forest degradation while also enhancing GHG sinks, to be completed by 2019. (Forestry Department within the Ministry of Forestry, Fisheries and Sustainable Development) | |
| **Fisheries and aquaculture** | Guide the short-, medium-, and long-term processes to sustain the fishing industry from the impacts of climate change and strengthen the resilience of the reef and associated habitats, to be completed by 2018. (Fisheries Department within the Ministry of Forestry, Fisheries and Sustainable Development) | BZD 1–1.5 million |
| **Coastal and marine resources** | Promote the adoption and implementation of the Belize Integrated Coastal Zone Management Plan which will ensure responsible and sustainable use of coastal and marine resources in the face of climate change, to be completed by 2019. (Coastal Zone Management Authority and Institute of the Ministry of Fisheries, Forestry and Sustainable Development) | BZD 4 million |
| **Water resources** | Enhance the protection and restoration of forest ecosystems and build the resiliency of water catchment areas, to be completed by 2020. (National Integrated Water Resources Management Authority within the Ministry of Natural Resources and Agriculture) | Unknown |
| **Land use and human settlements** | Promoting the adoption of integrated land tenure, land classification, and housing policies and programs which enhance climate change adaptation and are resilient to climate change, to be completed by 2020. (Housing and Planning Department and Land Utilization Authority, Physical Planning Unit and Land Information Unit within the Land and Survey Department within the Ministry of Natural Resources and Agriculture) | Unknown |
| **Tourism** | Assessing the vulnerability of Belize's tourism system to climate change and ensuring the mainstreaming of climate change throughout the sector to enhance ecosystem resilience, equitable distribution of tourism activities and fostering of sustainable tourism development, at a local and national scale, to be completed by 2020. (Ministry of Tourism, Culture and Civil Aviation) | Unknown |
| **Human health** | Strengthen and improve public health, disease prevention, and environmental sanitation and reduce human exposure to climate change-related health risks, to be completed by 2020. (Ministry of Health) | Unknown |
| **Energy** | Plan, promote, and effectively manage the production, delivery, and use of energy, through energy efficiency, renewable energy, and clean production interventions for sustainable development, to be completed by 2020. (Ministry of Energy, Science and Technology, and Public Utilities) | Unknown |
| **Trans-portation** | Take necessary measures to reduce vulnerability of critical transportation and communications infrastructure to climate change impacts and increase the resilience of the transportation/communication sectors, to be completed by 2020. (Ministry of Works) | Unknown |
| **Solid waste manage-ment** | Nationwide improvements in the management of solid waste and reduction in the generation of GHG emissions, to be completed by 2020. (Belize Solid Waste Management Authority within the Ministry of Natural Resources and Agriculture) | Unknown |
| | **TOTAL COST ESTIMATED** | BZD 41.8 million at the minimum |

***Source:*** World Bank staff, based on the NCCPSAP (2014).

184. **The more recent Climate Finance Strategy provides an estimate of the total cost of implementing the updated NDCs considering not only government funding but also that by other stakeholders, amounting to US$1,906 million for the ten years ending in 2030.** After accounting for the already mobilized resources, the financing gap to achieve the new NDC levels would be US$1,645 million. From 2015 to 2019, the GoB contributed 9.32 percent of the climate investments funding in the country.[63] Assuming the same distribution levels between the government, multilateral development banks, bilateral donors, climate funds, and private investors, the government would be required to allocate on average US$15.3 million per year for combatting climate change on top of what it has already committed. Converted to local currency, this amounts to approximately BZD 30.9 million, an estimate significantly higher than what is estimated in the NCCPSAP. The discrepancy may not be only a result of this amount reflecting all sectors but also more ambitious NDC targets, as well as inflation and other price increases over seven years. Furthermore, the Climate Finance Strategy estimates that the majority (83 percent) of the total costs of US$1,906 million would be required for funding climate change mitigation actions, as shown in Figure 54.

**Figure 54. Total costs of NDC-required interventions by 2020 (US$, millions)**




*Source:* World Bank staff, based on estimates from the Climate Finance Strategy (2021).

185. **The 2021 Belize's Updated NDC identifies climate change adaptation and mitigation targets and actions and provides a costed strategy to achieve them.** The sectors, targets, action, estimated costs, and estimated financing gap are presented in Table 16. The updated NDC identifies energy, agriculture, waste, industrial processes, and products as key emitters. The forestry and other land use sector is a net sink of GHG emissions due to GHG removals from forest growth. Belize committed to meeting the mitigation targets by expanding renewables, reducing energy intensity and fossil fuels in transportation, and protecting forest reserves. Because Belize is highly exposed to natural hazards and climate-related shocks, climate change adaptation is identified as a high priority in the NDC. To meet the adaptation targets, Belize's NDC prioritized using more resilient breeds of livestock and drought-resistant crops in agriculture, maintenance of healthy forest ecosystems, further enhancements to coastal management, including through early warning systems

[63] Caribbean Community Climate Change Centre and the GoB 2014.

for storm surges, improved water, waste management, and land use. The mitigation targets and actions are estimated to cost US$1.39 billion between 2021 and 2030, and the funding gap is estimated at US$1.24 billion. The adaptation targets and actions are estimated to cost US$318 million between 2021 and 2030, and the funding gap is estimated at US$146 million.

**Table 16. NDC-related climate change adaptation and mitigation sectoral targets, actions, and costs in US$, millions for 2021–2030**

| Sector | Target | Key actions | Estimated cost to meet target | Estimated funding gap |
|---|---|---|---|---|
| **CLIMATE CHANGE MITIGATION** | | | | |
| **Land use and forestry** | Reduce GHG emission and increase GHG removals related to land use change totaling 2,053 $KtCO_2e$ cumulative from 2021 to 2030 | Reforestation, forest protection, and sustainable forest management | 749 | 29,884 |
| | | Fuel wood consumption | 250 | 250 |
| | Enhance the capacity of the country's mangrove and seagrass ecosystems to act as a carbon sink by 2030, by removing a cumulative total of 381 $KtCO_2e$ between 2021 and 2030 | Mangrove protection and reforestation | 330,799 | 315,799 |
| | | Blue carbon market | 2,614 | 2,615 |
| **Energy** | Avoid 44 $KtCO_2e$ in the national electricity supply by 2030 through the introduction of expanded capacity from renewable energy | Renewable energy | 460,051 | 459,036 |
| | Avoid emission from the power sector equivalent to 19 $KtCO_2e$ per year through system and consumption efficiency measures | Energy efficiency in the power sector | 93,068 | 97,063 |
| | Avoid 117 $KtCO_2e$/year from the transport sector by 2030 through a 15 percent reduction in conventional transportation fuel | Energy in the transport sector | 71,000 | 14,962 |
| **Agriculture** | Reduce methane emissions from livestock by 10 percent by 2030 and avoid emissions of at least 4.5 $KtCO_2e$ by 2025 | Sustainable crop production and livestock management | 41,306 | 10,000 |
| **Waste management** | Improve waste management to avoid emissions of up to 18 $KtCO_2e$ per year by 2030 | Waste management | 327,400 | 317,200 |
| | | **TOTAL** | **1,394,237** | **1,236,808** |

| Sector | Target | Key actions | Estimated cost to meet target | Estimated funding gap |
|---|---|---|---|---|
| **CLIMATE CHANGE ADAPATION** | | | | |
| **Coastal and marine resources** | Increase resilience to climate impacts for coastal communities and habitats by managing development of the coastline and develop early warning systems for storm surges | • Assess coral reef restoration potential<br>• Monitor coastal erosion<br>• Pilot early warning systems | 35,685 | 11,750 |
| **Agriculture** | Reduce post-harvest losses; develop an enhanced early warning system for drought and extreme weather events by 2025 | • Mobilize infrastructure investment for climate-smart agriculture<br>• Improve crop and livestock husbandry | 113,474 | 72,000 |
| **Water resources** | Enhance the protection of water catchment and improve the existing water supply systems | • Implement groundwater hydrological monitoring network<br>• Develop flood controls and drought monitoring | 25,117 | 11,005 |
| **Tourism** | Increase the adaptive capacity of tourism through the development of climate resilient planning and infrastructure | • Identify and asset coastal tourism areas vulnerable to climate change<br>• Promote local practices in tourism | 35,555 | 16,950 |
| **Fisheries and aquaculture** | Build capacity through research, diversification, and retraining to support livelihoods while protecting coastal ecosystems | • Build capacity to gather climate data<br>• Explore alternative livelihood plans for fishers and their households | 12,978 | 750 |
| **Human health** | Build adaptive capacity by assessing vulnerability and investing in capacity to respond to climate-related threats | • Improve disease control and prevention<br>• Invest in health infrastructure | 12,572 | 8,272 |

| Sector | Target | Key actions | Estimated cost to meet target | Estimated funding gap |
|---|---|---|---|---|
| **Land use, human settlements** | Protect communities from damage caused by flooding and sea level rise | • Broaden the analysis of the vulnerability of ecosystems<br>• Develop strategy/plan | 82,748 | 25,050 |
| **Forestry and biodiversity** | Implement protection targets of the national actional plan | • Implement and monitor a biosafety policy | [not costed] | [not costed] |
| | | **TOTAL** | **318,128** | **145,777** |
| | | **TOTAL** | **1,712,365** | **1,382,585** |

*Source:* Belize's Updated NDC.

186. **Belize has successfully implemented several of the key measures proposed in policy documents and strategies relating to climate change.** For instance, the government has improved its financial situation by restructuring its superbond in 2021, thereby reducing the face value of this debt by 12 percent of GDP. This swap was tied to several conditions aiming at increased resilience to climate disasters, adaptation to climate change, and reduced GHG emissions.[64] Another example is Belize's effort to strengthen climate resilience by further protecting the ocean, with the support of the World Bank and the Adaptation Fund. This included restoring and conserving the Belize Barrier Reef System, expanding marine-protected area coverage, diversifying livelihoods beyond fishing (toward hospitality, tourism, or organic farming), easing pressures on ecosystems, and bringing more income to local communities.[65] Finally, the country has decreased its GHG emissions in most years over the last decade. Also, the climate-driven INFORM risk, which assesses the risk for climate-related hazards, aligns with those of other countries in the region (displaying a relatively high score for climate-driven hazard and exposure but also low climate-related vulnerability).[66] Finally, Belize's Updated NDC in 2021 reflects its ambitions to further reduce GHG emissions by restoring ecosystems and expanding renewable energy and adapting to climate change in agriculture, tourism, and fisheries.[67]

### 5.2 Analysis of climate change-relevant expenditures

187. **To help Belize understand how resource allocation aligns with national and sectoral climate change priorities, this section analyzes projected spending allocations in the fiscal year 2021/22.** The

[64] These included that US$4.2 million is spent each year over the next two decades on marine conservation, Belize's Biodiversity Protection Zones are expanded from 16 percent of the ocean area to 30 by 2026, an endowment fund of US$23.5 million is established to fund marine conservation following 2041, and an insurance premium against natural disasters is paid each year for the following two decades. Further commitments include the completion of a legally enforceable Marine Special Plan; general conservation to balance the development of the economy with the social, economic, and environmental needs of a healthy and biodiverse ocean; designation of public lands within the Belize Barrier Reef Reserve System as mangrove reserves; implementation of an Integrated Coastal Zone Management Plan; and an application to have at least three marine-protected areas listed as Green List Areas by the International Union for Conservation of Nature. (IMF Article IV staff reports for 2021 and 2022).

[65] World Bank 2021a.

[66] IMF Climate Changes Indicators Dashboard data for Belize (accessed March 20, 2023), https://climatedata.imf.org/pages/country-data.

[67] IMF 2022.

review identified and measured climate-relevant expenditure in the Approved Estimates of Revenue and Expenditure for Fiscal Year 2021/22. Although limited to one fiscal year, this analysis can provide an essential basis for Belize to continue identifying, measuring, and monitoring public spending on climate change to understand if it meets its ambitious targets outlined in key policy documents. Public spending amounts to a sizable portion of any country's economic activity. Consequently, decisions about revenue and expenditure levels and compositions can have significant social, environmental, and economic implications. Identifying climate-relevant expenditures and assessing their alignment with policy priorities builds on growing recognition that climate change considerations should be integral to the country's strategic planning and budgeting processes.[68]

188. **Review of expenditure from a climate change perspective can help achieve various goals.** Identifying expenditures related to climate change in a government's budget system enables their estimation, monitoring, and tracking. This allows governments to identify funding gaps and under-resourced priorities from their country's climate policies and plans and international commitments and enables systematical monitoring of their implementation. It can improve transparency and accountability and strengthen cooperation between government ministries and offices. It addresses the budgetary and fiscal goal of strategic and effective allocation of existing resources. It also informs the government's efforts to mobilize additional resources, which many countries require to align their budgets with climate goals outlined in the Paris Agreement. In 2021, the World Bank counted 18 national and subnational governments that had developed and applied approaches to identifying and measuring climate expenditure, each adapting their approach to their needs, priorities, and institutional arrangements.[69] The climate-relevant expenditure was identified using a climate change budget tagging tool. Box 3 explains about climate change budget tagging, its benefits, and its challenges.

[68] OECD 2021.
[69] World Bank. 2021b. DC.

**Box 3: About climate change budget tagging**

**Definition.** Climate change budget tagging is a process of identification, measurement, and monitoring of climate-relevant public expenditures. Climate change budget tagging is an emerging practice; most of the countries that currently tag their climate change-related expenditures started doing so less than seven years ago. There are three essential design elements to climate budget tagging methodologies: definition of climate-relevant expenditure, definition of appropriate coverage, and estimation of climate-relevant spending.

**Benefits:**

1. Climate tagging **increases awareness** of climate change issues in central finance and line agencies. Presentation of information on climate change, along with resource allocations in support of climate change policies in official budget documents, raises the profile of climate policy and awareness within government and the legislature and among civil society.
2. Climate change budget tagging can help focus attention on climate considerations in the design of programs and the allocation of resources. Tagging methodologies that **align definitions of climate relevance with national policies** are most likely to generate information that can be used to monitor and steer policy implementation.
3. The identification of climate-relevant programs can **help mobilize funding from external sources**. Tagging can be used to identify a portfolio of climate-relevant programs and expenditures for external financing.

**Challenges:**

1. Climate tagging—as currently practiced—puts **too much emphasis on the quantification** of climate-related expenditures, with **inadequate consideration of policy alignment**, efficiency, and effectiveness. Although tagging identifies the financial inputs associated with climate-relevant programs, information on the amount of budgeted climate-relevant expenditure alone does little to inform policy or oversight.
2. **Policy alignment** can be challenging. Where climate policy documents are high-level statements with extended time horizons, they are unlikely to translate directly into budgetary agendas. Policy alignment can be an iterative process.
3. **It is unclear to what extent climate tagging informs and has an impact on program design.** Typically, programs and projects are tagged after they have been approved—too late to inform design and rationalizing rather than informing resource allocation. That said, tagging helps raise the profile of climate change issues. Awareness may contribute to adjustments in program and project design that are not documented in the formal budget approval process.
4. **There is mixed evidence on the impact of climate tagging on resource allocation.** Most report on an increase in climate expenditures after the introduction of the tagging methodology. However, this seems to be because line agencies apply the climate tag to a wider range of programs rather than a systematic reallocation of resources to climate change objectives. In some cases, tagging may have created incentives for 'greenwashing'.
5. Excessive focus on spending can lead to an **expenditure bias**, neglecting consideration of the relative merits of regulation, taxation, and expenditure as instruments to achieve policy goals.

*Source:* World Bank 2021b.

189. **The review of Belize's expenditure analyzed both approved recurrent and capital spending projections using program information.** The spending information was identified as climate relevant based on the information provided in the description of the programs. Budget planning and preparation in Belize uses a program and performance-based medium-term expenditure framework approach. The annual budget estimates document presents estimates for the current year's budget and two following fiscal years (that is, forward estimates) by both program and economic classification. The annual budget estimates document submitted to parliament for scrutiny presents a range of performance information. Mission statements and strategic priorities are presented at the ministry level. At the program level,

ministries and agencies are required to specify program objectives and key program strategies/activities for the forthcoming budget period (that is, specific actions to improve program performance) as well as a report on progress against the key strategic priorities presented in the previous years' budget document. Therefore, the program information offers a good basis for identifying which programs were designed to address or contribute to climate change adaptation and mitigation. Spending allocations were reviewed across all sectors.

190. **The data presented in this chapter need to be interpreted carefully for several reasons.** First, the identification of climate-relevant expenditure included two activities (Science and Technology Works and Hurricane Preparedness), jointly accounting for BZD 0.2 million, for which budgetary users did not indicate if they were climate change informed.[70] Second, the costs of climate change-relevant initiatives attributed to the different activities are likely significantly overstated. This is because the expenditure identification forms circulated by the finance ministry to the budget users only permitted the full attribution of costs, even in cases where programs were not designed primarily to address climate change. Third, the climate-relevant expenditure identification distinguished between the different climate change objectives (that is, adaptation, biodiversity, desertification, mitigation). However, the information provided by the finance ministry only indicated whether an activity is climate relevant rather than what the objective was. Therefore, World Bank staff identified expenditures based on their knowledge of activities that might not fully align with the government's interpretation of climate relevance. Finally, this analysis was based on quantitative data only, that is, financial amounts attributed to activities. No qualitative information was available to complement this quantitative analysis, for instance, about the effectiveness of interventions. The lack of qualitative information hindered the analysis of if and how the government's spending allocations for climate change contributed to achieving climate change policies and programs at the output and outcome levels. Climate change budget tagging is an emerging practice, and many countries are still in the early stages of linking inputs with program and performance objectives for climate change. It is expected that as climate tagging becomes institutionalized, countries can produce more substantive information on climate change achievements.

191. **Most climate-related activities funded and implemented by the government in FY2021/22 originated in the NCCPSAP, indicating that the strategy provides a valuable basis for planning, even past its end date.** Of the 22 identified climate-related activities, 13 had a specific reference to strategies or activities of the NCCPSAP. The remaining nine related to sectors the NCCPSAP prioritized, and many also have objectives related to climate change but are not among specific activities foreseen by that document.[71] However, no ministry or agency indicated they implemented activities that the NCCPSAP identifies as advancing human health, energy, or solid waste management. This may be because they were completed in previous years, which cannot be concluded with certainty, as no NCCPSAP progress reports are available, or that the GoB decided to table them in the future.

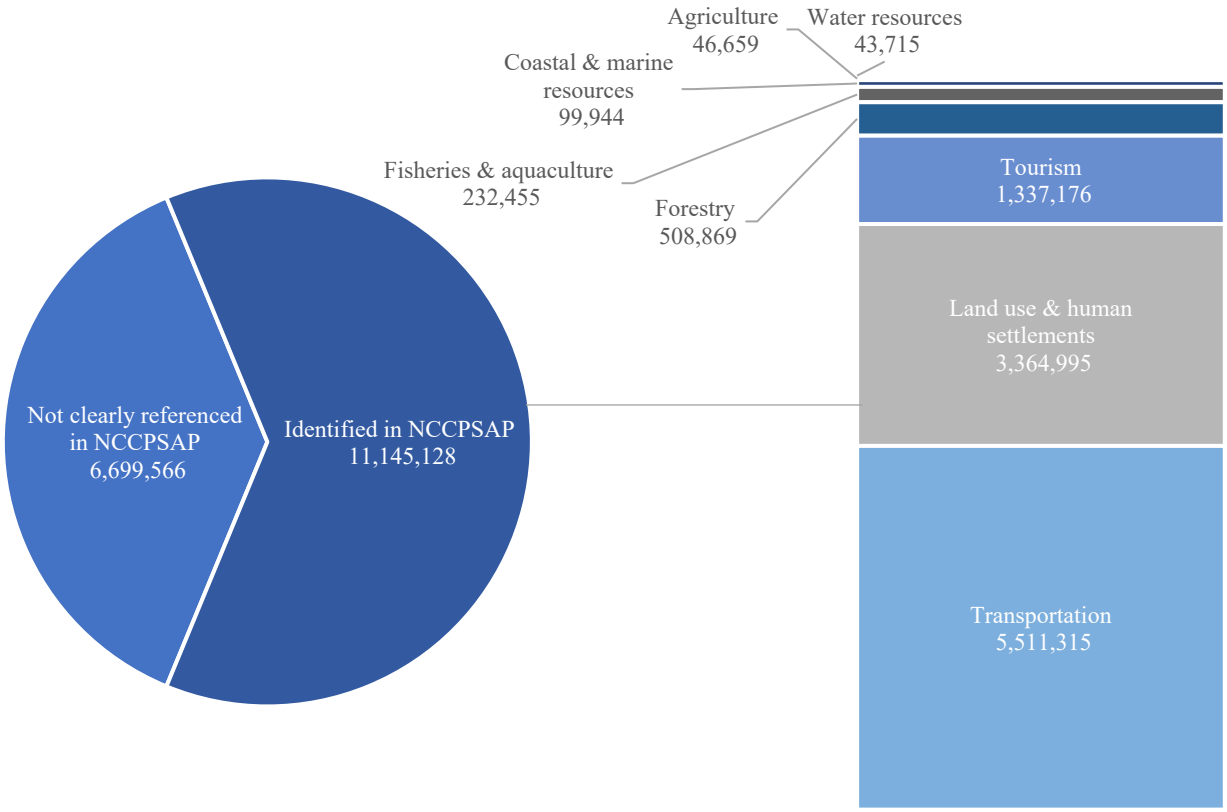
192. **In FY2021/22, the government prioritized NCCPSAP activities from two domains: transportation and land use and human settlements.** The Climate Vulnerability Reduction Program of the Ministry of Works, dealing with constructing and maintaining inland waterways and drains, received BZD 5.5 million

[70] Budgetary users were requested to select 'X' if activity was climate related or '0' if not climate related. These two activities did not have any tags, based on the information shared by the MoF.

[71] For instance, three tagged activities that have received funding in FY2021/22 relate to the NCCPSAP priority area of solid waste management but are not listed in the document as specific activities the Government needs to implement. Such activities are not included in the total of 13.

or 30.9 percent of all climate change-related funding. Similarly, three activities the NCCPSAP mentions under its priority sector land use and human settlements (land administration and two activities under the Rural Water Supply and Sanitation Project) received BZD 3.3 million or 19 percent of total climate change-related funding jointly. Activities referenced in the NCCSPAP accounted for BZD 11.1 million (62.5 percent) of all climate-related expenditures funded by the government in FY2021/22, as shown below in Figure 55.

**Figure 55. Government climate change-related funding in FY2021/22 by NCCPSAP sectors**




*Source:* World Bank staff estimates based on MoF data and NCCPSAP.

193. **Both climate change mitigation and adaptation to climate change are perceived as high-priority objectives in the combat against climate change.** The review demonstrated that around BZD 7.9 million was incurred by the GoB in FY2021/22 for expenditures aimed at climate change mitigation, while the allocation that targeted adaptation to climate change was estimated at BZD 7.8 million. On the other hand, biodiversity and de-desertification are perceived as less pertinent, having been allocated considerably smaller amounts of BZD 1.2 million and BZD 1 million, respectively. Their respective shares are presented in Figure 57. However, the Updated NDC envisaged more resources allocated to climate change mitigation than adaptation (see Figure 56).

**Figure 56. Planned distribution of resources for climate change adaptation and mitigation in Updated NDC**

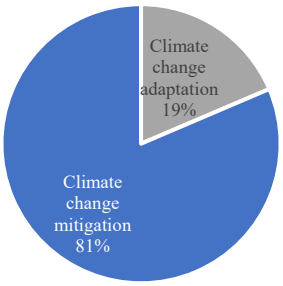
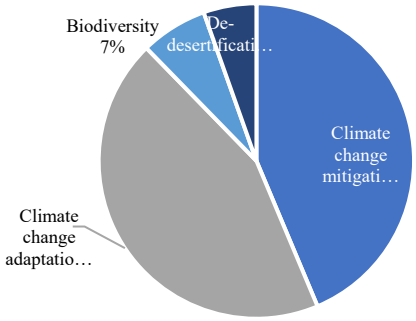



**Figure 57. Allocation of resources for climate change adaptation, mitigation, biodiversity, and de-desertification in the approved budget for FY21/22**




*Source*: World Bank staff estimates based on MoF data.

194. **Climate change adaptation is a high priority in Belize's Updated NDC due to the country's vulnerability to natural hazards; as a result, the allocations to adaptation are relatively high, even if not fully aligned with adaptation sector priorities.** In FY2021/22, the government allocated almost half of the climate-related expenditures to adaptation. This reflects the high importance of adaptation activities. Based on the Updated NDC, agriculture, land use and human settlements, and coastal and marine resources were identified as critical sectors for climate change adaptation (see Figure 58). However, the review of resource allocations for climate change adaptation shows that the sector of water resources received the highest budget allocations, followed by land use and human settlements (see Figure 59).

**Figure 58. Planned distribution of resources for climate change adaptation in Updated NDC**

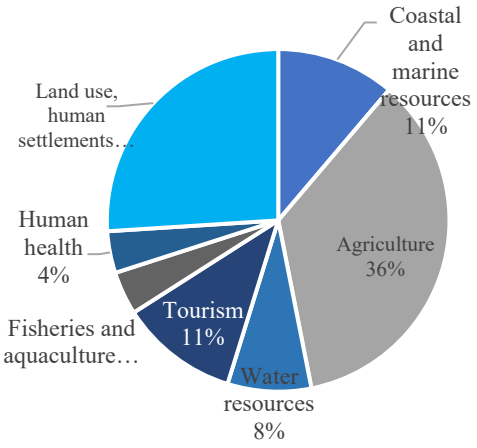
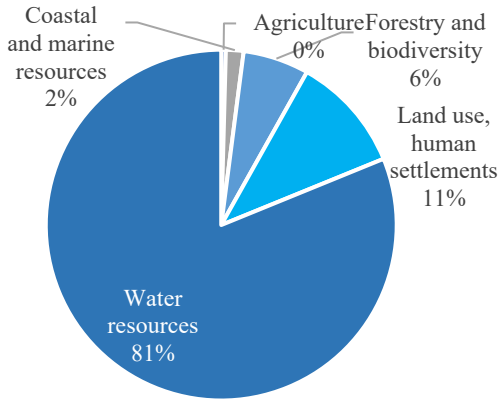



**Figure 59. Allocation of resources for climate change adaptation in the approved budget for FY21/22**




*Source:* World Bank staff estimates based on MoF data and Updated NDC.

195. **The resource allocations for climate change mitigation in FY2021/22 were at the same levels as for adaptation.** The Updated NDC prioritized the energy sector, followed by equal distribution of resources for waste management and land use and forestry (see Figure 60). However, a substantial portion of climate change mitigation resource allocations focused on waste management. None of the

identified climate change mitigation relevant programs were linked to the energy sector, prioritized by NDC. Land use and forestry received almost the same proportion of resources as planned in the Updated NDC (see Figure 61).

**Figure 60. Planned distribution of resources for climate change mitigation in Updated NDC**

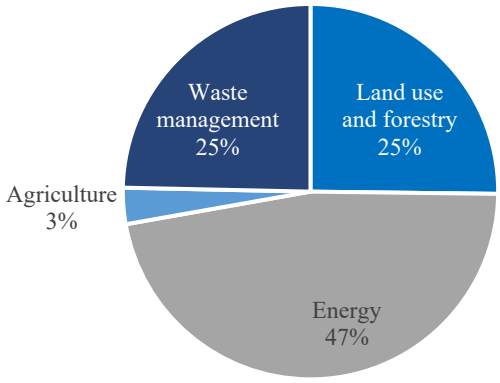
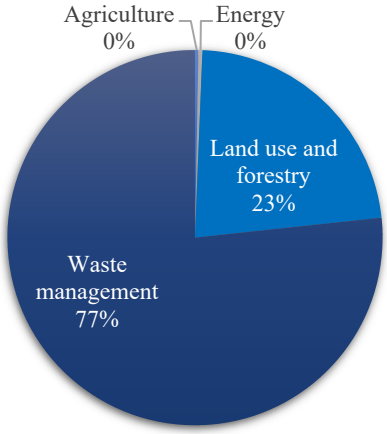



**Figure 61. Allocation of resources for climate change mitigation in the approved budget for FY2021/22**




*Source*: World Bank staff estimates based on MoF data and Updated NDC.

196. **The identification of climate-relevant expenditure highlighted that Belize spends a portion of its budget on initiatives aiming to combat climate change; however, the level of spending is below the NDC spending targets.** In FY2021/22, the total cost of these climate-relevant activities covered by the budget amounted to over BZD 17.8 million, representing around 1.5 percent of total expenditure. The level of spending incurred due to climate change is below the level necessary to fund the current NDC targets of Belize. While it may be like the level initially outlined in the NCCPSAP (assuming the remaining seven sectors would spend almost twice what the four costed do), the estimates from 2021 reflecting the new NDC targets send a different message, namely that, on average, BZD 30.8 million would be needed each year. Assuming the latest estimates are accurate, government funding for climate change fell short by BZD 12 million (39 percent) in 2021/22, creating fiscal pressure in years to come.

197. **While most climate change-related expenditures were funded through external sources—BZD 8.3 million or 47 percent of all climate change-relevant expenditures—Belize also spent around BZD 9.5 million of its own public funds for the same purpose.** Of the latter amount, BZD 3 million was spent to cover recurrent climate change-related expenditures and BZD 6.5 million to fund domestically financed capital expenditures, the proportions of which are depicted in Figure 62. Putting these in proportion with the total expenditure spent on each category reveals that a minor portion of capital expenditure is related to the impacts of climate change. Climate change-relevant expenditures comprise 8.2 percent of all domestically financed capital expenditures and 4.3 percent of all domestically funded expenditures. This percentage is even lower in the case of recurrent expenditures—around 0.3 percent, as depicted in Figure 63.

**Figure 62. Climate change-relevant expenditures in FY2021/22 disaggregated by expenditure category**

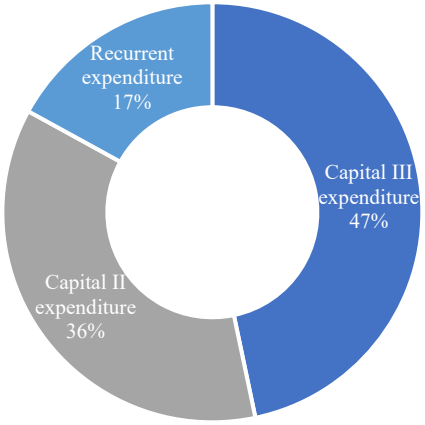
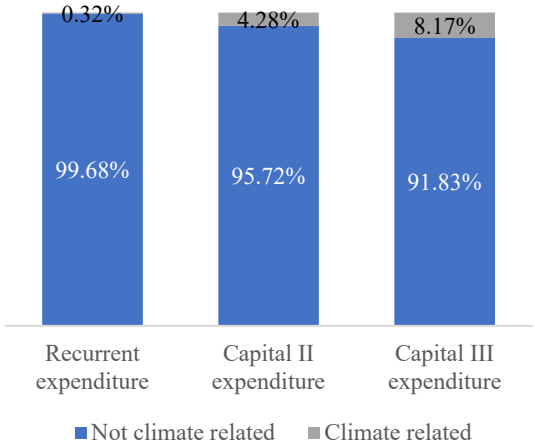


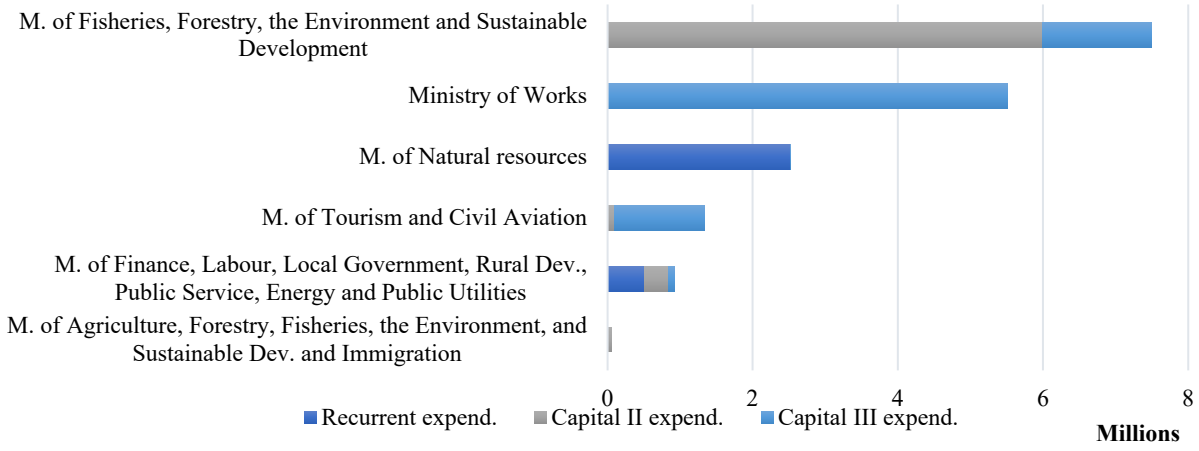

**Figure 63. Climate change-relevant expenditures in FY2021/22 as a percentage of expenditure category**




*Source:* MoF reports.

198. **Two ministries incurred most of this expenditure, the Ministry of Fisheries and the Ministry of Works, jointly accounting for 72.1 percent of all climate-relevant expenditures**. The remaining expenditures were incurred by the Ministry of Natural Resources; the Ministry of Tourism and Civil Aviation; the Ministry of Finance, Labor, Local Government, Rural Development, Public Service, Energy, and Public Utilities; and the Ministry of Agriculture, Forestry, Fisheries, the Environment, and Sustainable Development and Immigration. This is in line with the NCCPSAP, which foresaw that climate change-related activities would be implemented under the leadership of ministries responsible for forestry, fisheries, agriculture, water resources, land, rural development, health, energy, tourism, and transportation. The corresponding amounts and their breakdown by major expenditure category are provided in Figure 64.

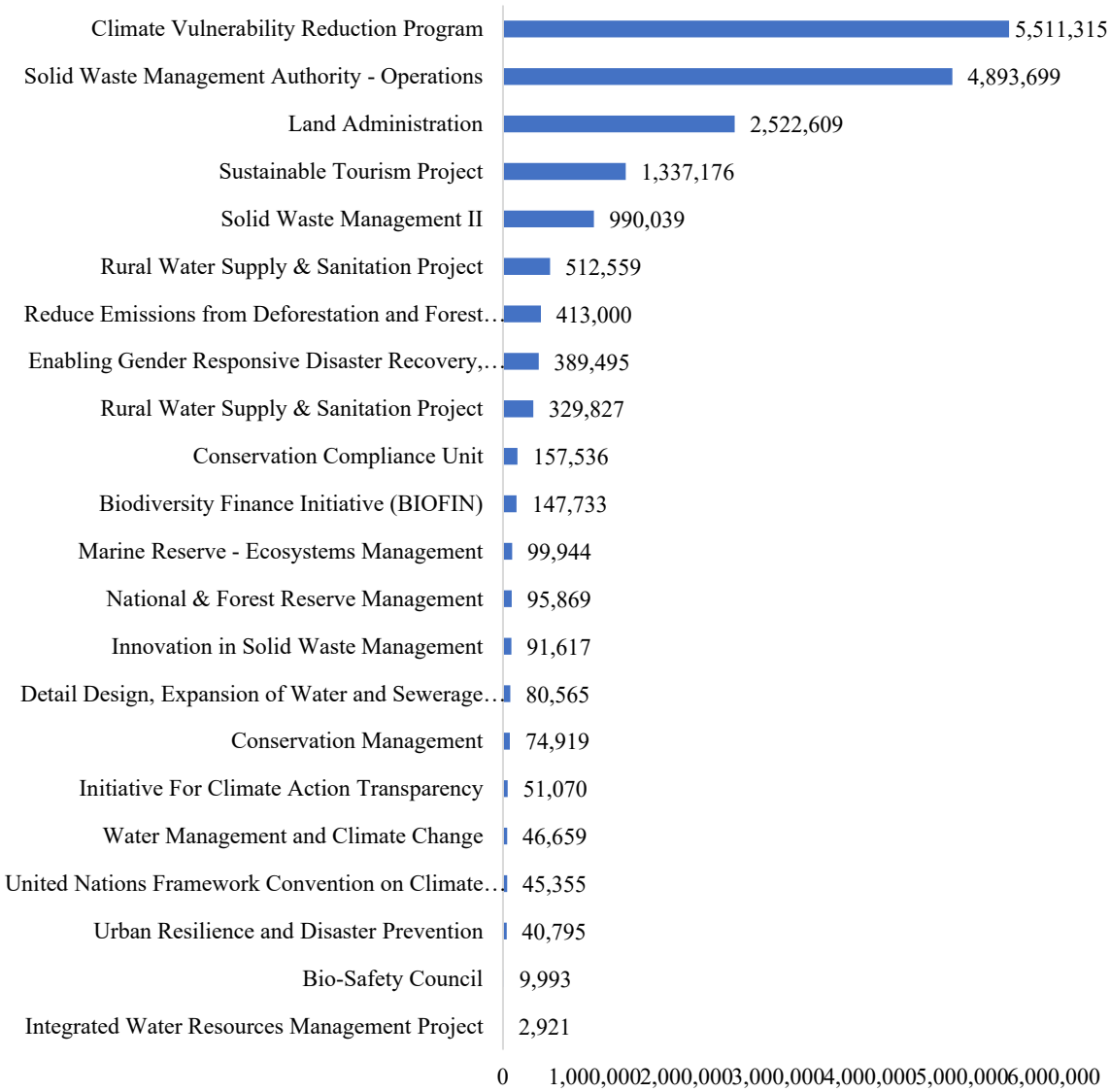
**Figure 64. Total climate change-relevant expenditure incurred by different ministries in FY2021/22**




*Source:* MoF reports.

199. **These six ministries administer 12 programs implementing climate change-relevant activities**. However, compared to 188 programs listed in the budget, only some incorporate the issue of climate change in their mandate. Across all ministries and offices and their programs, 22 activities were identified as either entirely climate change-focused or had a climate change-relevant component. As presented in Figure 65, most funds spent aimed at reducing vulnerability to climate change and management of solid waste, jointly accounting for BZD 11.5 million or 64 percent of funds spent in FY2021/22.

**Figure 65. List of implemented activities with a climate change component**




*Source*: MoF reports.

### 5.3 Conclusions and recommendations

200. **Clear identification of climate change policy goals in various policy documents is Belize's strong point in addressing climate change impacts; however, the national climate change policy needs an update.** An updated list of NCCPSAP priorities, responsible agencies, strategies, and activities, ideally

accompanied by cost estimates, would help Belize ensure that those preparing, adopting, implementing, and reporting on the budget can focus on the agreed priorities. A clear policy direction embodied in a strategic document to guide budgeting improves focus and effectiveness and potentially increases government spending efficiency. Without it, parochial ministry and agency interests may overrule government priorities and efficient resource allocation.

201. **Belize's Updated NDC provides a reasonable basis for climate change adaptation and mitigation sector priorities, including funding needs; however, budget allocations need to be better aligned with identified priorities unless alternative funding from the private sector is available and clearly identified.** For example, forestry and biodiversity are sectoral priorities for climate change adaptation, yet the NDC does not estimate the required funds. Although tourism is one of the priority sectors for climate change adaptation, in the FY2021/22, no funds were allocated to climate-relevant activities in that sector. No dedicated climate-relevant activities were identified in the housing sector either, although evidence demonstrated how vulnerable this sector is to climate change. No climate-relevant activities were funded in the energy sector either, which the Updated NDC for climate change mitigation recognized as the sector requiring most funding. On the other hand, despite of not being a key sector for climate change adaptation, water resources received almost 75 percent of all climate change adaptation allocations. To conclude, budget allocations seem much closer aligned with the priorities of the NCCPSAP, which is now outdated. Going forward, a review is needed of the most up-to-date policy on climate change adaptation and mitigation and identifying to what extent the resource allocation matched the agreed priorities.

202. **If Belize wants to get a better understanding of climate spending priorities and gaps, it could introduce identifying climate change-relevant expenditures as part of its strategic planning and budgeting processes.** The up-to-date list of sectoral priorities for climate change adaptation and mitigation would serve as a basis for this. Updated information on climate change objectives strengthens the link between budgeting and national climate change policies and strategies. The finance ministry could request through a budget circular that line ministries identify and measure resources for climate change adaptation and mitigation when they submit their budget proposals. The finance ministry would then consolidate the information, allowing the country to monitor more efficiently how much it spends on individual national and international climate change obligations and goals and if the spending is aligned with identified priorities. The information generated would need to be tailored to the specific needs of Belize, trying to mobilize additional funding for climate change. Publishing information on climate spending would promote transparency, engagement, and debate on climate policy.

203. **Because Belize implements program and performance-informed budgeting, this provides a sound basis for identifying climate-relevant expenditures in addition to conducting expenditure reviews.** Budgets using program information are better suited for incorporating climate-oriented objectives than those limited to administrative classification that cannot effectively distinguish resources allocated to specific services. Line ministries and offices could refer to climate change objectives in their program and performance reports prepared for budget purposes. More specifically, this information could be included in the section about strategies and activities of each program alongside its key performance indicators (outputs produced and outcomes achieved) for existing and proposed new programs. This would allow Belize to collect information not only on program spending allocations but also on program effectiveness. Alternatively, or in addition, Belize could consider undertaking periodic expenditure reviews to test the alignment of plans and budget with climate policy goals and impact on climate outcomes.

# CHAPTER 6. EDUCATION EXPENDITURES

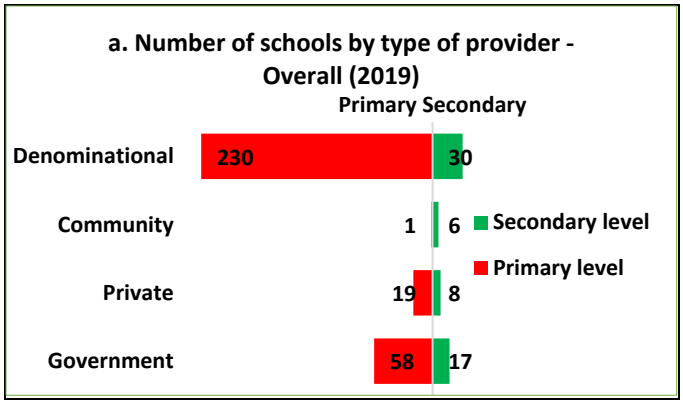
204. **This chapter examines Belize's public expenditures on education.** It provides an overview of the education system, including its structure, governance, and sources of financing. It explores accountability and value for money from public expenditures, their efficiency and effectiveness, as well as the equity aspects of public spending and outcomes in education. Based on this analysis, the chapter offers insights into the challenges and opportunities in improving the efficiency, effectiveness, and equity of public expenditures on education in Belize.

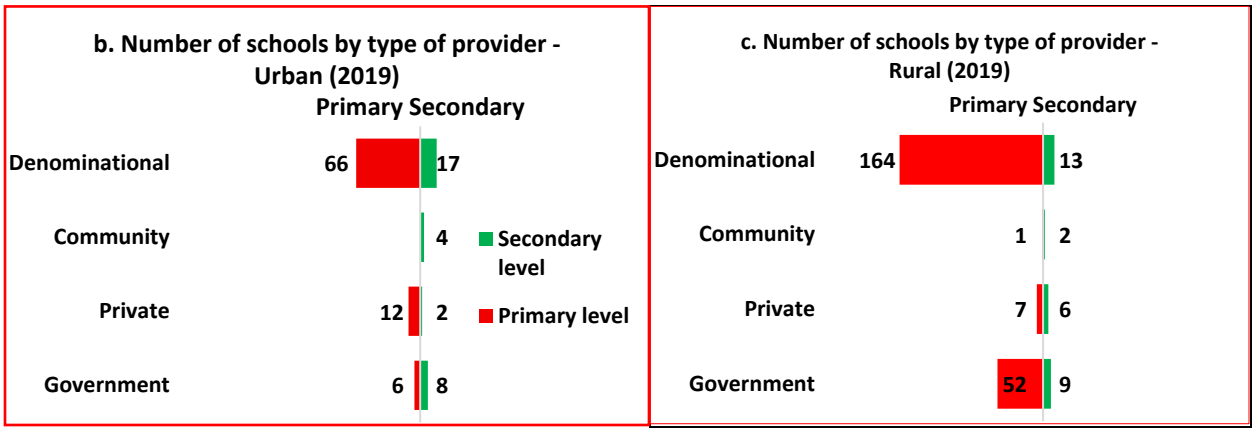
## 6.1 Structure and governance of Belize education system

205. **Belize's education sector functions in a political economy that undercuts accountability for results.** Though the government pays most of the bill for education, it is caught between two powerful players—organized groups such as the teachers' union and the churches reluctant to hold recipients of public funding accountable for results. The structure by the nominal ages of students is presented in Annex 6.

206. **Most of the schools in urban and rural areas are owned by churches and provide instruction in English.** Government, private owners, the community, and denominational owners manage the nation's schools. Denominational schools are under the jurisdiction of 21 different churches, listed in Annex 7. The Roman Catholic Church dominates all denominations and all other categories of providers at all levels of education in terms of the number of schools. English, the country's official language, is the primary language of instruction in the schools. Students are expected to be fluent in English by the end of primary school, but for many children entering school, English is not their mother tongue. Figure 66 shows the distributions of schools among the four owners by level of education, overall and by location (urban or rural).

**Figure 66. Schools by type of provider**



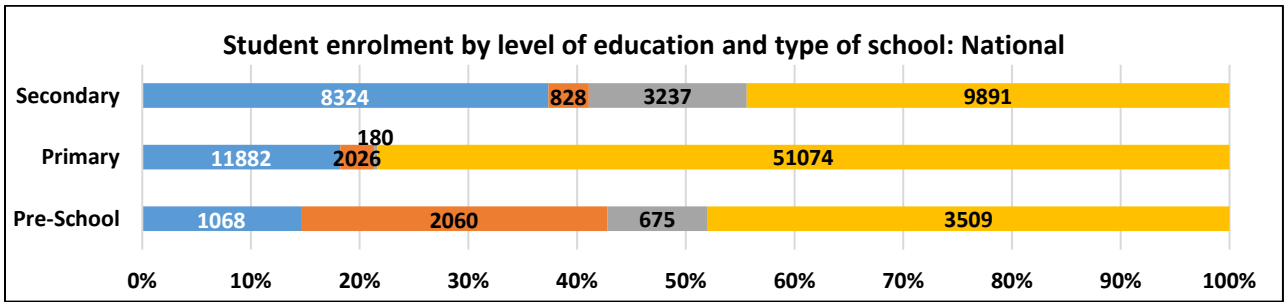



*Source:* Belize Educational Management Information System (EMIS) for 2019–2020.

207. **The intersection between a school's management category and its public funding category (government-funded, government-aided, and specially assisted schools) is messy.** A few privately managed schools receive government transfers as 'specially assisted' schools. Although most denominational schools are government-aided, some are only privately funded, including all Mennonite primary[72] and secondary schools and a few other schools under the management of small churches. The analysis in this section focuses on schools that receive public funding. However, most of the tables in the excellent annual *Abstract of Education Statistics* are by management, not by public funding, category.

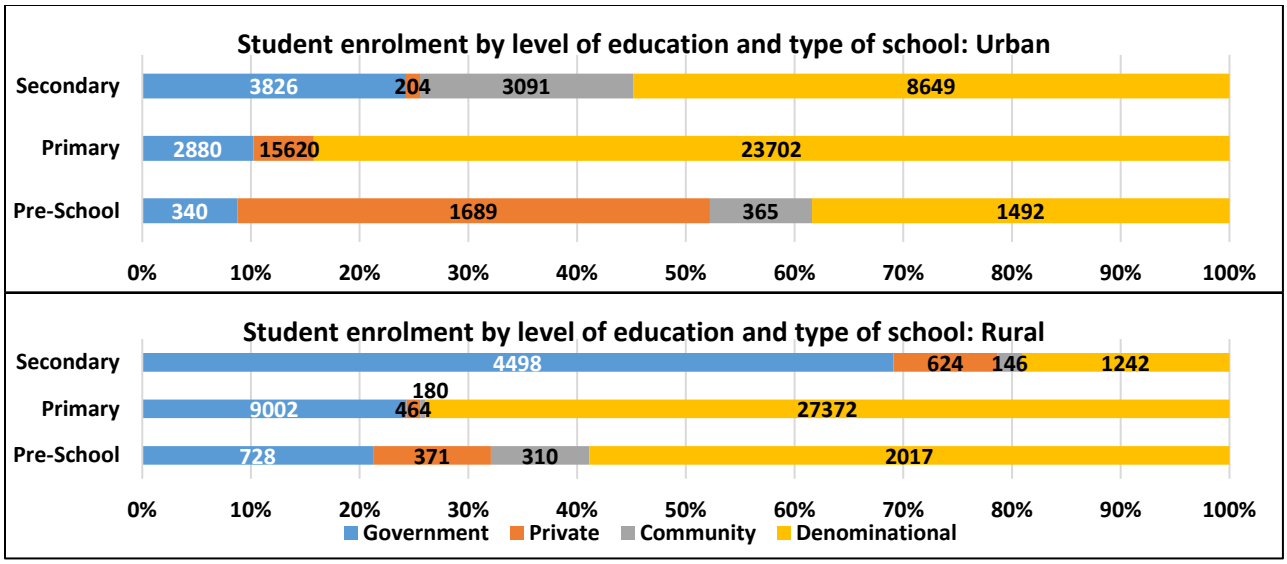
208. **Church-based schools dominate overall enrolments at the preschool, primary, and secondary levels of education and generally in urban and rural areas** (see Figure 67).[73] Private schools dominate enrolments at the preschool level for urban areas, and government-funded schools dominate enrolments at the secondary level in rural areas.

**Figure 67. Enrolment by level of education and manager:[a] national and by urban/rural (2019)**




[72] The Pilgrim Fellowship Mennonite school in Belize is coded as government aided in the 2019–2020 EMIS for the primary schools.

[73] The total enrolled in all levels and types of education in 2019 was 106,689 students. Figure 67 excludes 2019 enrolments for Adult Continuing Education (ACE)—1,085 students; Institute for Technical and Vocational Education and Training (ITVET)—856 students; junior colleges—4,617 students; or the University of Belize—5,557 students.




*Source:* Belize EMIS for 2019–2020.
*Note:* a. At the primary level there is only one community school in a rural area, with an enrolment of 180 students.

## 6.2 Sources of financing for education

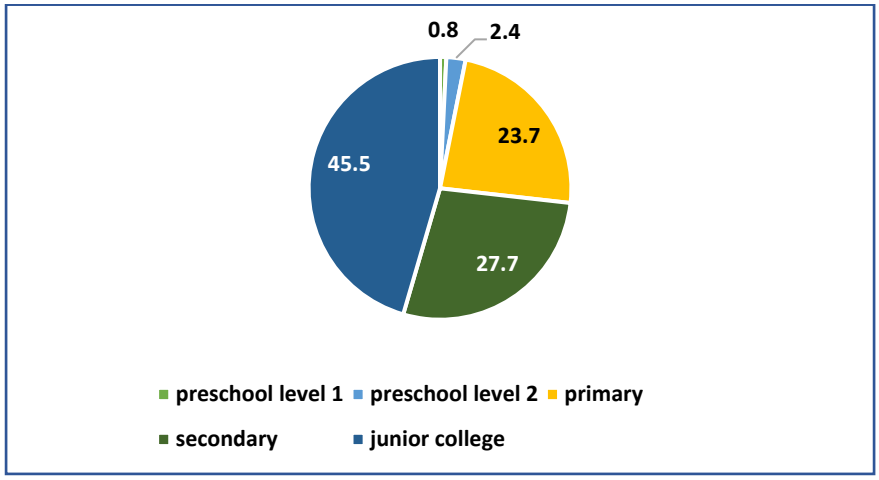
209. **Government, households, and donors fund education.** Although many schools are under the jurisdiction of churches, churches seem to rely on government funding and school fees paid by households. They do not seem to fund the schools themselves in any significant way.

210. **Household expenditures can only be approximately estimated.** Household expenditures should be estimated from household expenditure surveys. The 2018 household budget survey of the Statistical Institute of Belize (SIB) included excellent questions about household expenditures for education by level of education,[74] but as noted earlier, despite efforts to obtain these data, they were not available in time for this analysis. A 'workaround' to get some approximate estimate of household costs had to be used. In 2022, the Policy, Planning, Research and Evaluation Unit (PPRE) of the MoECST designed and conducted a survey of the fees charged by school, classified by the school's funding source (government-funded, government-aided, and specially assisted) and education level. School fees are the lion's share of household education expenditures. Even government schools charge fees. The MoECST calculated the school fees paid by households by level of education and the school's funding source, using the enrolment within each cell to estimate households' expenditures. These data are for the 2021–2022 school year. It is not known whether schools changed their fee structures between the 2019–2020 reference school year and 2021–2022. Their fees were assumed to be broadly the same.

211. **Data from the fee survey indicate that households support education in this rank order of total household expenditures: junior college > secondary > primary > preschool level 2 > preschool level 1.** See Figure 68.

[74] The household questionnaire determined expenditures for tuition (fees), exam fees, textbooks, tutoring and extracurricular activities, and boarding. The individual questionnaire measured expenditures for uniforms.

**Figure 68. Percentage of household expenditures by level of education**




*Source:* MoECST's PPRE 2022 survey of Belize schools at all levels for 2021–2022 fees. Data on MoECST's actual textbook and exam fee revenues for 2019 are from the MoF annual *Approved Estimates of Revenue and Expenditures* for FY2021.

212. Though the MoECST provides free textbooks for primary students, secondary and tertiary students buy their books. The MoF annual budgets list MoECST revenues from the sale of textbooks and Caribbean Examinations Council (CXC) exam fees, and these constitute household costs that were added to the school fees that households pay to obtain household expenditure estimates. Household education expenditures on uniforms, tutoring, and boarding and government transfers to cover the fees for students from poor households are omitted. It is not known to what extent overestimates and underestimates of household costs cancel each other out.

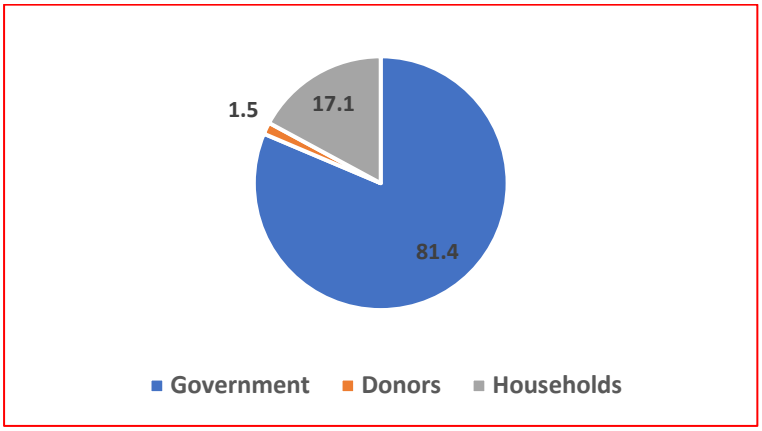
213. **Using this approximation of household expenditures, the GoB and donors, who put their money through government, accounted for 82.9 percent of total education expenditures in FY2019.** See Figure 69.

214. **Between FY2012 and FY2019, Government expenditures trended up and donor contributions went down.** Government expenditures increased about one-third between 2012 and 2019 against a 3.3 percent inflation rate between these two points in time.[75] Donor contributions varied from 1.8 to 3.1 percent of the total MoECST budget, depending on the year, but generally trended down.

215. **Relative to the OECD average, the Belizean shares of household versus state funding for pre-tertiary education are similar, but at the tertiary level the average Belize household pays more than twice as much as the average OECD household.** Figure 70 a and b compare public versus household shares of education expenditures by level of education for Belize and the OECD average.

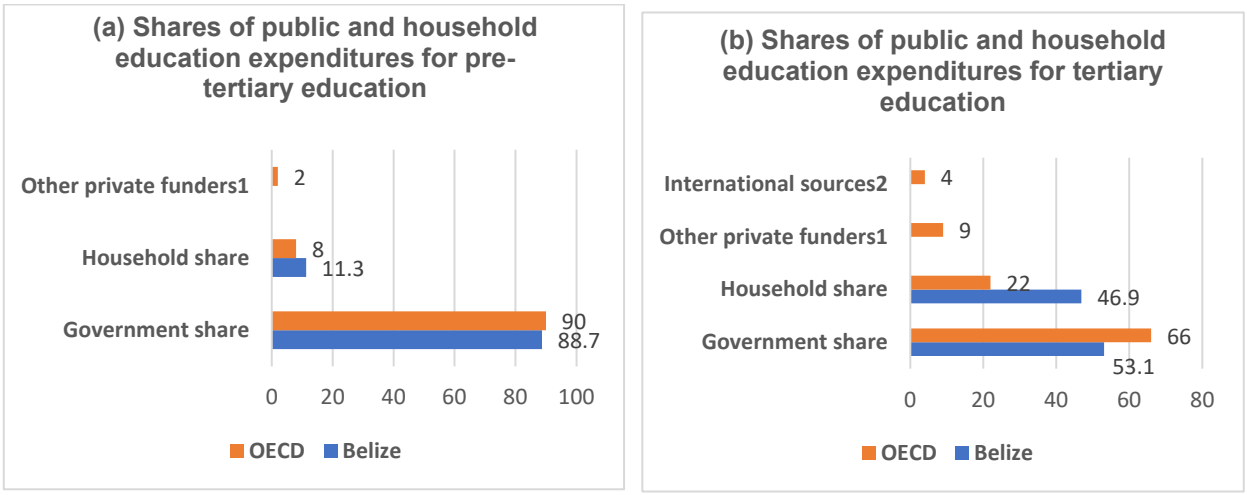
[75] World Bank data on consumer price indices for Belize for 2012 through 2019.

**Figure 69. Funder shares of total education expenditures in FY2019**




*Source:* MoECST's PPRE 2022 survey of 2021–2022 fees for all schools and actual MoECST expenditures for 2019 from the MoF annual *Approved Estimates of Revenue and Expenditures* for FY2021. Government expenditures exclude MoECST expenditures on functions not central to the delivery of education.
*Note:* **OECD country.** Bear in mind the caveats about using the OECD as a comparator and the basis for the estimates of Belizean household expenditures for education.

**Figure 70. Belize versus OECD**

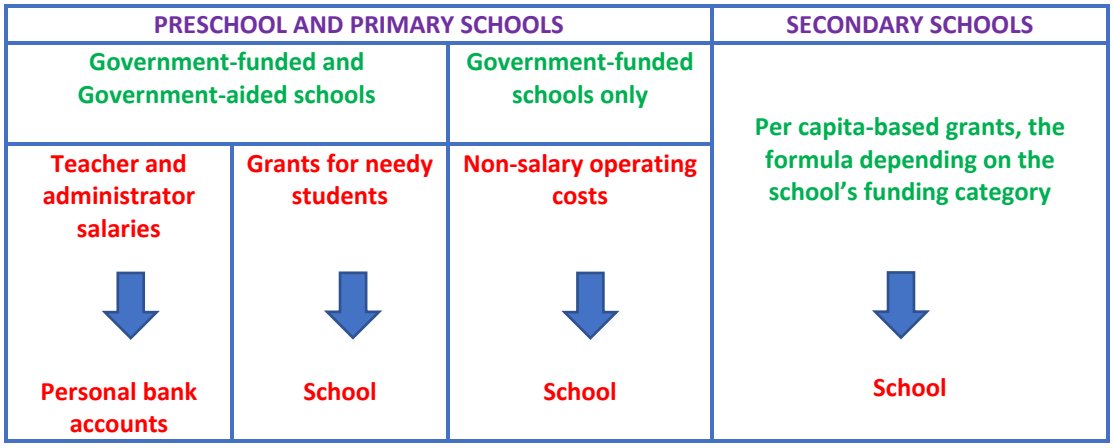



*Source:* Actual MoECST expenditures by level of education from the MoF annual *Approved Estimates of Revenue and Expenditures* for FY2021. OECD *Education at a Glance: 2021.* Table C3.1, p.264.
*Note:* 1. 'Other private funders' include private businesses and nonprofit organizations such as religious organizations, charitable organizations, and business and labor associations.
2. 'International sources' are research grants or other funds from international sources paid directly to educational institutions.

216. **The flow of government funding to schools differs by level of education and the financing category of the school** (see Figure 71). For all publicly funded preschools and primary schools, government pays the salaries of teachers and school administrators directly to their bank accounts. Government also pays non-salary operating costs for government primary schools, and these funds go directly to the schools. At the secondary level, grants go directly to the schools. For all funded or aided preschools or primary schools, budget items such as subsidies for children from poor households to defray school fees

flow directly to the school. For secondary schools, such subsidies are subsumed in the per capita grants for schools.

**Figure 71. Flow of funds from government by type of expenditure, level of education, and school management**




*Source:* Belize MoECST finance officer communications.

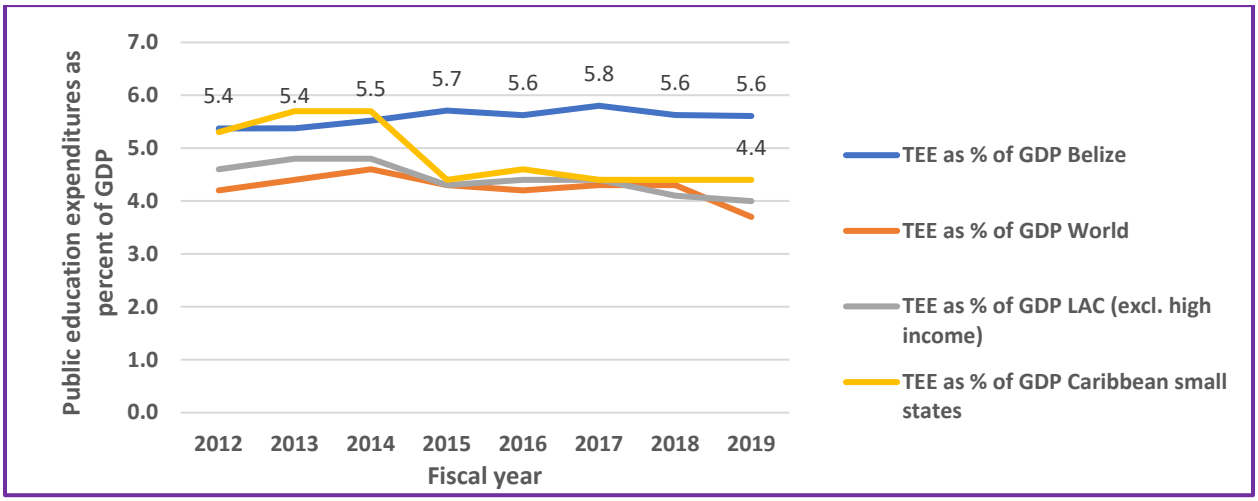
## 6.3 Public expenditures on education

217. This and subsequent sections use ratios, percents, and comparisons and do not speak to "adequacy" of financing (which is beyond the scope of this note). When comparisons reveal anomalous values, these anomalies only raise questions to be answered. Comparisons of data values are just about higher, lower, or the same. They do not measure "adequacy," however that may be defined. In any comparison of two data values, where $n_1$ is > than $n_2$, $n_1$ may be too high and $n_2$ too low; $n_1$ one may be about right and $n_2$ too low; $n_1$ one may be too high and $n_2$ about right; both $n_1$ and $n_2$ may be too high or too low but by different amounts. Comparisons of data values only raise red flags ("questions to answer") when the relationship between two or more values is anomalous relative to other comparators. Additional criteria must be used to judge whether a value is too high, too low, or adequate.

218. **Belize's public expenditures on education consume a high percent of GDP relative to comparators.** Figure 72 shows trends in Belize's public education expenditures as a percent of GDP relative to averages for the world, Latin America (exclusive of high-income countries), and the small Caribbean states (see Annex Table A.8.1 for the numbers). Using Belize's GDP figures rebased to 2014 reduced the gap between Belize and its comparators but did not eliminate it.

219. **Relative to all comparators, the share of Belize's GDP going to public education expenditures is an outlier.** Figure 72 shows that Belize's expenditures exceed the average costs for its best comparator—other small Caribbean states—by 1.2 percent of GDP. The government pays only teacher and administrator salaries for the grant-aided schools that dominate provision at all levels and a limited share of the per capita costs for tertiary education. Thesector's level of expenditures raises a question to be answered.

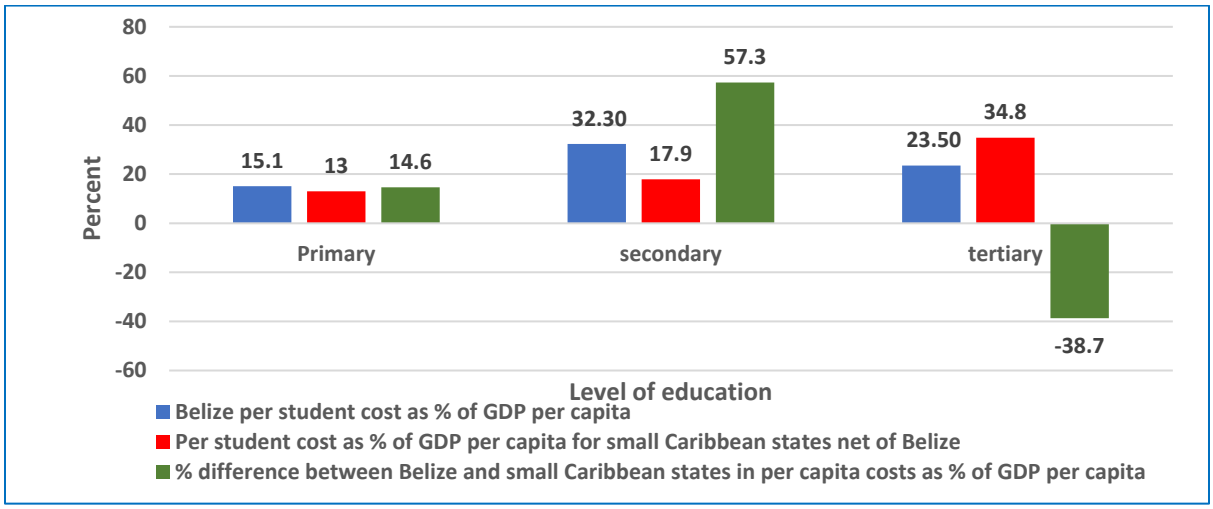
**Figure 72. Trends in public education expenditures as percent of GDP for Belize and comparators (Belize GDP rebased to 2014)**




*Source:* Annex Table A.8.1.
*Note:* Education costs for Belize exclude costs for MoECST units not directly involved in delivering education.

220. **Relative to Caribbean comparators, Belize per student costs as a percent of GDP per capita were higher for primary education, substantially higher for secondary education, and lower for tertiary education** (Figure 73). Per capita estimates by level of education control for differences between countries in the number of students at each level and significant variances in per capita expenditures by level.

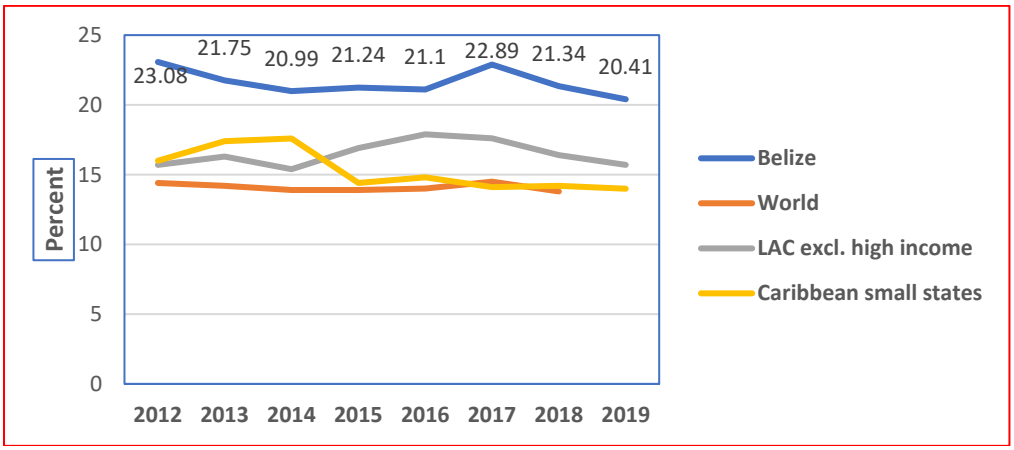
**Figure 73. Per student cost as percent of per capita GDP by level of education for Belize and small Caribbean states and percent differences between them (various years)**




*Source:* World Bank economic indicators. *Government per student expenditure on (primary) (secondary) (tertiary) education as percent of GDP per capita.* United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics (UIS). Data as of February 2020.
*Note:* GDP per capita for Belize was rebased to 2014. The dates for the most recent data varied substantially among countries, with some being very outdated. Even Belize data were from 2017.

221. **Belize's education sector consumes a high percent of TPE relative to comparators.** (See Figure 74.) In 2019, public costs for the Belize education sector as a percent of the country's TPE were about one-quarter higher than those for Latin America and the Caribbean, high-income countries excluded, and almost one-third higher than those for the world and small Caribbean states.

**Figure 74. Education expenditures as percent of TPE**




*Source:* Annex Table A.8.1

222. **A low ratio of TPE to GDP is not the explanation for education's high share of TPE.** Holding constant on the education bill, education costs will be a higher percent of TPE if Belize's TPE is a lower-than-average share of GDP. However, prior to the COVID-19 pandemic, Belize's TPE as a percent of GDP, rebased to 2014, is about the same as the average for two comparators: small Caribbean states and Latin America (excluding high income countries).

223. **In every budget year, almost 100 percent of government education expenditures are recurrent.** The Belize MoF distinguishes between Capital II (domestically funded) and Capital III (donor funded) capital expenditures. However, the IMF notes that this budget classification is not consistent with international standards. The two capital spending categories include items that should be classified as current spending—they do not create a capital asset.[76] In 2019 Capital II items for the MoECST were certainly a mix of recurrent and capital items, and most, if not all, Capital III expenditures were for recurrent items, such as training, training materials, workshops, and sector improvement programs.

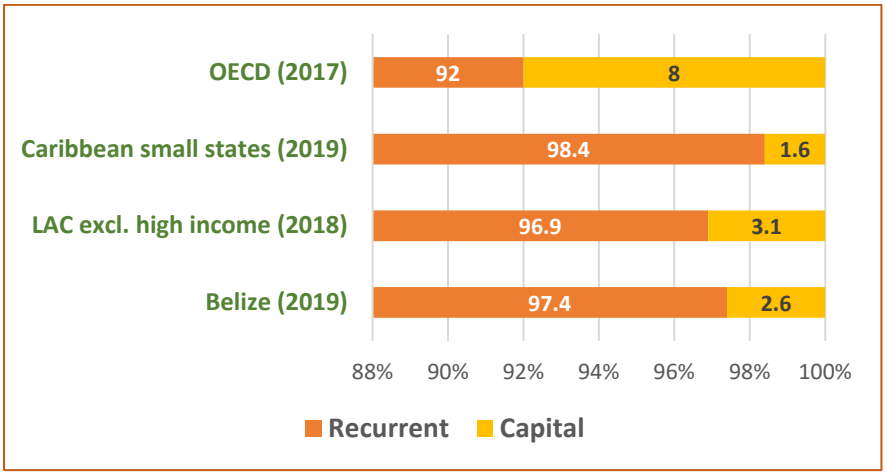
224. **The misclassification of Capital II and III expenditures indicates that almost 100 percent of the Belize MoECST budget is recurrent.** However, even if its 'capital' expenditures are reclassified as recurrent, the Belize shares are not much out of line relative to Latin America and the Caribbean and the Caribbean small states. (See Figure 75.) Even OECD countries run high recurrent shares.

225. **Like in all countries, most of Belize's recurrent education expenditures go to salaries.** Table 17 shows the big-ticket items by level of education. The GoB funds preschool/primary by paying teacher and administrator salaries for grant-aided schools and salaries and operating costs for Government schools. It pays school transportation for all pre-tertiary students and teachers. The GoB pays secondary and tertiary institutions through grants. The formula used to determine secondary school grants is based on the cost

[76] *Belize: Technical Assistance Report—Public Investment Management Assessment.* IMF Country Report No. 20/221. International Monetary Fund. Washington, DC. January 2020, p.31.

per student, the number of students, and allowances for students with academic and socioeconomic needs. The grant share going to salaries is estimated to vary between 80 and 100 percent, with schools that have low enrolments tending to spend more of their grant on salaries. Grants to tertiary institutions is for salaries only.

**Figure 75. Recurrent versus capital share of government education expenditures: Belize and comparators**




*Sources.* Belize: Actual MoECST expenditures by level of education from the MoF annual *Approved Estimates of Revenue and Expenditures* for FY2021. Latin America and the Caribbean and Caribbean small states: World Bank data series, using data from the UIS; OECD: OECD *Education at a Glance: 2020.* Table C6.1, page 346.

**Table 17. What government education expenditures buy by level of education (2019)**

| Preschool/primary | | Secondary | | Tertiary | |
|---|---|---|---|---|---|
| **Item** | **Percent of budget[a]** | **Item** | **Percent of budget[a]** | **Item** | **Percent of budget[a]** |
| Salaries | 92.4 | Grants | 95.5 | Scholarships and grants[d] | 31.4 |
| Operational expenses for Government schools | 0.6 | *Of which:* | | Institutional grants[e] | 22.4 |
| School transportation[b] | 5.5 | Individuals | 5.7 | University of Belize | 38.9 |
| Grants[c] | 1.4 | Organizations | 0.7 | | |
| | | GoB high schools | 37.3 | | |
| | | Grant-assisted high schools | 50.3 | | |
| | | Special assisted schools | 4.9 | | |
| | | Teacher replacement | 1.1 | | |

*Source:* Actual MoECST expenditures by level of education from the MoF annual *Approved Estimates of Revenue and Expenditures* for FY2021.

*Note:* a. Percent of recurrent budget for this level of education

b. Though listed in the preschool-primary budget, this expenditure apparently includes the costs of busing students and teachers at all pre-tertiary levels of education.

c. Individuals, organizations, and institutions are recipients of these grants. Grants to individuals are government payments to schools to cover the cost of school fees for needy students.

d. The MoF budget lists these under 'training'. They are probably transfers for students, channeled either to the student directly or to the school.

e. Grants to junior colleges.

226. **In 2019 (the last pre-pandemic year), primary education got the biggest share of the budget, followed by secondary and then tertiary education** (see Table 18). However, the data on per capita costs tell a different and anomalous story. The usual relationship between per capita costs by level is primary < secondary < tertiary. The Belize relationship is primary < tertiary < secondary. This inversion immediately raises red flags.

**Table 18. Total and per capita government funding shares by level of education (2019)**

| Level of education | Total BZD (2019) | Percent of total going to institutions (2019) | 2019 enrolments | 2019 per capita BZD |
|---|---|---|---|---|
| Preschool/primary | 128,760,247 | 53.2 | 72,294 | 1,781.1 |
| Secondary | 85,050,958 | 35.1 | 22,280 | 3,817.4 |
| Tertiary | 28,299,862 | 11.7 | 10,174 | 2,781.6 |
| Total | 242,111,067 | 100.0 | 104,748 | 2,311.0 |

*Source*: Actual MoECST expenditures by level of education from the MoF annual *Approved Estimates of Revenue and Expenditures* for FY2021.

227. **A hypothetical exercise illustrates the savings Belize could realize if its ratio of per student secondary to primary costs was more in line with comparators.** Table 19 displays the results of a hypothetical exercise, using OECD comparative data. Though this exercise uses ratios only, not dollars, the OECD is not an optimal comparator for Belize. The ratio of secondary to primary per student costs for the small Caribbean states is 1.38—higher than the OECD's ratio of 1.17 but much lower than Belize's ratio of 2.14, and this exercise could be rerun using the ratios for the Caribbean small states. However, the data for this set of countries were either outdated—in some cases, badly outdated—or missing.

**Table 19. Fiscal effects for Belize of using OECD ratios of secondary to primary per capita costs**

| Belize and OECD per capita costs by level of education | Preschool/ primary | Secondary | Tertiary |
|---|---|---|---|
| Belize per capita by level (BZD) 2019 | 1,781.1 | 3,817.4 | 2,781.6 |
| OECD per capita by level (US$[a]) 2018 | 9,550 | 11,192 | 11,653 |
| | | | |
| ***Per capita comparative ratios*** | ***Belize*** | ***OECD*** | |
| Ratio of secondary per capita to primary per capita | 2.14 | 1.17 | |
| Ratio of secondary per capita to tertiary per capita | 1.37 | 0.96 | |
| | | | |
| ***Belize savings using the OECD ratio of secondary to primary per capita costs*** | | | |
| Belize secondary per capita if Belize had the same ratio of secondary to primary per capita costs as OECD | | | 2,083.9 |
| Total cost in BZD of secondary education in 2019 | | | 85,050,958 |
| Total cost in BZD of secondary using ratio of OECD secondary as percent of primary | | | 46,428,902 |
| Difference between Belize actual secondary cost and cost if its secondary to primary per capita ratio were same as that of the OECD | | | 38,622,056 |
| Difference as percent of total education expenditures, net of non-education MoECST functions | | | 14.2 |
| | | | |
| ***Effects of using the OECD's ratio of secondary to primary per capita costs on MoECST's 'bite' of GDP and TPE*** | | | |

| | *Actual* | *OECD ratio* |
|---|---|---|
| 2019 total MoECST budget net of non-educational functions (BZD) | 271,065,469 | 232,443,413 |
| 2019 MoECST budget as percent of GDP (rebased to 2014) | 5.6 | 4.8 |
| 2019 MoECST budget as percent of TPE | 20.2 | 17.3 |

*Sources:* Belize: World Bank 2019 GDP rebased to 2014; 2019 population estimates from SIB, *Abstract of Statistics 2019*, page 15; actual MoECST expenditures by level of education from the MoF annual *Approved Estimates of Revenue and Expenditures* for FY2021; table 2. OECD: OECD *Education at a Glance: 2021.* Table C1.1, page 241.
*Note:* a. In equivalent US dollar converted using purchasing power parity for GDP, direct expenditure within educational institutions.

228. **If Belize had had the same ratio of secondary to primary per capita costs in 2019 as the OECD, it would have saved 0.8 percent of GDP and almost 3 percent of TPE.** The magnitude of these effects raises serious questions about how Belize is funding secondary education. The share of the Belize education sector of GDP and TPE would still exceed average figures for comparators (see figure 74 , but the gaps would be reduced. For example, education expenditures averaged 4.4 percent of GDP in 2019 for the Caribbean small states—1.2 percent lower than Belize's actual expenditures, using its 2019 GDP rebased to 2014. If Belize had had the OECD ratio of primary to secondary per capita costs, the difference between Belize and these states would have been reduced to 0.4 percent of GDP.

### 6.4 Accountability and value for money from public expenditures

229. **The MoECST has input standards that analyses indicate are enforced.** The sector regulates the main inputs which government finances—teacher and administrator salaries at all levels. At the secondary level, salaries enter the per capita calculations for grants to the schools.

230. **The schools' staffing numbers are generally in accord with the government's standards for financing school personnel costs.** For primary schools, the MoECST uses a staffing schedule to determine the number of teachers and administrators that government will finance. The schedule is based on enrolments. Government will not grant an operating license to a school with less than 30 students enrolled except in extreme cases. The schedule precludes one-teacher schools. If one or more grant-aided schools exist in a community, no additional school(s) are given grant-aided status until such school(s) reaches a minimum enrolment of 240 students. The Education Act, Chapter 36, Revised Edition 2003, seems to leave some input decisions at the discretion of the managing authority, but any change in the school's public financing requires an application whose particulars the MoECST verifies. An interview with school heads for secondary schools indicated that government funds this level of education in accord with the public financing formula. The formula has design problems, but the government finances the schools according to the formula's current design.

231. **The sector either does not measure or does not publicize measures of the performances of its schools.** A surprising share of the international studies of Belizean education stress the lack of accountability of schools to stakeholders for results.[77] Schools cannot be held accountable for their performance if it is unmeasured, or if measured, the results are not publicized. Belize measures minimally,

[77] For example: Näslund-Hadley, Alonzo, and Martin (2013); Shaffer (2020).

and the results are not public, leaving stakeholders in the dark about how the country's schools are performing. As a result, failing schools evade all consequences.

232. **Belize has excellent measures of school participation but less adequate measures of learning.** Like most countries, Belize seeks high rates of school participation and reasonable levels of learning. The Belize education statistics unit has excellent data on school enrolment by level and type of education and publishes these by district and for the nation in its *Annual Abstract of Education Statistics.* The abstract also publishes calculations of net and gross enrolment rates.

233. However, measures of learning are less adequate. The only national assessment before 2019 was the Primary School Examination (PSE), administered to Standard VI (grade 8) students. The PSE is a population-based assessment that measures students' learning in English, science, social studies, and mathematics in the last primary grade. It therefore measures the performance of each student, each school, and the overall system. Its administration at the conclusion of primary education nullifies its use diagnostically to identify and help struggling students. Since the PSE is Belize specific, its results cannot be compared with those for students in other nations. Belize has not participated in any international assessments of learning—for example, the Program for International Student Assessment (PISA), the Trends in International Mathematics and Science Study (TIMSS), the Progress in International Reading Literacy Study (PIRLS), the Early Grade Reading Assessment (EGRA), or the Early Grade Mathematics Assessment (EGMA).[78]

234. **Some recent efforts to improve the measures of learning are promising but are yet to fully bear fruit.** The *Belize Education Sector Strategy 2021–2025* describes the recent introduction of the Belize Diagnostic Achievement Test (BDAT), to be administered every year from Infant I to Standard VI. The objective is to create a culture and tools that identify struggling students to help get them back on track. Although an excellent initiative, this remains a work in progress. In 2019, more than 70 percent of Form 4 secondary students[79] sat the Caribbean Secondary Education Certificate (CSEC) examinations in English and mathematics,[80] but this exam does not measure the performance of individual Belize secondary schools or the secondary system's performance.[81] Belize students taking the CSEC exam constitute a

[78] These assessments are administered at different grades and ages and have different objectives. EGRA and EGMA measure students' reading and mathematics capacities early at grades 2 or 3. Since these assessments have an important diagnostic function, all children in the grade selected to administer the assessment should be tested. TIMSS measures the student's mastery of mathematics and science content at grades 4 and 8. PIRLS measures reading performance at grade 4. PISA, administered at age 15, is especially relevant for assessing the performance of students pursuing different educational tracks (academic or vocational). It focuses, not on specific content, but on the students' abilities to apply what they have learned in school to real-life problems—interpret texts, solve mathematical problems, or explain a phenomenon scientifically, using their knowledge and reasoning skills. TIMSS, PIRLS, and PISA normally sample schools and students within schools because the costs of measuring all students are too high for large education systems. Thus, their results yield statistically valid measures of the system's performance but not that of individual schools. However, the Belize school population is small. In 2019, 8,326 students were enrolled in Standard 2 (grade 4); 7,448 in Standard 6 (grade 8); and 5,317 in the third year of secondary (Form 3 and nominally those 15 years of age).

[79] In 2019, for urban areas, 79 percent sat the exam; for rural areas, 62 percent.

[80] The CXC administers the CSEC. The CSEC is considered equivalent to the Ordinary Level (O-Levels) examinations in the United Kingdom. Those taking the CSEC include students from Anguilla, Antigua and Barbuda, Barbados, Belize, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, and Turks and Caicos Islands.

[81] The MoECST should assess how well aligned the CSEC is with Belize's new competency-based curriculum. If the two are poorly aligned, the CSEC will not properly reflect the skills of Belize students who sit it.

biased sample of the pool of Belize secondary students. If the CSEC measures the CSEC test-taker's performance relative to the normal curve, as opposed to absolute standards, the curve is established by test-takers from all countries that participate in the CSEC.

235. **The results of enrolment and learning measures are not widely publicized.** The enrolment data are public, but no device such as a 'school report card' mailed to parents and prominently posted at the school seems to exist. Thus, these data probably do not enter the national discussion about school participation. Each year the Belize newspapers publish the names of the top-scoring students and their schools for the PSE. However, they do not publish information about the performance of the students by school and district. Though the MoECST has the detailed PSE results for each school and student, apparently it has been politically pressured not to publish them.

236. **There are no consequences for persistently failing schools.** Since none of the players who have a stake in the education sector's outcomes know how well the schools are performing, there is no pressure to act on persistently failing schools. Belizean and international researchers have commented on how little parents seem involved in the schools.[82] This is not surprising, given their lack of information about the performance of the schools that their children attend. If a poorly performing school, despite having been put 'on notice' and supported to help it improve, persists in failing,[83] the government must step in. In these situations, the school can be closed if its students can be appropriately dispersed to better-performing schools. If its location precludes closure, the school often goes into 'receivership' with a small SWAT team of seasoned school leaders and top teachers taking control of the school to get it on track.

### 6.5 Value for money from public expenditures: efficiency and effectiveness

237. **'Value for money' means using the least expensive mix of inputs to obtain the highest possible values of the sectoral outcomes sought.** The concepts of efficiency and effectiveness are not the same. A service or good may be efficiently produced but not effective. It may be effective, but not efficiently produced. For example, a teacher-training program may produce many graduates at a small cost, yielding an efficient cost-output ratio. However, if the classroom performances of these trained teachers fails to improve, the training is efficient but not effective. A high student/teacher ratio may be efficient but detrimental to student learning and thus ineffective.

**Efficiency**

238. **Aside from their dropout and rates, the *average* values for inputs to Belize schools seem relatively efficient nationally and for urban versus rural schools.** Government partially funds some private schools ('specially assisted'), but the schools of particular interest are those funded or aided by government: government, community, and denominational schools. Since most government education expenditures go to staff (teachers and administrators), this analysis focuses on input variables that measure the use of staff: student/teacher ratios, teacher/class ratios, and teacher/administrator ratios.

[82] Recently the MoECST consulted widely with parents about the new competency-based curriculum, an excellent step toward engaging parents in the schools.

[83] The school's geographic location (urban/rural) and the socioeconomic status of the school's catchment area affect participation rates and learning performance in ways not entirely in the school's control. In terms of learning outcomes, the issue is the 'value added' of a year of school, not absolute results on a test.[83]

The student/teacher ratios are the most critical. Two internal efficiency variables (dropout and repetition rates) are also assessed.

239. **The messiness of the intersection between the management category and the funding category for a school has implications both for efficiency and for its estimation.** A few private schools receive minor government funds. Though the government funds almost all denominational schools, some have not asked for or do not receive government aid. The 18 privately funded Mennonite primary schools and the five Mennonite secondary schools categorized as denominational pose the major problem. These schools constitute about 8 percent of the primary denominational schools and about one-sixth of the denominational secondary schools but much smaller shares of the enrolments at these two levels—13 of the Mennonite primary schools range from 4 to 55 students; the five Mennonite secondary schools have low enrolments that range from 2 to 21. Low enrolments tend to entail an inefficient use of resources. Since the government is not funding these schools, this is not a public fiscal concern. However, these schools tend to drag down the efficiency measures for the non-Mennonite denominational schools. For example, the minimum size for secondary denominational schools is two; this is for a Mennonite school.

240. **Management, not funding, has been used except in this section for calculation of all but the most critical fiscal variable: student/teacher ratios.** As noted earlier, statistics in the Belize *Abstract of Education Statistics* are usually disaggregated by management. Creating new databases by funding only from the EMIS databases and recalculating all statistics required time which was not available for this exercise. In the special calculation of student/teacher ratios, the primary and secondary Mennonite schools are categorized as private. For the other variables, Mennonite schools are bundled with denominational schools.

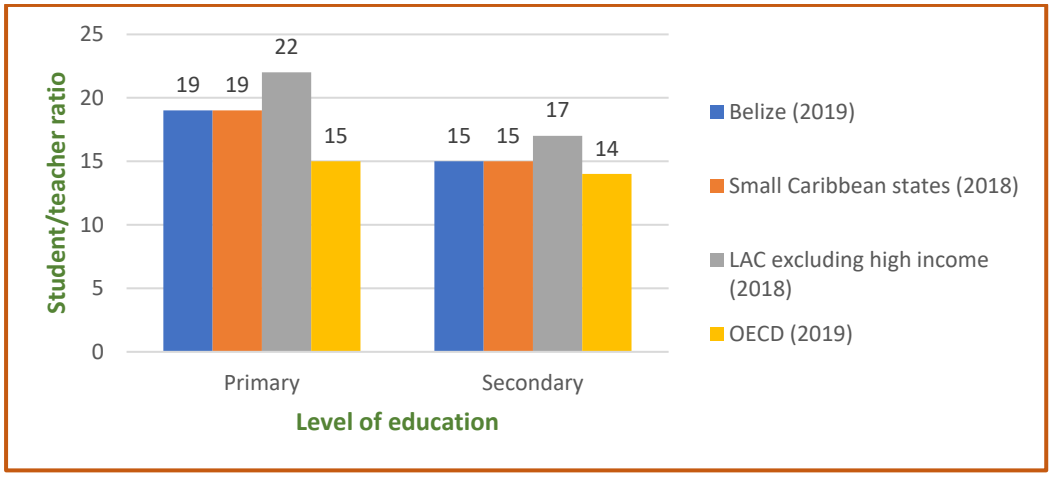
241. **The main 'takeaways' for the *average* values for all, urban and rural primary and secondary schools are these.**[84]

- The averages for inputs—the student/school, student/class, student/teacher, teacher/class, and teacher/administrator variables—show no glaring inefficiencies for urban or rural, primary, or secondary, schools.
- Student/teacher ratios heavily affect a system's efficiency. The ratios for Belize at the primary and secondary levels are in line with those of the Caribbean small states, slightly lower than Latin American countries (excluding high income states), and higher than the OECD (see Figure 76.)
- Generally, the average rural school uses resources as efficiently as the average urban school—a real feat in Belize's low-density areas.
- Government and denominational schools have similar average values for all input variables.
- Teacher/administrator ratios are acceptable for all types of schools. They are lower for primary than for secondary schools that tend to be larger and better able to use non-teaching staff more efficiently.

[84] For the detailed data, see appendix figures A.8.4, A.8.7, A.8.10, A.8.13, A.8.16, A.8.19, and A.8.22.

- The number of community schools is very small: one rural school at the primary level and six at the secondary level, four urban and two rural. A value for one of these schools unduly influences the average for this category of school.
- Private schools generally have smaller classes and lower student/teacher ratios. Since the government does not fund or only minimally funds this category of school, their less efficient use of teachers has little effect on public expenditures.
- The dropout rates for all primary schools, regardless of management, are low.
- At the secondary level, government schools have high dropout rates for both their urban and rural schools. Grant-aided and community secondary rural schools have high dropout rates.
- Repetition rates are relatively high for government and denominational rural primary schools and for government urban secondary schools, and relative to alternative ways to support struggling students. Repetition policies are not value added. The government pays twice for one year of schooling. Net of private school repeaters and using average primary and secondary per capita costs, the costs of repeaters were 4.5 percent of the MoECST's total budget in 2019–2020.[85]

**Figure 76. Comparators for student/teacher ratios by level of education**




*Sources:* Belize: EMIS databases for primary and secondary schools for 2019–2020. Caribbean small states and Latin America, excluding high-income countries, UIS in World Development Indicators (WDI) database. OECD: *2021 Education at a Glance,* table D2.2, page 355.

242. **Analyses of the *distribution* of schools for the input variables raise some red flags.** Minimum and maximum values and values at the first and the 75th quartiles for both the primary and secondary schools were assessed. The value for the first quartile indicates that 25 percent of the schools are less

[85] Although in its early implementation, the MoECST's competency-based curriculum (CBE) can ultimately reduce repetition and dropout rates. Students repeat only modules, not an entire year of schooling thus saving money. Since repetition tends to increase subsequent drop outs, reducing repeition rates is likely to reduce dropout rates. The CBE will take time to implement. It will take longer for such effects to manifest themselves.

than that value and 75 percent are greater. Thus, for the first variable (primary school size), 25 percent of government primary schools have 66 or fewer students, and 75 percent have more than 66 students. The value of the size of government schools at the 75th percentile is 319 students. This means that 75 percent of government schools have less than 319 students; 25 percent have values higher than 319.

243. **The main 'takeaways' for the distribution of values for primary and secondary schools are these.**[86]

**For the primary schools:**

(a) With a few exceptions, the minimum and first quartile values are less efficient for the school size, student/class, student/teacher, and teacher/administrator variables, regardless of management. For example, 25 percent of the schools enroll fewer than 100 students. The minimum student/teacher ratios are very low, but these suboptimal ratios may be unavoidable, given Belize's dispersed population.

(b) The teacher/class ratios at the minimum and 25th quartile values for primary schools are more efficient than for schools at the 75th quartile.

(c) The repetition values for government and denominational primary schools at the 75th quartile is worrisome: 25 percent of these two types of schools have repetition rates higher than 11.0 and 8.6 percent, respectively.

**For the secondary schools:**

(a) For the secondary level, the minimum values for the student/school, student/class, student/teacher, and teacher/administrator variables are very inefficient for community and grant-aided schools. The minimum values for government schools are more reasonable. However, the values for these variables at the 25th quartile are not bad for all schools receiving public funding.

(b) Government and denominational secondary schools at the 75th quartile have high dropout and repetition rates: 25 percent of government and denominational schools have dropout rates higher than 8.0 and 12.8 percent, respectively, and repetition rates higher than 11.3 and 8.4 percent, respectively. The maximum dropout rate of 43 percent for the denominational schools and the maximum repetition rate of 19 percent for the government schools are alarming.

**Effectiveness**

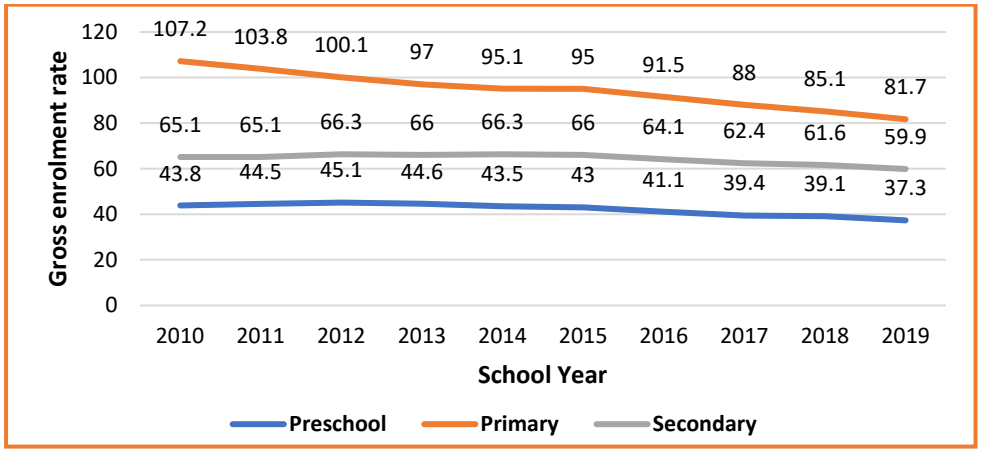
244. The 'value' part of 'value for money' refers to the system's performance on two important education objectives: high participation in school and acceptable levels of learning.

245. **Gross participation rates are declining at the levels of preschool, primary, and secondary education.** Figure 77 shows the trends in gross enrolment rates by level of education from 2010 to 2019.

[86] For the detailed data, see appendix figures A.8.5, A.8.8, A.8.11, A.8.14, A.8.17, and A.8.20for primary schools. See appendix figures A.8.6, A.8.9, A.8.12, A.8.15, A.8.18, and A.8.21 for secondary schools.

Preschool rates lost 6.5 percentage points; primary, 25.5 percentage points;[87] and secondary, 5.2 percentage points. The loss at primary is particularly concerning. It should be noted, however, that both gross and net enrolment rates depend on accurate census data. Belize's population data are rather outdated, and the MoECST does not trust them. Some, but probably not all, of the decline in enrolment rates may be an artifact of inaccurate estimates of school-age populations.

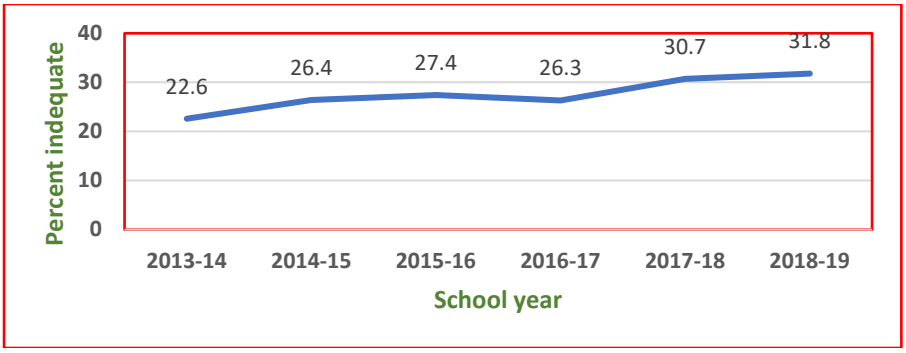
**Figure 77. Trends in gross enrolment rates by level of education (2010–2019)**




*Source:* MoECST, *Abstract of Education Statistics, 2015–2016* and *2019–2020,* table 2, page 2.

246. **By 2018–2019 almost one-third of the students averaged 'inadequate' across the four PSE subjects, an increase from 22.6 percent in 2013–2014.** Figure 78 shows the trend in the percent of students who averaged 'inadequate' across the English, mathematics, social science, and science PSE tests.

**Figure 78. Percent of PSE test-takers averaging 'inadequate' across four subjects**




*Source:* MoECST, *Abstract of Education Statistics 2014–2015, 2016–2017, and 2018–2019.* Table 36 or 37, page 56 or 57.

*Note:* Scores from the 2018–2019 school year are the last available. The PSE was canceled for the 2019–2020 school year because of the pandemic.

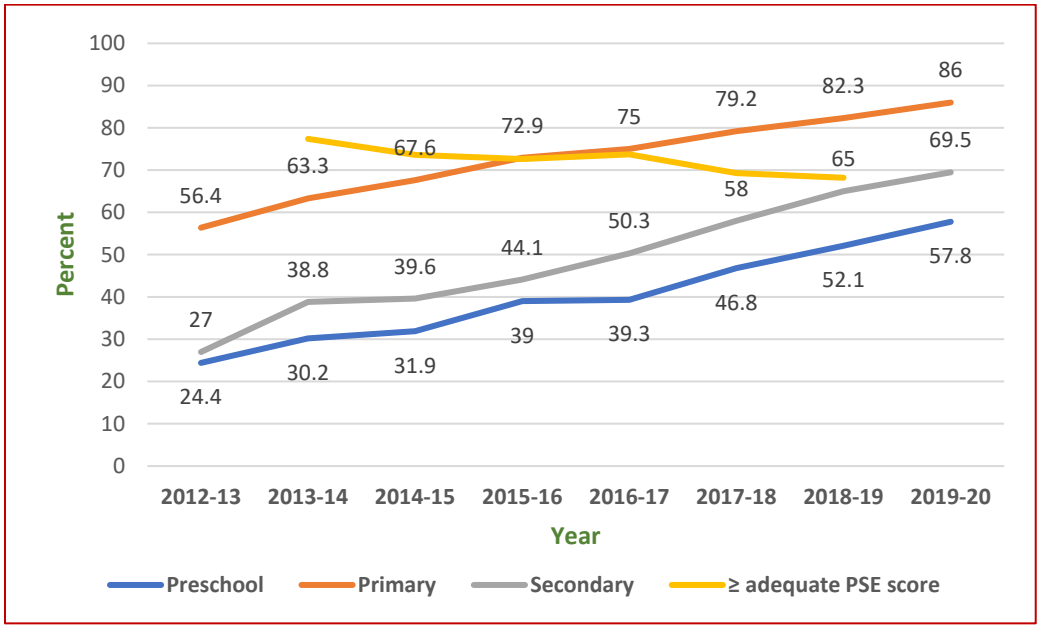
[87] The primary gross enrolment rates exceeded 100 percent in the 2010, 2011, and 2012 school years. Rates at these levels indicate early entry, repetition, or an actual age distribution of pupils that extends beyond the official school ages.

247. **Tougher assessment standards, a shift in the test-taking pool toward lower-achieving students, and less well-trained teachers were rejected as explanations for the decline in PSE scores.** Inefficient use of students' time in school remains a possible but untested hypothesis.

- **Scoring standards might have toughened across these six years**, but this does not seem to have happened.
- **The composition of those enrolled in Standard VI could have shifted to include larger proportions of students from disadvantaged homes who tend to score less well.** However, primary participation rates have declined, and those most apt to be unenrolled will be disproportionately from more disadvantaged homes. If anything, the composition of those taking the PSE should have shifted toward students of higher socio-economic status who tend to score better.
- **The skill composition of the teaching force could have declined.** The data, depicted in Figure 79, refute this hypothesis. For the period in which students' PSE scores declined, the percentage of trained teachers increased significantly at all levels: preschool, an increase from 24.4 to 57.8 percent trained; primary, an increase from 56.4 to 86 percent trained; and secondary, an increase from 27.0 to 69.5 percent trained. As the percentage of trained teachers climbed dramatically, the percentage of students scoring adequate or above on the PSE declined by almost 10 percentage points. Since the teacher salary scale is related to qualifications, the average cost of a teacher probably increased across this period. This implies that Belize is paying more for teachers and getting worse learning outcomes.
- **'Time on task' remains a hypothesis still to be tested.** "Time on task" has two components: the amount of class time spent on instruction and how that instructional time is used. Belize's mandated instructional hours exceed the average instructional time by level of education for the OECD countries (Figure 80). However, several studies of Belize education raise questions about incursions into the instructional time available for the core subjects (English, mathematics, science, and the social sciences). In the context of its consultancy to strengthen system leadership, MindBloom Consulting reported that "Stakeholders indicated that, while students are in schools, the number of days that the national curriculum is delivered is considerably less due to school-based activities and special events…. [S]takeholders [suggested] that the actual number of days that students are actively engaged in the curriculum… is in the range of 135–150 days." If instructional time on the core subjects assessed in the PSE is seriously compromised in the primary schools—and has declined across time, this may help explain some of the decline in PSE scores.

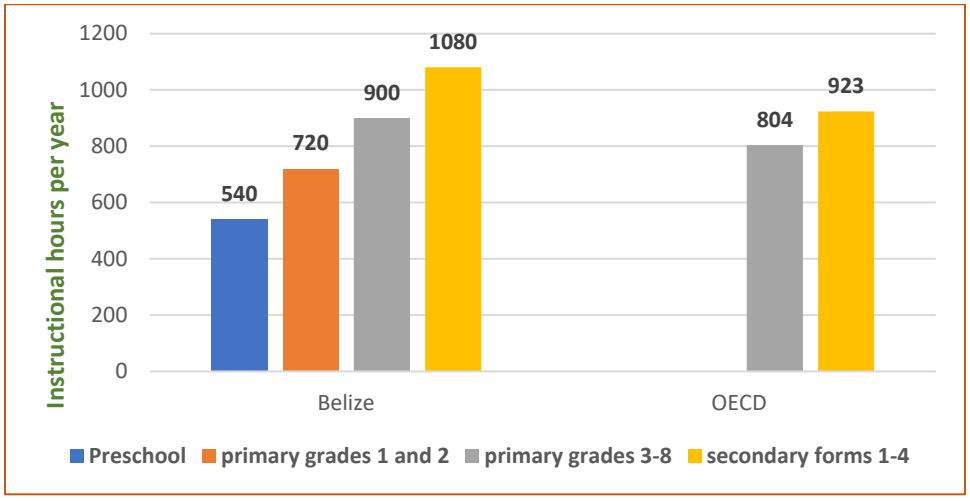
- **How instructional time is used probably did not change over the period that learning outcomes declined.** Studies that compare the curricula of several countries find that curricula focused in-depth on fewer subjects improve learning. During the 2012/13-2018/19 period, Belize's curriculum may have been fragmented among multiple subjects, with each treated superficially. If so, Belize was not optimizing learning, but this cannot account for the decline in student learning outcomes unless fragmentation increased across this time period. Belize's CBE reform can potentially use instructional time more effectively by reducing the number of subjects and treating each subject in more depth.

**Figure 79. Trends in percent of trained teachers and of students scoring ≥ adequate on PSE**




*Sources:* Percent of teachers trained by level: *Abstract of Education Statistics,* 2012–2013 to 2019–2020. The percent of students scoring ≥ adequate on PSE: figure 16.

**Figure 80. Belize and OECD legislated annual hours of instruction by level of education**

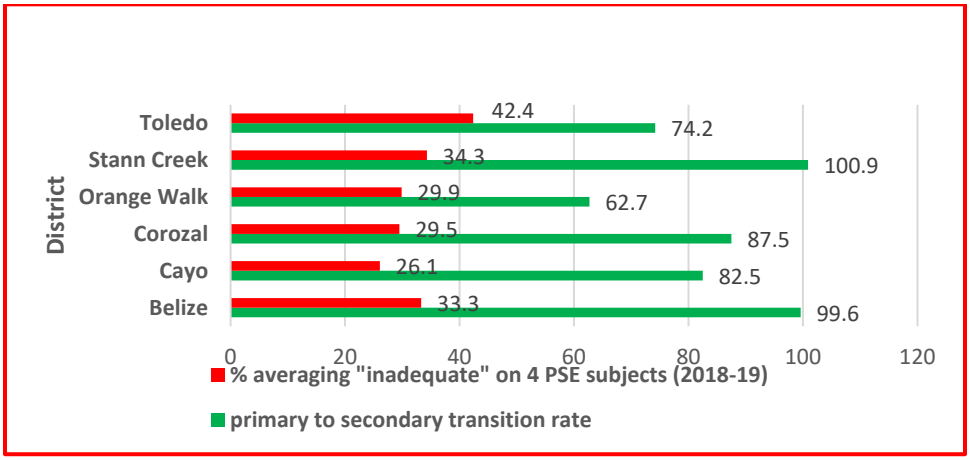



*Sources:* Belize Education Act Chapter 36 Revised Edition 2003, page 118. OECD: https://stats.oecd.org/Index.aspx?DataSetCode=EAG_IT_ALL.

248. **The percentage of students transitioning to secondary school with weak foundation skills does not bode well for effective learning at the secondary level.** Though Belize has no reliable measure of student learning at the secondary level, learning achievements are likely problematic. Meeting the school's internal academic requirements, not PSE scores, determines graduation from primary school. A sizable share of students transitioning from primary to secondary education averaged 'inadequate' across the four core PSE subjects. Figure 81 shows the percent of students transitioning from primary to secondary by district and the percent of those transitioning who had ≥ adequate scores on their PSE exams. For example, virtually all Belize and Stann Creek primary graduates transition to secondary

education, but in each case about one-third of those entering Form 1 of secondary school scored 'inadequate' across the PSE core subjects.

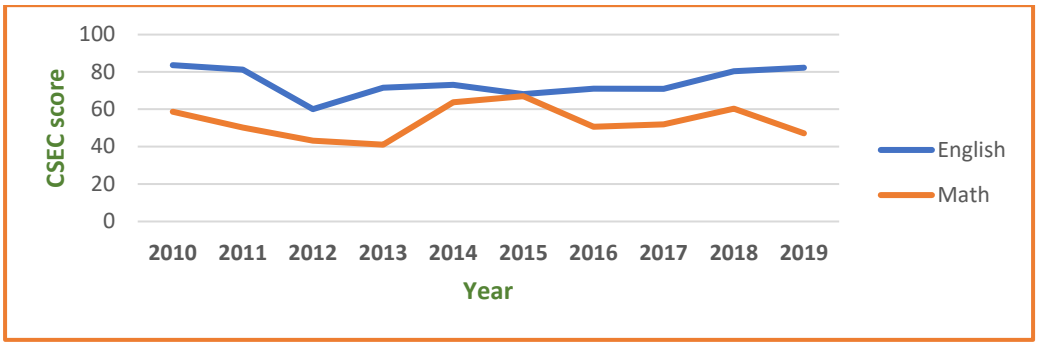
**Figure 81. Percent scoring 'inadequate' on four PSE subjects at entry to secondary school**




*Source:* MoECST, *Abstract of Education Statistics, 2019–2020,* table 21, page 32, and table 37, page 57.

249. **Students' performance on the CSEC English and mathematics tests cannot be used to measure learning at the secondary level.** As noted, Belizean secondary students who elect to take the CSEC are a biased sample. If the CSEC is graded on the curve across individuals in other participating countries, biased pools of test-takers in those countries further complicate interpretation. Belizean students sitting the CSEC perform consistently higher on the English than the mathematics test, the gap between them ranging widely from 1 percent (2015) to 35 percent (2019) (see Figure 82).

**Figure 82. Trends in percent scoring satisfactory in CSEC examination (2010–2019)**




*Source:* MoECST, *Abstract of Education Statistics* series from 2010–2011 through 2019–2020.

## 6.6 Equity aspects of public spending and outcomes

250. **Answers to several questions shed light on how well Belize 'levels the playing field' in education.**

- Is there a problem? Variations in enrolment rates and learning outcomes by gender, household income, geographical location, and ethnic or religious group raise questions but may or may not flag policy-driven inequities.
- Do government financing policies ensure equal funding across schools (horizontal equity)?

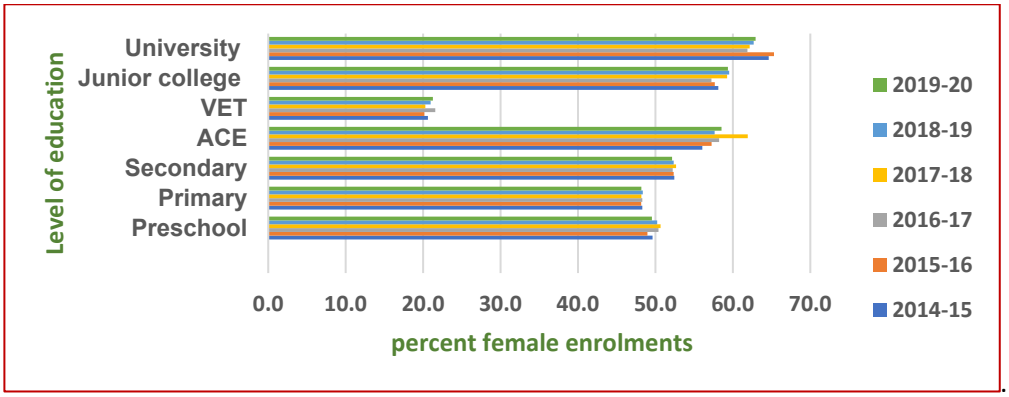
- Does government use its financing (demand-side and supply-side) to mitigate inequities arising from households' circumstances (vertical equity)?
- How progressive or regressive is the state's financing of education?[88] This question cannot be answered because it requires analyses of data from the 2018 Household Budget Survey that have heretofore not been made available to us.

**Enrolment**

251. Enrolment data by gender, urban/rural location, and district are available but not by household income or ethnic/religious group. However, population data that are required to calculate enrolment rates by subgroup are available only by age and by gender.

252. **Male enrolments at the post-primary levels of education are the gender problem.** Figure 83 shows that enrolment is gender neutral at the preschool level; slightly male biased at the primary level; but, except for vocational education and training (VET), increasingly female biased at the secondary, junior college, and university levels. Annex 8, Table A.8.1 shows the numbers.

**Figure 83. Percent of female enrolments by level of education and year (2014–2019)**




*Source:* MoECST, *Abstract of Education Statistics 2014–2015, 2015–2016, 2016–2017, 2017–2018, 2018–2019, 2019-20.*
*Note:* See Annex 8, Table A.8.2 for the specific data.

**Learning outcomes**

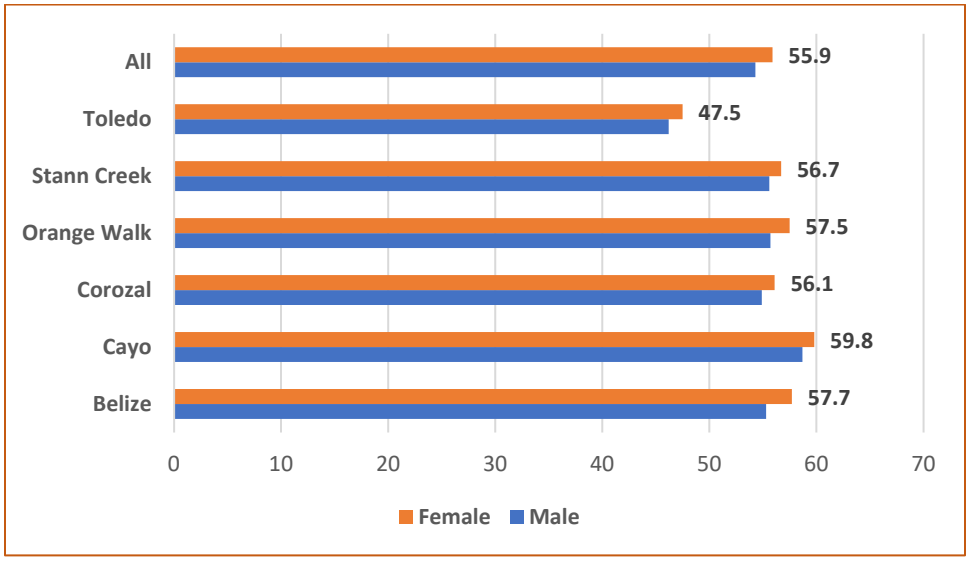
253. **Variations in learning outcomes must be interpreted carefully.** Variations do not necessarily spotlight failing schools or imply inequitable financing of education. They only raise questions. For schools whose students do not score well, how much learning do these schools engender during the school year?[89] Low PSE scores can mask schools that in fact have achieved significant learning gains among its students

[88] Minimum practice (average benefit incidence analysis) is to report average public education financing per child or per household-by-household consumption (for example, quintile, decile) or by other socioeconomic or geographic characteristics (urban versus rural, male versus female, and so on). In progressive or 'pro-poor' public spending, poorer quintiles or deciles get a disproportionately higher share of the total benefit compared to their share in the national income distribution; for example, the bottom 40 percent receive more than 40 percent of the total funds.
[89] Simple pretest and posttests at the beginning and end of the school year give some idea of the value added of a year of school provided by a specific school.

in the school year, but these schools are working against the headwinds of accumulated disadvantage among their students. The answers to questions such as this can winnow out targets for remedial actions by schools and the government.

254. **Although boys have slightly lower average PSE scores than girls, the gender differences are minor within a district.** See Figure 84 and Annex 8, Table A.8.3 that has the PSE data by gender, district, and urban/rural for 2018–2019.

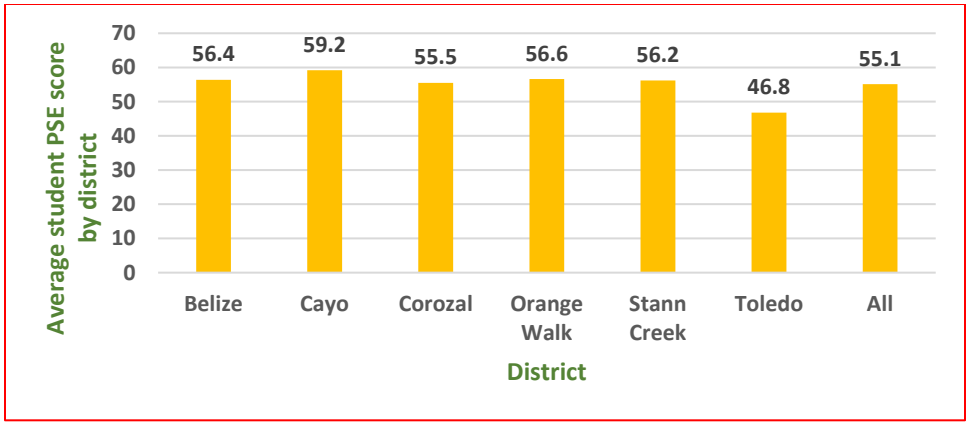
**Figure 84. Average PSE scores by gender and district (2018–2019)**




*Source:* MoECST PSE results by student and school for 2018–2019.

255. **Learning outcomes differ more between districts.** Excluding Toledo, the average performance by district differs by 3 or 4 points (Figure 85). However, students in Cayo, the top-performing district, had an average PSE score that was 12.4 points higher that those in Toledo.

**Figure 85. Average PSE scores by district (2018–2019)**

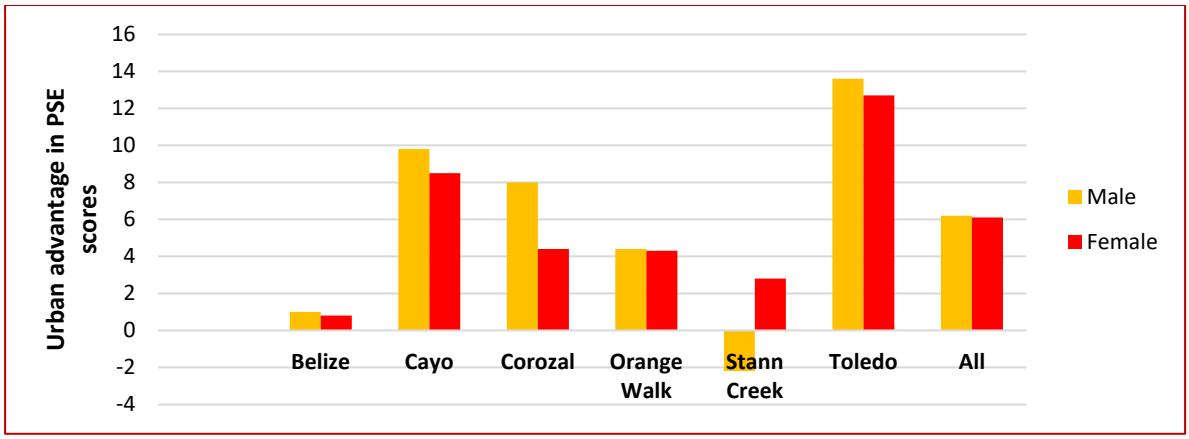



*Source:* MoECST PSE results by student and school for 2018–2019.

256. **Learning outcomes differ significantly by urban versus rural location, with an interaction among urban/rural, district, and gender.** The learning disadvantage for Toledo is a rural, not an urban,

disadvantage. Figure 86 shows the difference in learning outcomes between urban versus rural locations, controlling on district and gender. Location matters least in the district of Belize and most in that of Toledo. Urban students in Toledo perform as well as urban ones in the other five districts.

**Figure 86. Urban advantage in PSE scores by gender and district (2018–2019)**




*Source:* MoECST PSE results by student and school for 2018–2019.

257. **The results for the CSEC exam show the same urban advantage as the PSE scores.** A smaller percent of Form 4 students in rural secondary schools sit the CSEC than their counterparts in urban schools and those that do have lower average scores on both the English and mathematics CSEC tests than students from urban schools (Figure 87).

**Figure 87. Percent with satisfactory levels of performance on the CSEC English and mathematics tests by urban and rural location (2015–2019)**


*Source:* MoECST. *Abstract of Education Statistics 2019–2020.*

**Financing**

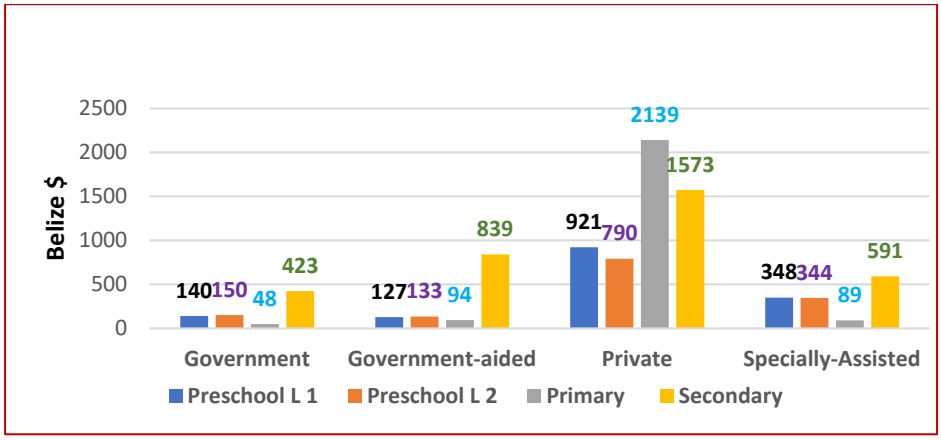
258. **Government financing policies include how the government allocates money to schools and what it allows schools to charge parents.**

259. **Government financing regulations seem to produce relatively equitable financing across preschools and primary schools, but the secondary level is another story.** The Secondary Financing Reform introduced per capita financing based on enrolments. However, it did not include a floor or a

ceiling. A telephone interview with school heads indicated that this omission leaves small schools underfunded and large ones overfunded.

260. **Government does not regulate the fees that schools can charge parents.** Figure 88 shows the average fees that schools charge parents by level of education and school manager. Government and government-aided schools charge about the same at the preschool and primary level, and the charges are small. That said, for poor families with several children in school simultaneously, even small charges can reduce school participation. Specially aided schools charge more at these levels.

**Figure 88. Average annual fee per child by school funding category and level of education (BZD)**




*Source:* MoECST PPRE 2022 survey of Belize schools at all levels for 2021–2022 fees.

261. **Secondary education is more expensive across all types of schools.** Government schools charge the least, with government-aided and specially assisted schools charging more. On average, private schools charge substantially more per child at every level of education than schools under other managers. This is an equity problem only if families have no options for their children except a private school. Most private schools are urban, where families should have more choice, but about one-third of private schools are rural.

262. **Government financing policies aim at increasing enrolments by students from disadvantaged homes, but the effectiveness of these policies is unknown.** Before secondary education, the MoECST pays the costs of school fees for some share of poor children, but the subsidy coverage of school-eligible children from poor households is unknown. The Secondary Finance Reform includes additional funding for economically needy students, based on the district poverty rate (Student Economic Support Program or SEN). At least initially the SEN seemed to increase enrolments among needier students. How well targeted it is on children from poorer households is unknown. At the tertiary level, the government provides scholarships and tuition grants, some based on merit.

263. **Current Government policies to support academically struggling students are questionable.** Government pays the costs of repeaters at all levels of education, but repetition is a costly flawed policy. Though in early implementation, the CBE reform could be a more efficient and effective way to support struggling students. The Secondary Finance Reform includes additional funding for special academic needs (SAN) students, based on the number of students in the first form of secondary school with PSE scores below 60. It is not known how these funds are used or whether they make much difference. The *Belize Education Sector Strategy 2021–2025* describes efforts to create a culture and the tools for continuous

diagnoses of student progress and ways to get struggling students back on track. As noted earlier, this is a work in progress. This strategy specifies aspirations that, if well implemented, will help reduce learning gaps between subgroups. The catch is implementation. Creating a culture of continuous improvement across the system and within each school is a heavy lift, no matter the country.

## 6.6 Conclusions and policy recommendations

### *Conclusions*

264. MoECST expenditures as a percent of GDP rebased to 2014 and of TPE are relatively high, leaving the sector little fiscal room to accommodate increased enrolments at different levels, adverse macro and climate events, or reform policies with substantial price tags.

265. Some factors that might account for Belize's higher expenditures are these.

(a) Events exogenous to the sector can produce short-term spikes in costs. However, Belize's costs have been consistently high across the seven years of 2012–2019.

(b) The MoECST budget includes costs for functions that do not support education directly. These were not included in the analysis.

(c) The meaning of budget lines can be misinterpreted, a possibility not entirely ruled out. Recent MoF budgets are quite clear, but, as noted earlier, the team needed to sit with budget officers in Belize to ensure that it understood precisely what each item meant. The lack of a mission meant that this was impossible, and the exchange of emails to clarify budget lines was suboptimal.

(d) Belize may pay for inefficient levels of inputs. Efficiency analyses did not support this hypothesis for either urban or rural schools—even though Belize's population size and residential patterns are unconducive to economies of scale. On average, the sector uses inputs efficiently, although the distributional data raise questions about inefficiencies on some variables for some schools.

(e) Per capita expenditures for secondary education far exceed those for primary education and tertiary education. The secondary school financing formula is a potential culprit in increasing Belize's education expenditures.

(f) One-quarter of government and denominational primary schools have high repetition rates, as do one-quarter of publicly funded secondary schools. Belize uses grade repetition to support struggling students, a generally ineffective and costly policy that absorbed 4.5 percent of the MoECST's total budget in 2019.

(g) The salary structure for teachers may be out of line, in which case the education sector budget would be unduly affected because it is staff intensive. Chapter 3 does not support this hypothesis: teachers fall within pay grades 8 and 17 within the 26 pay grades. Data limitations prevented the World Bank from reliably separating the relative contributions of employment levels and wage rates to growth in the wage bill. Thus, we could not determine if the education personnel bill had increased noticeably as a result of rewarding the significant increase in "trained" teachers with higher pay grades.

266. There is little accountability for results at the school level. The MoECST aspires to counter this lack of accountability by creating a culture of continuous improvement. Implementing this culture requires multiple, publicized performance measures. Moving from aspiration to facts on the ground faces the headwinds of powerful organized groups such as the teachers' union and the churches' control of most of the country's schools.

267. The trend data for the sector's main outcomes (school participation and learning) are both going in the wrong direction. The COVID pandemic has probably accelerated the declines in both.

268. Across the period that student enrolment rates and PSE scores declined, the percentage of trained teachers increased significantly at all levels. The teacher salary scale is related to qualifications, and the average cost of a teacher probably increased across this period. Belize is paying more for teachers and getting worse outcomes.

269. The MoECST works to finance the schools equally, though flaws in the Secondary Finance Reform probably have undermined this intent at the secondary level. It has financing policies in place at each level to encourage participation by students from poor families and to support academically weaker students at the secondary level. How effectively this additional money is used is unknown.

***Recommendations***

270. **Remedy flaws in the functioning of the Secondary Finance Reform.** Use analytic studies and consultations with the sector's stakeholders, such as high school principals, to assess which aspects of the funding formula are working and which are not. Evaluate how well the SEN and SAN programs target students from poor families and academically struggling students, respectively, and with what effect. Secure international expertise to redesign the per capita financing formula. Update the *Business Rules for the Implementation of the New Secondary School Financing Model.*

271. **'Bell the cat'.**[90] Push publicly to establish a culture of continuous improvement at the school level with multiple, publicized performance measures. Make this a positive campaign, with media coverage of schools in each district that have improved substantially in the previous year. As suggested in the *Belize Education Sector Strategy 2021–2025,* compile a 'report card' for each school in terms of its efficiency rating, its enrolment record relative to its catchment area, and data on its students' learning achievements. Mail the report card for each school to the parents of the students at that school. Require the school to post its report card prominently at the school. If the PSE is being phased out, replace it with internationally recognized measurements of learning. At the primary level, measure perhaps at Standard 2, where the results can be used diagnostically to help lagging students early in their education. At the secondary level, add an assessment of learning to obtain interpretable measures of students' learning outcomes at this level. Using public comment on draft policies, establish and enforce policies for dealing with failing schools. These should range from active support to more drastic actions. Publicize these widely. Encourage the development of parent-teacher associations to assure that a stakeholder critical to the sector has a seat at the table.

[90] "The Bell and the Cat" is an Aesop fable about a dangerous or risky task that requires courage. In the Belize case, it refers to the political courage to revamp church-state relations to increase schools' accountability for their basic mission and to deal with any obstructions thrown up by groups such as the teachers' union.

272. **Involve influential figures in the national campaign to champion a culture of continuous improvement.** Bring in high-level representatives of influential organizations to champion continuous improvement at the school level. These representatives might come from the churches, the Association of the Principals of Secondary Schools, the teachers' union, and the private sector. A more public dialogue can potentially weaken domestic forces not aligned with the best educational interests of Belize's children and youth.[91]

273. **Conduct analytic studies to identify the root causes of the decline in learning, as measured by the PSE.** For example, classroom observations can be used to assess the actual instructional time and teachers' classroom practices in the core subjects. Determine if teachers with more qualifications who are paid more perform better than teachers with lesser qualifications. If not, the training curricula, the hiring criteria, and the promotion criteria for teachers must be completely reassessed.

274. **Move away from repetition to help lagging students.** All countries face the problem of students who struggle academically, and many use repetition as the solution. Though the quality of research on the effects of repetition policies is variable, a meta-analysis of the most rigorous studies of repetition found it ineffective and likely to encourage dropping out by the repeater.[92] OECD identifies more effective alternatives to grade repetition.[93] Potentially MoECST's CBE reform can let schools replace the repetition of the entire school year with the repetition of specific modules. The MoECST has considered other OECD options that are not yet mainstreamed

275. **Participate in international assessments of learning.** Several reputable international learning assessments exist. They differ in their objectives and scope—for example, diagnostic versus summative, and regional versus global. Belize should select an assessment that best meets what Belize wants to get out of it.

276. **Reinforce the MoECST's PPRE unit to drive the campaign for continuous improvement.** To establish a culture of continuous improvement, publicized statistics, evaluations, and studies must be the brains driving the campaign. The PPRE is already a competent unit. However, it needs more staff, more training, and thus more budget if it is to create the empirical underpinnings for a continuous improvement campaign. For example, PPRE's statistics should be expanded to report on costs, which requires PPRE to add staff with financing expertise.

[91] The MoECST has taken actions to improve trust, especially between the Ministry, schools, and teachers. Trust eroded during COVID-19 and in the face of necessary salary cuts. Consultations revealed school level problems with overload. The MoESCT has prepared and posted on the Ministry's virtual platform unit plans and assessments..

[92] Thompson and Cunningham 2000.

[93] OECD 2012.

# CHAPTER 7. HEALTH EXPENDITURES

277. **This chapter provides a comprehensive analysis of the health sector expenditures in Belize.** It covers various aspects such as health system governance, health outcomes, disease burden, health financing, and major reforms. The chapter also focuses on health expenditure, including benchmarking on health spending between countries and over time, flow of funds in the Belizean health sector, levels and composition of public health spending, and budget performance and budgetary response to COVID-19. Additionally, the chapter examines efficiency at various levels, as well as equity analysis in financing, services availability, health services utilization, and health outcomes. The analysis sheds light on how Belize develops and implements its health sector budget, whether spending is aligned with policy priorities, and if spending achieves the desired results. For global benchmarking analysis, a longer time frame was considered to consider relative changes to prior periods..

278. **The Belize Health Sector Strategic Plan 2014–2024 developed by the MoHW sets the strategic directions of the health sector and identifies seven priority objectives to move toward universal health coverage (UHC):** integrate primary health care (PHC) services for better outcomes; strengthen governance of health organizations; enhance equity, cost efficiency, and effectiveness in resources allocation; strengthen capacity for HRH; strengthen the Belize Health Information System (BHIS); and develop a quality improvement framework to ensure accountability and availability of good infrastructure.

279. **The specific objectives of the analysis were to** (a) review the level and composition of public spending on health in relation to peers and over time; (b) analyze the funds flow; (c) examine the budgetary response to the COVID-19 pandemic; (d) assess resource allocation, budgeting, and budget execution in public facilities; (e) analyze efficiency and value for money; (f) assess equity in financing, access to services, and health results at district level; (g) and provide a list of prioritized recommendations on ways to improve the use and impacts of public funds in health. This chapter focuses on public expenditure executed by the MoHW.

280. **Belize was hit hard by the COVID-19 pandemic that brought profound health, economic, and social changes.** The pandemic preparation and response actions forced the suspension of fiscal adjustment measures and the acquisition of new debt, resulting in a fall of GDP by 14 percent in 2020 mainly due to a decline in the production of secondary services. In an environment of negative overall macroeconomic impacts, Belize had to cut spending on routine service delivery to create fiscal space to finance the COVID-19 response, negatively affecting other health sector objectives. The loss of income experienced by the households is also likely to have negatively affected financial protection indicators. This chapter examines the budgetary response of the country to the COVID-19 pandemic and how it affected the resilience of the health sector.

281. **In times of more constrained resources, improving the efficiency of the health sector is even more paramount to make progress on the UHC agenda.** This chapter includes an analysis of the health sector performance at the macro- and meso- (district) level to identify opportunities to increase the value for money of public spending on health. Macro-level efficiency analysis made cross-country comparison of health expenditures versus key population health outcomes and outputs. A similar comparison was undertaken across administrative districts to assess the meso-level efficiency of health financing in Belize. Analysis at the micro level—that is, at the level of health facility—could not be carried out due to lack of data.

282. **Equitable access to quality health care services to move toward UHC is one of the goals of the Belize Health Sector Strategic Plan 2014–2024.** The equity analysis considered the level of public spending on health by district to assess different spending patterns per capita, looked at how health services are accessed and used across districts, and analyzed equity of health outputs and outcomes among Belizean districts. Due to lack of data, analysis of financial protection was not carried out. Annex 9 provides information on availability and limitations of the data used for this chapter's analysis.

## 7.1 Health sector context

### *Health system governance and organization*

283. **Belize has four levels of health care delivery.** At the lowest level, health services are provided through community primary care facilities (health , health posts, mobile clinics, and community health workers ), usually staffed with a rural health nurse and in some cases a physician (Cuban brigade). Polyclinics are the second level of service delivery and have a larger cadre of staff and services being provided such as laboratory services, imaging services, community-based services (immunization, prenatal care, vector control, environmental health, and personal curative services), 24-hour emergency services, and observation capacity (few beds for observation only before referral to higher level of care). The third level of health care delivery are the regional and community hospitals that provide surgical facilities, obstetrician-gynecologist, internal medicine, and pediatrics. The fourth level of care is the KHMH that functions as the national referral hospital and provides secondary and tertiary health services. Belize has a well-developed outreach program through mobile clinics to reach communities living in rural areas and provide them essential health services (immunization, prenatal care, and sometimes PHC services).

284. **Belize is divided in four health regions (Northern, Central, Western, and Southern) that serve six administrative districts** (Corozal, Orange Walk, Belize, Cayo, Stann Creek, and Toledo). Each district serves a catchment area, except for Cayo District that serves two catchment areas: San Ignacio and Belmopan. Each catchment area has a regional or community hospital and multiple health centers. Some districts (Corozal, Belize, Stann Creek, and Toledo) also have polyclinics (Annex 10). All catchment areas have several health posts (not shown). A visual representation of the MoHW facilities can be found in Annex 11.

285. **The MoHW is the main actor to regulate, manage, supervise, and provide public health services in Belize.** The MoHW manages seven public regional and community hospitals,[94] 10 polyclinics, 32 health centers, and many health posts associated with the health centers. The KHMH is the only tertiary referral hospital and has been a Statutory Authority since 1999. Decisions on management and use of resources remain with the Chief Executive Officer (CEO) of the KHMH and the statutory board where the ministry has representation through the CEO of the MoHW and the Director of Hospital Services and Allied Health.

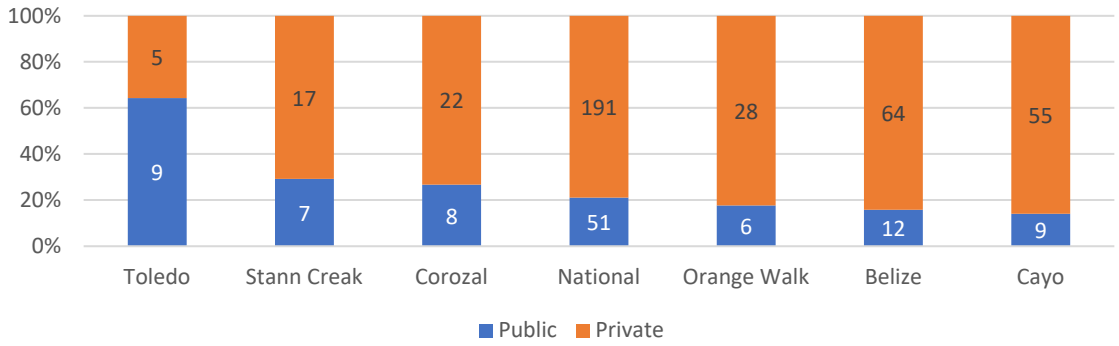
286. **The private health care sector plays a role in the delivery of health services in Belize.** Private health facilities (HFs) are for-profit and not-for-profit.[95] As of May 2022, there were 191 private HFs in

[94] Three regional hospitals (Northern, Western, Southern); three community hospitals (Corozal, San Ignacio, Punta Gorda); and one National Referral Hospital in Belize City, the KHMH.

[95] The following services are offered: emergency medical services; primary and outpatient care; laboratories, diagnostics, and imaging; dental care; hemodialysis; hospital services; and allied health services such as counselling and psychological services.

Belize, mostly located in Belize (64) and Cayo (55) districts (Figure 89).[96] The Licensing and Accreditation Unit of the MOHW ensures compliance of all facilities with licensing requirements through inspections. No recent data on the percentage of the population seeking care in the public sector are publicly available. In 2013, it was reported that 65 percent of the population was seeking care exclusively from the public sector. The number of private facilities differs by district. Toledo has the highest share of public HFs (64 percent) while Belize and Cayo (16 and 14 percent, respectively) mostly have private HFs (Figure 89). There are 122 pharmacies in Belize of which a fifth (24) are publicly managed and the remaining are managed by the private sector, with the highest concentration in Belize City (49). With respect to laboratories, 35 of the 46 laboratories are privately run and the remaining (11) are managed by the public sector. Belize City and Cayo, each with have 11 across public and private laboratories, have most laboratories in the country.

**Figure 89. Distribution of public and private HFs by district (percent and number), 2022**




*Source:* MoHW.
*Note:* Numbers inside the bars denote the number of HFs.

287. **The total number of outpatient services in MoHW HFs has slightly increased over the past 10 years.** Outpatient services dropped significantly in 2020, owing to the negative impacts of the pandemic. Between 2010 and 2019, Corozal and Orange Walk had on average the larger year-on-year increase in the number of outpatient visits (19 percent and 14 percent, respectively). In the same period, Punta Gorda and Belmopan had the lowest average year-on-year increase in outpatient visits with 2.0 percent and 0.2 percent, respectively. For Belmopan this is due to the large drop (by 24 percentage points) of outpatient visits between 2018 and 2019. When COVID-19 started in 2020, Punta Gorda had the largest drop in outpatient visits (−39 percent) between 2019 and 2020, followed by Stann Creek (−34.5 percent), Cayo (−31.8 percent), Belize (−30.4 percent), Corozal (−27.4 percent), and Orange Walk (−27.2 percent).

288. **However, the number of outpatient services per capita has stagnated since 2014.** The number of outpatient visits per capita in 2019 (1.12 visits per person per year) was similar to the number of outpatient visits per capita in 2012 (1.11 visits per person per year). In 2020, a significant drop in the number of outpatient visits per capita occurred (−34 percent on average) due to the pandemic, with a similar decline across districts. However, changes in outpatient visits per capita over time differed across districts: Corozal and Orange Walk had a higher average increase from 2011 to 2019 (16 and 13 percent,

[96] The number of private health facilities is 22 in Corozal, 5 in Toledo, 17 in Stann Creek, and 28 in Orange Walk.

respectively), compared to all other districts which on average increased by only 1–3 percent. See Table 20.

**Table 20. Percentage increase in annual number of outpatient visits per capita, by district**

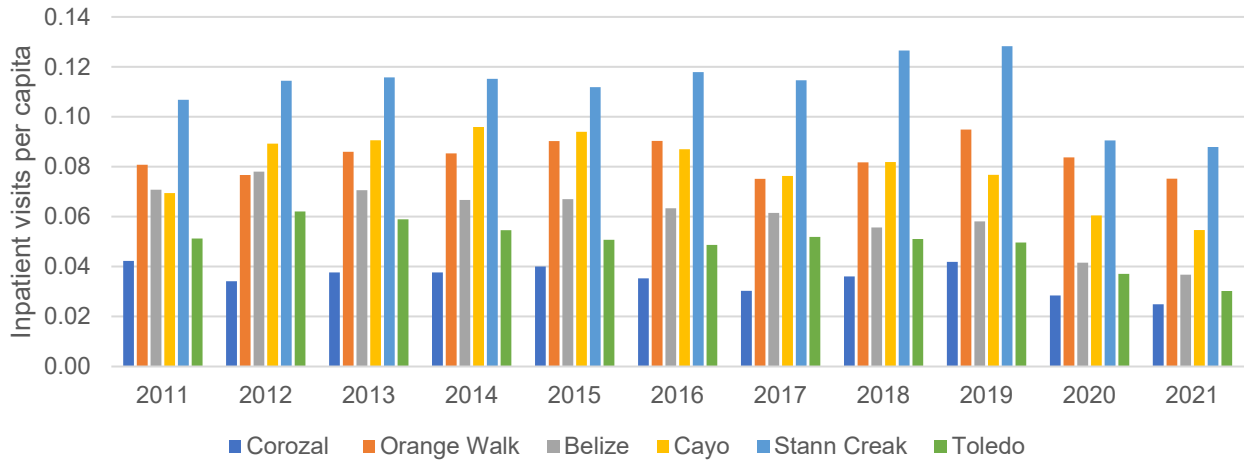
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Avg[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **National** | **16** | **11** | **5** | **0** | **−1** | **0** | **5** | **−6** | **−2** | **−33** | **−1** | **3** |
| Corozal | 19 | 95 | 19 | 4 | 11 | 4 | −5 | −2 | 3 | −29 | −13 | **16** |
| OW | 46 | 3 | 0 | 20 | 9 | 3 | 18 | −2 | 17 | −28 | −4 | **13** |
| Belize | 16 | 9 | 5 | 2 | −4 | −6 | 4 | −9 | −2 | −32 | −1 | **2** |
| Cayo | 13 | 0 | 2 | −2 | −8 | 4 | 10 | −3 | −10 | −34 | −5 | **1** |
| SC | 7 | 3 | 10 | −7 | 2 | 0 | 7 | −9 | −3 | −36 | 22 | **1** |
| PG | 7 | 3 | 10 | −7 | 2 | 0 | 7 | −9 | −3 | −36 | 22 | **1** |
| Toledo | 11 | 22 | −9 | −9 | 0 | 7 | −9 | −7 | −11 | −40 | −6 | **0** |

*Source:* MoHW/Health regions (2022).
*Note:* a. This is the average change from 2011 to 2019, excluding the impact of the pandemic.
SC = Stann Creek; OW = Orange Walk; PG = Punta Gorda.

289. **The overall number of inpatient admissions in MoHW hospitals fluctuated in the last decade and fell by one-fourth at the onset of the COVID-19 pandemic.** Between 2011 and 2019, a steady increase in inpatient admissions was registered in Stann Creek; in Belize, inpatient admissions gradually went down over time (Figure 90). The overall year-on-year change in inpatient admissions was −22 percent between 2019 and 2020 and −25.1 percent between 2020 and 2021. This is like other countries in the region; for example, according to the OECD data, the number of hospital discharges in 2020 dropped by 29 percent in Mexico and 20 percent in Costa Rica.[97] Between 2019 and 2020, the largest drop in inpatient admissions was registered in Corozal (−31 percent) followed by Stann Creek (−27 percent), Belize (−26 percent), San Ignacio (−24 percent), Punta Gorda (−23 percent), Belmopan (−16 percent), and Orange Walk (−10 percent). The fall in inpatient admissions between 2020 and 2021 was more moderate and ranged from −16 percent in Punta Gorda to −0.1 percent in Stann Creek. This may be because many elective surgeries were postponed due to the need to reallocate resources (staffing, equipment, intensive care units) to the treatment of patients with severe COVID-19 illness. The number of annual inpatient visits per capita was stagnant at 0.08 between 2011 and 2019; it dropped to 0.06 and 0.05 in 2020 and 2021, respectively (data not shown). There are marked geographical differences in the number of inpatient admissions per capita: between 2011 and 2021, Stann Creek (0.11), Orange Walk, and Cayo (both 0.08) had on average the highest number of admissions per capita, while Belize (0.06), Toledo (0.05), and Corozal (0.04) the lowest number of inpatient admissions (Figure 90).

[97] https://data.oecd.org/healthcare/hospital-discharge-rates.htm. Data for 2021 were not available.

**Figure 90. Annual number of inpatient admissions per capita, by catchment area**




*Source:* MoHW (2022), data from health regions.

290. **Human resources is one of the main gaps of the health system with inequities in the availability, distribution, and quality of the health workforce.** Poor retention rates in rural and/or underserved areas, high mobility and migration, low productivity, and poor overall performance are factors hindering the progressive expansion of health services, particularly at the first level of care.[98] With 10.8 medical doctors available per 10,000 people in 2018, Belize is below peer countries like Barbados (24.9 in 2017), Costa Rica (28.9), Dominica (11), Guyana (18.2), Mexico (24.2), Panama (16), and Trinidad and Tobago (54) but above Jamaica (5.3) and Suriname (8.2). In 2018, Belize had 23.4 nurses and midwifery personnel per 10,000 people, which places the country above peers like Guatemala (12.8), Guyana (10.4), and Jamaica (9.4) but below Barbados (30.6), Costa Rica (34.1), Dominica (60.9), Mexico (28.5), Panama (30.7), Suriname (27.6), and Trinidad and Tobago (41.4).[99]

291. **Belize struggles to fill vacant positions in the public sector, especially in the rural districts.** Hiring processes under the public health system are considered too lengthy, often leading to months of waiting time before recruitment. This contributes to the attractiveness for health professionals to join the private health sector, where salaries are also assessmenthigher (Table 21).

**Table 21. Number of posts that need to be created, by district**

| | Corozal | Orange Walk | Belize | Cayo | Stann Creek | Toledo | Total |
|---|---|---|---|---|---|---|---|
| **Vacant positions** | 13 | 12 | 11 | 40 | 22 | 15 | 113 |

*Source*: MoHW 2021a.

292. **A 2021 assessment of the MoHW HFs highlighted gaps in the delivery of health services, with shortages of doctors and nurses, particularly in rural areas.** In the Northern region, the clinics at Libertad, Sartaneja, Xunox, and Caledonia do not have permanently placed medical officers and visiting physicians are stretched thin. Similarly, the Southern, Central, and Western regions face shortages of HRH, with few

[98] MoHW 2021a.

[99] All statistics on the human resource density in this paragraph were taken from the World Health Organization (WHO) Global Health Workforce Statistics (https://www.who.int/data/gho/data/themes/topics/health-workforce).

rural health nurses shared among different clinics. This affects the delivery and quality of the public health program and reduces the pap smear counts, visual inspection with acetic acid (VIA) screening, and birth control programs.[100]

293. **Even when HRH are available, they do not always have the appropriate profile and competencies nor are they equipped with the necessary inputs to provide quality health services.** There is a great shortage of specialist nurses at the regional hospitals including operating room nurses, public health nurses, midwives, psychiatric nurse practitioners, quality assurance nurses, and administrative nurses. In addition to Belize's shortages of human resources, there continues to be stockouts at almost all HFs, poor use of the information system by (medical) personnel, obsolete equipment, and lack of training and continuous education programs.[101]

294. **The BHIS gives the opportunity to move toward a performance-based management system; however, its potential is not yet fully exploited.** A 2021 performance assessment of public HFs carried out by the MoHW found that the clinical record system and the documentation of clinical records in the BHIS need strengthening as not all facilities enter the data in the BHIS. The partial documentation does not amplify holistic care by the clinical team, with missing clinical notes by doctors and/or nurses. Some HFs, for example, Xunox polyclinic in Corozal district, do not have BHIS access. Typically, health centers do not have access to BHIS either and the available but incomplete documentation is on paper.[102]

***Health outcomes and disease burden***

295. **Life expectancy in Belize has increased over the past decade.** It has steadily grown from 71.5 years in 2009 to 74.8 years in 2020 (3.3 years increase), surpassing all other peer countries except for Guatemala that registered an increase from 71.1 years to 74.5 years (3.4 years increase) in the same period. However, gender differences in life expectancy are quite marked in Belize, with women living longer than men, and have progressively increased since 2009: life expectancy was 74.7 years and 78 years for females in 2010 and 2020, respectively, versus 69.6 years and 71.8 years for males in the same years.[103] The high homicide rate in Belize (ranked a top 10 worldwide) is a leading cause of death for men in Belize, especially in Belize City.[104]

296. **Over the past years, Belize has made remarkable progress in improving maternal and child health outcomes, contributing to improved life expectancy at birth.** Infant mortality per 1,000 births dropped from 16.2 in 2010 to 10 in 2020 and the gender gap between males and females fell from 3.1 to 2 in the same period. Under-five mortality per 1,000 births also declined by almost 40 percent between 2010 and 2020, placing Belize at the second lowest ranking in Central America after Costa Rica.[105] Due to the COVID-19 pandemic in 2020, immunization coverage for all childhood vaccinations, historically very high, fell significantly. Immunization coverage for one-year-old children dropped from 95 percent in 2019 to 76 percent in 2020. Similarly, all other childhood vaccinations for DTP3, measles, Polio3, HepB3, and Hib3 fell over time, with the most significant drop during the 2020 COVID-19 pandemic. Between 2019

[100] MoHW 2021b..
[101] MoHW 2021c.
[102] MoHW 2021a.
[103] World Development Indicators database, Washington, DC: World Bank (https://databank.worldbank.org/source/world-development-indicators).
[104] https://borgenproject.org/top-10-facts-about-life-expectancy-in-belize/.
[105] Ibid.

and 2020, BCG fell from 95 percent to 76 percent, DTP3 from 96 percent to 79 percent, MMR1 from 96 percent to 82 percent, and Polio3 from 98 percent to 79 percent.[106]

297. **Communicable diseases, including HIV and acute respiratory tract infections, account for approximately 20 percent of deaths annually,**[107] flagging the need for enhanced response capacity of integrated health services for prevention, surveillance, early detection, and treatment of communicable diseases, including vaccine-preventable diseases, but also addressing risk factors conducive to communicable diseases with an intersectoral approach.

298. **Belize has been successful in eliminating malaria[108]; however, other vector-borne diseases continue to be a concern in Belize, especially those that are climate sensitive and thus expected to rise again.** Belize's success in dramatically reducing the burden of malaria is exemplar. Between 2010 and 2021, Belize achieved a 100 percent reduction in local malaria cases (150 cases to zero cases),[109] with its last two cases reported in 2019.[110] However, the number of confirmed cases of dengue spiked in 2019 with 13,316 cases (3,411.3 per 100,000 people), up from 2,326 in 2018 (607.2 per 100,000 people) and 3,042 cases in 2017 (809.5 per 100,000 people).[111] As highlighted above, vaccine-preventable diseases such as diphtheria, tetanus toxoid, and pertussis (DTP3) in children below 1 year of age dropped in 2020 to 79 percent due to the COVID-19 pandemic.

299. **The three top causes of death as of 2019 (before COVID-19) were related to noncommunicable diseases (NCDs) (ischemic heart disease, diabetes, and stroke), followed by interpersonal violence[112].** Neonatal disorders ranked 10th. In 2021, COVID-19 related deaths ranked on top, followed by NCDs. Next to NCD-related deaths, other causes of death are assault (males), unintentional injuries, cerebrovascular diseases, and HIV. Diabetes is of particular concern. Belize has one of the highest diabetes prevalence among the population ages between 20 and 79 years in North America (14.5 percent in Belize, 10.7 percent in the United States and 7.7 percent in Canada) and the Caribbean (9.9 percent), second only to Mexico (16.9 percent).

300. **When looking at the combined effect of death and disability, interpersonal violence ranks the top cause, followed by neonatal disorders, diabetes, and road injuries**.[113] Interpersonal violence and road accidents are the main causes of death and disability among the adult male population. In 2019,

[106] PAHO 2020a.
[107] IHME Global Burden of Disease Study. https://www.healthdata.org/belize

[108] The World Health Organization declared Belize malaria free on June 21, 2023.
[109] This remarkable achievement resulted from a combination of early case detection via the network of malaria voluntary collaborators and community health workers, the timely provision of effective antimalarial treatment for people with a confirmed malaria diagnosis, and the regular and widespread use of effective vector control methods (insecticide-treated mosquito nets and indoor spraying of insecticides).
[110] IHME Global Burden of Disease Study. https://www.healthdata.org/belize
[111] PAHO 2022.

[112] https://www.healthdata.org/research-analysis/health-by-location/profiles/belize
[113] IHME Global Burden of Disease Study. https://www.healthdata.org/belize.

Belize had a mortality rate of 212.2 per 1,000 people among the adult male population, which is one of the highest among other countries in the region, except for Guyana (267.8) and Suriname (218.3).[114]

301. **Behavioral risk factors—including tobacco use, physical inactivity, harmful use of alcohol, and unhealthy diets—are key drivers of illness and death from NCDs.** In 2016 (latest available year), more than half of the Belizean adult population (54.8 percent) was estimated to be overweight, with a significant difference among adult females (61.2 percent) and males (48.1 percent). The prevalence of current tobacco uses in 2020 among males was 15.1 percent against 1.8 percent among females. The use of tobacco among males in Belize is the highest among peer countries for which comparable data exist. In 2020, only Guatemala (20.1 percent) and Mexico (19.9 percent) had a higher prevalence of tobacco users among males.[115] NCDs threaten the financial viability of the health care system, add to comorbidities, lower the quality of life, and put a large part of the population at risk of severe COVID-19 illness and death.

302. **Road traffic injuries and homicides are the leading causes of death for men.** Road safety is of increasing concern—mortality rate caused by traffic injuries grew per 100,000 people from 14 in 2010 to 22.6 in 2019. Traffic injuries disproportionately affect men, who have a much higher mortality rate (38.2) than women (7) (calculated per 100,000 people).[116] Belize has one of the highest per capita murder rates in the world, including violent crime such as armed robberies, home incursions, and murders. Belize recorded 29 murders per 100,000 people in 2021 due to gang violence. Belize's homicide rate is the fifth highest among the LAC countries, and it is above Mexico, Columbia, and Guatemala, but below Jamaica and Honduras.[117]

303. **Changes in the family structures and living conditions in Belize affect future models of health care delivery, demand, and spending.** People live longer and have fewer children. In 2021, about 14 percent of the population was under 5 years old and 4 percent of the population was above 65 years old. However, the increased life expectancy, coupled with declining fertility rate from 2.7 children per woman in 2009 to 2.2 children per women in 2020, suggests that the share of population ageing will continue to increase over time, narrowing the population pyramid and generating an increase in health care needs and demand for health services for the elderly.[118] In that same year, more than half of the population (55.4 percent) lived in rural areas with limited access to health services and broader infrastructure services.[119]

***Health financing***

304. **Despite health financing being a strategic priority of the MoHW to move toward UHC, no official health financing strategy has been developed for Belize.** Health financing is a cornerstone of the overall health system and can enable progress toward UHC and greatly affect the efficiency, quality, equity, and

[114] World Development Indicators database, Washington DC: World Bank (https://databank.worldbank.org/source/world-development-indicators).
[115] World Development Indicators database, Washington DC: World Bank (https://databank.worldbank.org/source/world-development-indicators).
[116] Ibid.
[117] http://www.7newsbelize.com/sstory.php?nid=61106.
[118] Ibid.
[119] Population data are mid-year estimates from the SIB.

access to health services.[120] The Health Sector Strategic Plan 2014–2024 lists two target indicators for 2024: first, out-of-pocket spending should be equal to or less than 20 percent of current spending on health, and second, public spending on health should be at 6 percent of GDP.[121]

305. **There are four main financing sources of the health sector in Belize:** (a) general tax revenue; (2) premiums paid to the Social Security Board for workers' compensation such as compensation for employment injuries, maternity allowance, and sickness benefits; (c) donor financing; and (d) household contributions in the form of out-of-pocket payments (co-payments and user fees in public and private facilities, respectively, and payments for drugs) and insurance premiums paid to private insurance providers. Private philanthropies also make small contributions to the health care sector.

306. **The government provides a package of primary and secondary health services through MoHW-managed health facilities (primary and secondary) to the entire population.** Users have access to free services among a package of essential services such as maternal and childcare and are charged a nominal fee for the others. Nominal payment can be waived for those who cannot afford to pay, though determination of ability to pay is discretionary.

307. **Belize's National Health Insurance (NHI) is a single payer outpatient scheme primarily financed through general revenue, which is currently available in five administrative districts, covering a comprehensive package of PHC services for about 55 percent of the population.**[122] The NHI purchases PHC services and is fully funded through tax revenue. Initially the scope of the program was limited to the poorest regions in Belize City and then progressively expanded to other areas with great needs. All Belizean nationals and people legally resident in the four districts are eligible for NHI enrolment, provided they have a social security card. Each resident must register at a PHC facility, where she/he will be required to seek care when needed. The NHI has a network of public and private HFs that offer primary care and outpatient care services[123] for a predefined catchment population. In 2012, a nutritional package was introduced to combat the high prevalence of micronutrients deficiencies reported in children less than 5 years. In Belize City, the NHI contracts a network of providers to provide integrated PHC, including access to medications at a contracted pharmacy with negotiated prices which make medicines affordable to patients.

308. **The GoB has planned a phased geographic scale-up of the NHI model as resources become available; however, this resulted in a dual and fragmented system of service delivery.** The geographic limited coverage of NHI facilities in the five districts resulted in inequities and fragmentation, creating a dual system of PHC financing and service delivery modality. For example, NHI facilities are subject to quality control mechanisms by the NHI and use a different health information system than public HFs, which rely on the BHIS. In addition, the MoHW does not have visibility about the budget and expenses linked to the NHI activities or the performance of the HFs. Public HFs contracted by the NHI face the additional challenge of having to meet the demand of patients coming from outside the catchment area,

[120] WHO (World Health Organization). 2022. *Health Financing*. Geneva: World Health Organization (https://www.who.int/health-topics/health-financing#tab=tab_1).
[121] The Pan American Health Organization (PAHO/WHO) suggests that public health expenditure should be 6 percent of GDP to enable optimal allocation of social resources.
[122] The NHI started off in Belize City, expanded in the Southern Region (Stann Creek and Toledo Districts), then to the Corozal District as of 2016 and in 2023 it was rolled out in Orange Walk District. The NHI is expected to expand in Cayo district in 2024.
[123] NHI-covered services are medical consultations, nursing services, prenatal services, clinical laboratory services, generic medicines included in the national formulary, ophthalmology, and geriatric care (this latter in South-Side Belize only).[123]

thus spreading thinly available resources given for a catchment area defined ex ante and without an ex post adjustment.

309. **MoHW facilities are financed using input-based financing with no fungibility across line items.**[124] While Belize started using program-based budgeting with specific targets, financing is still primarily based on inputs and not linked to performance indicators. As a result, the budget received by each region is based on historic values. The budget allocated to the catchment areas mostly covers salaries and allowances of the health personnel with a small share earmarked to operational costs. Annual targets defined for each catchment area by the MoHW are not reviewed by the MoF and not used as a direct management tool.

310. **HFs under the NHI are funded using strategic purchasing, that is, a mix of capitation and performance-based payments.** NHI HFs receive a monthly payment in the form of capitation for the catchment area of each facility, 70 percent of which is received up front while the remaining 30 percent of the capitation is based on performance monitored with selected indicators for coverage (70 percent), quality of care (20 percent), and administrative processes (10 percent). The capitation payment varies per geographic area and is based on the level of service provided. Additionally, NHI HFs can receive an annual bonus based on their performance regarding promotion of prevention programs, quality of care, use of clinical protocols, patient satisfaction, and appropriate delivery of key services. The total bonus payment is determined by applying each indicator's weight against 10 percent of annual generated revenues.

311. **Belize has introduced reforms to contain out-of-pocket payments for health services and medicines for households.** All Belize residents—including undocumented immigrants—are entitled to essential public health care for only nominal fees, which are waived for the poor. Moreover, in October 2023, the GoB approved the removal of all fees charged in public hospitals[125], including for ancillary services, such as laboratory and x-ray services. NHI HFs charge co-payments for general outpatient services (fixed amount, US$2 per visit) and for medicines (10 percent of negotiated drug price). However, children ages under 5 years, pregnant women, old people, and people with low incomes are exempt from user charges in NHI facilities. Private HFs can set and charge their own fees as these are not regulated by the MoHW.

***Major reforms of the health sector***

312. **In 1999, Belize started the implementation of key reforms to improve the health sector.** This included the decentralization of the health sector, the creation of the KHMH as an independent entity subsidized from the GoB but with an independent board, and the rollout of the NHI scheme.

313. **The decentralization process aimed at creating four independent health regions; however, the process has not been operationalized as envisaged**. The four health regions (Northern, Central, Western, and Southern) were expected to have administrative and decision-making autonomy in terms of finances, operational costs, and HRH management. Four new 'regional manager' positions were created. However,

[124] Input-based financing models usually fund hospital beds, number of hospital professionals, and so on.

[125] https://www.pressoffice.gov.bz/government-of-belize-removes-fees-in-public-hospitals-promoting-universal-healthcare-access/#:~:text=The%20Government%20of%20Belize%20has,%2C%20particularly%20low%2Dincome%20families.

to date, the MoF and the national-level MoHW retain the decision-making authority in terms of finances and HRH. The role of regional managers is limited to advise the MoHW in the recruitment of new staff and the management of small operational expenditure for hospitals and setting orders from the Central Medical Store for the procurement of drugs on behalf of the hospitals. The high turnover rate of regional managers coupled with the mismatch of needed technical skills further limit their role. The main public health programs have remained organized in a centralized and vertical manner, further contributing to the fragmentation of the health system.

314. **The NHI scheme was intended to enhance access to quality PHC services by opening new clinics in both the public and private sectors, separating financing from the provision of services, and using strategic purchasing.** It also aimed at strengthening the technical and normative capacity of the MoHW. Potential sites for new clinics were identified based on a goal of enrolling 12,000 people per primary care physician and other criteria. Where available, the NHI contracted public HFs; otherwise, private clinics were invited to bid.[126] There was no adjustment in the MoHW budget as a consequence of the introduction of the NHI fund; the MoHW budget allocated to the health regions remained the same. The plan was to scale up the NHI nationwide; however, the MoF had to increase its contribution to the financing of the NHI beyond initially expected, which limited the feasibility of scaling up the model initially.

315. **The NHI was first implemented as a pilot project in the Belize District South Side. After validation of successful results, the Cabinet rolled out the NHI scheme to the Southern Region in 2006, including Stann Creek and Toledo Districts.** Contracts were signed with primary care providers to deliver a comprehensive benefits package of primary care services in the hospital, polyclinics, and satellite clinics to provide services in the most remote geographical areas. In 2012, a nutritional package was introduced in the Southern region to alleviate high prevalence of micronutrient deficiencies reported in children less than 5 years. In the Southern region, the NHI also implemented a model of integrated health care delivery to effectively provide a comprehensive PHC package, including medicines, a very good example of bundled care for PHC services, especially for the management of chronic diseases. In 2016, the NHI was rolled out in Corozal District. In 2023, the NHI included Orange Walk district. While hospital services were included in the pilot, these were later excluded as part of the NHI rollout plan.

316. **The GoB is currently preparing to expand the NHI scheme to make it available to everyone in Belize, with the upcoming expansion set to be done in Cayo district.** The GoB is receiving technical assistance from the PAHO to update a fiscal space analysis following COVID-19, look at innovating health financing models to expand the NHI, and estimate the costs of different health services packages by region. The results of this technical assistance are expected to inform the health financing strategy to scale up the NHI plan.

### 7.2 Health expenditure

***Benchmarking on health spending between countries and over time***

317. **Belize's current health spending as share of GDP (about 5 percent) is below the average of what countries with similar per capita level of income (GNI per capita) spend** (Figure 91). Belize's GNI per capita (constant 2015 US$) was US$5,495 in 2019 but dropped to US$4,896 in 2020. Compared to peer

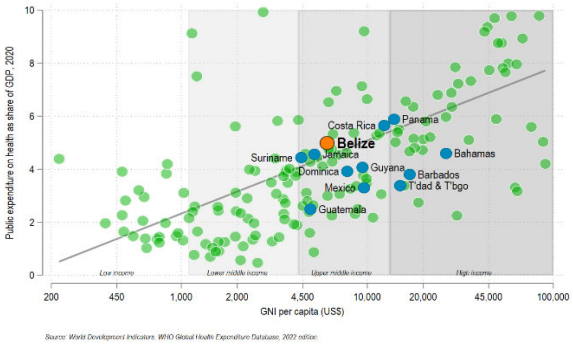
[126] Vanzie et al. 2010.

countries in the region, Belize is spending on health about as much as Guatemala (6 percent) and Jamaica (7 percent) that have a similar level of GNI per capita.

318. **Public spending on health in Belize as a share of GDP was 4.1 percent in 2019, below the objective of 6 percent set out in Belize Health Sector Strategic Plan 2014–2024 and slightly above the average of countries with a similar income level**.[127] In that same year, Belize public spending on health as a share of GDP was higher than countries with a similar or higher GNI per capita such as Dominica (4 percent), Guatemala (2 percent), Guyana (4 percent), and Mexico (3 percent) but below countries with higher GNI per capita such as Costa Rica and Panama (Figure 92).

**Figure 91. Current health expenditure as a share of GDP, global benchmark (2020)**


**Figure 92. Public expenditure on health as share of GDP, global benchmark (2020)**




*Source:* WDI and WHO GHED[128] (2021).
*Note:* Belize is highlighted in orange. Peer countries in the region are highlighted in blue. All other countries are highlighted in green. GNI is on a log scale.

319. **Between 2016 and 2019, most health financing indicators have remained at the same level, with minor fluctuations that mostly leveled out (**Table 22**).** Public spending per capita has increased overall by about 4 percent, from US$268 in 2015 (constant 2019 purchasing power parity) to US$278 in 2019 (latest available year). The same holds true for the share of public resources allocated to health, which increased slightly from 68 percent in 2015 to about 70 percent in 2019, though the same share was allocated to health in 2016. At the same time, out-of-pocket payments (estimated) as a share of current health expenditure decreased from almost 23.4 percent to about 22 percent. Over this time, GDP grew by 1.5 percent on average, while GDP per capita decreased slightly from US$12,000 (purchasing power parity constant 2017 international US$) to US$11,251, a decrease of 1 percent.

**Table 22. Overview of Belize public health spending indicators, 2015–2019**

| | 2015 | 2016 | 2017 | 2018 | 2019 | Percent change |
|---|---|---|---|---|---|---|
| Current health expenditure (percent of GDP) | 4.73 | 4.96 | 4.8 | 4.93 | 5.13 | 8 |

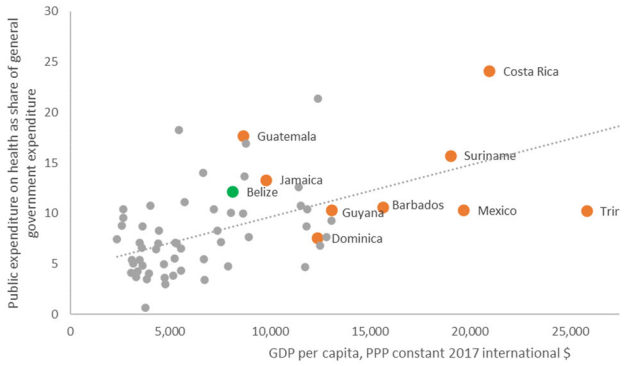
[127] PAHO 2020b.
[128] GHED = Global Health Expenditure Database.

| | 2015 | 2016 | 2017 | 2018 | 2019 | Percent change |
|---|---|---|---|---|---|---|
| Current health expenditure per capita(constant 2019 purchasing power parity BZ$ per capita) | 450 | 457 | 429 | 435 | 446 | −1 |
| Public spending on health (percent of current health expenditure) | 68 | 68.8 | 68.6 | 68.6 | **69.9** | 3 |
| Public spending on health (percent of GDP) | 4.06 | 4.2 | 3.89 | 3.92 | 4.08 | 1 |
| Public spending on health (percent of general government expenditure) | 11.4 | **12.2** | 11.6 | 12.1 | **12.2** | 7 |
| Public spending on health per capita, (constant 2019 purchasing power parity BZ$ per capita) | 268 | **278** | 259 | 264 | **278** | 4 |
| Out-of-pocket spending (percent of current health expenditure) | 23.4 | 23.7 | 23.9 | 23.2 | **21.8** | −7 |
| GDP per capita (Constant real BZ$, base: 2014) | 12,000 | 11,708 | 11,213 | 11,049 | 11,251 | 0.1 |
| GDP growth (annual percent) | 3.4 percent | 0.1 percent | −1.7 percent | 1.1 percent | 4.5 percent | 1.5[a] |

*Source:* WDI and WHO GHED (2021).
*Note:* Numbers in bold indicate the best value of an indicator.
a. Average growth.

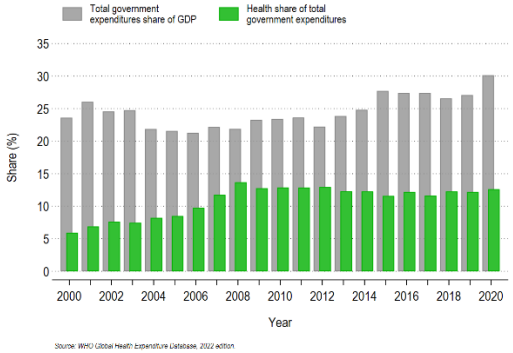
320. **The share of government spending allocated to health in 2019 was relatively high at 12.2 percent and remained constant over the past five years, despite an increasing share of government spending as a share of GDP.** Public spending on health relative to general government spending in 2019 was higher than in Barbados (10.6 percent), Dominica (7.6 percent), Guyana and Mexico (both 10.3 percent), and Trinidad and Tobago (10.2 percent) in the same year. However, the share allocated to the health sector has remained relatively stable since 2008. In the early 2000s, the total government spending as a share of GDP decreased, while allocation to health increased steadily. From 2009 to 2019, general government expenditure as a share of GDP in Belize has increased by an average of 1.3 percent per year, while public expenditure on health as a share of general government expenditure has declined at an average rate of 0.5 percent per year (Figure 94).

**Figure 93. Public expenditure on health as share of general government expenditure versus income level, 2019 (base: 2014)**




*Source:* WDI database (2022).
*Note:* Belize is highlighted in green. Peer countries in the region are highlighted in orange.

**Figure 94: Total government spending as share of GDP versus allocation to health sector**




*Source:* WDI and WHO GHED (2021).

321. **The greatest source of health financing is domestic general taxation, followed by out-of-pocket spending.** Financing from domestic general taxation increased from 45 percent in 2000 to 70 percent in 2019, with the largest increase occurring up to 2010. Out-of-pocket spending represents the second largest component and according to existing WHO estimates,[129] decreased from 37 percent to 22 percent over the same period (Figure 95). All other sources of financing have remained limited over time (voluntary health insurance, external financing, and social health insurance). Of the externally funded share, the majority is off budget. In per capita terms, total health spending in Belize sourced from domestic general taxation increased from US$79 in 2000 (constant 2019 US$) to US$204 (constant 2019 US$) in 2019, but the largest increase took place over 2005–2008. Out-of-pocket spending slightly decreased in the same period from US$66 to US$64. Coupled with a stagnant GDP per capita, this resulted in current health spending per capita in real terms remaining stagnant at mostly below US$450 per person in 2019 constant US$ (Figure 96). Real spending per capita increased steadily between 2000 and 2012 but plateaued afterward.

[129] The last available data are estimated by the WHO using government reports on public expenditure and extrapolations from previous years based on the growth of macroeconomic series.

**Figure 95. Composition of health spending**

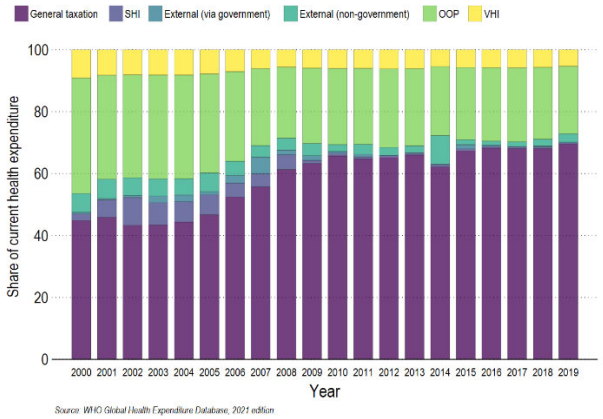
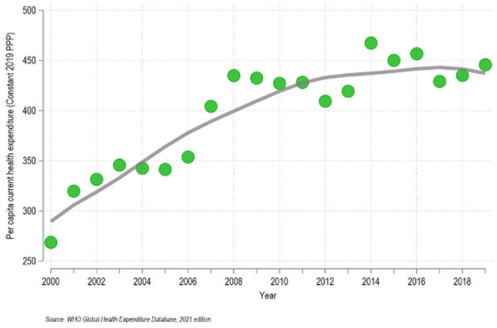



**Figure 96. Per capita current health expenditure (constant 2019 purchasing power parity)**




*Source:* WDI and WHO GHED (2021).

322. **Out-of-pocket payments as a share of current health spending in Belize—at 21.8 percent in 2019—are among the lowest in the region based on data available and close to the country target of 20 percent.** Among comparator countries, only Suriname (16.1 percent) and Jamaica (16.4 percent) have lower shares of out-of-pocket payments in the same year (data available upon request). Belize is close to its national target and to the 15–20 percent commonly cited as the reference threshold for ensuring a desired level of financial protection for the population.[130] The share of out-of-pocket spending in Belize is below the regional average at about 29 percent. Globally, there is an inverse correlation between public spending on health as a share of GDP and the out-of-pocket spending on health expenditures across countries. Compared to the global trend, the share of out-of-pocket spending in Belize is slightly below the expected level (data available upon request). However, these data points rely on estimates from the WHO, as data from the household budget survey are not publicly available.[131] This figure may have changed during the pandemic time (data not available).

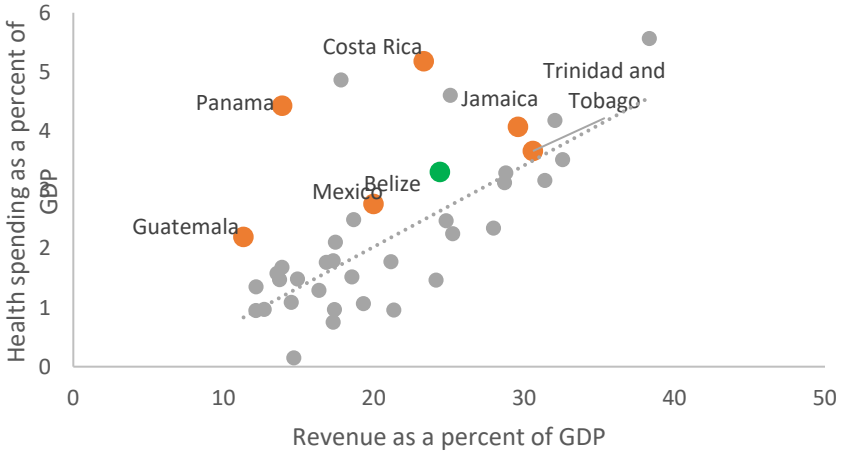
323. **Despite the relative low share of out-of-pocket spending, people may incur catastrophic and impoverishing spending from seeking health care.** These important indicators to achieve UHC are not routinely monitored. Full financial protection in health is defined as the absence of three potentially overlapping groups of people in a population: (a) those who forgo needed health care for financial reasons; (b) those who use health care when in need and incur out-of-pocket health payments which are considered to threaten consumption of other essential goods and services like food and education; and (c) those who use health care when in need and are impoverished by the out-of-pocket payments. The latter two groups of people are considered to experience financial hardship through out-of-pocket medical payments. Estimating these indicators and monitoring the trend over time is key to make progress on the UHC agenda.

324. **Belize's spending on health is slightly above at the expected level given its fiscal capacity (29 percent) and like other countries in the region with similar fiscal capacity (Trinidad and Tobago - 30.6 percent and Jamaica - 29.6 percent)** (Figure 97). Countries outside of the region with similar fiscal capacity

[130] WHO 2010; Xu et al. 2010.
[131] The data in this paragraph were taken from the WDI database (2022).

(Solomon Islands - 28.7 percent and Cabo Verde - 28.8 percent) spend relatively less on health (about 3 percent of GDP). Government spending on health against revenue measures a country's fiscal capacity. Belize spent 4 percent of its GDP on health, which was similar to Jamaica's revenue and health spending as a share of GDP but above Trinidad and Tobago that spent 3.7 percent of GDP on health and had a slightly higher fiscal capacity (30.6 percent versus 29 percent).

**Figure 97. Government health spending versus revenue generation (as percent of GDP), 2017[132]**




*Source:* WDI database (2022).
*Note:* Revenue includes all government revenues excluding grants. Belize is highlighted in green. Peer countries in the region are highlighted in orange. Low-middle-income countries are highlighted in grey.

***Flow of funds in the Belizean health sector***

325. **The flow of funds in the Belizean health system reflects the fragmentation of the health system.** There are two main flows of funds: one from the MoF to the MoHW, which then channels resources to publicly managed HFs and the tertiary hospital, and one from the MoF directly to the NHI, which in turn reimburses contracted HFs for the benefits package (Figure 98). The funds flow for the NHI changed in 2022, before funds to the NHI were channeled through the MoHW. Household contributions are in the form of user fees and co-payments for select services and medicines in public hospitals and in private HFs. In addition, a small proportion of households (15 percent) also pays insurance premiums to private insurance providers for availing services in private HFs and for specialized health services abroad. Households are not required to pay a premium to avail from the services of the NHI. On-budget funds are channeled to the MoHW through the MoF while off-budget donor financing remains outside the government funds flow. In some cases, donors execute funds on behalf of the MoHW (for example, procurement of commodities).

326. **Health personnel can receive payments from the MoHW, the NHI, and privately run facilities.** Staff salaries in public NHI facilities are paid by the MoHW through the budget allocated to the HFs in catchment areas, while staff in private NHI facilities are paid directly by the private facilities. Doctors working in NHI-contracted public HFs also receive additional allowances, such as an on-call allowance (although they are not required to work outside the normal working hours) and an additional allowance

[132] 2017 is the latest available year for Belize for the revenue generation variable.

if they agree to not work in private practice. Private NHI facilities can also charge co-payments for select services and retain the collected user fees. In addition, the KHMH and other private hospitals can also receive funds from the NHI for performing select support services.

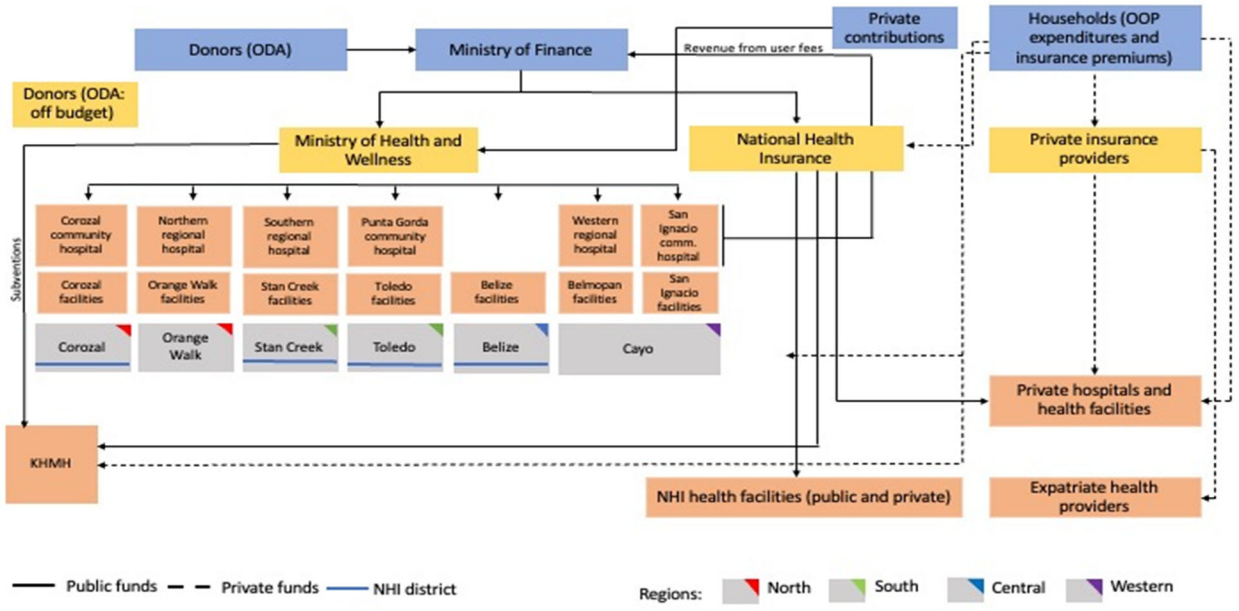
327. **The MoHW manages a large part of the financing of the public health care system and allocates the resources to the catchment areas and the KHMH.** Of the budget channeled through the MoHW, 40 percent is allocated for the functions executed at the national level, which includes financing of national-level technical units (for example, maternal and childcare unit). Another 40 percent is allocated to the health regions and their HFs, while 20 percent is transferred to the KHMH in the form of block grants (commonly called subvention). Health centers in the four regions receive withdrawing rights to cover the costs for human resources, operating costs, the costs for drugs, and maintenance costs. Each public HF has access to a virtual bank account and has spending authority up to BZD 2,000 (about US$1,000). If the spending request exceeds BZD 2,000, approval from the MoHW is needed. Drugs are procured centrally by the MoHW through the central medical store based on the request of the HFs, which is based on regional-level forecasted needs. Hospitals procure drugs directly from the central medical store and elsewhere.

328. **The KHMH is primarily financed through revenue from general taxation through the MoHW.** In FY2021/22, nearly 85 percent of the KHMH's revenues was made up of MoF block grants[133] (about BZD 29 million). The share of the government's subventions to the KHMH has remained consistent over the years, except for FY2019/20 when it reached 89 percent.[134] The KHMH has a revenue-based financing model, and the remaining 15 percent consists of user fees collected from patients and other sources of income such as reimbursement from the NHI (for specific services that are not provided through the facilities contracted), donations, consolidated revenue fund allocations, and proceeds from the sale and issuance of bonds and other financial instruments.[135] The KHMH can set its own levels of user fees and retain the revenue collected. The KHMH has budget autonomy from the MoHW, including for expenses related to its wage bill and operating costs. The referral hospital also procures its medicines and equipment independently (including from the central medical store). The KHMH is managed by its board of directors, and the MoHW is represented by a board member on the KHMH board. In effect, this is a form of autonomy with limited accountability.

329. **Public hospitals have limited autonomy in the retainment and use of resources.** Public health centers and health posts do not charge user-fees, and since October 2023, neither do public regional/community hospitals anymore. Households are required to pay a small proportion of the cost of select services, such as laboratory and support services, at regional and community hospitals in the form of co-payment. Public hospitals were not allowed to retain the revenue collected from user fees, which was instead transferred back to the MOF.

[133] KHMHA, Statement of Estimate of Expenditures and Expenses.
[134] Ibid.
[135] KHMHA Act, Chapter 38, 2008.

**Figure 98. Flow of funds in Belizean health system**




***Levels and composition of public and MoHW health spending***

330. **Aggregate MoHW expenditures, contributions from donor and private philanthropists, out-of-pocket expenditures paid by households to the KHMH, and NHI expenditures increased slightly over time** (both nominal and real terms), from BZD 153 million to BZD 163 million between FY2018/19 and FY2021/22 at 2015 prices (Figure 99). This increase was a result of the greater health system needs caused by the COVID-19 pandemic, especially in FY2020/21 and 2021/22. The increase was primarily driven by an increased budgetary allocation for the MoHW to combat the pandemic. MoHW expenditures increased by BZD 20 million between FY2015/16 and FY2021/22 (Figure 100). In addition, a small increase was observed in the volume of donor financing and private philanthropic contributions in FY2021/22.

**Figure 99. Public health spending, FY2018/19–FY2021/22 (nominal and real terms)**

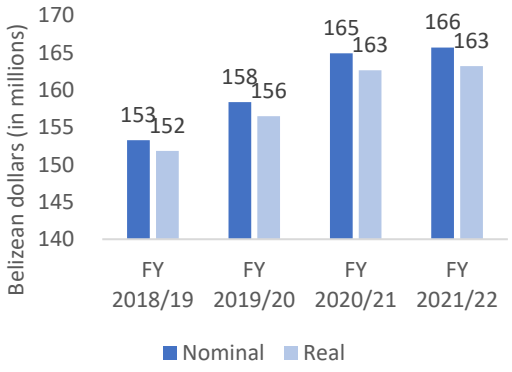
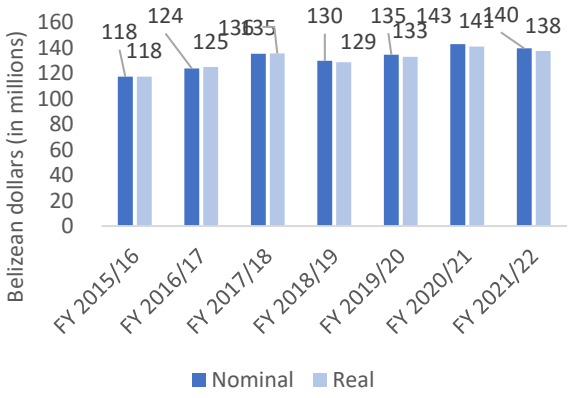



**Figure 100. Volume of total MoHW expenditures for FY2015/16–FY2021/22 (nominal and real terms)**




*Source:* BOOST, NHI, KHMH.

331. **The MoHW spends a small proportion of its budget on capital.** The share of capital expenses fluctuated between 2 and 5 percent during the period analyzed[136] (Figure 101). There were no data on the availability and functionality of capital stock (for example, medical equipment) to assess the adequacy of the level of capital investments from the MoHW.

332. **The largest share of MoHW budget is spent on HRH,[137] around 55 percent on average.** This is followed by operating expenses (around 20 percent) and subventions made to the KHMH (15 percent) and other organizations (less than 1 percent). Among operating expenses, 70 percent were for medical supplies. The share of capital expenses has been the lowest at about 1 percent. The category 'payment to contractors' could not be disaggregated, as it is likely to include expenses for the factors of health care delivery. The same was for the grant to the KHMH, with the exclusion of the HRH, which was extracted and aggregated with other expenses on HRH. The distribution of MoHW expenditure across the factors of health care provision has remained constant over the period analyzed, even during the pandemic years during which the MoHW priorities underwent a significant shift (Figure 102).

**Figure 101. Percentage of recurrent and capital expenditures**

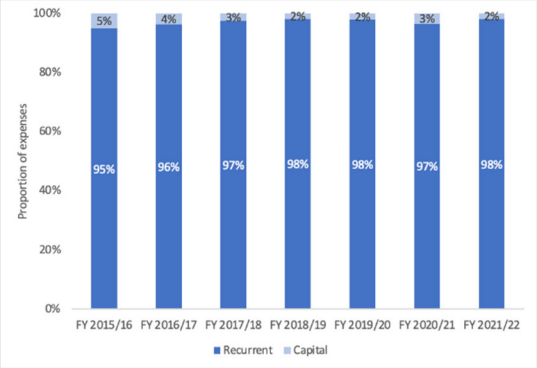
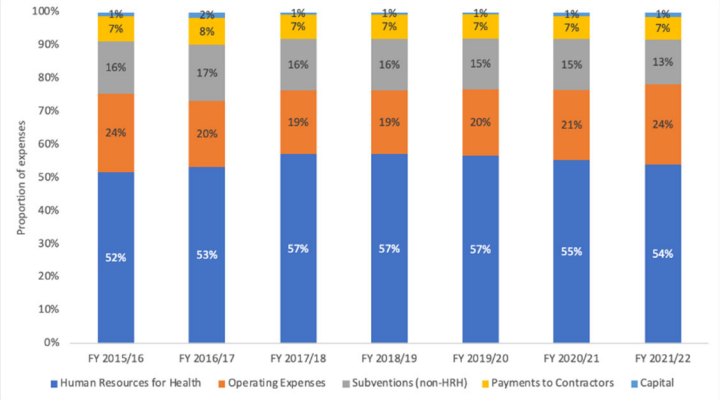



**Figure 102. Distribution of expenditure based on factors of health care provision**




*Source:* BOOST.
*Note:* Subventions are block grants to the KHMH. Payment to contractors reflects payment to companies contracted by the MoHW for specific services (infrastructure, HRH, supply of medical equipment).

333. **Donor financing for health is usually limited but increased during the pandemic.** In FY2019/20, donors' contributions amounted to BZD 0.34 million (both on-budget and off-budget). In FY2020/21, donor financing increased to BZD 10.81 million and in FY2021/22 to BZD 19.37 million. To provide funds to rapidly respond to the pandemic, donors availed additional resources (mainly off-budget), including through reallocation of funds from other sectors such as tourism. The share of off-budget donor financing increased from 0 percent in FY2019/20, to 6 percent in FY2021/22 and 18 percent in FY2021/22. This reflects budget executed through the PAHO and National AIDS Commission of Belize.

[136] During FY2020/21 and FY2021/22, the MoHW recorded all expenses related to the COVID-19 pandemic as capital expenses since they did not anticipate allocating those resources in future budget cycles. As a result, the share of capital expenses increased significantly to 13 percent in FY2021/22. Those expenses were recategorized by the World Bank staff, per the economic classification used in the fiscal years before the pandemic.
[137] Includes allowances, overtime, salaries, social security, subsistence allowance, and wages.

***Budget performance and budgetary response to COVID-19***

334. **Before the onset of the pandemic, the budget performance of the resources executed by the MoHW was very high, but on a decreasing trend.** In FY2015/16, the budget execution rate was 98 percent, but it steadily decreased to 91 percent up to FY2019/20. An increase in the MoHW budget allocation, from BZD 119 million in FY2015/16 to BZD 148 million in FY2019/20, was accompanied by a less than proportionate increase in the budget spent (Figure 103).

335. **Budget execution during the pandemic years reflects limited financial and health system surge capacity.** In FY2020/21, the MoHW requested additional budget to respond to the increased needs resulting from the pandemic. The process to identify and allocate additional funds to the MoHW took time, as it had to follow the regular request for supplementary budget which requires the government's approval. This led to an increase in the budget execution rate. In FY2021/22, the MoHW got a 15 percent increase in budget allocation. However, the lengthy administrative and bureaucratic processes slowed down the ability to create health system surge capacity, reducing the ability of the MoHW to spend the additional budget. For example, recruitment of new health personnel requires long approval procedures through the Ministry of Public Service and the MoF. To circumnavigate these delays in financing, the MoHW cut some recurring expenditure (for example, meals in hospitals); to circumnavigate the lengthy processes for recruitment of staff, the MoHW relied on external financing.

**Figure 103. Budget allocations, expenditures, and budget execution rate for FY2015/16–FY2021/22**

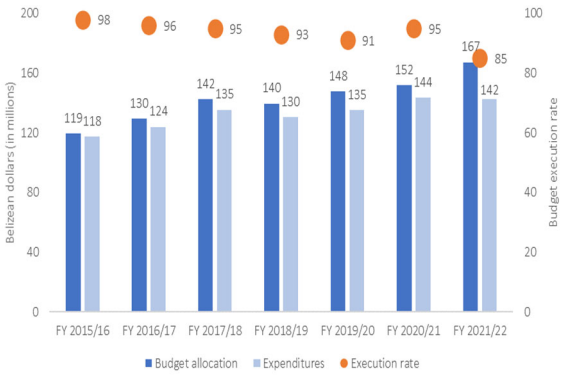
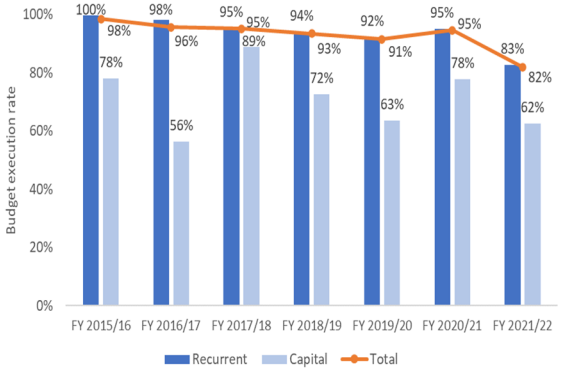



**Figure 104. Budget execution rate for recurrent and capital expenditures, FY2015/16–FY2021/22**

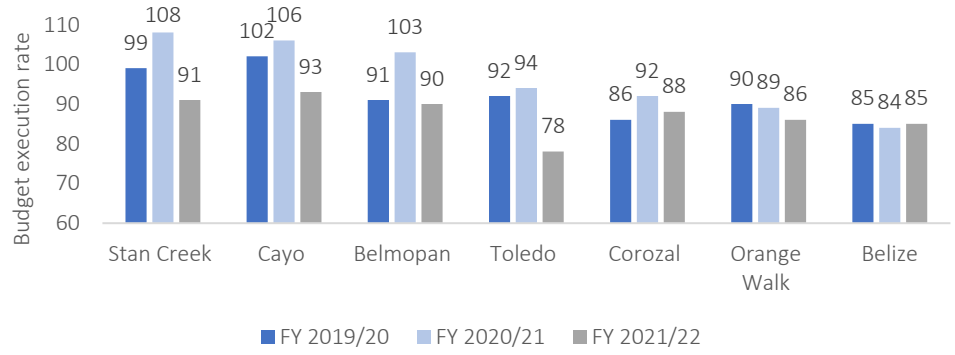



*Source:* BOOST.

336. **Changes in the execution rate are mainly driven by the recurrent expenditures since these make up the largest share of expenditures; however, fluctuations in execution of capital expenditure have been lowest and largest** (Figure 104). The execution rate for capital expenditures (between 56 and 82 percent) is significantly lower than the budget execution rate for recurrent expenditures across all fiscal years studied. This may suggest that capital expenditure is deferred in case of insufficient budget to cover the recurrent expenditures.

337. **There is large variation in the MoHW budget execution rate across catchment areas.** Budget execution rates at the catchment area level vary between about 70 percent to full execution rate.[138] While some variation is also observed over time within a catchment area, the overall trend remains similar. Stann Creek and San Ignacio catchment areas consistently have the highest budget execution rate, while the Belize catchment area has consistently had the lowest budget execution rate (Figure 105). This variation is driven by a host of factors such as varying levels of authority in decision-making at the catchment area level and the variation in the type of hospitals/facilities in different catchment areas.

**Figure 105. Budget execution rate for catchment areas in Belize for FY2019/20–FY2021/22**




*Source:* BOOST.

338. **Learning from the pandemic, Belize has taken action to increase its preparedness for future emergencies. As discussed in Chapter 2, i**n February 2021, the GoB passed a bill to amend the Finance and Audit Reform Act and create a contingencies fund for use in times of unforeseen emergencies. These funds can be used for any emergency, that is, natural disasters, public health emergency, or any other emergency requiring immediate access to funding.[139] The creation of this contingencies y fund is a great step toward ensuring a resilience financing.

339. **The additional resources to respond to COVID were mainly spent for the procurement of medical supplies** (which amounted to 51 percent in FY2020/21 and 67 percent in FY2021/22), for the purchase of medical equipment (about 15 percent), and to give subventions to the tertiary hospital for investments in additional intensive care units (10 percent).

## 7.3 Efficiency

### *Macro-level efficiency*

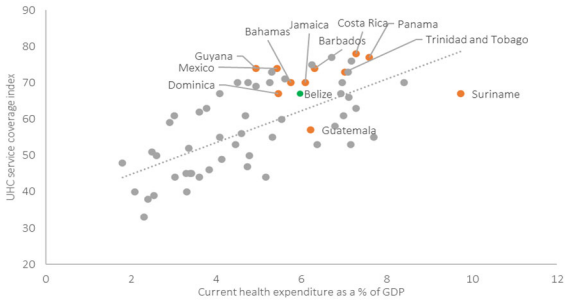
340. **Macro-level efficiency is examined by analyzing the impact of inputs (measured through health spending) on service delivery outputs and outcomes.** For benchmarking, current health expenditure per capita and as a share of GDP were used as measures of inputs to the health sector. The World Bank UHC index was used as proxy of health service coverage (output) while life expectancy at birth and under-5

[138] For some catchment areas such as Stann Creek, Cayo, and Belmopan, the execution rate was greater than 100 percent. This might be a consequence of these catchment areas using leftover budget from the previous year.
[139] Expenditures financed through the Contingencies Fund ~~The contingency fund is~~ are classified as ~~under~~ capital expenditure.

mortality rate were used as proxies for health outcomes.[140] This analysis can shed light on the correlation between resources and results. Comparator countries in the region used for the benchmarking analysis were Barbados, Costa Rica, Dominica, Guatemala, Guyana, Jamaica, Mexico, Panama, Suriname, and Trinidad and Tobago.

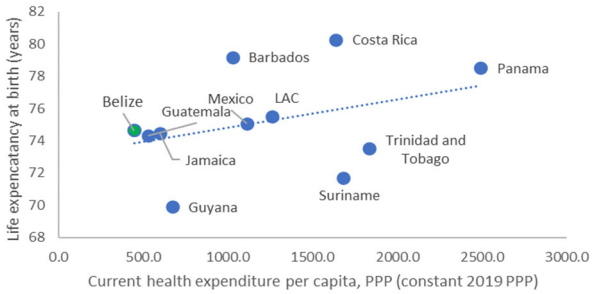
341. **Belize's achieves higher UHC coverage than the average given the resources spent on health, yet there is room for improvement.** Belize performs better than Guatemala—which spends 6.2 percent of GDP on health but has a lower UHC coverage index (57 versus 67 in Belize)—and Suriname that spends more of its resources on health (9.7 percent) but achieves the same UHC service coverage index (67). However, Belize lags the Bahamas, Dominica, Guyana, and Mexico that spend less of their resources on health as a share of GDP but achieve higher UHC service coverage index (Figure 106).

**Figure 106. Benchmarking health expenditure (inputs) to UHC coverage (output)**




*Source:* WDI database (2022).

**Figure 107. Life expectancy at birth versus recurrent health expenditure per capita (constant 2019 purchasing power parity), 2019**




*Source*: WDI database (2022).

342. **Belize achieves average results in terms of life expectancy given the current level of spending.** In 2019, Belize spent about one-third of the average for the LAC countries (constant 2019 purchasing power parity US$446 and US$1,164, respectively) while life expectancy at birth was relatively similar (74.6 versus 75.5 years, respectively) (Figure 107). Compared to peers, it obtains average results. Countries like Barbados and Costa Rica spend more but also achieve better results.

343. **Given the level of UHC service coverage, Belize is performing better than most other countries in the region in terms of under-5 mortality (**Figure 108**).** Suriname and Dominica, for example, have the same UHC coverage index as Belize (67) but the under-5 mortality rate is much higher (18.1 Suriname, 35 Dominica, and 12.3 Belize). Belize's mortality rate is also lower than countries in the region with higher UHC coverage index (Bahamas, Jamaica, Guyana, Trinidad and Tobago, Mexico, Barbados, and Panama). Costa Rica is the only exception in the region with a UHC service coverage index of 78 and an under-5 mortality rate of 8.2 per 1,000 people.

344. **Belize's adult mortality rate among the male population is above what would be expected given its UHC coverage index.** This result reflects the great public health concern among males of interpersonal

[140] Another commonly used outcome indicator to measure efficiency is maternal mortality. The latest available year for international comparison is 2017 and outdated. For this reason, this analysis uses under-5 mortality and life expectancy at birth as outcome indicators.

injuries (homicides) and road accidents that primarily affect men (section 0). With an estimated adult male mortality rate of 212 per 1,000 people, Belize has one of the highest incidences among peer countries. Only Guyana (267) and Suriname (218) score worse (Figure 109).

**Figure 108. UHC service coverage index versus under-5 mortality**

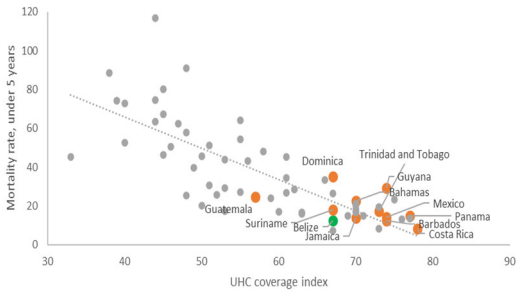
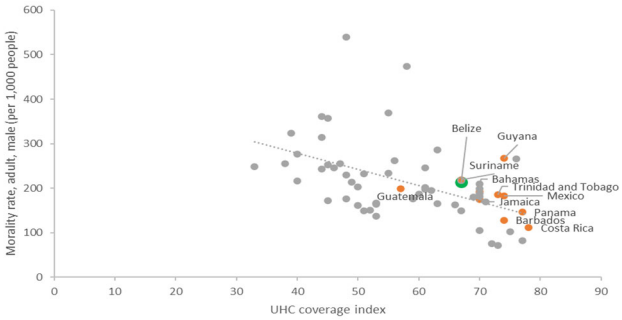



**Figure 109. UHC coverage index versus adult male mortality**




*Source:* WDI database (2022).
*Note:* Low-middle-income countries are indicated in grey.

### *Meso-level efficiency*

345. **Due to the data limitations, the efficiency analysis will be limited to the district level.** To measure efficiency of service provision in MoHW HFs, the level of HRH productivity was estimated, that is, by looking at the relationship between inputs used (medical doctors and nurses) and the outputs produced (number of visits) at the district level.

346. **Inputs, outputs, and input costs were estimated using data from the MoHW and the regions.** Inputs normally used to perform an efficiency analysis include human resources, capital and assets, and medical and non-medical inputs. For this analysis, human resources—medical doctors and nurses—were the only production factor for which the data were available. However, given that HRH account for at least 55 percent of MoHW expenditure, this analysis remains relevant. To estimate HRH costs, the number of staff was multiplied by the average salary, by cadre. The number of medical staff might be overestimated because of health workers working part-time in the public health sector owing to dual practice, which remains unregulated despite its use by virtually all specialists and doctors, generally, but also lower-level cadres. To measure service production, a composite indicator of emergency, outpatient, and inpatient visits at the district level was used. To consider different levels of resources needed for different types of visits, visits were weighted (an outpatient visit was assigned a weight of 1, an emergency visit a weight of 2, and an inpatient visit a weight of 4). Sensitivity analyses with different weights for inpatient visits (3 and 5) to showed that the results remain qualitatively consistent. The number of services provided was extracted from the health regions, due to partial use of the BHIS by the public health facilities which would have underestimated production.

347. **Three indicators were computed for 2021, to measure the productivity and the unit costs per visit** (Table 23). The first two indicators measure productivity of doctors and of all medical staff (expressed per day) while the third indicator measured unit costs per visit and was calculated by dividing the total salaries paid to the HRH by the total number of weighted visits.

**Table 23. Indicator of health personnel productivity, by district**

| Indicator | Numerator | Denominator |
|---|---|---|
| **Doctors' productivity** | Number of weighted visits | Number of doctors |
| **Productivity of medical staff** | Number of weighted visits | Number of medical staff (doctors and nurse) |
| **Unit costs per visit** | Salaries of doctors and nurses | Total number of weighted visits |

348. **In 2021, on average a health care provider visited about 2.2 patients per day in the MoHW-managed facilities in Belize, a low overall level of productivity (Table 24).** This level of productivity (also called caseload) is lower than the productivity of countries in Africa where similar studies were conducted (for example, about 12 patients per day in Tanzania and 23 patients per day in Kenya but similar to small countries such as Madagascar at 6.3 patients per day[141]). This finding finding is partially driven by the low population density in some areas of Belize, but others factors are likely to be major drivers, such as the result of dual practice arrangements driven by generally low salaries of public sector health providers. The highest number of patients visited was in Belize district (3.5), likely due to the availability of services at the KHMH. Corozal and Toledo Districts, where community hospitals are based, show the lowest productivity for both indicators. The data also show that the productivity of medical staff decreases with the increase in the share of people living in rural areas, except for Stann Creek that has a high productivity despite a large share of the population in rural areas. In 2014, it was estimated that although 55 percent of the population in Belize lives in rural areas, only 13.6 percent of health care providers reside there.[142]

349. **The variation in human resources productivity is reflected in the variation in respective unit costs per visit to MoHW HFs (Table 24).** On average, unit costs (from HRH personnel) per visit are BZD 63 in Belize. However, unit costs vary from about BZD 37 in Belize District to BZD 117 in Toledo District, an almost fourfold increase from the district with the lowest productivity to the district with the highest. The Northern region with Corozal and Orange Walk Districts had comparable unit costs per visit. Cayo and Stann Creek showed similar unit costs per visit.

**Table 24. Productivity of doctors and medical staff and unit costs by district, 2021**

| | Productivity of medical staff | Doctors' productivity | Unit cost per visit | Population living in rural areas (percent) |
|---|---|---|---|---|
| Belize[a] | 3.5 | 12.0 | 37 | 32 |
| Stann Creek | 2.4 | 6.5 | 68 | 77 |
| Cayo | 2.0 | 7.9 | 71 | 45 |
| Corozal | 1.8 | 5.3 | 78 | 74 |
| Orange Walk | 1.8 | 8.4 | 80 | 75 |
| Toledo | 1.2 | 4.2 | 117 | 84 |
| **National** | **2.2** | **7.9** | **63** | **55** |

*Source*: Own calculations using MoHW data on number of encounters and salary by grade.
*Note:* a. Includes the KHMH.

350. **While this analysis provides first insights about the level and variation in the productivity of service delivery in Belize, further disaggregation of data is needed to better identify the drivers of performance difference.** The current analysis presents data by district and assumes that districts have

[141] https://www.sdindicators.org/indicators
[142] Mc Arthur, Nelson, and Woodye 2014.

similar type of patients and service delivery patterns. To consider differences in the profile of patients seen at different level of care, this analysis should be conducted comparing districts by similar level of care and facility types (rural versus urban).

351. **In addition to HRH-related inefficiencies, suboptimal quality of care can constitute a significant source of inefficiency for the health system.** A recent report by the MoHW (2021) highlights significant gaps in quality of care at all levels of MoHW facilities (hospitals and PHC-level facilities). Each facility was assessed based on the percent of indicators met with satisfaction among a list of 6–7 indicators related to procedural quality.[143] The report shows that virtually no facility conducts patient satisfaction surveys. Moreover, many indicators were not met. For example, PHC facilities in the Northern region only achieved 12 percent of the indicators, while 46 percent were not achieved. Similarly, in the Central region, PHC facilities only met 25 percent of the indicators. Data on clinical quality of care, including providers' competencies to diagnose and prescribe correct treatment, were not available.

***Hospital-level efficiency***

352. **We measured the performance of hospitals using the Pabon Lasso model[144] that plots the bed turnover rate (BTR)[145] and the bed occupancy rate (BOR).**[146] Using the average of these two indexes, two perpendicular lines are drawn to divide the graph into four quadrants. Hospitals in the upper right quadrant are considered more efficient because higher BTR and BOR implies ability of the hospital to efficiently use available resources, proxied by the number of beds. It is important to compare similar hospitals with this model as BTR and BOR depend in part on the different level of severity of the patients seen. Belize District (which has the KHMH) may not be comparable to other districts. Figure 110 reports the results for 2019; results for 2020 and 2021 can be found in Annex 12.

353. **The BOR of all hospitals in general is low by international standards** (Figure 110). A hospital can be considered as operating efficiently at BOR of 80–90 percent;[147] a BOR beyond 90 may reflect insufficient capacity as there would be no surge capacity in case of an unexpected increase in demand for inpatient services. The overall average BOR in 2019 was 63 percent and ranged significantly across districts (for example, 35 percent in Punta Gorda and 44 percent in Corozal). Similar average BOR was found in Iran and Tunisia (58 percent), Malaysia (56–61 percent), and Indonesia (55–60 percent).[148] Stann Creek had a high BOR. In 2019, BTR for regional hospitals was equal to 85 patients per bed in Orange Walk, 104 patients per bed in Belmopan, and 88 patients per bed in Stann Creek. Corozal and Toledo had the lowest BTR with 65 and 58 patients per bed, respectively. Belize's BTR was 52 patients per bed. This is similar to the BTR found in Uganda (74)[149] and variation in Iranian hospitals (about 6–34 in teaching hospitals and

[143] At the hospital level, these included, for example, whether patient satisfaction improved, review of hospital admission clinical records, weekly management meetings, and whether new staff received orientation. At the PHC level, indicators assessed included measure of physician productivity, coverage of routine immunization, whether body mass index was recorded, whether facilities randomly review patient records for those detained in observation, and so on.
[144] https://iris.paho.org/bitstream/handle/10665.2/27221/ev20n4p341.pdf?sequence.
[145] BTR measures productivity of hospital beds, and it represents the number of patients treated per bed in a year.
[146] BOR measures the share of beds occupied by patients in a given period, usually one year, thus reflecting efficiency in the use of hospital beds.
[147] Barnum and Kutzin 1993.
[148] Aloh et al. 2020.
[149] NabuKeera, Boerhannoeddin, and Raja Noriza 2015.

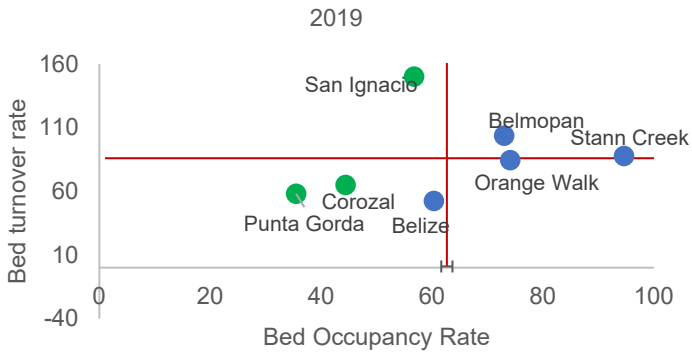
61–96 in hospitals associated with a medical school).[150] Regional hospitals have a higher BOR and a higher BTR than community hospitals.

354. **The average length of stay (ALOS)—another efficiency indicator—also varies significantly in Belize** (Table 25). The ALOS was relatively stable in 2019 and 2020 for all hospitals and ranged between 1.3 and 5.1 days, with community hospitals having a shorter ALOS than regional hospitals. As community hospitals refer more severe patients to regional hospitals, comparison is better suited between hospitals of the same level. Even by level of care, there are differences in the ALOS. The higher ALOS in Belize is likely because the KHMH provides care to patients with more illness severity. The ALOS is generally low when compared to European countries, where in 2018, the ALOS was 7.5 days. However, it is important to keep in mind that these values should be analyzed along with indicators of quality of care such as re-admission rates.

**Table 25. ALOS in public hospitals, 2019–2021**

| Hospitals | 2019 | 2020 | 2021 |
|---|---|---|---|
| Belize | 4.2 | 4.5 | 4.8 |
| Stann Creek | 3.9 | 5.1 | 4.5 |
| Orange Walk | 3.2 | 3.3 | 3.3 |
| Belmopan | 2.6 | 2.6 | 2.5 |
| Corozal | 2.5 | 2.2 | 2.5 |
| Toledo | 2.2 | 1.9 | 1.9 |
| San Ignacio | 1.4 | 1.3 | 13.8 |

**Figure 110. Pabon-Lasso model to measure hospital efficiency, 2019**




*Source:* MoHW.
*Note:* Blue indicates regional hospitals, and green indicates community hospitals.

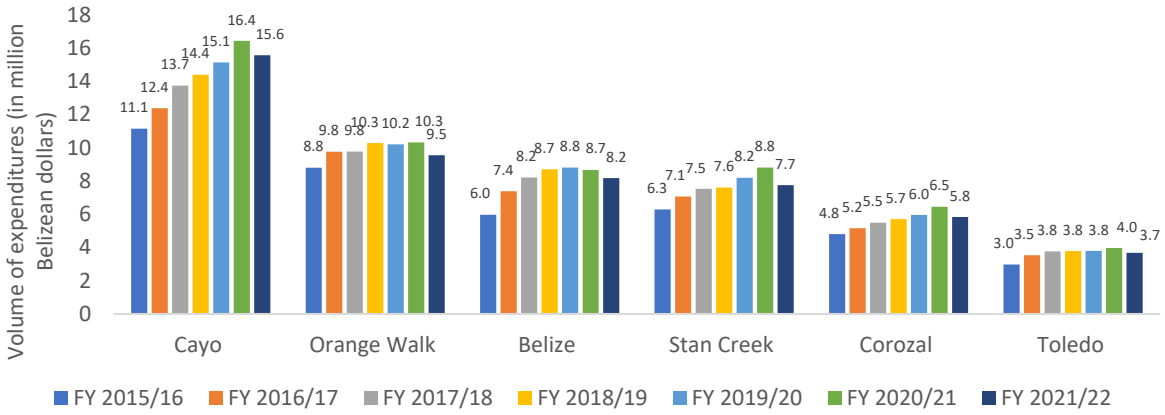
## 7.4 Equity analysis

### *Equity in financing and services availability*

355. **The level of MoHW health expenditures varies significantly across districts in Belize** (Figure 111). Average health spending is highest in Cayo District and lowest in Toledo. The average expenditures in Cayo are nearly three times the average expenditures in Toledo. Cayo is the only district with two public hospitals: a regional hospital in Belmopan and a community hospital in San Ignacio, which explains the higher level of public health expenditures. As expected, districts with regional hospitals (Cayo, Stann Creek, and Orange Walk) spend significantly more than districts with a community hospital (Corozal and Toledo). Given data limitations, the volume of expenditures made by the MoHW could not be disaggregated by levels of care.

[150] Aloh et al. 2020.

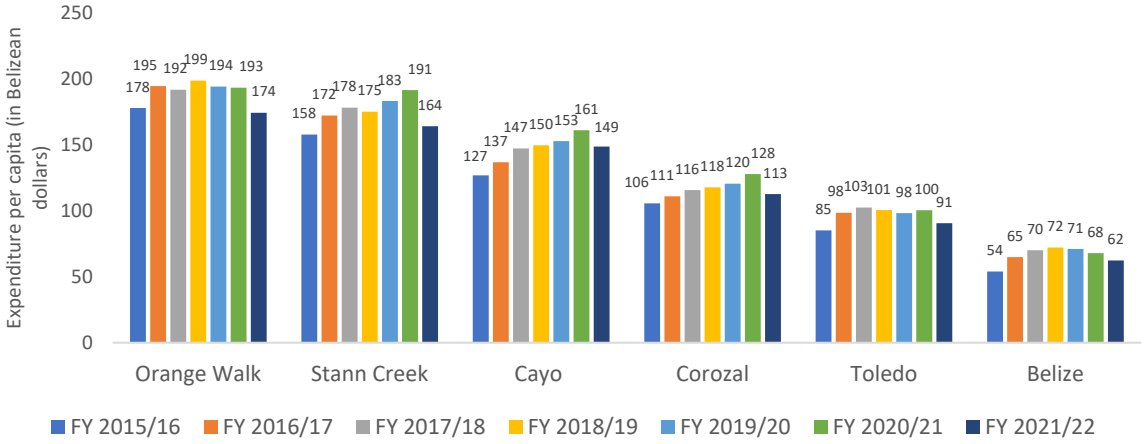
**Figure 111. Volume of expenditures by district, FY2015/16–FY2021/22**




*Source*: BOOST.

356. **When considering the number of people living in each district, hospital type largely determines the per capita expenditure in each district** (Figure 112)**.** Orange Walk has the highest MoHW expenditures per capita (close to BZD 200) while Belize has the lowest public spending per capita (BZD 60–70), a threefold difference. Cayo, which receives the highest overall allocation, spends about BZD 150 per person. Since Belize District does not have a dedicated community/regional hospital (its residents avail secondary health care services at the KHMH), the MoHW budget mainly covers primary care facilities. As a result, the per capita expenditure in Belize is the lowest. Similarly, per capita expenditures in districts with community hospitals (Toledo and Corozal) are lower than the per expenditures in districts with regional hospitals (Orange Walk and Stann Creek). Finally, Cayo is the only district with both a regional and a community hospital. This explain its per capita expenditures being higher than districts with a community hospital but lower than districts with a regional hospital.

**Figure 112. MoHW health expenditures per capita, by district**




*Source*: BOOST, SIB.

357. **The availability (density) of public doctors and nurses in Belize is uneven across districts** (Figure 113). In FY2021/22, the density of nurses in Orange Walk District (2.03 nurses per 1,000 people) was the

highest, while Belize District (0.99 nurses per 1,000 people) had the lowest nurse density. With respect to doctors, Stann Creek District had the highest density of doctors (0.97 doctors per 1,000 people) and Belize (0.41 doctors per 1,000 people) and Cayo (0.51 doctors per 1,000 population) have the lowest density among all districts. This analysis only includes doctors and nurses employed in the MoHW-managed hospitals and facilities and does not include personnel employed by the private health care sector. Belize and Cayo Districts have the largest number of private health care providers.

358. **There are also noteworthy differences in the availability of public hospital beds between districts** (Figure 114). The number of beds (per 1,000 people) in Stann Creek District is more than twice the number of beds (per 1,000 people) in two out of six districts: Toledo (0.81) and Corozal (0.74). Districts with regional hospitals have better access to hospital services than districts with community hospitals. The difference in services provided in the two types of hospitals explains the variation in the density of physical resources.

**Figure 113. Number of nurses and doctors per 1,000 people by district in FY2021/22**

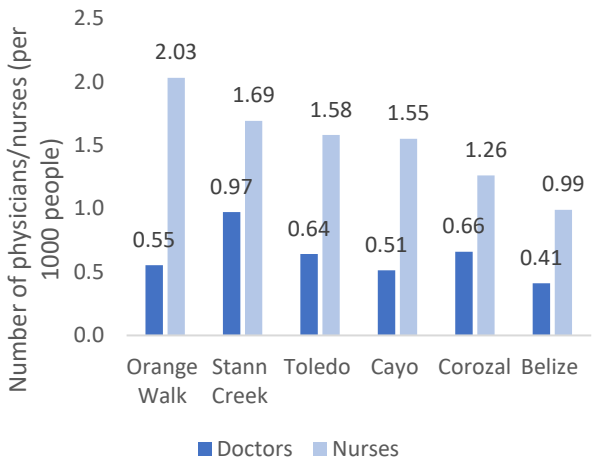
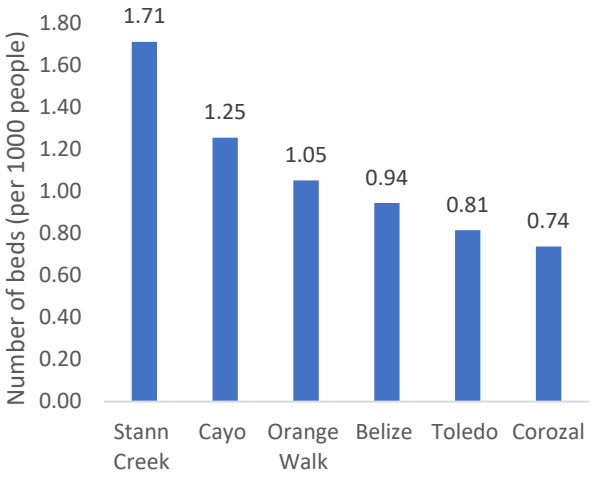



**Figure 114. Number of beds (per 1,000 people) for FY2021/22**




*Source:* MoHW, SIB.
*Note:* Belize District includes the KHMH.

***Equity in health services utilization and health outcomes***

359. **Utilization of health services varied across Belizean districts, apart from maternal and child health services (**Table 26**).** The number of inpatient and outpatient visits per capita was the highest in Stann Creek District (0.07 and 1.04, respectively) and lowest in Orange Walk (0.05) and Toledo (0.02) for inpatient services and in Toledo for outpatient visits (0.5). This means that on average, people in Toledo get less than half outpatient care from the public system than those living in Stann Creek. Instead, the proportion of mothers who accessed maternal health services, such as adequate antenatal care, was consistently high across all districts ranging from 94.8 percent in Orange Walk to 99.4 percent in Toledo.

**Table 26. Indicator values for service utilization indicators for Belizean districts**

| Indicator | Belize | | Cayo | Corozal | Orange Walk | Stann Creek | Toledo |
|---|---|---|---|---|---|---|---|
| | Belize City[a] | South Side | | | | | |
| Mother who attended 4+ antenatal care visits (percent, 2016) | 99.2 | 95.9 | 95 | 99 | 94.8 | 98.1 | 99.4 |
| Inpatient admissions per capita (Number, 2021) | 0.04 | | 0.05 | 0.02 | 0.08 | 0.09 | 0.03 |
| Outpatient visits per capita (Number, 2021) | 0.82 | | 0.64 | 0.63 | 0.75 | 1.03 | 0.50 |

*Source:* United Nations Children's Fund (UNICEF) Multiple Indicator Cluster Survey (MICS), MoHW.
*Note:* a. Excludes South Side.

360. **Disparities in financing, services availability, and utilization of care impact health outcomes** (Table 27, Figure 115, Figure 116). The high and homogenous coverage in maternal and child health services drives overall excellent results in outcomes. Maternal mortality is very low for all districts, ranging from 0 deaths (per 1,000 live births) in Corozal and Orange Walk to nearly 4 deaths in Stann Creek.[151] These maternal mortality rates are comparable to the average maternal mortality rate for high-income countries (0.11 deaths per 1,000 live births[152]). Similarly, Belize has made significant progress across child mortality indicators. However, some indicators do reflect large differences in results. Toledo has the highest neonatal and under-5 mortality of all districts. Moreover, mortality rate for all three indicators was lower for girls than for boys, albeit the difference was small.

**Table 27. Maternal and child mortality indicators for Belizean districts/sex for FY2021/22**

| District | Maternal mortality rate (per 1,000 live births) | Neonatal mortality rate (per 1,000 live births) | Infant mortality rate (per 1,000 live births) | Under-5 mortality rate (per 1,000 live births) |
|---|---|---|---|---|
| **District** | | | | |
| Belize | 2.71 | 12.9 | 10.2 | 17.6 |
| Cayo | 0.63 | 5.7 | 10.5 | 12.7 |
| Corozal | 0.00 | 8.7 | 8.5 | 17.4 |
| Orange Walk | 0.00 | 5.2 | 14.7 | 9.3 |
| Stann Creek | 4.20 | 8.3 | 15.3 | 10.0 |
| Toledo | 1.50 | 16.1 | 14.8 | 27.8 |
| **Data by Sex** | | | | |
| Girls | n.a. | 7.2 | 11.7 | 13.2 |
| Boys | n.a. | 11.0 | 13.5 | 16.6 |

*Source:* BHIS, MoHW.

361. **The burden of disease of the population also differs across Belizean districts** (Figure 115, Figure 116). For example, the proportion of deaths caused by diabetes in the Northern region of Belize (Corozal and Orange Walk) is higher than the rest of the country (12 and 11 percent, respectively), while it is lowest in Belize (4 percent). There is also variation in the proportion of deaths caused by heart disease across

[151] BHIS, MoHW.
[152] WDI, WHO, UNICEF, United Nations Population Fund (UNFPA), World Bank Group, and the United Nations Population Division. *Trends in Maternal Mortality: 2000 to 2017*. Geneva, World Health Organization, 2019.

districts although less marked. It ranged from 11 percent in Toledo and Belize Districts, to 16 percent in Cayo and Stann Creek. Moreover, men tend to die more from NCDs (disease of the heart, cerebrovascular diseases, influenza and pneumonia, chronic liver disease, and cirrhosis) than women (Figure 116). This is likely caused by behavioral risk patterns such as men drinking more alcohol and using more tobacco products than women. Homicide, HIV, and unintentional injuries—that include road accidents—are the leading causes of mortality for men. Women generally suffer more than men from malignant neoplasms and diabetes.

**Figure 115. Percentage of total deaths caused by health disease and diabetes in FY2021/22**

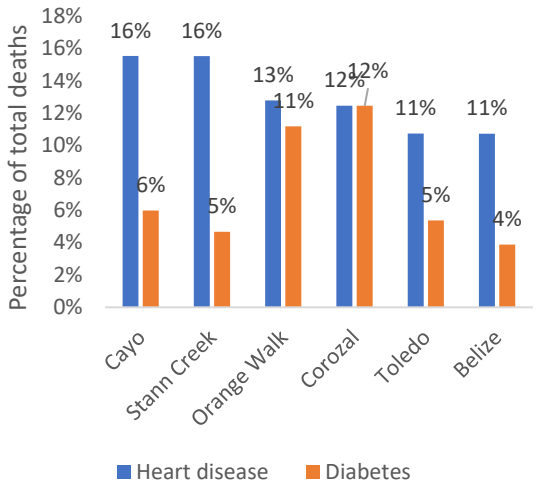
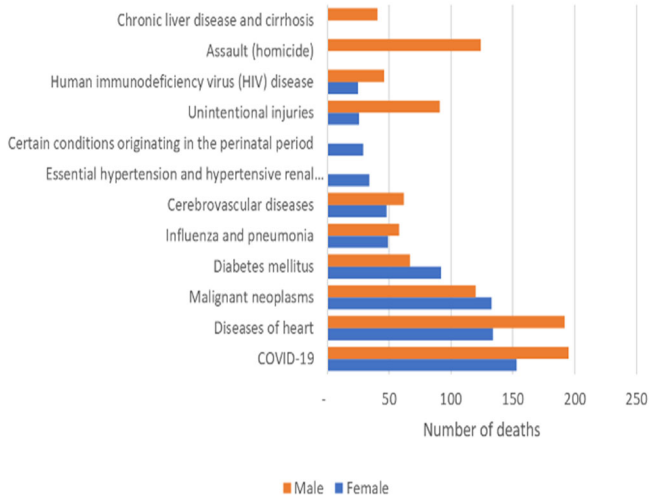



**Figure 116. Leading causes of deaths in 2021, by gender**




*Source:* MoHW, BHIS.
*Note:* The 2021 mid-year population estimates have an equal distribution of males (49.8 percent) and females (50.2 percent).

## 7.5 Conclusions and recommendations

362. **While Belize has made big strides in improving health outcomes and health financing protection for its population, this PER has identified concrete options to increase the effectiveness, efficiency, and equity of health spending**. The results of this chapter may be used to inform the development of the next health sector strategic plan which is planned for 2025 as well as for the development and implementation of a comprehensive health financing strategy to explicitly define targets to promote financial sustainability, efficiency, and health system resilience.

- **Spending on health.** Belize finances majority of the health sector spending through domestic tax revenue, which is an effective and equitable financing mechanism, but it is limited by fiscal space constraints. While the level of spending is adequate for the income level and fiscal capacity, in the short term, the government will need to increase the amount of resources (in absolute value) to the health sector to (a) avoid the erosion of existing services which may result from inflation and (b) provide services that were deferred during the COVID pandemic. The strong economic recovery to date that is expected to be sustained will represent an important source for additional public health spending. Foreign aid has increased during the pandemic, but it is expected to decrease again, and it does not constitute a substantial or

sustainable source of health financing. Given the high share of poor people and lack of systems to identify those in need, contributory systems are not recommended.

- **Health financing of MoHW-managed facilities.** The GoB may consider health financing reforms that could maximize the results achieved: (a) link payments to health regions to the achievement of key performance indicators; (b) introduce strategic purchasing methods that also incorporate quality of care targets; (c) allow hospitals to retain some fungible funds; and (d) examine and address the reasons for different budget execution rates across catchment areas.

- **'UHC'—aka scale-up on NHI.** As the government plans for the gradual scale-up of the NHI model—that is, strategic purchasing of a PHC benefit package—the following considerations should be explicitly discussed: (a) budget implications for the regions that currently provide PHC services; (b) stepwise transition from supply-side financing to demand-side financing to ensure facilities' readiness to provide quality care to the population; (c) supply-side restructuring to address inefficiencies; (d) roles and responsibilities of the MoHW and of the health regions, given the fact that the scale-up of the NHI model is expected to lead to a "centralization of health finances and service delivery;" and (e) feasibility of implementing a needs-based scale-up of the NHI model to ensure that people most in need are reached first, thus reducing inequalities.

363. **Improving the efficiency in the use of available resources** by (a) identifying and addressing root causes of low productivity in hospitals and (b) further analyzing the low productivity of HRH by looking at its causes by facility type. To boost hospital and HRH productivity, several strategies can be considered. HFs should make greater use of the BHIS to record all information and eliminate the paperwork, which is conducive to mistakes and is time demanding. A set of standard output and outcome indicators can be collectively monitored and evaluated to inform hospital managers about the performance of their facility and improvement measures. The MoHW could also consider regulating dual practice to ensure that doctors stay in the hospitals and perform their work for the hours they are employed, or their remuneration and efforts are recorded accordingly. Physician-nurse task shifting, particularly in PHCs, can be facilitated as it is commonly considered a measure to address workforce shortages while reducing the overall costs in the health system. Task shifting requires a redefinition of the role of nurses. Community health workers can function as frontline workers and their role may be institutionalized to address some of the HRH constraints, particularly in rural areas. Community health workers typically reside in the community they serve and, with strong referral systems, can work as frontline agents of change to help improve access and use of health services, reduce health disparities in underserved communities, and enhance communication between community members and health care providers.

- **Improve service delivery**

    - **Given the shortage of health workers in Belize, it is important to develop effective policy strategies to retain the health workers in the country, particularly in rural areas, and exploit the potential of telemedicine as a complementary service delivery modality**. Factors to address in the development of retention policies are the lack of financial incentives, geographical remoteness, poor road access and communication, unavailability of goods and services, and lack of adequate support for education of children and of appropriate accommodations. The introduction of telemedicine, both

client-to-provider and provider-to-provider, can be a complementary intervention to address some of the human resources challenges. Telemedicine can empower younger professionals to treat conditions such as chronic diseases at the primary care level, without need for referral at higher levels of the system, can provide rapid medical advice, referral or prescription of medicines for simple or recurrent conditions, saving time and money for patients who no longer need to travel to the facility, thus improving access to care and equity. As first step, it is recommended to undertake (i) a review of the regulatory framework to support the use of telemedicine and patients' data privacy, (ii) an acceptability study by the different populations, and (iii) a baseline assessment of the building blocks required to implement telemedicine.

- **Set up a robust continuous quality improvement program**. Suboptimal quality of care is not only a lost opportunity to provide relief to a patient and improve his/her wellbeing, but it is also a significant source of inefficiency. Setting up a robust health care quality measurement and quality improvement program is key to address the suboptimal performance in Belize. As part of such quality improvement program, it is also recommended to include routine patient satisfaction surveys to capture the perceptions of the population and use these as inputs to improve access to and quality of care.
- **Strengthen health and multisectoral financing and service delivery models to improve NCDs' outcomes and broader public health issues.** The costs of NCDs and communicable diseases not only affect the health sector but spill over to businesses and individuals due to premature deaths and disabilities. Interventions to address these include instituting payment mechanisms that reward screening and disease management, improving data collection and quality, creating financial and nonfinancial incentives for patient education and counselling about NCD risk factors and behavioral changes (healthy eating, physical activity), linking health service delivery with outreach and social care activities, and improving access to quality NCD medicines. The scale-up of the PHC network model piloted under the NHI may offer an effective way to better manage chronic diseases. Moreover, adopting intersectoral action beyond health to mobilize the assistance of other ministries will be critical to address both NCDs as well as broader public health issues that have an impact on the Belizean population, especially homicides and road traffic injuries.

- **Strengthen health sector governance**

  - **Sustained investments are urgently needed in health management and information systems as well as human resource capacity to generate timely and quality data and their use for planning and budgeting, reporting, monitoring of performance (use of funds and results), and overall benchmarking over the entire health sector.** Such investments include (a) ensuring that every facility adequately records data into the BHIS, (b) building interoperable health information systems that allow to get data from different providers and across purchasing mechanisms, (c) strengthening financial management systems to allow for tracking of health resources in line with international standards, including by facility type and by key program such as PHC, and (d) building capacity to conduct systematic review of all health spending (including through the National Health Accounts [NHA]). Access to data from the household budget survey is paramount to monitor out-of-pocket spending and financial protection objectives and to

assess the extent to which health spending promotes equity. Moreover, the different financing and service delivery models constitute a natural experiment from which the MoHW can learn—conducting systematic assessments of the quality of care, patients' satisfaction, and costs will provide critical information for decision-making. Instilling a culture of evidence-based decision-making will go a long way in improving the performance of the health sector in Belize.

- **Strengthen the policy, regulatory, and oversight capacity of the MoHW.** The KHMH receives most of its funds from the MoHW, yet no accountability mechanisms exist on the use of these funds or results achieved. Also, the private health sector plays an increasingly important role in the delivery of health services, yet there are few regulations; legislations; health polices, strategies, and plans that target market entry, quality of health services, and pricing strategies of private HFs. Strengthening the policy, regulatory, and oversight capacity of the MoHW will be paramount moving forward to ensure that patients receive effective and safe care in a cohesive manner. Finally, although the NHI works with input from the MoHW to define key performance indicators and targets, it is recommended to integrate a health information system that allows to monitor the overall health system in the country.

- **Create surge capacity in the health sector for future emergencies.** Along with improving the financial response capacity, the GoB should work to introduce mechanisms to fast-track the creation of surge capacity in the health sector (for example, for the recruitment of health personnel). Learning from the COVID-19 pandemic and climate-related natural disasters, Belize has taken action to increase its preparedness for future (health) emergencies. The creation of a contingencies fund for use in time of unforeseen emergencies is a step in the right direction to increase the health system resilience to external shocks. However, more needs to be done to avoid backlogs and waiting lists, for example, through smoother government approval processes, the creation of surge capacity and rethink of the skill mix, use of digital health tools, and more.

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## Annex 1: Scenarios for the Analysis of the Impact of Natural Disasters on Public Debt

**The report used the MAC-DSA template to model the debt impact of various climate- and natural disaster-related shocks.** The main avenue used to model the public debt impact was through making use of the integrated 'customized scenarios' within the existing MAC-DSA template. This method allows to generate a standard baseline debt path absent of any hurricane damage and subsequently produce an alternative baseline within the same template showing the effect of a given shock; in this case, the economic damage was caused by a hurricane of given magnitude. The following are the considerations regarding the modelling of disaster-related shocks on the baseline DSA:

(a) The aim of these shocks is to simulate an alternative debt as percent of GDP and gross funding needs as percentage of GDP ratio. These can be used together with the baseline ratios to create a target range to inform how much debt and gross funding needs level can fluctuate under climate- and hurricane-induced stresses.

(b) Depending on the debt profile, there is a larger range in the debt-to-GDP ratio, and temporary increases in the gross funding needs depending on the debt repayment profile.

(c) Applying shock scenarios does not in itself indicate any specific likelihood that the shock materializes or that Belize in this case may be seen as an inherently riskier country than its regional and/or credit rating peers.

(d) Neither of the shocks include any mitigating factors that may be in place such as any type of liquidity linked to immediate disaster management, or catastrophe insurance policies that can be drawn upon, nor significant fiscal buffers.

**Description of natural disaster shocks to the baseline DSA scenario**

*Standard natural disaster shock applied to the MAC DSA*

The standard natural disaster shock considers the following:

(a) A direct impact of a one-off shock of 4.5 percentage points of GDP to public debt-to-GDP ratio. This includes the realization of contingent liabilities of BZD 293.8 million added to the baseline expenditure. This represents an increase of 4.4 percent of GDP to the non-interest expenditure-to-GDP ratio of 21.8 percent of GDP.

(b) An interaction effect where real GDP growth is lowered by 1.3 percentage points, with no subsequent rebound shock, implying some permanent output loss.

The shocks are introduced in the second year of the projection period (2024) and reference the 2016 IMF publication on Small States,[153] which assess the relative vulnerability across small states to natural disasters—of which Belize is part of the sample size. It captures risks arising from natural disasters with potential effects on medium-term growth. This is applied in the form of a 'standard' stress test that aims to capture changes in the primary balance and the gross funding needs that may otherwise not be covered in the baseline scenario.

[153] "Small States' Resilience to Natural Disasters and Climate Change – Role for the IMF" (IMF, November 2016).

*Belize-specific natural disaster shock*

The Belize-specific natural disaster shock considers the following:

(a) A direct impact: a one-off shock of 9.8 percentage points of GDP to public debt-to-GDP ratio

(b) A lingering effect with a gradual recovery of output and fiscal profile.

The shock is based on two sets of information. The first is from the World Bank publication on *Advancing Disaster Risk Finance in Belize* (2018) that provides significant information on frequency, probability, and size of hurricanes and earthquake-induced economic damages. The study is based on a historical database of natural disasters affecting Belize in the last two decades from 1996 to 2016 and shows that Belize's total direct and indirect impact from wind-related events and floods translated into annual average loss, averaging US$122.7 million, representing on average, a loss magnitude of 7 percent of national GDP. Historically, certain hurricanes (in 2000, 2001, and 2007) caused damage between 25 percent and 40 percent of GDP, respectively.[154]

Probabilities of the study show that once every 100 years, on average, these costs are expected to exceed US$1,857 million or more than 105 percent of GDP. This does not consider the underlying effects of climate change, which means, before climate change, there is a 1 percent probability in any year that a disaster will impose direct and indirect damage of more than 105 percent of GDP.

The second set of information that was consulted had the aim to use historical evidence on the frequency and cost of natural disasters. A useful resource in this regard is the comprehensive database on natural disasters compiled and maintained by the Centre for Research on the Epidemiology of Disasters (CRED) at the Catholic University of Louvain.[155] Available data for Belize comprise the cost of the total damage for every year a natural disaster was recorded. The average of the damage recorded for available years was considered and amounted to 9.8 percent of GDP considering data from 1990 to 2022. Since 9.8 percent of GDP is a more conservative number compared to the information gathered in the first part, this magnitude of shock will be applied.

[154] World Bank( 2018), Chapter 3.
[155] See http://www.emdat.be/.

## Table A.1.1. Scenario tables

| Baseline | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nominal Debt (in percent of GDP) | 76.6 | 64.6 | 59.9 | 58.7 | 57.6 | 56.8 | 55.9 | 55.0 | 54.2 | 53.6 | 52.9 | 52.2 | 47.2 |
| Debt Service (in percent of GDP) | 7.8 | 6.1 | 5.7 | 5.5 | 4.8 | 4.3 | 4.5 | 4.6 | 4.7 | 4.8 | 4.8 | 5.8 | 6.1 |
| Gross Financing Need (in percent of GDP) | 7.7 | 5.0 | 5.3 | 4.5 | 3.2 | 3.7 | 3.6 | 3.7 | 3.5 | 3.6 | 3.6 | 4.6 | 4.8 |
| Nominal Debt (in percent of Revenue) | 351.5 | 278.5 | 272.4 | 265.1 | 256.4 | 252.9 | 248.9 | 244.7 | 237.9 | 235.2 | 232.0 | 228.8 | 205.2 |
| Debt Service (in percent of Revenue) | 35.7 | 26.3 | 25.8 | 24.7 | 21.5 | 19.2 | 19.8 | 20.3 | 20.7 | 21.0 | 21.3 | 25.4 | 26.4 |
| Gross Financing Need (in percent of Revenue) | 35.3 | 21.7 | 24.1 | 20.3 | 14.1 | 16.4 | 16.0 | 16.4 | 15.4 | 15.7 | 16.0 | 20.1 | 21.1 |
| Real GDP growth (in percent) | 14.8 | 5.7 | 2.6 | 3.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Inflation (in percent) | 4.0 | 6.3 | 4.1 | 2.5 | 1.6 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Primary Balance (in percent of GDP) | 0.1 | 1.1 | 0.4 | 1.0 | 1.7 | 0.6 | 0.9 | 0.9 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Effective Interest Rate (in percent) | 1.7 | 2.5 | 3.0 | 3.5 | 3.6 | 3.8 | 3.8 | 3.8 | 3.7 | 3.6 | 3.5 | 3.4 | 3.2 |

| 1. Natural Disaster Shock | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nominal Debt (in percent of GDP) | 60.0 | 63.1 | 61.3 | 61.7 | 60.9 | 60.1 | 58.8 | 57.8 | 56.6 | 55.7 | 54.5 |
| Debt Service (in percent of GDP) | 5.6 | 5.6 | 5.2 | 4.3 | 4.9 | 5.0 | 5.2 | 5.6 | 5.9 | 7.0 | 7.1 |
| Gross Financing Need (in percent of GDP) | 5.3 | 9.1 | 3.5 | 4.7 | 4.0 | 4.1 | 4.0 | 4.4 | 4.7 | 5.8 | 5.9 |
| Nominal Debt (in percent of Revenue) | 273.1 | 285.2 | 272.7 | 274.8 | 271.3 | 267.5 | 258.1 | 253.6 | 248.1 | 244.1 | 237.2 |
| Debt Service (in percent of Revenue) | 23.8 | 25.4 | 23.2 | 19.2 | 21.9 | 22.1 | 22.7 | 24.5 | 25.9 | 30.6 | 31.0 |
| Gross Financing Need (in percent of Revenue) | 23.9 | 40.9 | 15.8 | 20.9 | 18.0 | 18.1 | 17.4 | 19.1 | 20.6 | 25.3 | 25.7 |
| Real GDP growth (in percent) | 2.6 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.5 | 2.0 | 2.5 | 2.0 | 2.5 |
| Inflation (in percent) | 4.1 | 2.0 | 1.6 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Primary Balance (in percent of GDP) | 0.4 | -3.4 | 1.7 | -0.4 | 0.9 | 0.9 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Effective Interest Rate (in percent) | 3.0 | 3.4 | 3.4 | 3.6 | 3.6 | 3.7 | 3.9 | 3.8 | 3.9 | 3.8 | 3.8 |

| 2. WB Hurricane Shock | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nominal Debt (in percent of GDP) | 59.9 | 71.2 | 74.2 | 76.1 | 75.3 | 74.4 | 73.4 | 72.4 | 71.5 | 70.7 | 69.9 |
| Debt Service (in percent of GDP) | 5.6 | 6.3 | 6.1 | 5.2 | 5.9 | 6.0 | 6.3 | 6.8 | 7.5 | 8.9 | 9.1 |
| Gross Financing Need (in percent of GDP) | 5.3 | 10.7 | 6.6 | 5.2 | 5.0 | 5.1 | 5.1 | 5.6 | 6.3 | 7.7 | 7.9 |
| Nominal Debt (in percent of Revenue) | 273.1 | 337.0 | 338.8 | 345.4 | 335.2 | 331.2 | 322.3 | 317.8 | 313.8 | 310.0 | 304.0 |
| Debt Service (in percent of Revenue) | 23.8 | 29.8 | 27.8 | 23.7 | 26.1 | 26.6 | 27.6 | 30.0 | 32.9 | 38.8 | 39.7 |
| Gross Financing Need (in percent of Revenue) | 23.9 | 50.8 | 30.1 | 23.7 | 22.2 | 22.7 | 22.3 | 24.7 | 27.6 | 33.6 | 34.4 |
| Real GDP growth (in percent) | 2.6 | -6.6 | 0.4 | 0.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Inflation (in percent) | 4.1 | -0.5 | -0.6 | -0.1 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Primary Balance (in percent of GDP) | 0.4 | -4.4 | -0.5 | 0.0 | 0.9 | 0.9 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Effective Interest Rate (in percent) | 3.0 | 3.4 | 3.4 | 3.5 | 3.6 | 3.6 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |

## Table A.1.2. Belize EM-DAT data 1964–2022

| Year | Disaster Subtype | Total Damages, Adjusted ('000 US$) | Damages as % of GDP1/ | GDP (USD '000)2/ |
|---|---|---|---|---|
| 1961 | Tropical cyclone | 587,431 | 600.0 | |
| 1974 | Tropical cyclone | 23,741 | - | data missing |
| 1978 | Tropical cyclone | 26,918 | - | data missing |
| 1979 | - | - | - | |
| 1982 | Fire | - | - | |
| 1990 | Cold wave | 5,040 | 0.9 | 533,000.0 |
| 1990 | - | 4,928 | 0.9 | 533,000.0 |
| 1995 | - | 960 | 0.1 | 796,000.0 |
| 1997 | Water | - | - | 845,000.0 |
| 1998 | Tropical cyclone | 90 | 0.0 | 892,000.0 |
| 2000 | Tropical cyclone | 471,545 | 43.6 | 1,082,000.0 |
| 2001 | Tropical cyclone | 413,199 | 36.6 | 1,129,000.0 |
| 2001 | Tropical cyclone | - | - | 1,129,000.0 |
| 2005 | Tropical cyclone | - | - | 1,427,000.0 |
| 2005 | Tropical cyclone | - | - | 1,427,000.0 |
| 2007 | Tropical cyclone | 20,956 | 1.3 | 1,645,000.0 |
| 2008 | Tropical cyclone | - | - | 1,701,000.0 |
| 2008 | Riverine flood | 13,181 | 0.8 | 1,701,000.0 |
| 2010 | Tropical cyclone | 35,000 | 2.0 | 1,735,000.0 |
| 2015 | - | - | - | 2,199,000.0 |
| 2016 | Tropical cyclone | 150,000 | 6.7 | 2,228,000.0 |
| 2020 | Tropical cyclone | - | - | 2,019,000.0 |
| 2022 | Tropical cyclone | 100,000 | 3.7 | 2,676,000.0 |

Source: EM-DAT, CRED / UC Louvain, Brussels, Belgium

1/Cells highlighted in grey sourced from the 2020 Belize Post Disaster Public Financial Management Review from the World Bank

2/ IMF WEO Database October 2022

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## Annex 2: Pre-conditions for and Basic Types and Characteristics of Fiscal Rules

### Pre-conditions to implement fiscal rules

There are relevant pre-conditions in terms of the institutional and technical PFM capacities of the country that need to be considered in the design and adoption of a fiscal rule. These include the implementation of an MTFF and an agenda for enhancing PFM in the short run that may precede the adoption of a fiscal rule to ensure its compliance and effectiveness in the medium run. Sound budgetary and PFM institutional arrangements include the credibility and the coverage of the budget, clear procedural arrangements including norms for the preparation and execution of the government budget, and strong fiscal accounting systems favoring the compliance and effectiveness of fiscal rules.

**Functioning MTFF in place.** Considering the benefits that fiscal rules could bring to guide the debt reduction process in a transparent and predictable manner, it could be advantageous to allow for implementation of fiscal rules earlier than permitted by the prior adoption of the whole set of sound budgetary and PFM institutional arrangements listed in the preceding paragraph. The implementation of fiscal rules requires, as a minimum pre-condition, a functioning MTFF in place. In turn, a functioning MTFF requires to be part of a Macroeconomic Framework or FSP, which has been approved by Cabinet, thus ensuring political commitment and providing credibility to the budget estimates and the MTFF. The MTFF will consist of fiscal projections for no less than four years including the budget year to be presented to Parliament in the form of an FPP in February before the tabling of the budget estimates in March. The FPP is also the instrument for the Parliament and the public to monitor the implementation and updating of the FSP, the budget, and the MTFF. To this effect, an interim FPP would be presented to Parliament at mid-year of the fiscal year focusing primarily on the mid-year outturn and the implications for the remainder of the financial year and the medium term. This information will inform discussions relating to the ensuing financial year while providing a preliminary and indicative view of that year's estimates of revenue and expenditure. Moreover, for an accurate assessment of the fiscal space for new commitments, the MoF requires a sound understanding of future commitments in each sector, regardless of whether they are recurrent or capital in nature.

### Fiscal responsibility framework legislation

**To achieve the objective of a functioning MTFF in place requires enactment of legislation through an Amendment of Belize's Finance and Audit (Reform) Act incorporating a fiscal responsibility section.** In addition to meeting the pre-conditions for a functioning MTFF in place (fiscal projections for no less than four years including the budget year, issuing of an FPP and a mid-year interim FPP), regulations regarding the Minister of Finance's authority to approve multiyear commitments for capital investments and expenditure obligations of the government under PPPs are recommended as a way to enhance a functioning MTFF and the FSP.

### Budget execution

**Pre-conditions regarding PFM legislation on budget execution are required to provide flexibility while not resulting in an executed budget significantly different than the approved one damaging budget credibility and a functioning MTFF and the FSP.** While governments should have the ability to adjust the budget to changing circumstances, this must be done within certain limits or via a supplemental budget request to the National Assembly, which also needs to be restricted. Consequently, the Act needs to be

amended to include regulations on the issuing of reallocation and virements warrants; on incorporating a budget reserve allocation in the annual budget; and on the issuing of supplementary estimates and supplementary appropriation bills, including what is to be done if expenditures exceed the budget or a supplementary budget appropriation. The Act contemplates, however, the issuing of special warrants to address urgent and unforeseen needs for expenditure which being in respect of a new service or new goods is not provided in the budget or will result in an excess of the sum provided for that service or goods in the budget or supplementary budget and which cannot without serious injury to the public interest be postponed until a supplementary estimate is approved. A budget reserve allocation could be used instead of a special warrant, with the additional advantage of the appropriation having already being incorporated in the budget. If the urgent and unforeseen expenditure arises from a natural disaster with the characteristics contemplated in the use of the NDRF, it would be covered with resources from the NDRF, not affecting the budget. If the urgent and unforeseen expenditure arises from other exogenous shocks such as a pandemic or an international financial crisis, it would be covered with resources from the budget reserve, not affecting the budget.

**Virements, reallocations, budget reserve, and supplementary budget legislation**

Virements, reallocations, a budget reserve, and supplementary budgets need to be regulated by the Act.

**Regarding virements,** no virement of personal emoluments in an expenditure vote shall occur unless it is to personal emoluments within that expenditure vote; virements that involve changes to spending plans approved by the minister for that entity for the year require prior approval from the minister; virements may be made from recurrent expenditures to capital expenditures as well as from one capital expenditure to another but not from capital expenditures to recurrent expenditures; and the minister may limit the amount, in absolute and/or percentage terms what may be vired under the subsection in any transaction or on any other basis.

**Regarding reallocations,** the minister shall not approve a reallocation warrant if the total of all reallocation warrants in any financial year exceeds a certain percentage of the approved expenditure for the budget for that financial year. Every reallocation in excess of this amount shall be authorized by supplementary estimates and a supplementary appropriation bill; the minister may by means of a reallocation warrant apply savings arising from an expenditure vote approved by an Appropriation Act or a Supplementary Appropriation Act in aid of any item in any other expenditure vote in those estimates or in aid of any new item of expenditure and the amounts to be applied shall be deemed to have been appropriated for that purpose; and a reallocation may be in respect of a transfer between expenditures of different ministries. No reallocation shall occur so as to transfer savings of salaries or other employee benefits unless is to personal emoluments within another expenditure vote and no reallocation may occur to increase wages, salaries, emoluments, allowances, or other personnel expenditures from capital expenditures to recurrent expenditures; from a public body to a ministry; and if in the minister's opinion, such reallocation may hinder the effective execution of the budget or will result in the breach of the aggregate expenditure or fiscal balance initially approved.

**Regarding the budget reserve,** which has the objective of providing for an urgent and unforeseen need for expenditure for which no other provision exists, must be used for a significant need that cannot be delayed until future budget years without harming the public interest; be unable to be funded using the virement provisions or other flexibilities for managing expenditure available to a public entity; have not been adequately provided for in the annual budget; and do not relate to an increase in salaries or in the

numbers of personnel. The budget reserve would also be used for an urgent and unforeseen expenditure that arises from an exogenous shock other than a natural disaster such as a pandemic or an international financial crisis. The budget reserve shall be a provision in the annual budget of no more than a certain percentage of the proposed budget; the budget reserve shall be administered by the minister through the MoF which shall provide a written statement with the annual financial statements regarding expenditure from the budget reserve including the amount of the expenditure, the recipient, and the purpose; the reasons that delaying the expenditure until future budget years will harm the public interest; confirmation that the expenditure cannot be accommodated under the virement powers or other flexibilities for managing expenditure; and confirmation that the expenditure is not to be used to increase the salaries or the number of personnel in the Government. The MoF shall ensure that all expenditures sourced from the budget reserve are allocated to the relevant budgets of the recipient entities and are subject to the same requirements for the management and reporting of other expenditures. The National Assembly shall have the power to invalidate a withdrawal from the budget reserve if it considers that the requirements of this Act have not been met. There shall be no carry forward of budget appropriated to the budget reserve to a future financial year.

**Regarding supplementary estimates and supplementary appropriation bills,** any expenditure proposed during the year by a public entity that is not within the appropriations approved by the National Assembly in the annual budget shall be funded through the virements authorized under this Act, or through an allocation from the budget reserve, or until future budget years without substantially harming the public interest; or if funding by these ways is not possible, then supplementary estimates and appropriation bill shall be introduced as required by the Constitution and this section. If in any financial year, it is found that the amount appropriated by an appropriation law for any purpose is insufficient or that a need has arisen for expenditure for a purpose for which no amount has been appropriated by that law, or that any money has been expended for any purpose in excess of the amount appropriated for the purpose by the appropriation law or for a purpose for which no amount has been appropriated by that law, a supplementary estimate showing the sums required or spent shall be laid before the House of Representatives and the heads of any such expenditure shall be included in a Supplementary Appropriation Bill. No more than two Supplementary Appropriation Bills may be submitted within a fiscal year for amounts not exceeding a certain percentage of budgeted current primary (primary) expenditure. Also, the government shall not propose Supplementary Estimates and a Supplementary Appropriation Bill over expenditure that result from circumstances within the control of the government or circumstances which could have been reasonably anticipated and in such case, the expenditure shall be dealt with as excess expenditure. The Supplementary Estimates and Appropriation Bill shall be accompanied by an explanation from the minister as to the impact of the additional expenditure or financing on the government's performance against the fiscal principles ~~in this Act~~ and the fiscal objectives set out in the fiscal strategy. If the minister considers that the additional expenditure or financing sought under the supplementary estimates is likely to breach the fiscal responsibility principles ~~in this Act~~ or the fiscal objectives in the fiscal strategy, the minister shall comply with the requirements of the section requiring reporting on deviations and plan to get back on track.

**Public debt management**

**Pre-conditions regarding PFM legislation on public debt management.** A Public Debt Management Strategy designed to develop a public debt management legislative framework and the necessary policy requirements consistent with best practices for development of effective management of public debt in Belize would serve as the basis for modifying the Finance and Audit (Reform) Act while providing the

necessary conditions to attain and maintain public debt sustainability. To ensure public debt management required by a DR, the Finance and Audit (Reform) Act needs to be amended to stipulate what is required if the cap on the public debt becomes binding. On the one hand, debt ceilings only constrain fiscal balances when debt levels are close to the established ceiling; when debt levels are far from the ceiling, imposing a numerical target on the budget balance consistent with the DR's long-term ceiling can serve as a short-term binding constraint on fiscal balances. On the other hand, as ERs make government spending acyclical, they have positive effects on debt sustainability during upturns but deteriorating impacts on fiscal balances during downturns. Therefore, ERs have no clear effects on fiscal sustainability unless combined with a DR.

## Annex 3: Types of Fiscal Rules and their Simulations for Belize

**Different fiscal rules trade off the extent of debt stabilization with the degree of countercyclical properties.** Operational fiscal rules differ according to the type of budgetary aggregate that they seek to constrain and have different advantages and drawbacks. Accordingly, the design of a rule-based fiscal policy framework should address the need for short-term economic stabilization and ensure fiscal sustainability over the long term.

### Fiscal sustainability (debt sustainability) and countercyclicality (output stabilization) properties of fiscal rules

**Debt rules (DRs),** such as a ceiling on the debt-to-GDP ratio safeguard fiscal solvency by linking the fiscal stance to debt sustainability over the medium term. However, DRs are not typically effective as operational fiscal rules, as policy changes affect debt dynamics with a lag beyond the annual budget horizon and do not have desirable countercyclical properties to stabilize macroeconomic fluctuations.

**Budget balance rules (BBRs),** such as a ceiling on the overall budget deficit, are relatively easy to monitor and implement and can support debt sustainability. However, if specified in nominal terms, BBRs do not have macroeconomic (output) stabilization properties and tend to lead to procyclical fiscal policy. BBRs lead to procyclical fiscal policy because in the event of a decline in revenues resulting from a decline in output in the lower part of the cycle, to comply with the rule, expenditures must be cut worsening the downside of the cycle, and in the high side of the cycle complying with the rule allows for larger expenditures bolstering the size of the cycle. BBRs may have negative impacts on the social insurance role of fiscal policy, as they usually impose spending cuts to face revenue shortfalls during downturn periods.

**DRs and BBRs**, when implemented together, are tightly linked to debt sustainability, but they negatively affect output stabilization, as they can foster a procyclical fiscal stance. Moreover, DRs and BBRs tend to exacerbate economic expansions and contractions, as they enforce debt or budget-balance targets without regard to the business cycle.

**Expenditure rules (ER)**, such as a ceiling on nominal expenditure growth, are operationally simple and provide clear guidance on how to adjust the fiscal stance over time. ERs aim to control the size of government and have positive effects on output smoothing, as they turn spending acyclical. As they insulate the evolution of government spending from cyclical fluctuations, ERs have positive effects on output stabilization. At the same time, ERs do not restrict the economic stabilization function of fiscal policy in times of adverse shocks, as they do not require spending adjustments to cyclical or discretionary reductions in tax revenues. Also, by reducing incentives for spending overruns, ERs can lead to stricter prioritization and greater efficiency in spending. However, their effects on fiscal sustainability are ambiguous and depend on whether the economy is in an expansion or a recession. As ERs make government spending acyclical, they have positive effects on debt sustainability during upturns but deteriorating impacts on fiscal balances during downturns. Therefore, ERs have no clear effects on fiscal sustainability unless combined with a DR or BBR. While ERs provide macroeconomic (output) stabilization properties, they require a reliable medium-term budget framework to avoid the build-up of large deficits and deterioration in the net asset position due to persistently lower revenue generation. Unlike the BBRs, ERs also help creating buffers in good times, when revenue windfalls can make spending pressures difficult to resist. In this context, an ER would contribute to reduce the procyclicality of fiscal policy that has

characterized Belize's fiscal policy over the past decades.[156] Through their effect on the stability of spending and output stabilization, ERs can enable fiscal policy to exert a social insurance role, as they help smooth consumption of population groups unable to attenuate fluctuations in their incomes, resulting in positive effects on equity.

**Flexibility of fiscal rules, enforcement procedures, and corrective mechanisms**

**Fiscal rules should have sufficient flexibility to respond to shocks, while being supported by explicit enforcement procedures and corrective mechanisms.** The success of fiscal rules in guiding policy makers as well as shaping expectations depends on predetermined provisions for dealing with deviations from the fiscal rules.

**To balance credibility and flexibility in responding to developments outside the direct control of policy makers**, the FRL should establish an automatic correction mechanism that would be triggered by a pre-specified deviation from the fiscal rules and require additional fiscal adjustment in subsequent years to bring fiscal performance back in line with the rules. The FRL should therefore include enforcement sanctions (that is, public report to parliament) in case of deviations from the fiscal rules and a specific timetable to offset such deviations over a certain period. In this context, the establishment of an independent fiscal council is particularly important to provide unbiased macro-fiscal projections and evaluate compliance with fiscal rules. This would enhance transparency and accountability of fiscal operations and buttress credibility of the rule-based fiscal policy framework.

**Combination of fiscal rules**

**Combining a DR with a BBR** reinforces their effects on debt sustainability and provides operational guidance when actual debt levels are far from the targeted levels set by the DR. Debt ceilings only constrain fiscal balances when debt levels are close to the established ceiling; when debt levels are far from the ceiling, imposing a numerical target on the budget balance consistent with the DR's long-term ceiling can serve as a short-term binding constraint on fiscal balances.

**Combining a DR with an ER or a DR with a BBR that includes a well-defined escape clause can mimic the properties of an SBR.** During economic expansions, when positive budget balances are easier to achieve, the expenditure ceiling is the binding constraint, preventing procyclical expenditures from exacerbating the amplitude of the business cycle. During downturns, the BBR or the DR becomes the binding constraint. This can increase procyclicality, as expenditures need to be reduced to achieve the BBR or DR target. However, an escape clause can allow the authorities to increase or reduce the numerical target value of the BBR, increase that of the DR, or enable the ER to continue functioning to avoid procyclical expenditure cuts.

**Escape clauses**

**To be resilient and credible, a rules-based fiscal management framework must be sufficiently flexible, while remaining simple and transparent.** A useful distinction can be made between predictable events that invariably occur after some time—such as business cycle fluctuations—and unpredictable realizations of fiscal risk. The latter must be addressed with well-defined escape clauses, whereas the former can be

[156] See Chapter 1.

handled with an adequate definition of the fiscal indicators subject to a numerical limit. As macroeconomic stabilization is both harder to achieve in low-income countries and small states (no well-defined business cycle) and less of a concern compared with other objectives of fiscal policy, the rule's flexibility would primarily come in the form of well-designed escape clauses, including clauses for natural disasters or other large shocks.

**Escape clauses are a key tool to mitigate the trade-off between commitment with the adoption of fiscal rules and flexibility to address extraordinary events.** Both time-inconsistency problems and the fact that fiscal rules can never be fully contingent inevitably create situations in which strict compliance with the rule may be fiscally expensive and economically suboptimal. The lack of well-designed escape clauses makes it challenging to deal with tail events. Without well-designed escape clauses, rules are often put in abeyance following large shocks, or countries resort to ad hoc measures to accommodate them. But country experiences show that, to be credible and effective, escape clauses need to be precisely defined to cover events that are truly outside the government's control. Instead of circumventing the rule, clearly defined escape clauses embedded in the rule can provide flexibility without affecting the credibility, enforceability, and predictability of a fiscal rule.

**To this end, robust FRLs have well-defined escape clauses allowing for temporary deviations from the fiscal rules.** A well-defined escape clause should have (a) a limited and clearly defined set of events triggering the operation of the clause,[157] (b) numerical thresholds for the size of the shock that will enable the use of the escape clause,[158] (c) size of the deviation for fiscal targets,[159] (d) time limits on when the rule will be resumed (period for the application of the escape clause or years of suspension of the fiscal rule), and (e) measures to offset the accumulated deviations.[160]

**Simulations for Belize**

*MTFF baseline projections 2023–2032*

**The MTFF baseline projections for the Government Accounts for FY2023–FY2028 presented in Section III above** were extended to FY2032 for this exercise as the debt target of below 50 percent of GDP is to be attained by FY2032. Under unchanged policies, public debt declines from 62.1 percent of GDP [161] in FY2022 to 55.0 percent by FY2028 and further to 52.2 percent by FY2032 (table A.3.1) [162], above the target of below 50 percent of GDP recommended by the IMF 2023 Article IV Debt Sustainability Analysis. After

[157] Examples of events that trigger the use of escape clause include natural disasters, GDP slowdowns, financial system crisis that require government support, and public sector reforms that require initial higher expenditure levels.
[158] In the case of a large-scale natural disaster, for example, the damage threshold could be set at the median loss (as a share of GDP) incurred by natural disasters.
[159] For example, the escape clause should define a budget balance 1 or 2 percent of GDP lower than the established in the fiscal rule; or the expenditure growth of 1 percentage point higher than the defined in the rule.
[160] For example, public sector wage bill increases limited for a defined period; temporary increase in tax revenues up to achieve original targets.

[161] For FY 2022/23 public debt to GDP ratio = public debt stock at end of calendar year/nominal GDP corresponding to FY period, i.e., April to March of the following calendar year.

[162] For FY2023/24 through FY 2032/33 public debt to GDP ratio = public debt stock at end of FY/nominal GDP corresponding to FY period, i.e., April 2022 to March 2023.

increasing from −0.5 percent of GDP in FY2022 to −1.4 percent in FY2023 and −1.3 percent in FY2024, the overall balance declines to −0.9 percent in FY2025–2027 and −0.8 percent in FY2028, to increase to −1.0 percent in FY2028-FY2031 and decline to −0.9 percent in FY2032.

**Table A.3.1. MTFF Baseline Projections 2023–2032 [1/2/](percent of GDP)**

| Central Government | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Revenue and grants** | **22.4** | **22.0** | **22.1** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** |
| **Total expenditure** | **22.9** | **23.4** | **23.4** | **23.4** | **23.4** | **23.4** | **23.3** | **23.5** | **23.5** | **23.5** | **23.4** |
| Primary expenditure | 21.2 | 21.6 | 21.6 | 21.6 | 21.6 | 21.6 | 21.6 | 21.8 | 21.8 | 21.8 | 21.8 |
| (o/w capital expenditure) | 5.8 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.6 | 5.6 | 5.6 | 5.6 |
| Interest payments | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 |
| **Primary balance** | **1.2** | **0.4** | **0.5** | **0.9** | **0.8** | **0.9** | **0.9** | **0.7** | **0.6** | **0.6** | **0.7** |
| **Overall balance** | **−0.5** | **−1.4** | **−1.3** | **−0.9** | **−0.9** | **−0.9** | **−0.8** | **−1.0** | **−1.0** | **−1.0** | **−0.9** |
| **Public sector debt [3/]** | **62.1** | **59.9** | **58.7** | **57.6** | **56.8** | **55.9** | **55.0** | **54.2** | **53.6** | **52.9** | **52.2** |
| ***Memorandum items*** | | | | | | | | | | | |
| Nominal GDP (BZD, millions) [4/] | 6,037 | 6,404 | 6,679 | 6,914 | 7,138 | 7,370 | 7,609 | 7,852 | 8,104 | 8,363 | 8,631 |
| GDP Deflator (%) | 6.3 | 4.1 | 2.5 | 1.6 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | |

*Notes:*
1/ Fiscal year ends in March of the following year.
2/ Excludes extrabudgetary funds.
3/For FY 2022/23 = public sector debt at end of calendar year/ nominal GDP corresponding to FY period, i.e., April to March of the following calendar year. For FY2023/24 through FY2028/29 = public debt at end of fiscal year/nominal GDP corresponding to FY period Public debt includes central government debt and external financial and nonfinancial public sector debt.
4/ Nominal GDP corresponding to FY period.

**MTFF Fiscal Rules Based-Framework Projections 2023–2032**

To attain the public debt target of below 50 percent of GDP by FY2032, projections were prepared by applying fiscal rules starting in 2024—one scenario, applying a BBR on the overall balance and a second scenario applying an ER on the primary expenditure.

**MTFF 2023–2032—Balance Budget Rule (BBR)**

**Overall BBR.** The values for the overall balance rule are −0.9 percent for FY2024, −0.1 percent for FY2025–FY2028, and −1.0 percent of GDP for FY2029–FY2032 (Table A.3.2) to attain the debt-to-GDP target of below 50 percent by FY2032. To comply with these values will require cumulative fiscal consolidation measures (expenditure cuts) equivalent to 0.8 percentage points of GDP over FY2023–FY2025 and of −0.1 percent of GDP in FY2029.

**Public sector debt converges to 49.2 percent of GDP by FY2032.** The convergence of the public debt-to-GDP ratio to 49.2 percent is explained by the primary expenditure-to-GDP ratio converging to 22.0 percent for FY2032, and by interest payments declining from 1.8 percent of GDP in FY2023–FY2026 to 1.5 percent of GDP by FY2032, with the primary balance improving from 0.4 percent of GDP in FY2023 to 1.6 percent of GDP for FY2025–FY2028 and decreasing to 0.5 percent of GDP for FY2029–2032. At the same time, the overall deficit improves from −0.9 percent of GDP in FY2024 to −0.1 percent of GDP in

FY2025–FY2028 and deteriorates to −1.0 percent of GDP in FY2029–FY2032. **Table A.3.2. MTFF 2023–2032—Balance Budget Rule (BBR) [1/2/] (percent of GDP)**

| Central Government | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Revenue and grants** | **22.4** | **22.0** | **22.1** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** |
| **Total expenditure** | **22.9** | **23.4** | **23.0** | **22.5** | **22.6** | **22.6** | **22.6** | **23.5** | **23.5** | **23.5** | **23.5** |
| Primary expenditure | 21.2 | 21.6 | 21.2 | 20.8 | 20.8 | 20.9 | 21.0 | 21.9 | 22.0 | 22.0 | 22.0 |
| Interest payments | 1.7 | 1.8 | 1.8 | 1.7 | 1.8 | 1.7 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 |
| **Primary balance** | **1.2** | **0.4** | **0.9** | **1.7** | **1.7** | **1.6** | **1.5** | **0.5** | **0.5** | **0.5** | **0.5** |
| **Overall balance** | **-0.5** | **−1.4** | **−0.9** | **−0.1** | **−0.1** | **−0.1** | **−0.1** | **−1.0** | **−1.0** | **−1.0** | **−1.0** |
| **Public sector debt [3/]** | **62.1** | **59.9** | **58.3** | **56.4** | **54.7** | **53.1** | **51.5** | **50.9** | **50.3** | **49.8** | **49.2** |

*Notes:*
1/Fiscal year ends in March of the following year.
2/ Excludes extrabudgetary funds.
3/ For FY 2022/23 = public sector debt at end of calendar year/ nominal GDP corresponding to FY period, i.e., April to March of the following calendar year. For FY2023/24 through FY2028/29 = public debt at end of fiscal year/nominal GDP corresponding to FY period. Public debt includes central government debt and external financial and nonfinancial public sector debt.

**MTFF 2023–2032—Expenditure Rule (ER)**

**ER on primary expenditure.** The values for the ER are an increase in real terms for the primary expenditure of 4.3 percent for FY2023, 0 percent for FY2024–FY2025, 2.0 percent for FY2026–FY2027, 2.8 percent for FY2028, 6.5 percent for FY2029, 2.2 percent for FY2030, and 2.0 percent for FY2031–FY2032 (Table A.3.3). To comply with these values for the ER will require cumulative fiscal consolidation measures (expenditure cuts) of 0.8 percent of GDP over FY2023–FY2025 and −0.1 percent of GDP in FY2029.

**Public sector debt converges to 49.1 percent of GDP by FY2032.** The convergence of the public debt-to-GDP ratio to 49.1 percent is explained by the primary expenditure-to-GDP ratio converging to 22.7 percent for FY2032, and by interest payments declining from 1.8 percent of GDP in FY2023–FY2026 to 1.5 percent of GDP by FY2032, with the primary balance improving from 0.3 percent of GDP in FY2023 to 1.6 percent of GDP for FY2025–FY2028 and decreasing to 0.5 percent of GDP for FY2029−2032. At the same time, the overall deficit improves from −0.9 percent of GDP in FY2024 to −0.1 percent of GDP in FY2025–FY2028 and deteriorates to −1.0 percent of GDP in FY2029–FY2032.

**Table A.3.3. MTFF 2023-2032—Expenditure Rule (ER) [1/2/](percent of GDP)**

| Central Government | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Revenue and grants** | **22.4** | **22.0** | **22.1** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** | **22.5** |
| **Total expenditure** | **22.9** | **23.5** | **23.0** | **22.6** | **22.6** | **22.5** | **22.6** | **23.5** | **23.5** | **23.5** | **23.5** |
| Primary expenditure | 21.2 | 21.7 | 21.2 | 20.8 | 20.8 | 20.8 | 21.0 | 21.9 | 22.0 | 22.0 | 22.0 |
| Interest payments | 1.7 | 1.8 | 1.8 | 1.7 | 1.8 | 1.7 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 |
| **Primary balance** | **1.2** | **0.3** | **0.9** | **1.6** | **1.6** | **1.6** | **1.5** | **0.5** | **0.5** | **0.5** | **0.5** |
| **Overall balance** | **−0.5** | **−1.5** | **−0.9** | **−0.1** | **−0.1** | **−0.1** | **−0.1** | **−1.0** | **−1.0** | **−1.0** | **−1.0** |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Public sector debt [3/]** | **62.1** | **59.9** | **58.3** | **56.4** | **54.7** | **53.1** | **51.5** | **50.9** | **50.3** | **49.7** | **49.1** |
| ***Memorandum items:*** | (% change in real terms) | | | | | | | | | | |
| Baseline Primary Expenditure (%) | | 3.9 | 1.9 | 1.9 | 2.1 | 1.9 | 2.0 | 3.0 | 2.0 | 2.0 | 2.0 |
| Primary Expenditure Rule (ER) | | 4.3 | 0.0 | 0.0 | 2.0 | 2.0 | 2.8 | 6.5 | 2.2 | 2.0 | 2.0 |

*Notes:*
1/ Fiscal year ends in March of the following year.
2/ Excludes extrabudgetary funds.
3/ For FY 2022/23 = public sector debt at end of calendar year/ nominal GDP corresponding to FY period, i.e., April to March of the following calendar year. For FY2023/24 through FY2028/29 = public debt at end of fiscal year/nominal GDP corresponding to FY period Public debt includes central government debt and external financial and nonfinancial public sector debt.

**MTFF Fiscal Rules Based-Framework Projections 2023–2032 - Revenue shock**

**Negative revenue shock.** A negative revenue cycle in the period FY2023–FY2028 of a total of 2.0 percentage points of GDP, with the revenue- and grants-to-GDP ratio declining by 1 percentage point in FY2023, an additional 0.5 percentage points in FY2024, and an additional 0.5 percentage points in FY2025 and recovering by 1 percentage point in FY2026, an additional 0.5 percentage points in FY2027, and an additional 0.5 percentage points in FY2028, returning to the pre-shock revenue-to-GDP ratio from FY2029 onward.

**Positive revenue shock.** A positive revenue cycle in the period FY2023–FY2028 of a total of 2.0 percentage points of GDP, with the revenue- and grants-to-GDP ratio increasing by 1 percentage point in FY2023, an additional 0.5 percentage points in FY2024, and an additional 0.5 percentage points in FY2025 and decreasing by 1 percentage point in FY2026, an additional 0.5 percentage points in FY2027, and an additional 0.5 percentage points in FY2028, returning to the pre-shock revenue-to-GDP ratio from FY2029 onward.

**Assumptions.** The revenue shock is not endogenous, that is, GDP is not assumed to have fallen (increased) and in turn caused the negative (positive) revenue shock but is at the same level as shown in Table A.3.1 for all scenarios. Also, GDP is not assumed to fall (increase) further because of a decrease (increase) in central government expenditure in the case of the BBR, meaning that no second-round effects on GDP are considered. The only second-round effects that are contemplated are the ones on interest rate payments resulting from an increase (decrease) in the debt because of an increase (decrease) in the overall budget deficit.

**Overall Balance Budget Rule (BBR)—Revenue shock**

**Output stabilization.** Both scenarios on the revenue shock show the procyclical characteristics of the BBR. Under the negative revenue shock, for the period FY2023–FY2028, primary expenditure averages 19.9 percent of GDP (Table A.3.4) compared to an average of 21.1 percent of GDP before the shock (Table A.3.2), and under a positive revenue shock it averages 22.3 percent of GDP (Table A.3.5). If second-round effects were to be considered, the size of the cycle would be increased under the revenue shocks. At the same time, the debt-to-GDP ratio is not affected attaining 49.2 percent of GDP by FY2032.

**Table A.3.4. MTFF FY 2023–2028—BBR—negative revenue shock [1/2/]**

**(percent of GDP)**

| Central Government | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Revenue and grants** | **22.4** | **21.0** | **20.6** | **20.4** | **21.0** | **21.5** | **22.0** | **22.5** | **22.5** | **22.5** | **22.5** |
| **Total expenditure** | **22.9** | **22.4** | **21.5** | **20.5** | **21.1** | **21.6** | **22.1** | **23.5** | **23.5** | **23.5** | **23.5** |
| Primary expenditure | 21.2 | 19.7 | 18.7 | 19.3 | 19.9 | 20.5 | 21.0 | 21.9 | 22.0 | 22.0 | 22.0 |
| Interest payments | 1.7 | 1.8 | 1.8 | 1.7 | 1.8 | 1.7 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 |
| **Primary balance** | **1.2** | **0.4** | **0.9** | **1.7** | **1.7** | **1.6** | **1.5** | **0.5** | **0.5** | **0.5** | **0.5** |
| **Overall balance** | **–0.5** | **–1.4** | **–0.9** | **–0.1** | **–0.1** | **–0.1** | **–0.1** | **–1.0** | **–1.0** | **–1.0** | **–1.0** |
| **Public sector debt [3/]** | **62.1** | **59.9** | **58.3** | **56.4** | **54.7** | **53.1** | **51.5** | **50.9** | **50.3** | **49.8** | **49.2** |

*Notes:*
1/ Fiscal year ends in March of the following year.
2/ Excludes extrabudgetary funds.
3/ For FY 2022/23 = public sector debt at end of calendar year/ nominal GDP corresponding to FY period, i.e., April to March of the following calendar year. For FY2023/24 through FY2028/29 = public debt at end of fiscal year/nominal GDP corresponding to FY period. Public debt includes central government debt and external financial and nonfinancial public sector debt.

**Table A.3.5. MTFF FY 2023–2028—BBR—Positive revenue shock [1/2/] (percent of GDP)**

| Central Government | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Revenue and grants** | **22.4** | **23.0** | **23.6** | **24.5** | **24.0** | **23.5** | **23.0** | **22.5** | **22.5** | **22.5** | **22.5** |
| **Total expenditure** | **22.9** | **24.4** | **24.5** | **24.5** | **24.1** | **23.6** | **23.1** | **23.5** | **23.5** | **23.5** | **23.5** |
| Primary expenditure | 21.2 | 22.6 | 22.7 | 22.8 | 22.3 | 21.9 | 21.5 | 21.9 | 22.0 | 22.0 | 22.0 |
| Interest payments | 1.7 | 1.8 | 1.8 | 1.7 | 1.8 | 1.7 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 |
| **Primary balance** | **1.2** | **0.4** | **0.9** | **1.7** | **1.7** | **1.6** | **1.5** | **0.5** | **0.5** | **0.5** | **0.5** |
| **Overall balance** | **–0.5** | **–1.4** | **–0.9** | **–0.1** | **–0.1** | **–0.1** | **–0.1** | **–1.0** | **–1.0** | **–1.0** | **–1.0** |
| **Public sector debt [3/]** | **62.1** | **59.9** | **58.3** | **56.4** | **54.7** | **53.1** | **51.5** | **50.9** | **50.3** | **49.8** | **49.2** |

*Notes:*
1/ Fiscal year ends in March of the following year.
2/ Excludes extrabudgetary funds.
3/ For FY 2022/23 = public sector debt at end of calendar year/ nominal GDP corresponding to FY period, i.e., April to March of the following calendar year. For FY2023/24 through FY2028/29 = public debt at end of fiscal year/nominal GDP corresponding to FY period. Public debt includes central government debt and external financial and nonfinancial public sector debt.

### Expenditure Rule (ER)—Revenue shock

**Output stabilization.** Both scenarios on the revenue shock, negative and positive shocks, show the acyclical characteristics of the ER. Primary expenditure to GDP ratios are not affected by the revenue shock (negative or positive) remaining the same as under the scenario previous to the shock (Tables A.3.3, A.3.6, and A.3.7). However, the total expenditure to GDP ratio decreases relative to the scenario previous to the shock because interest payments increase (decrease) to an average of 1.8 percent of GDP (1.5

percent of GDP) compared to a 1.6 percent of GDP before the revenue shock because of the revenue shortfall (increase), leaving less (more) space for financing the primary expenditure.

**Debt stabilization.** The negative (positive) revenue shock results in an increase (decrease) of the debt-to-GDP ratio to slightly over the maximum ratio of 60 percent considered sustainable for FY2023–FY2027, declining to under 60 percent of GDP from FY2029 through FY2032 to 56.6 percent, thus, not attaining the ratio target of below 50 percent by FY2032. Consequently, it would be necessary to reduce the increase of primary expenditure in real terms (the value of the ER) to achieve both targets. On the other hand, in the scenario of a positive revenue shock, the debt-to-GDP ratio declines sharply to already below the 50 percent value by FY2026 and to 41.7 percent of GDP by FY2032, creating fiscal space to finance structural reforms or to engage in infrastructure project financing to address the effects of climate change.

**Table A.3.6. MTFF FY 2023–2028—ER—Negative revenue shock [1/2/](percent of GDP)**

| Central Government | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Revenue and grants** | **22.4** | **21.0** | **20.6** | **20.4** | **21.0** | **21.5** | **22.0** | **22.5** | **22.5** | **22.5** | **22.5** |
| **Total expenditure** | **22.9** | **23.4** | **23.0** | **22.6** | **22.7** | **22.7** | **22.8** | **23.7** | **23.8** | **23.7** | **23.7** |
| Primary expenditure | 21.2 | 21.6 | 21.2 | 20.8 | 20.8 | 20.8 | 21.0 | 21.9 | 22.0 | 22.0 | 22.0 |
| Interest payments | 1.7 | 1.8 | 1.8 | 1.8 | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 | 1.7 | 1.7 |
| **Primary balance** | **1.2** | **−0.6** | **−0.6** | **−0.4** | **0.1** | **0.6** | **1.0** | **0.5** | **0.5** | **0.5** | **0.5** |
| **Overall balance** | **−0.5** | **−2.4** | **−2.4** | **−2.2** | **−1.7** | **−1.2** | **−0.8** | **−1.2** | **−1.2** | **−1.2** | **−1.2** |
| **Public sector debt [3/]** | **62.1** | **60.9** | **60.8** | **60.9** | **60.7** | **60.1** | **59.0** | **58.3** | **57.7** | **57.1** | **56.6** |

*Notes:*
1/ Fiscal year ends in March of the following year.
2/ Excludes extrabudgetary funds.
3/ For FY 2022/23 = public sector debt at end of calendar year/ nominal GDP corresponding to FY period, i.e., April to March of the following calendar year. For FY2023/24 through FY2028/29 = public debt at end of fiscal year/nominal GDP corresponding to FY period. Public debt includes central government debt and external financial and nonfinancial public sector debt.

**Table A.3.7. MTFF FY 2023–2028—ER—Positive revenue shock [1/2/] (percent of GDP)**

| Central Government | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Revenue and grants** | **22.4** | **23.0** | **23.6** | **24.5** | **24.0** | **23.5** | **23.0** | **22.5** | **22.5** | **22.5** | **22.5** |
| **Total expenditure** | **22.9** | **23.4** | **23.0** | **22.5** | **22.7** | **22.7** | **22.4** | **23.2** | **23.3** | **23.3** | **23.3** |
| Primary expenditure | 21.2 | 21.6 | 21.2 | 20.8 | 20.8 | 20.8 | 21.0 | 21.9 | 22.0 | 22.0 | 22.0 |
| Interest payments | 1.7 | 1.8 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 |
| **Primary balance** | **1.2** | **1.4** | **2.4** | **3.6** | **3.1** | **2.6** | **2.0** | **0.6** | **0.5** | **0.5** | **0.5** |
| **Overall balance** | **−0.5** | **−0.4** | **0.7** | **2.0** | **1.5** | **1.1** | **0.6** | **−0.7** | **−0.8** | **−0.8** | **−0.7** |
| **Public sector debt [3/]** | **62.1** | **58.9** | **55.8** | **51.9** | **48.8** | **46.1** | **44.0** | **43.4** | **42.8** | **42.3** | **41.7** |

Notes:
1/ Fiscal year ends in March of the following year.
2/ Excludes extrabudgetary funds.

3/ For FY 2022/23 = public sector debt at end of calendar year/ nominal GDP corresponding to FY period, i.e., April to March of the following calendar year. For FY2023/24 through FY2028/29 = public debt at end of fiscal year/nominal GDP corresponding to FY period. Public debt includes central government debt and external financial and nonfinancial public sector debt.

## Annex 4: Public employees by job category and type of contract

**Number of public employees by job category**

| | Coast Guard | Defense | Police | Public Officers | Teachers | Grand Total |
|---|---|---|---|---|---|---|
| **2016** | 354 | 1,303 | 2,189 | 6,734 | 994 | 11,574 |
| **2017** | 343 | 1,337 | 2,141 | 7,022 | 961 | 11,804 |
| **2018** | 421 | 1,908 | 2,109 | 7,063 | 962 | 12,463 |
| **2019** | 495 | 1,958 | 2,358 | 7,324 | 3,933 | 16,068 |
| **2020** | 493 | 2,037 | 2,353 | 7,255 | 3,845 | 15,983 |
| **2021** | 479 | 2,002 | 2,545 | 7,418 | 3,743 | 16,187 |
| **2022** | 467 | 1,910 | 2,502 | 7,201 | 3,612 | 15,692 |

**Number of public employees by type of contract**

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|
| **Established** | 7,275 | 7,489 | 7,686 | 10,234 | 10,154 | 10,002 | 9,734 |
| **Unestablished** | 2,088 | 2,200 | 2,254 | 3,285 | 3,256 | 3,457 | 3,121 |
| **Temporary** | 1,175 | 1,090 | 1,067 | 1,039 | 914 | 1,271 | 1,318 |
| **Contract** | 476 | 492 | 489 | 549 | 506 | 387 | 340 |
| **Stipend** | 314 | 308 | 299 | 297 | 309 | 311 | 302 |
| **Labour Act** | 182 | 170 | 183 | 220 | 228 | 165 | 158 |
| **Legislative Appointment** | 52 | 49 | 48 | 51 | 65 | 51 | 51 |
| **Volunteer BDF** | 1 | - | 421 | 380 | 514 | 482 | 421 |
| **Temporary PSR** | 2 | 2 | 2 | 2 | 2 | 55 | 233 |
| **Total** | 11,565 | 11,800 | 12,449 | 16,057 | 15,948 | 16,181 | 15,678 |

## Annex 5: Top 10 Projects in the PSIP by Size

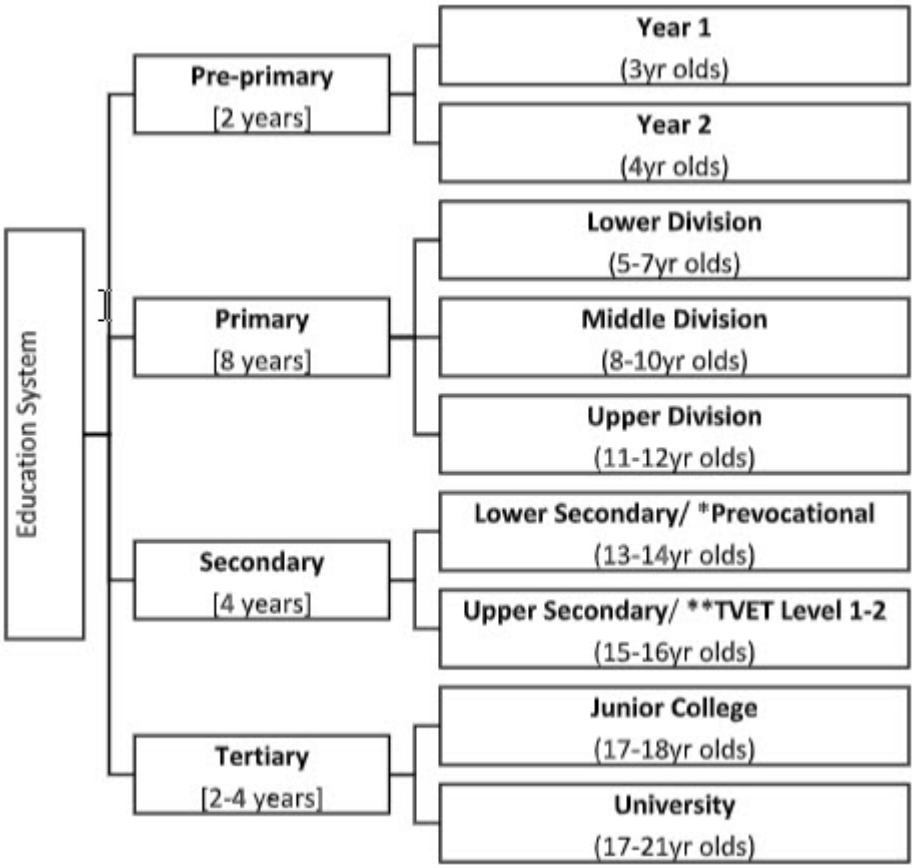
**The top 10 projects with the largest expected cost account for 61.8 percent of the total.** These projects are mainly of economic infrastructure and under the execution of the MIDH.

| Num_Project | Name_Project | Area | Sub-area | Executing_Agency |
|---|---|---|---|---|
| 9 | Caracol Road Project (Ph. I) | Economic infrastructure | Economic infrastructure | MIDH |
| 7 | Coastal Highway Upgrading | Economic infrastructure | Economic infrastructure | MIDH |
| 10 | Philip Goldson Highway and Remate Bypass | Economic infrastructure | Economic infrastructure | MIDH |
| 8 | Corozal-Sarteneja Road and Bridges | Economic infrastructure | Economic infrastructure | MIDH |
| 30 | Belize Climate Smart Agriculture Project | Economic services | Agriculture | MAFSE/BSIF |
| 70 | Education Sector Reform Project II | Social services | Education | MOECST |
| 2 | George Price Highway Rehabilitation | Economic infrastructure | Economic infrastructure | MIDH |
| 95 | Belize Integral Security Program | Public administration | Security and civil rights | MFEDI |
| 22 | Resilient Rural Belize Program | Economic services | Agriculture | MED |
| 3 | Belize City Southside Poverty Alleviation Project (Ph. 3) | Economic infrastructure | Economic infrastructure | MIDH |

**Annex 6: Structure of Belize Education System**

*Education is mandatory up to age 16.*

**BELIZE EDUCATION SYSTEM**



**Annex 7: Religious Denominations Providing Education by Number of Schools and Level of Education**

| Denomination | | # of schools by level | |
|---|---|---|---|
| | | Primary | Secondary |
| 1. | Anglican | 16 | 1 |
| 2. | Assemblies of God | 5 | 1 |
| 3. | Baptist | 3 | 2 |
| 4. | Belize Faith Mission | 1 | |
| 5. | Christian Brethren | 1 | |
| 6. | Church of Christ | 2 | |
| 7. | Friends United | 1 | |
| 8. | International Foursquare Church (Evangelical) | 1 | |
| 9. | Islamic Mission | 1 | |
| 10. | Mennonite | 31 | 4 |
| 11. | Methodist | 16 | 2 |
| 12. | Methodist Protestant Schools | 2 | |
| 13. | Nazarene | 7 | 2 |
| 14. | New Life Presbyterian | 1 | |
| 15. | Pentecostal | 3 | |
| 16. | Presbyterian | 3 | 1 |
| 17. | Roman Catholic | 112 | 11 |
| 18. | Salvation Army | 1 | |
| 19. | Seventh Day Adventist (SDA) | 20 | 5 |
| 20. | Union of Evangelical Churches of Belize (UECB) | 3 | 1 |
| 21. | YMCA | 1 | |

## Annex 8: Background information on education expenditures

### TABLES

**Table A.8.1. Education expenditures as percent of GDP and TPE for Belize, the world, Latin American/Caribbean states that are not high income, and Caribbean small states (2012–2019)**

| Fiscal Year | TEE as percent of GDP | | | | TEE as percent of TPE | | | |
|---|---|---|---|---|---|---|---|---|
| | Belize[a] | World | LAC excluding high income | Caribbean small states | Belize | World | LAC excluding high income | Caribbean small states |
| **2012** | 5.4 | 4.2 | 4.6 | 5.3 | 23.08 | 14.4 | 15.7 | 16.0 |
| **2013** | 5.4 | 4.4 | 4.8 | 5.7 | 21.75 | 14.2 | 16.3 | 17.4 |
| **2014** | 5.5 | 4.4 | 4.8 | 5.7 | 20.99 | 13.9 | 15.4 | 17.6 |
| **2015** | 5.7 | 4.4 | 4.3 | 4.4 | 21.24 | 13.9 | 16.9 | 14.4 |
| **2016** | 5.6 | 4.3 | 4.4 | 4.6 | 21.10 | 14.0 | 17.9 | 14.8 |
| **2017** | 5.8 | 4.1 | 4.4 | 4.4 | 22.89 | 14.5 | 17.6 | 14.1 |
| **2018** | 5.6 | 4.2 | 4.1 | 4.4 | 21.34 | 13.8 | 16.4 | 14.2 |
| **2019** | 5.6 | 4.1 | 4.0 | 4.4 | 20.41 | n.a. | 15.7 | 14.0 |

*Source:* GDP: World Bank; TEE as percent of GDP and as percent of TPE: UNESCO Institute of Statistics in World Bank world indicator database.
*Note:* TEE = Total education expenditures; TPE = Total public expenditures; LAC = Latin America and Caribbean. The data for the LAC countries exclude high-income LAC countries.
a. GDP for Belize was rebased to 2014.

**Table A.8.2. Percent female enrolled by level of education and year**

| Level of education | 2014–15 | 2015–16 | 2016–17 | 2017–18 | 2018–19 | 2019–20 |
|---|---|---|---|---|---|---|
| **Preschool** | 49.6 | 49.0 | 50.4 | 50.7 | 50.2 | 49.5 |
| **Primary** | 48.3 | 48.2 | 48.3 | 48.2 | 48.4 | 48.2 |
| **Secondary** | 52.4 | 52.3 | 52.2 | 52.7 | 52.4 | 52.1 |
| **Adult and Community Education** | 56.1 | 57.3 | 58.2 | 61.9 | 57.6 | 58.5 |
| **Vocational education and training** | 20.6 | 20.2 | 21.6 | 20.3 | 21.0 | 21.3 |
| **Junior college** | 58.1 | 57.7 | 57.2 | 59.3 | 59.5 | 59.4 |
| **University** | 64.6 | 65.3 | 61.9 | 62.2 | 62.7 | 62.9 |

*Source:* MoECST *Abstract of Education Statistics* annual series for 2014–15 through 2019–20.

**Table A.8.3. Average PSE scores by district, gender, and urban/rural (2018–19)**

| District | Male | | | Female | | | All |
|---|---|---|---|---|---|---|---|
| | Urban | Rural | Total | Urban | Rural | Total | |
| Belize | 55.7 | 54.7 | 55.3 | 57.8 | 57.0 | 57.7 | 56.4 |
| Cayo | 65.6 | 55.8 | 58.7 | 65.8 | 57.3 | 59.8 | 59.2 |
| Corozal | 61.5 | 53.5 | 54.9 | 59.7 | 55.3 | 56.1 | 55.5 |
| Orange Walk | 59.2 | 54.8 | 55.7 | 60.9 | 56.6 | 57.5 | 56.6 |
| Stann Creek | 54.1 | 56.3 | 55.6 | 58.7 | 55.9 | 56.7 | 56.2 |
| Toledo | 58.7 | 45.1 | 46.2 | 59.2 | 46.5 | 47.5 | 46.8 |
| All | 58.7 | 52.5 | 54.3 | 60.2 | 54.1 | 55.9 | 55.1 |

*Source:* MoECST PSE results by student and school for 2018-19.

## FIGURES

**The sources for the data in Figures A.8.1–A.8.21 are the EMIS databases for primary and secondary schools for 2018–19 and 2019–20.**

**Figure A.8.1. Average school size for national, urban, and rural primary and secondary schools by management**

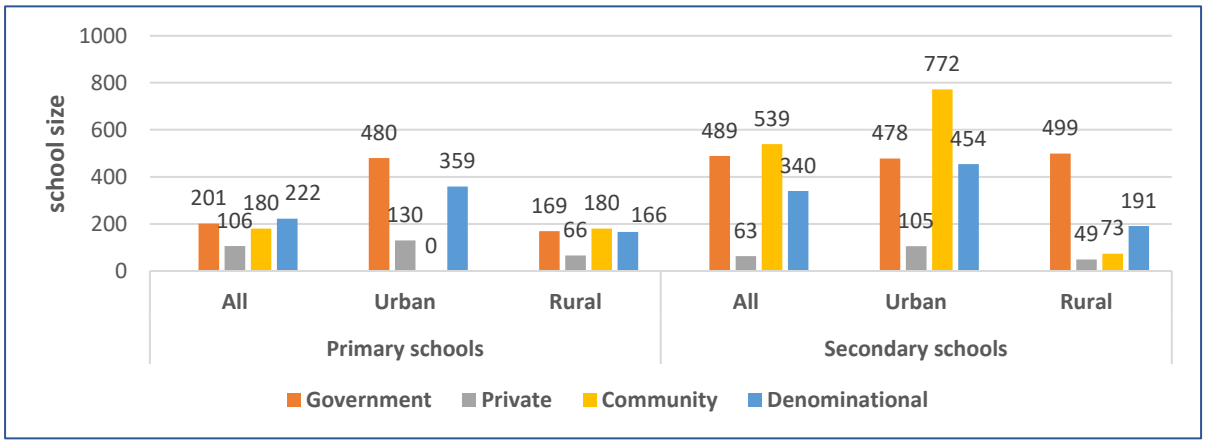



**Figure A.8.2. Distribution of primary schools by school size and management**

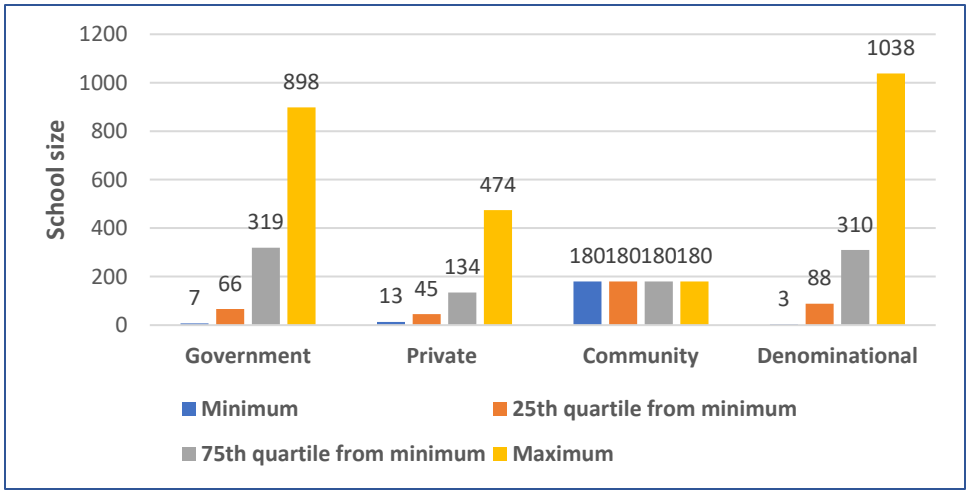


**Figure A.8.3. Distribution of secondary schools by school size and management**

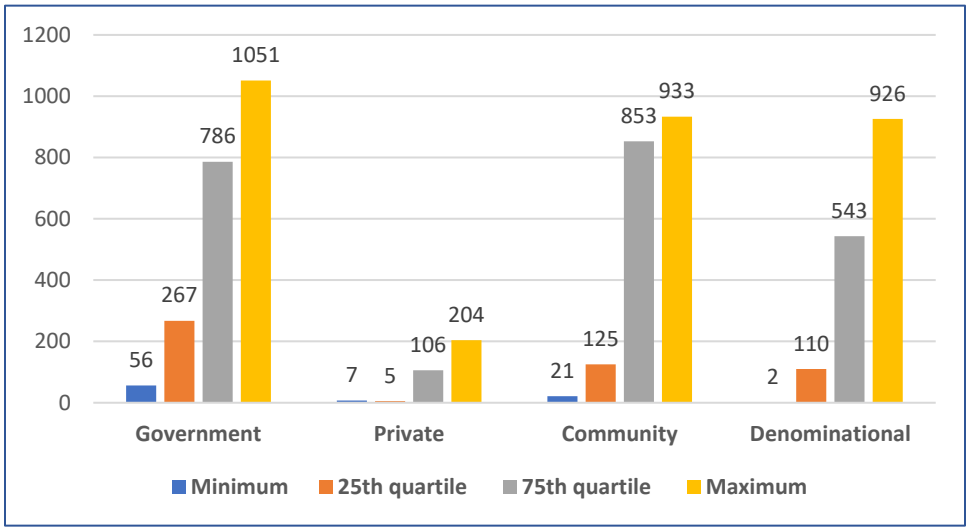



**Figure A.8.4. Average student/class ratios for national, urban, and rural primary and secondary schools by management**

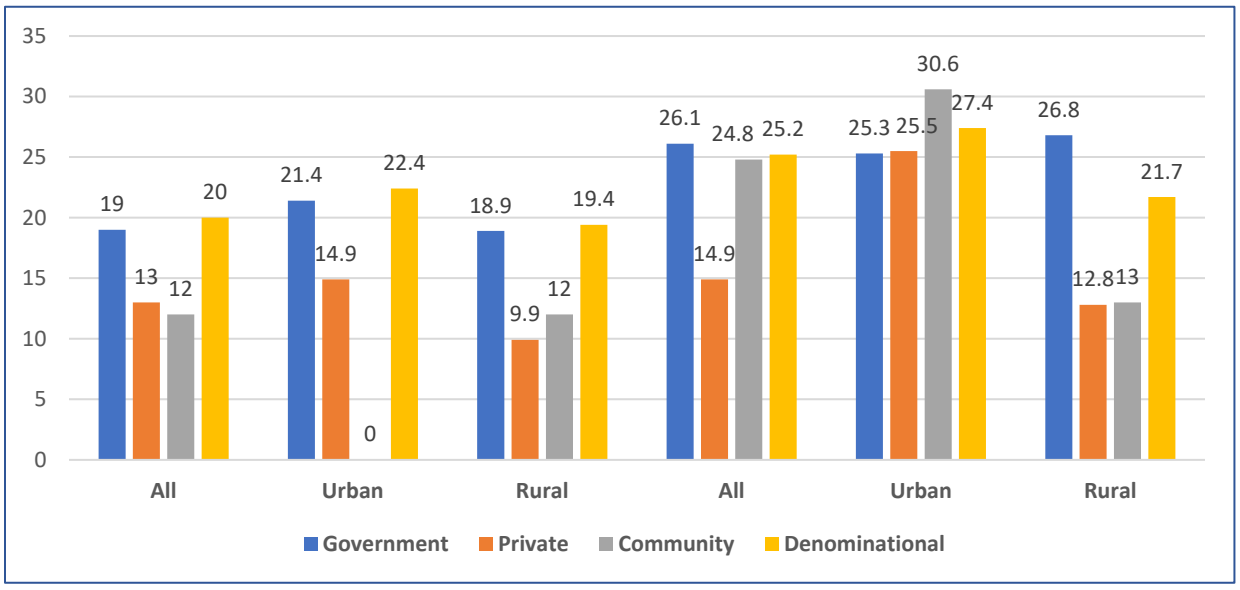


**Figure A.8.5. Distribution of primary schools by student/class ratios and management**

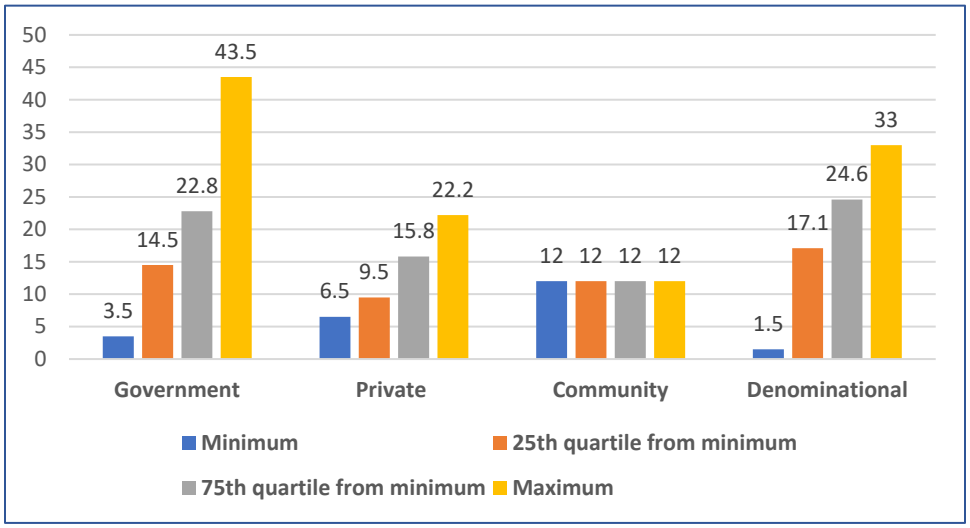



**Figure A.8.6. Distribution of secondary schools by student/class ratios and management**

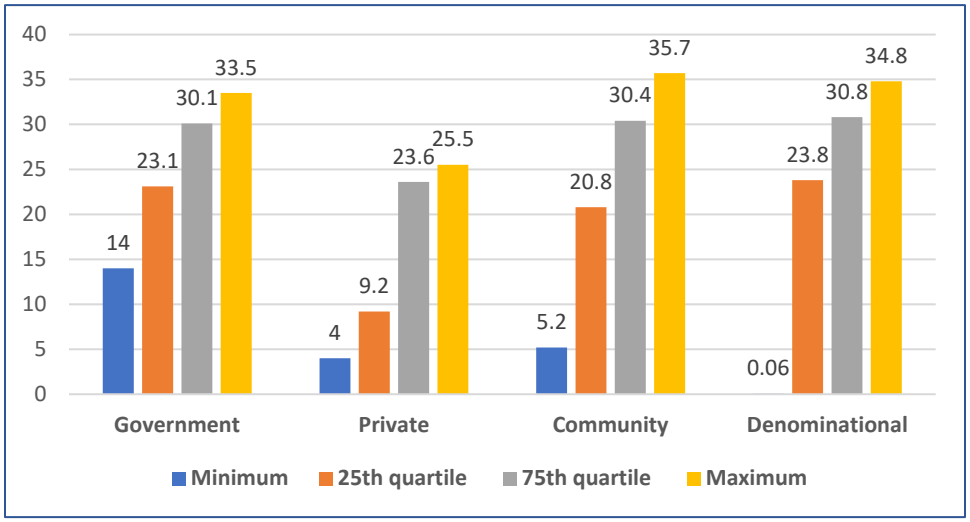
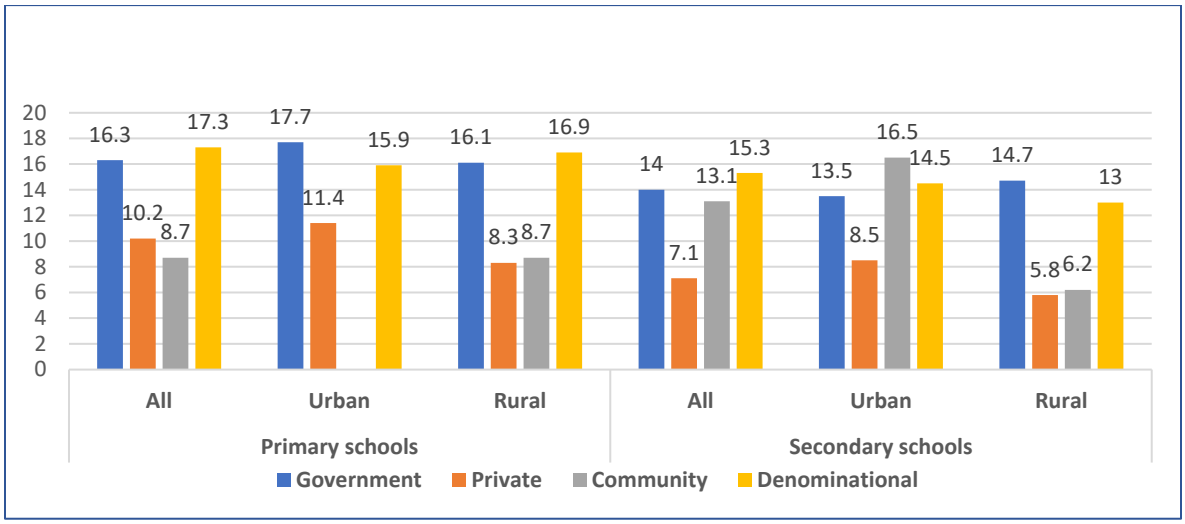


**Figure A.8.7. Average student/teacher ratios for national, urban, and rural primary and secondary schools by management[a]**




*Note:* a. For this variable, Mennonite schools are categorized as private in this and other figures of this annex.

**Figure A.8.8. Distribution of primary schools by student/teacher ratios and management**

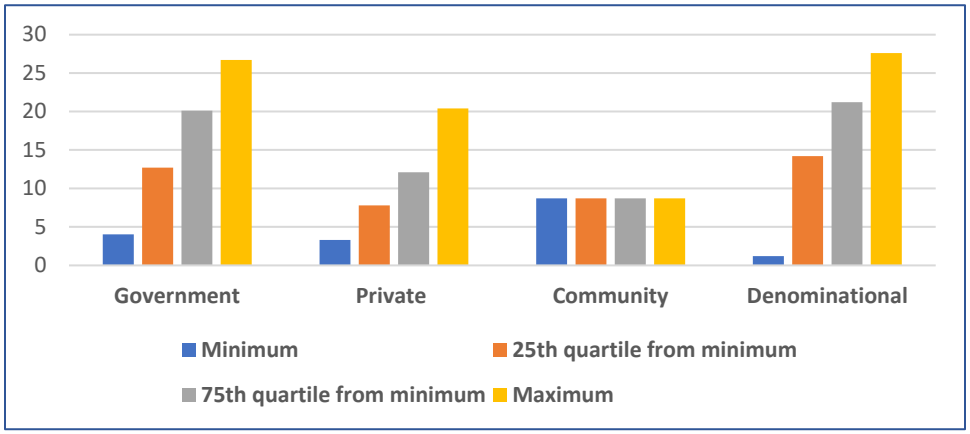


**Figure A.8.9. Distribution of secondary schools by student/teacher ratios and management**

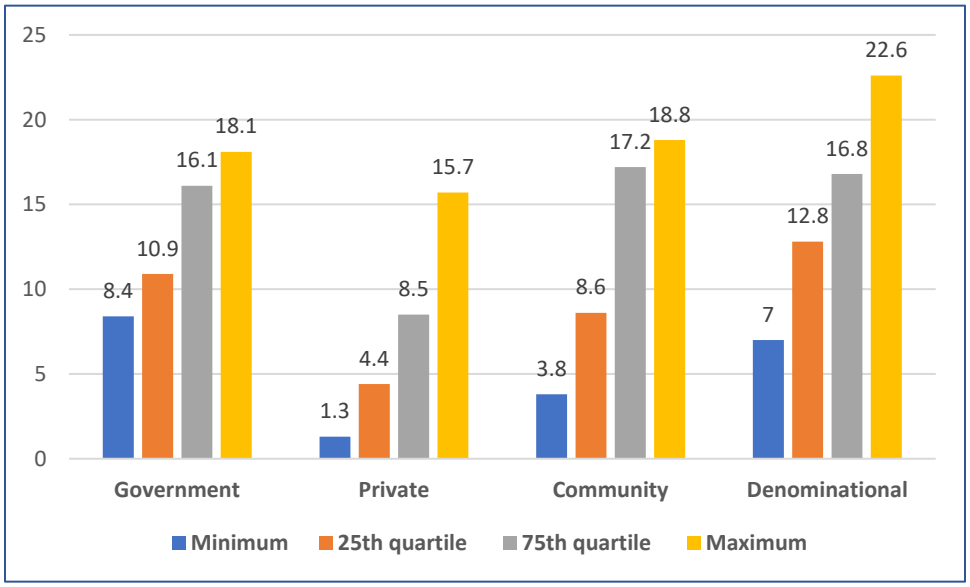



**Figure A.8.10. Average teacher/class ratios for national, urban, and rural primary and secondary schools by management**

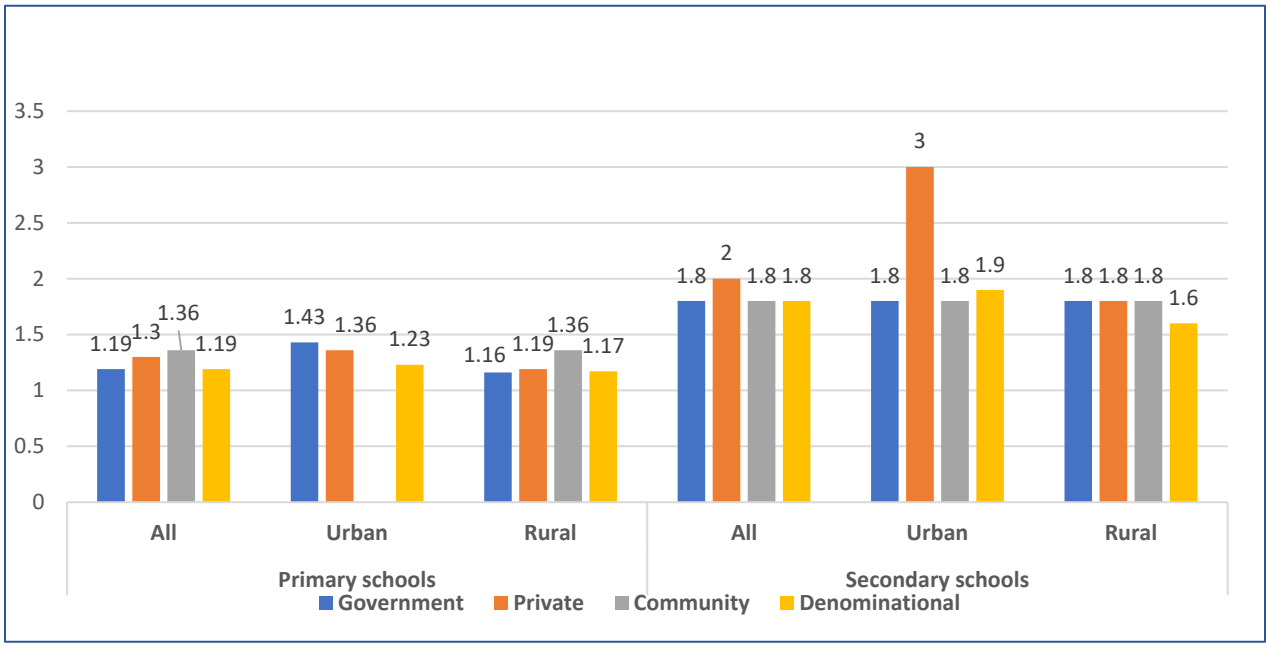


**Figure A.8.11. Distribution of primary schools by teacher/class ratios and management**

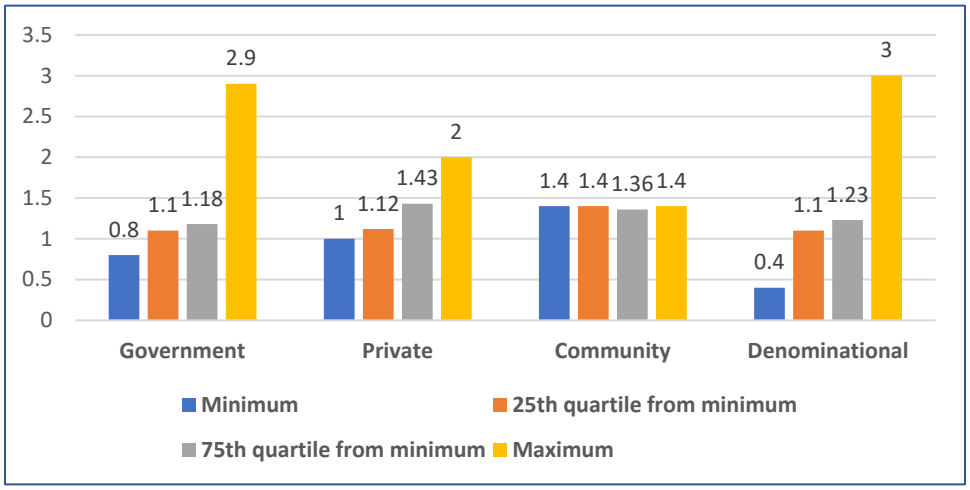



**Figure A.8.12. Distribution of secondary schools by teacher/class ratios and management**

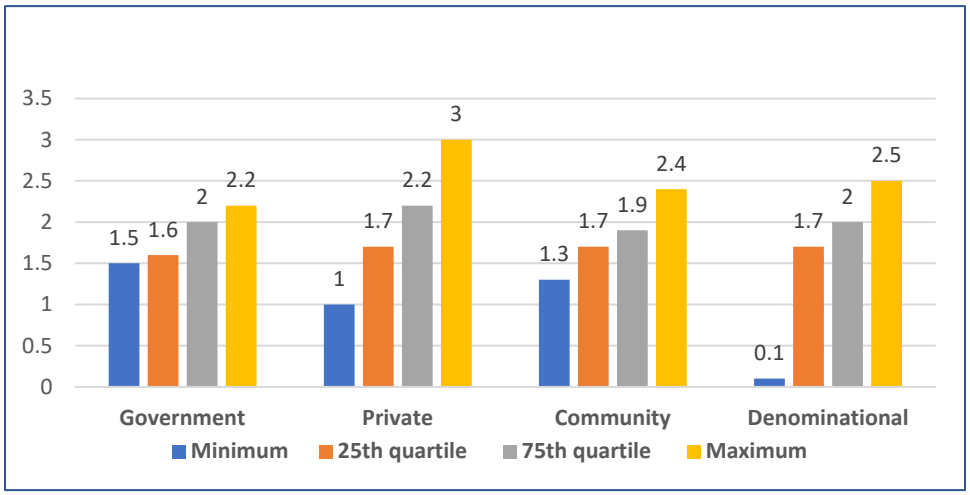


**Figure A.8.13. Average teacher/administrator ratios for national, urban, and rural primary and secondary schools by management**

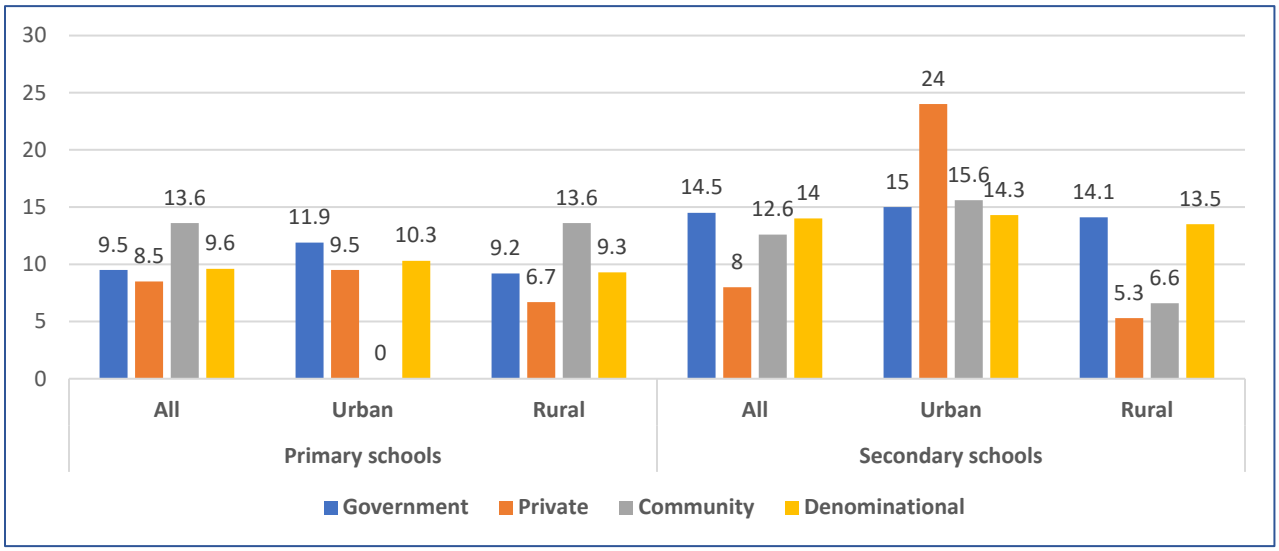



**Figure A.8.14. Distribution of primary schools by teacher/administrator ratios and management**

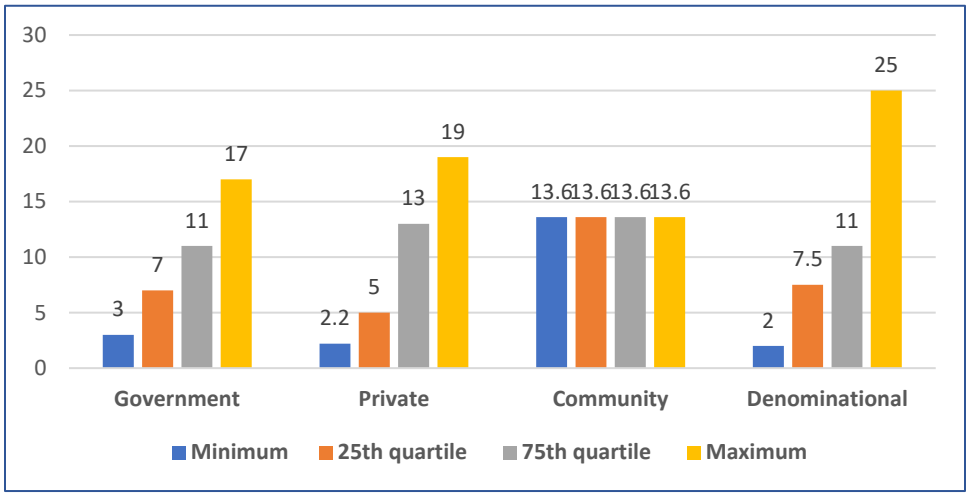


**Figure A.8.15. Distribution of secondary schools by teacher/administrator ratios and management**

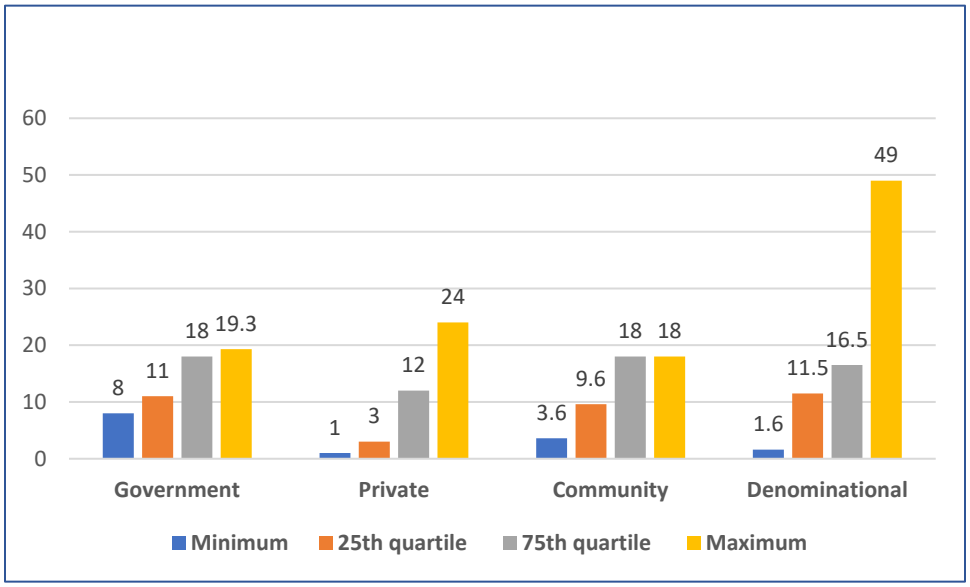



**Figure A.8.16. Average dropout rates for national, urban, and rural primary and secondary schools by management**

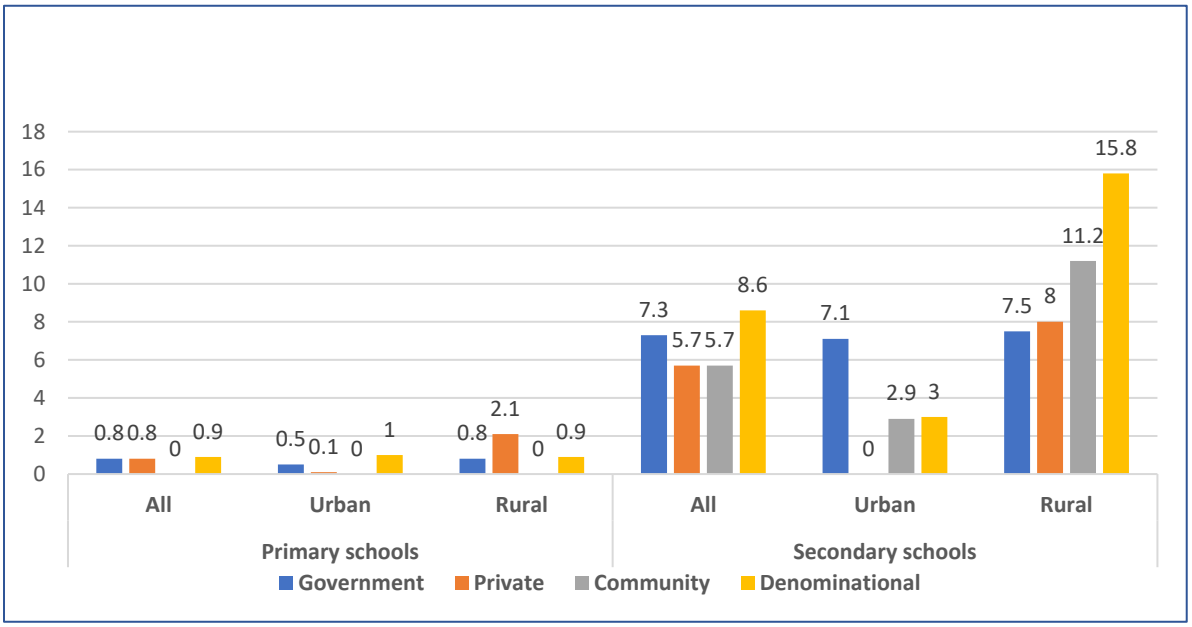


**Figure A.8.17. Distribution of primary schools by dropout rates and management**

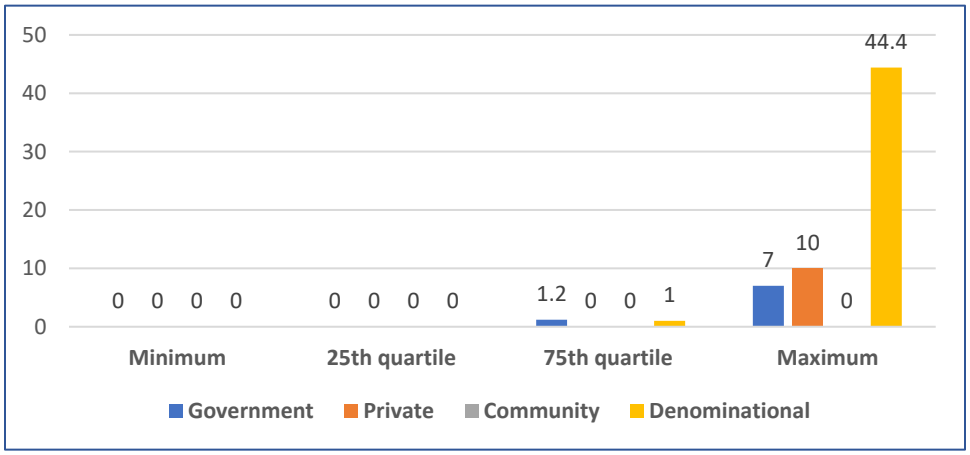



**Figure A.8.18. Distribution of secondary schools by dropout rates and management**

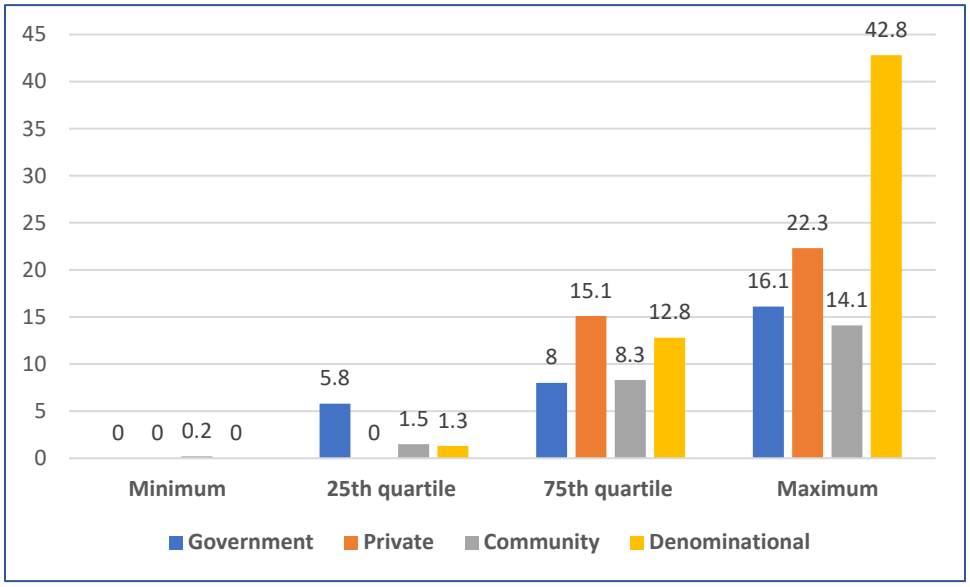


**Figure A.8.19. Average repetition rates for national, urban, and rural primary and secondary schools by management**

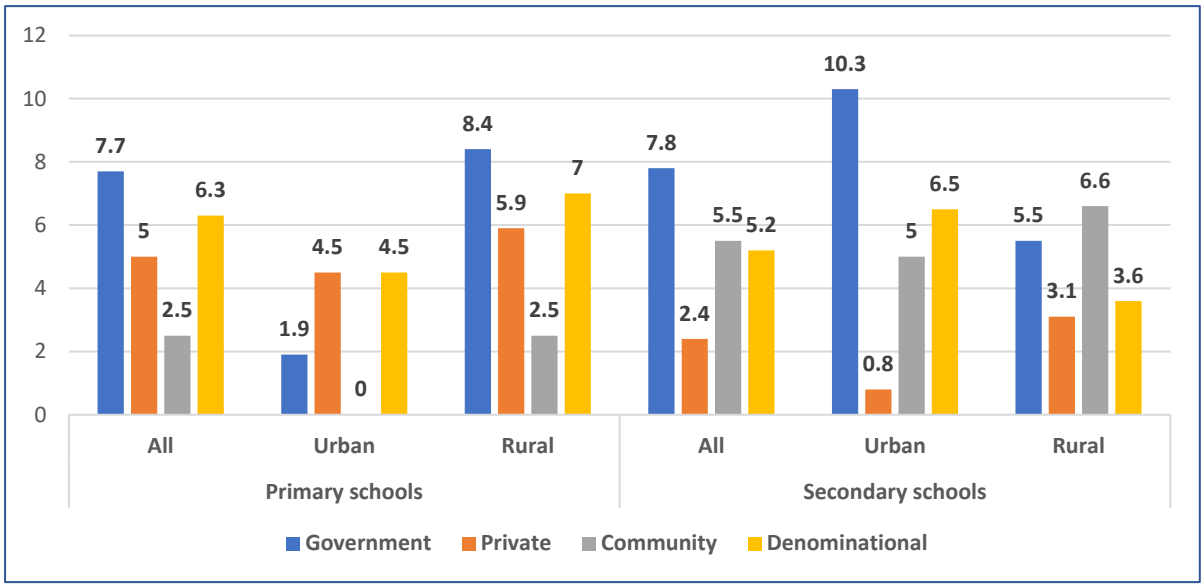



**Figure A.8.20. Distribution of primary schools by repetition rates and management**

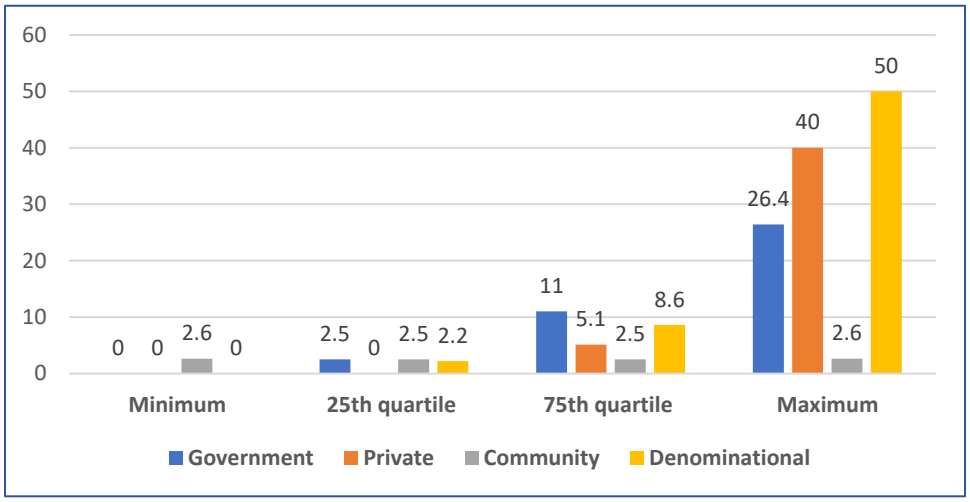
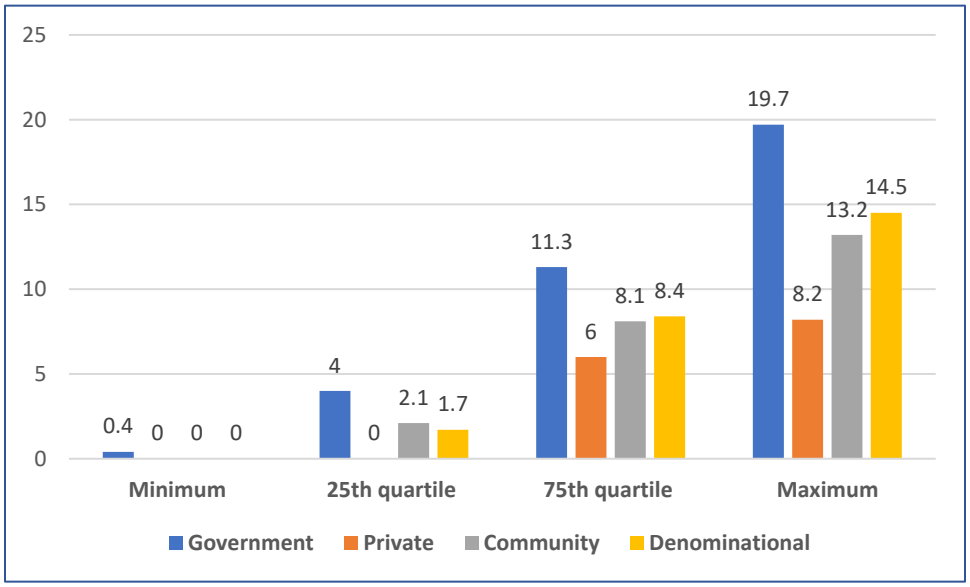


**Figure A.8.21. Distribution of secondary schools by repetition rates and management**



## Annex 9: Data Sources and Limitations of the Data on Health Expenditures

### Data sources

**The health expenditure data from multiple sources (Table A.8.1).** Data for the international comparison of health spending came from the World Bank's World Development Indicator (WDI) and the WHO GHED. The latest available year for international comparisons is 2019. The selected peer countries in the region were agreed with representatives from the MoHW and are Barbados, Costa Rica, Dominica, Guatemala, Guyana, Jamaica, Mexico, Panama, Suriname, and Trinidad and Tobago. Public expenditure data at national and district level were mainly sourced from BOOST. Additional expenditure data to estimate the total spending on health were sourced from the NHI and from the KHMH financial report. For all analyses, the rebased 2014 GDP was used.

**Table A.8.1. Data sources for health expenditures**

| Type of data | Data source | Scope/comments |
|---|---|---|
| **Expenditure data** | | |
| Total health expenditure | KHMH financial report, NHI, BOOST | To calculate the overall resource envelope for the Belizean health system |
| National level | BOOST | National government health expenditure |
| District level | BOOST | To calculate the volume of and per capita health expenditure for Belize |
| Total health spending | WDI, WHO GHED | 2019 is the latest available year |
| Comparison purposes | WDI, WHO GHED | Benchmarking Belize as compared to peer countries |
| Salaries for health personnel | MoHW | Pay scales of health personnel working in public HFs |
| **Health sector inputs and outputs** | | |
| Human resources for health | MoHW | Staffing data at national and district levels |
| HFs | MoHW | Number and ownership of HFs |
| Number of services provided | BHIS, MoHW | Number of inpatient, outpatient, and emergency services at the district level |
| **Survey Data** | | |
| Population data | SIB | Mid-year population estimates by district and by rural/urban areas |
| HRH Assessment 2021 | MoHW | Assessment of gaps in human resources for health |
| Public HFs Performance Assessment 2021 | MoHW | Assessment of gaps in the health service delivery |
| **Epidemiology data** | | |
| Causes of deaths | BHIS, MoHW | Leading causes of deaths by sex |
| Diabetes | International Diabetes Federation | Prevalence of diabetes in Belize and peer countries |
| Childhood vaccinations | PAHO (Pan American Health Organization) | 2020 EPI (Expanded Program on Immunization) country report with vaccination coverage by type of vaccine |
| Maternal and child health outcomes | WDI | Infant and under five mortalities, fertility rate |
| Comparison purposes | WDI | Benchmarking Belize compared to peer countries |

**Health outcomes and disease of burden analyses relied on national and international data sources.** Data were retrieved from national datasets of the MoHW, the BHIS, the SIB, and internationally comparable

datasets of the World Bank's Health Nutrition and Population Statistics, WDI, and the International Diabetes Federation.

**Analysis of efficiency was made possible with data retrieved from the World Bank's WDI and national data provided by the epidemiology unit of the MoHW.** These datasets included hospital production reports on the number of inputs used (health personnel) and the number of services provided (number of emergency, outpatient, and inpatient visits), as well as information on BTR, BOR, and ALS, the 2021 HRH assessment report and the 2021 performance report of public HFs both produced by the MoHW. In addition, pay scales of health personnel working in public HFs were provided by the MoHW.

**For conducting an equity analysis of financing, access to care, and health outputs and outcomes, a range of data sources were employed.** Expenditure data from BOOST were used to study whether public health expenditures in Belize are equitable across districts. The volume of and per capita health expenditures in Belize's districts were examined. To assess equity in access to care, indicators about HRH density and availability of physical resources were constructed using data from the MoHW BHIS and SIB. Finally, data from UNICEF MICS and MoHW BHIS were used to analyze differences in health outputs and outcomes across districts and sex.

**Despite strong support from the MoHW and the MoF, which have provided the available data, data challenges limited the scope, accuracy, and depth of the analysis.** These included the existence of multiple data sources with different data estimates, lack of health infrastructure to easily extract the data in a format ready for analysis, limited data extraction capacity, limited completeness of the BHIS, and scarce availability of publicly available evidence on the health sector in Belize. An in-depth description of the data limitations in each section is provided below.

**The analysis of health expenditure data was limited by the following data challenges:** the lack of data disaggregation of expenditures, including (a) NHI expenditures and some MoHW expenses (such as payment to contractors) were not disaggregated by economic category, (b) the lack of disaggregation of the expenditure data by level of care (primary, secondary, and tertiary) and by program area (maternal and child health, psychiatric care, and so on) made it impossible to analyze whether allocation and spending are aligned with health sector strategic objectives and priority disease burden, (c) the lack of routine NHA studies to assess the total level of spending for the health sector (the latest was conducted in FY2013/14), and (d) the lack of access to the household budget survey data made it impossible to analyze catastrophic and impoverishing health spending and conduct an in-depth equity analysis.

**The efficiency analysis was limited to the national (macro) and district (meso) levels, and it was not possible to conduct the analysis by level of care, as necessary to compare facilities that have the similar production function.** The data at the district level by level of care and by facility level were not readily available to understand inputs availability, outputs, and supply readiness. In addition, the data limitations made it impossible to disentangle the analysis by rural and urban facilities and to assess the extent to which the productivity of HFs drives performance differences. Data quality and validation warrant attention: the accuracy, completeness, and consistency of the data required several rounds of cleaning and fixing highlighting that prioritization of the BHIS is important. In addition, the team was unable to look at the 'inefficiencies' related to the production of health personnel who then leave the country in search of better work conditions, due to the lack of data.

**Data on the quality of care were limited.** There are no systematic health facility assessments to assess the availability of essential medicines and equipment, as well as the functionality of the latter. Measuring effective care is a critical step to assess whether the resources achieve the results desired; looking at the number of services provided alone is not sufficient to know if people get the care that can improve their health status and overall well-being.

**The availability of more recent and disaggregated data would also allow for a richer analysis of equity in the health sector in Belize.** Due to the lack of categorization of the expenditure data into different levels of care (primary, secondary, and tertiary health services), the team was unable to make an accurate comparison of the spending (total and per capita) on public health expenditures across districts by level of care. In addition, the absence of household budget survey data prevented the team from studying financial protection across districts, income levels, and other socioeconomic characteristics. Data about health outputs were outdated. Despite NCDs being a significant challenge for the Belizean health system, the equity section did not conduct an in-depth analysis of the subnational variation in NCD outcomes due to the lack of adequate data.

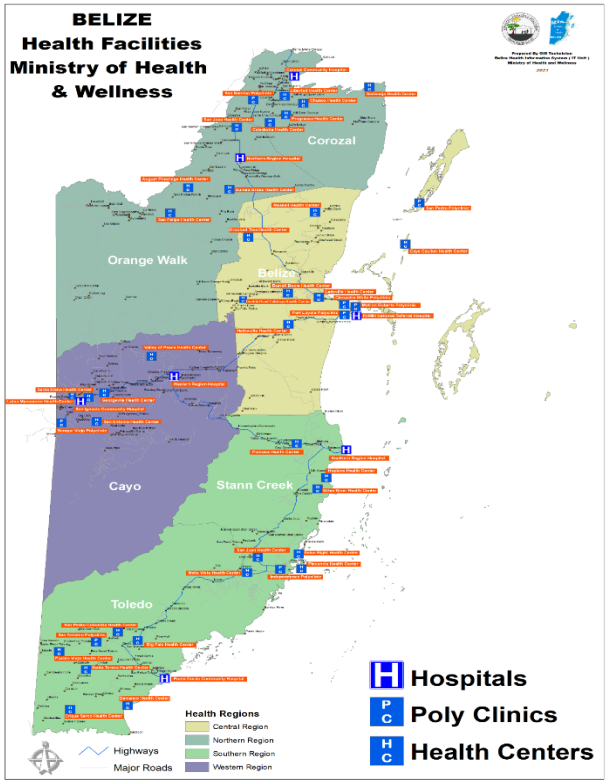
## Annex 10: Public HFs by Catchment Area, 2022

| Region | Catchment area/District | Hospitals | Polyclinics | Health centers |
|---|---|---|---|---|
| Northern | Corozal | Corozal Community Hospital (primary care services) | 1. Corozal Polyclinic<br>2. Xunox Polyclinic<br>3. San Narciso Polyclinic | 1. Libertad Health Center<br>2. Caledonia Health Center<br>3. Sarteneja Health Center<br>4. Progresso Health Center |
| Northern | Orange Walk | Northern Regional Hospital (primary and secondary services) | | 1. Senovia Meggs Health Center<br>2. August Pine Ridge Health Center<br>3. San Felipe Health Center<br>4. Guine Grass Health Center |
| Central | Belize | Karl Heusner Memorial Hospital (secondary and tertiary care services) | 1. Cleopatra White Polyclinic<br>2. Matron Roberts Polyclinic<br>3. San Pedro Polyclinic | 1. Ladyville Health Center<br>2. Hattieville Health Center<br>3. Port Loyola Health Center<br>4. Maskall Health Center<br>5. Double Head Cabbage Health Center<br>6. Burrel Boom Health Center<br>7. Crooked Tree Health Center<br>8. Caye Caulker Health Center |
| Western | Belmopan (Cayo District) | Western Regional Hospital (primary and secondary care services) | | 1. Valley of Peace Health Center |
| | San Ignacio (Cayo District) | San Ignacio Community Hospital (primary care services) | | 1. Mopan Clinic<br>2. Georgeville Health Center<br>3. Luisa Manzanero Health Center (Reopened May 2021) |
| Southern | Stann Creek | Southern Regional Hospital (primary and secondary care services) | 1. Dangriga Polyclinic<br>2. Independence Polyclinic | 1. Hopkins Health Center<br>2. Pomona Health Center<br>3. Placencia Health Center<br>4. Seine Bight Health Center<br>5. Sittee River Health Center<br>6. San Juan Health Center<br>7. Bella Vista Health Center |
| Southern | Toledo | Punta Gorda Community Hospital (primary care services) | 1. Punta Gorda Polyclinic<br>2. San Antonio Polyclinic | 1. San Pedro Columbia Health Center<br>2. Pueblo Viejo Health Center |

| Region | Catchment area/District | Hospitals | Polyclinics | Health centers |
|---|---|---|---|---|
| | | | | 3. Santa Teresa Health Center<br>4. Barranco Health Center<br>5. Crique Sarco Health Center |

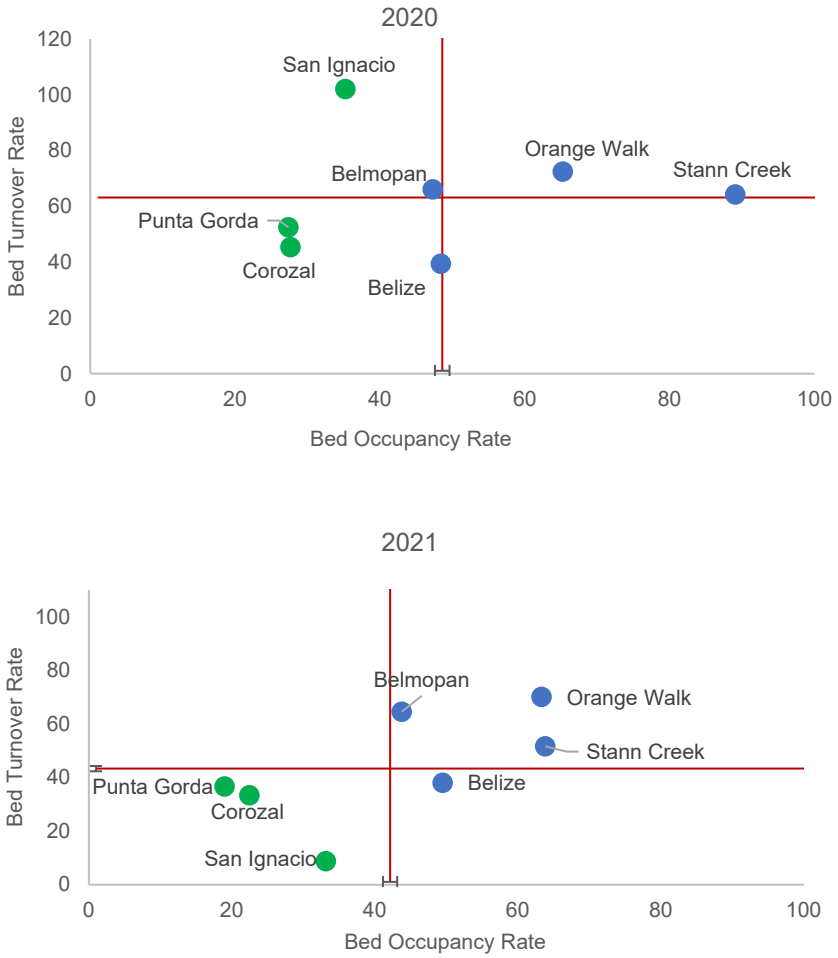
*Source*: MoHW 2022.

## Annex 11: Public Health Care Facilities in Belize, 2021




*Source:* MoHW 2022.

**Annex 12: Pabon Lasso Hospitals Efficiency Analysis for Years 2020 and 2021**




Source : World Bank staff calculations