# Resource Gap for Public Sector Provision of the Essential Service Package in Bangladesh, 2017-2022

## 1. Introduction

The Government of Bangladesh (GOB) is working towards achieving universal health coverage (UHC) by 2030 as part of attaining Target 3.8 of the Sustainable Development Goals (SDGs).[1, 2, 3] The Ministry of Health and Family Welfare (MOHFW) developed the first Essential Service Package (ESP) for Bangladesh in 1998,[4] and has updated it over the years to adjust for changing disease burden trends and population needs. In 2016, MOHFW updated the ESP significantly in preparation for the 4th Health, Population, and Nutrition Sector Programme 2017-2022 (4th HPNSP),[5, 6] which includes UHC as a key focus. The MOHFW aimed to design a well-defined, cost-effective, and implementable ESP to ensure equitable access to quality health, nutrition, and population services.[7] The updated 2016 ESP is a critical step towards the GOB's commitment to universal access to the most essential health services. The ESP consists of five core services, as well as management of common conditions, integrated behavior change communication (BCC), and three support services (see Box 1). Within the ESP, there are 232 service interventions with relevant delivery channels for each (from a list of ten channels, covering the community through to district hospitals). The 4th HPNSP includes plans and targets for ESP implementation, as part of its operational plans (OPs) in the Programme Implementation Plan (PIP).

Since 2016, USAID's Health Finance and Governance (HFG) project, in partnership with the World Health Organization (WHO) and the International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), have been supporting the MOHFW's Planning Wing and Health Economics Unit (HEU) to estimate the cost of providing the ESP through the public sector as per the plans and targets of the 4th HPNSP. Using findings from the costing study (henceforth MOHFW's 2018 ESP costing report),[8] HFG conducted a further analysis to determine the resource gap for public sector provision of the ESP in Bangladesh using the PIP and OPs of the 4th HPNSP as the basis.

**Box 1. Bangladesh ESP updated in 2016**

- Five core services
  - Maternal, Neonatal, Child and Adolescent Health (MNCAH)
  - Family Planning (FP)
  - Nutrition
  - Communicable Diseases
  - Non-Communicable Diseases (NCDs)
- Management of other common conditions
- Support services:
  - Laboratory
  - Radiology
  - Pharmacy
- Integrated BCC
- Provided through ten delivery channels

This analysis continues HFG's support to the MOHFW and GOB towards evidence-based planning and strengthening Bangladesh's health system for UHC. HFG also conducted a similar resource gap analysis for tuberculosis (TB)

and expanded programme on immunization (EPI) in Bangladesh.[9, 10] Please see the full report for complete details on methods, limitations, and results for resource gap analysis for ESP, TB, and EPI in Bangladesh.[11]

***This brief provides an overview of the resource gap analysis for the ESP, including data estimates for GOB and donors, and presents the calculated resource gap for public sector provision of the ESP for the period 2017-2022.***

## 2. Objectives

The analysis had the following objectives

- To generate resource gap estimates by consolidating data on resources available and estimated costs for the ESP service provision per the 4th HPNSP.
- To support the GOB in understanding additional resource requirements and facilitate improved budget planning by showing the funding flows and allocation across funding sources and priority areas for the ESP provision.
- To assist the GOB to strategically and holistically improve domestic resource mobilization for the ESP, and to plan for eventual transition from donor financing.

HFG designed this analysis to answer the following questions:

a) What resources are available over 2017-2022 to fund the ESP?
b) What, if any, is the resource gap for the ESP service provision over 2017-2022?

## 3. Methodology

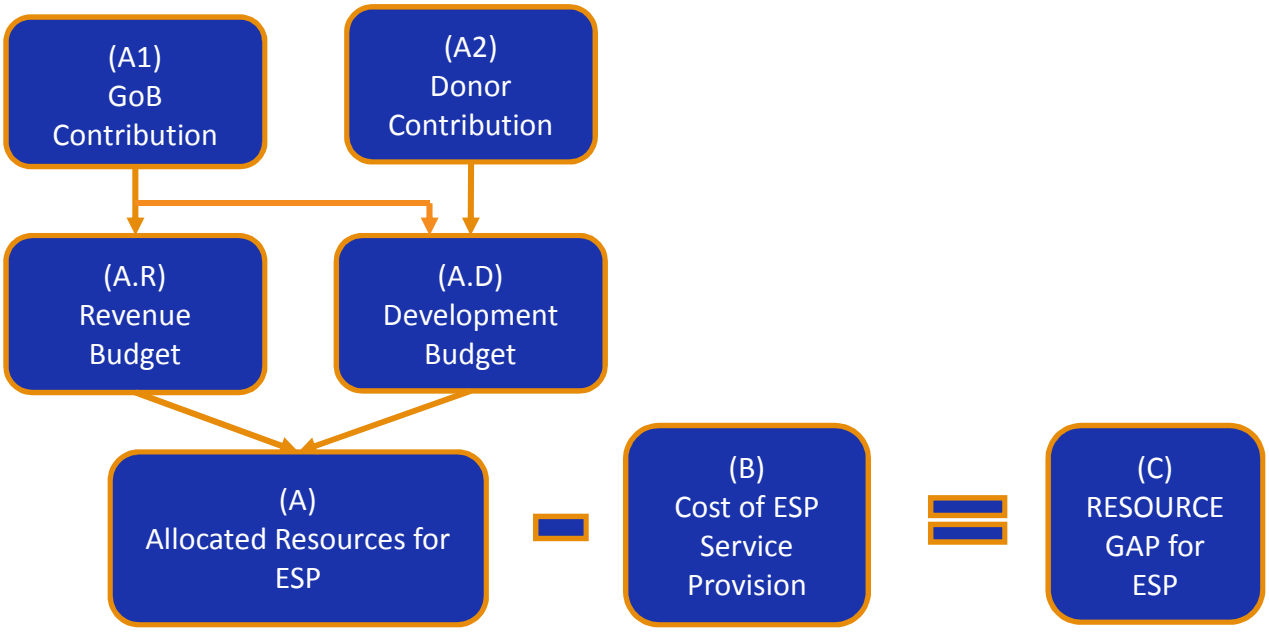
HFG followed a rigorous methodology, using an approach from similar resource modeling exercises for HIV, TB, malaria, and nutrition programmes in countries undergoing donor transitions.[12, 13, 14] This analysis applied a simple analytic framework to estimate the future resource gap (if any) for the ESP in Bangladesh. The framework includes funding flows for the health sector in Bangladesh and a core formula for resource gap analysis, as shown in Figure 1.

Components of the framework are explained below.

***(A)*** The ***allocated resources for ESP***. This includes two components:

- **(A.R) Revenue budget** is the fixed budget allocation by GOB. It is allocated primarily for human resources (HR) as salaries, allowances, and other benefits (which constitute about 90% of the revenue budget). In addition, a small portion is allocated for repairs, maintenance, supplies, and services for health facilities.
  - **(A1) GOB contribution** to MOHFW for the ESP includes funding allocated by GOB through the revenue budget.

**Figure 1: Analytic Framework for Resource Gap Analysis**



- **(A.D) Development budget** is the more flexible budget compared to the revenue budget. This is channeled through the sector programme, the 4th HPNSP; it covers the programmatic aspects of the health system, such as training, research and development, drugs and supplies, supportive equipment, and monitoring and evaluation.
  - **(A1) GOB contribution** to MOHFW for the ESP, also includes funding allocated by GOB through development budget.
  - **(A2) Donor contribution** includes external resources from development partners allocated as part of the development budget.

***(B)* Cost of ESP Service Provision** was obtained from the MOHFW's 2018 ESP costing report which estimated the cost of ESP services in the public sector in Bangladesh.[15] This study used the OneHealth Tool (OHT) to estimate the costs of each ESP core services, as well as the cost of ESP interventions[16] and the required health system costs to implement these services.

***(C)* Resource gap for ESP** is calculated as the difference between the allocated resources from the GOB and from donors for the ESP **(A)**, and the estimated cost of delivering ESP services **(B)**. This gap represents the amount of resources the GOB will need to mobilize for provision of the ESP, as per the PIP of the 4th HPNSP.

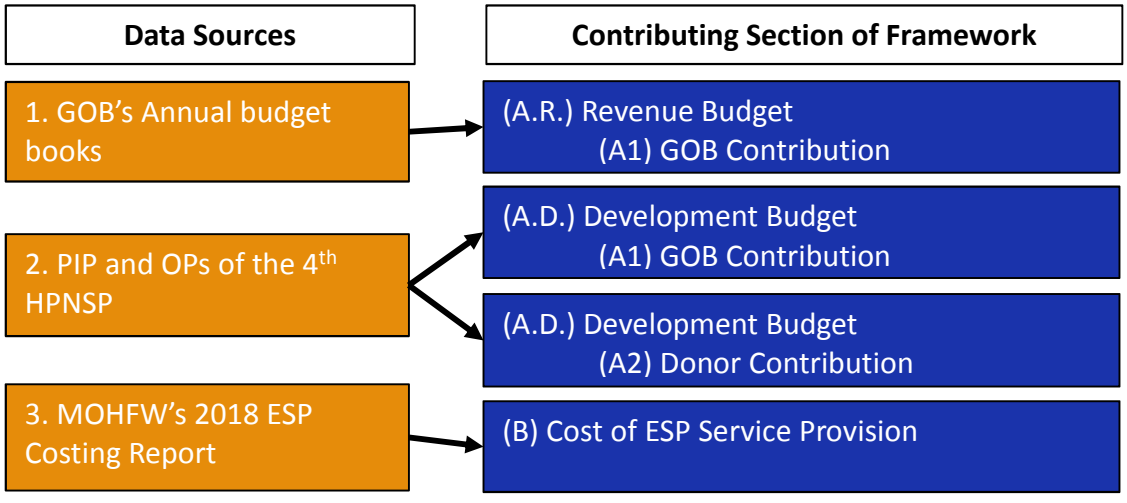
## 4. Data Sources and Analysis

For this analysis, data was compiled from multiple sources, as shown in Figure 2.

Information on **allocated resources (A)** was extracted from revenue and development budgets:

- **Revenue budget (A.R)** data was compiled from Bangladesh's annual budget books 2017-18 for the health services division (HSD) and health education and family planning division (HE&FPD).[17, 18] The revised budget for FY2016-17 and the intended budget for FY2017-18 were extracted from these documents. We extracted budget amounts for ten different types of health facilities, and for each type of health facility, the budget was provided in six different categories: officer salaries, employee salaries, allowances, supplies and services, repairs and maintenance, and assets collection and procurement. Revenue budget totals for FY2018-2019 to FY 2021-2022 were projected using linear best fit for actual expenditure data, including fiscal years from 2013-2016. For this analysis, we apportioned the budget for ESP based of assumptions made for health systems contribution to ESP at various tiers.
- **Development budget (A.D)** data in the PIP and OPs of the 4th HPNSP provided the breakdown of funding from the **GOB** and **"Project Aid (PA)"**, which is a sum of **reimbursable project aid (RPA)** and **direct project aid (DPA)**. RPA covers loans while DPA is grant money to GOB. HFG reviewed and extracted data for 394 budget line items that matched with the 232 ESP interventions from the 12 identified OPs that include ESP service provision.[19] Each OP includes a total financial target for the respective programme (GOB and PA combined) for each of the fiscal

**Figure 2: Data Sources**



years FY2017-2022, and also provides a breakdown of GOB vs. PA for the grand total for January 2017 to June 2022. HFG extracted this data and estimated the yearly breakdown for GOB and PA using the same ratio for the grand total of each OP over 2017-2022.

**Apportioned budget for ESP:** HFG apportioned the revenue and development budget amounts for ESP based on programme statistics and expert opinion.

- **Revenue budget (A.R):** salaries and benefits were apportioned based on assumptions of HR contribution (by each cadre) for ESP services; the same proportions were used to allocate the contribution of the remaining revenue budget (non-HR items) to the ESP.
- **Development budget (A.D)** amounts only for ESP services were extracted from twelve OPs. The budget from the Community Based Health Care (CBHC) OP, as this is for all types of ESP services, was divided into six equal amounts for each of the six service areas (five core services and management of other common conditions).

**Cost of ESP:** Data on the **cost of ESP Service Provision (B)** was compiled from the 2018 ESP costing report. The cost estimates include both the total cost of public sector provision of ESP in Bangladesh and the cost for each ESP programme area. Using an ingredients-based methodology, the study team costed 132 of the 232 ESP interventions in six health programme areas (MNCAH, FP, nutrition, communicable diseases, NCDs, and management of other common conditions). The data was obtained from a mixture of 2016 current practices, standard protocols (if available), and expert opinion when no other data was available. Costs were based on the target population, the population in need, and the service coverage of each ESP intervention. Service coverage for 2016 was obtained from document review and coverage for the period 2017 to 2022 was obtained from the PIP and OPs of the 4th HPNSP.

HFG converted the ESP cost estimates from **calendar year to fiscal year** by combining half of each consecutive calendar year. This is because the allocated resource data (revenue and development budgets) follow Bangladesh's fiscal year (July through June).

In order to undertake the analysis:

- Annual linear progress was assumed in achieving coverage targets from 2017 to 2022; and
- The revenue budget for EPI was apportioned based on a number of assumptions and expert opinion.

The full report[20] contains details of assumptions made for each of the compiled data sets.

## 5. Findings

### A. Allocated Resources for ESP

The total allocated resources (A) for ESP in FY2017-18 is approximately BDT 7,200 Crore (USD 902 Million); this increases to approximately BDT 8,000 Crore (USD 997 Million) by FY2021-22. As per the 4th HPNSP, the development budget for ESP reduces over the years, whereas the revenue budget increases steadily during this period (see Table 1).

**Table 1: Total Resources Allocated for ESP**

| YEAR | (A.R) Revenue budget | | (A.D) Development budget | | (A) Total Allocated Resources | |
|---|---|---|---|---|---|---|
| | (Crore BDT) | (Million USD)* | (Crore BDT) | (Million USD)* | (Crore BDT) | (Million USD)* |
| 2017-18 | 3,260 | 405 | 4,005 | 497 | 7,265 | 902 |
| 2018-19 | 3,580 | 444 | 4,015 | 498 | 7,595 | 943 |
| 2019-20 | 3,938 | 489 | 3,825 | 475 | 7,763 | 964 |
| 2020-21 | 4,341 | 539 | 3,762 | 467 | 8,103 | 1,006 |
| 2021-22 | 4,753 | 590 | 3,277 | 407 | 8,030 | 997 |
| **Total** | **19,872** | **2,466** | **18,884** | **2,344** | **38,756** | **4,810** |

* Exchange rate used in 2017-2022: USD 1 = BDT 80.57

The total GOB contribution (A1) for ESP over the period 2017-2022 is approximately BDT 26,000 Crore (USD 3,277 Million), which accounts for more than two thirds of the total allocation for the ESP programme (see Figure 3). The total donor contribution (A2) for ESP for 2017-2022 is approximately BDT 12,000 Crore (USD 1,533 Million), which accounts for approximately one third of the total resources allocated (see Figure 3).

**Figure 3: Apportioned Budget for ESP**

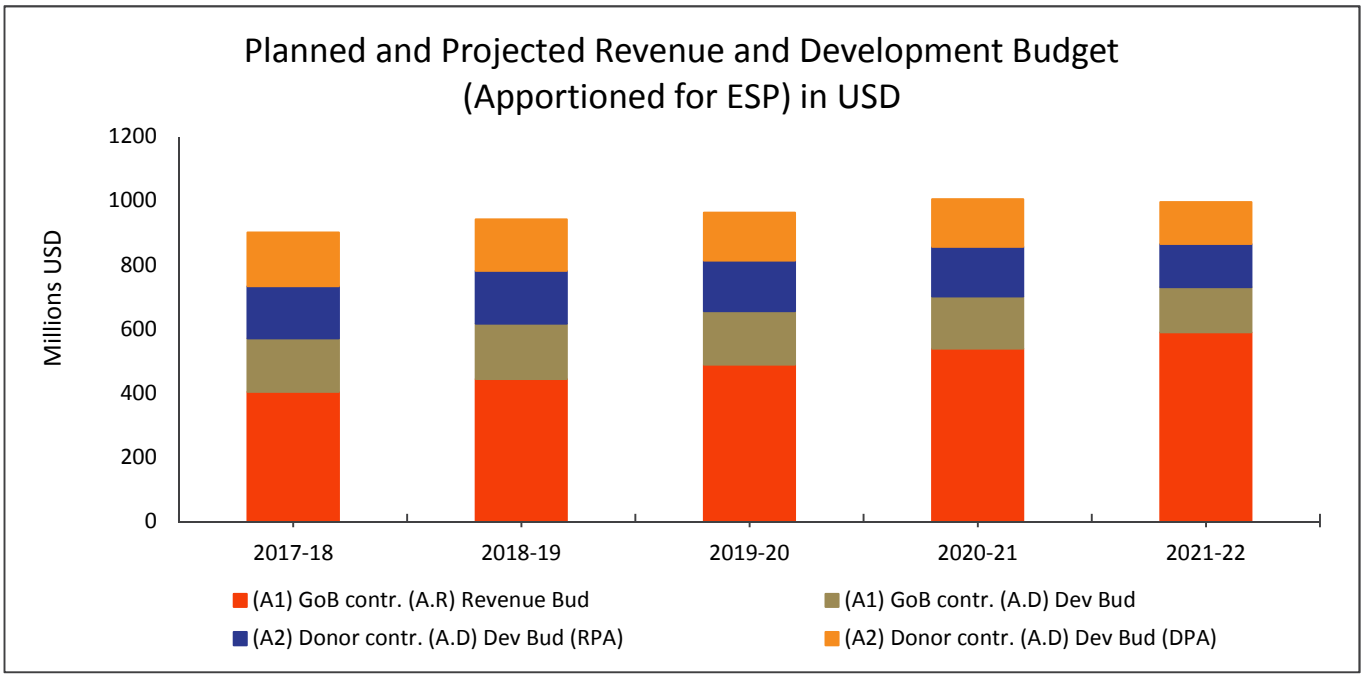



**Figure 4: Distribution of Development Budget for ESP 2017-2022 by Core Service Areas**

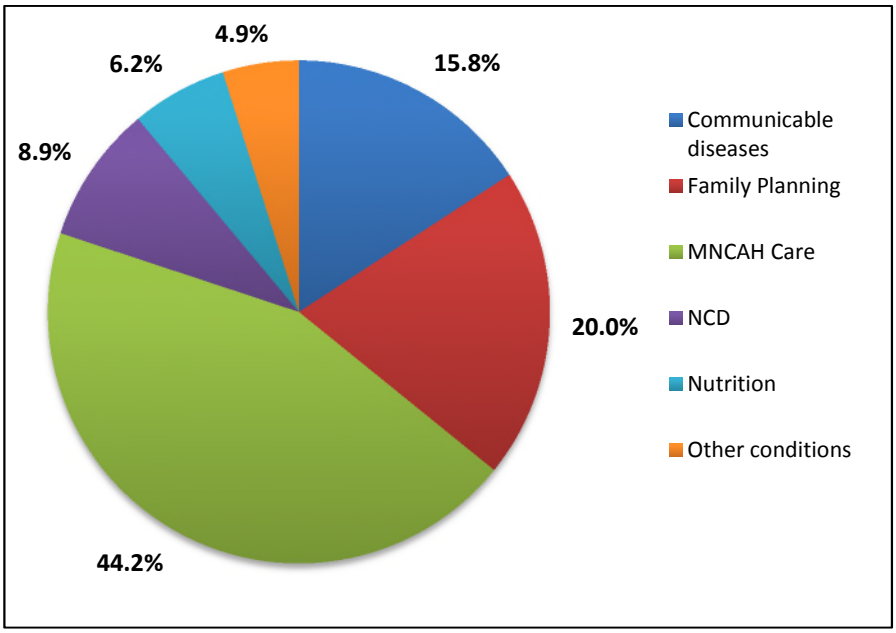



Figure 4 shows the percentage distribution of the development budget (total for 2017-2022) across the six core service areas of ESP. It was not possible to analyze the distribution of the revenue budget, as data was not available by service areas.

The total allocated resources for the ESP in 2017-18 (approximately BDT 7,200 Crore or USD 902 Million) is about one-third of the total budget for MOHFW for the same year (total MOHFW budget for 2017-18 is BDT 20,652 Crore or USD 2,563 Million).

## B. Cost of ESP Service Provision

Table 2 shows the total cost of ESP service provision by fiscal year, 2017-2022. This was used for this resource gap analysis, and does not include the January-June 2017 ESP cost data. HFG calculation is based on MOHFW's 2018 ESP costing report where the estimated cost of ESP service

provision to achieve targets of the 4th HPNSP for 2017 is approximately BDT 8,000 Crore (USD 1,043 Million). It is expected to increase to more than BDT 10,000 Crore (USD 1,281 Million) by 2022 to achieve implementation plan and service coverage of the 4th HPNSP (Table 3).

**Table 2: Total Cost of ESP Service Provision by Fiscal Year, 2017-2022, including health systems costs, not including inflation**

| Items | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | Total |
|---|---|---|---|---|---|---|
| (B) Cost of ESP (Crore BDT) | 8,492 | 8,767 | 9,178 | 9,623 | 10,082 | **46,141** |
| (B) Cost of ESP (Million USD*) | 1,054 | 1,088 | 1,139 | 1,194 | 1,251 | **5,727** |

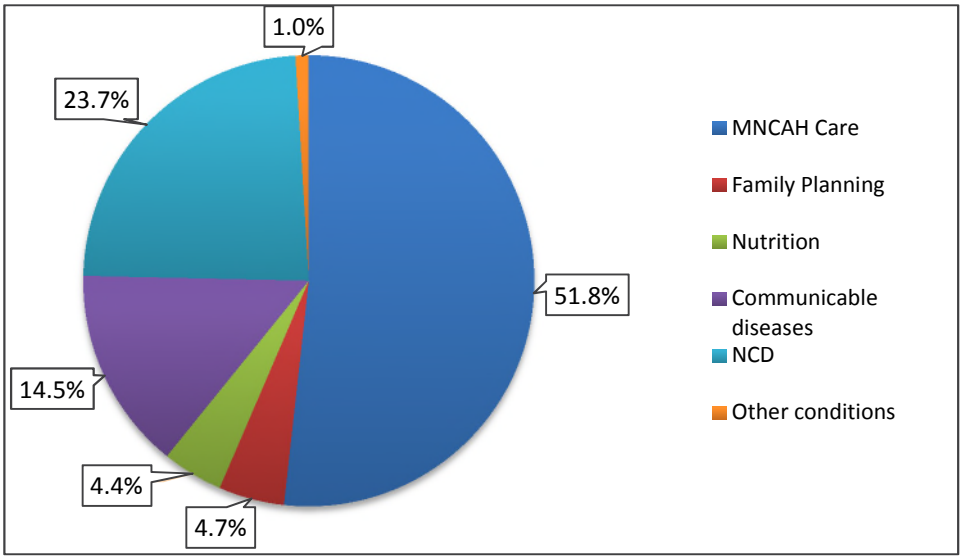
*Exchange rate used in 2017-2022: USD 1 = BDT 80.57

**Table 3: Total Cost of ESP* Service Provision by Calendar Year, 2016-2022, including health systems costs, not including inflation**

| Items | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Total |
|---|---|---|---|---|---|---|---|---|
| Total cost of ESP (Crore BDT) | 7,620 | 8,405 | 8,579 | 8,955 | 9,401 | 9,844 | 10,319 | **63,123** |
| Total cost of ESP (Million USD*) | 973 | 1,043 | 1,065 | 1,111 | 1,167 | 1,222 | 1,281 | **7,862** |

*Exchange rate used in 2016: USD 1 = BDT 78.3; 2017-2022: USD 1 = BDT 80.57

**Figure 5: ESP Cost Composition, 2017-2022**




MNCAH and NCD programmes account for the two largest portions of costs for ESP service provision from 2017-2022; MNCAH services account for more than half of the total cost, and NCD accounts for about one-fourth of the total cost. FP and nutrition are more minor components; each constitutes less than 5% of the total cost of the ESP (see Figure 5).

## C. Resource Gap for ESP in Bangladesh

The estimated cost of ESP service provision is higher than the resources currently allocated, which means there is a gap in the resources needed to achieve the 4th HPNSP targets by 2022. As shown in Table 4, the resource gap is approximately BDT 1,200 Crore (USD 152 Million) for 2017-18, and increases to approximately BDT 2,000 Crore (USD 255 Million) for 2021-22. This only represents the gap for Bangladesh to achieve the planned ESP service coverage targets indicated in the PIP and OPs by 2022.

The resource gap varies year-to-year and mostly contributed to the allocation of development budget by years. Both revenue budget and cost of ESP increases in linear fashion over these years,

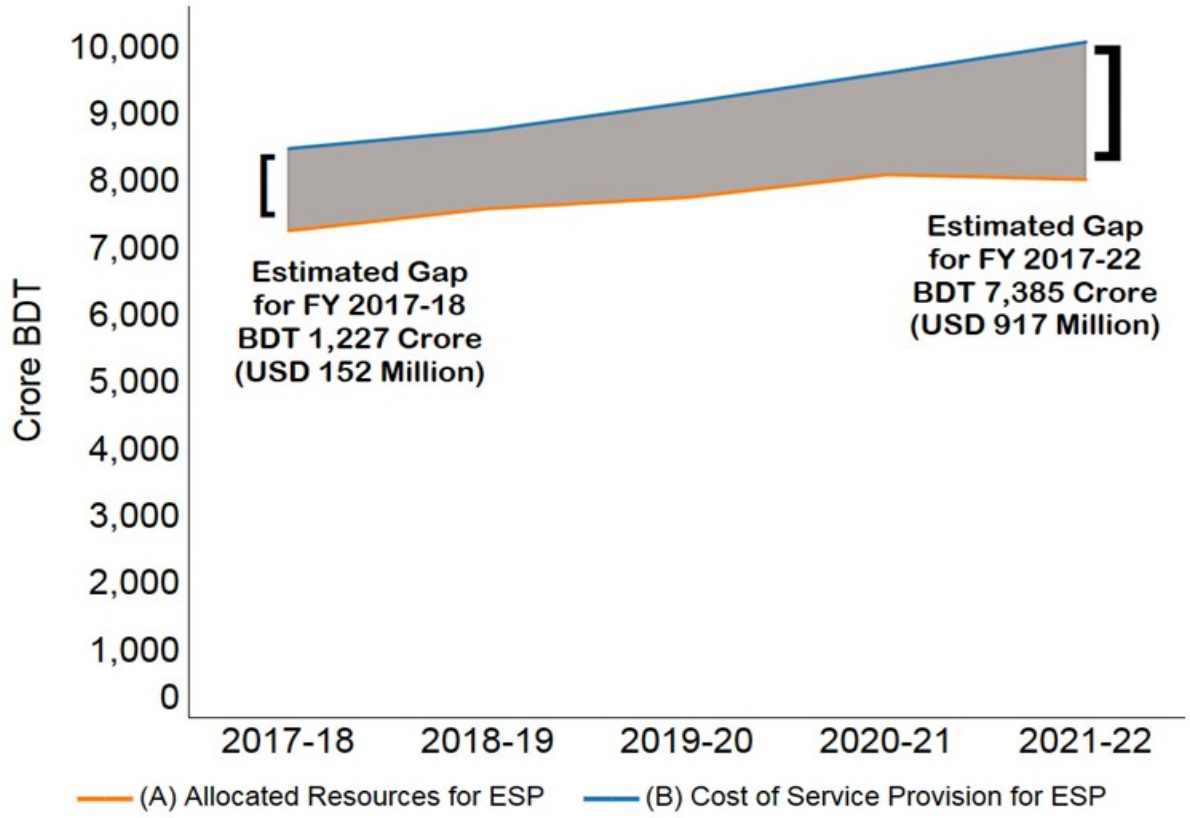
**Table 4: Resources, Cost, and Resource Gap for ESP Provision, FY2017-22**

| Year | (A) Total Allocated Resources for ESP | | (B) Cost of ESP Service Provision | | (C) Resource Gap for ESP | | Gap as % of Cost |
|---|---|---|---|---|---|---|---|
| | (Crore BDT) | (Million USD*) | (Crore BDT) | (Million USD*) | (Crore BDT) | (Million USD*) | |
| 2017-18 | 7,265 | 902 | 8,492 | 1,054 | (1,227) | (152) | **14%** |
| 2018-19 | 7,595 | 943 | 8,767 | 1,088 | (1,172) | (145) | **13%** |
| 2019-20 | 7,763 | 964 | 9,178 | 1,139 | (1,415) | (176) | **15%** |
| 2020-21 | 8,103 | 1,006 | 9,623 | 1,194 | (1,519) | (189) | **16%** |
| 2021-22 | 8,030 | 997 | 10,082 | 1,251 | (2,052) | (255) | **20%** |
| **Total** | **38,756** | **4,810** | **46,141** | **5,727** | **(7,385)** | **(917)** | **16%** |

*Exchange rate used in 2017-2022: USD 1 = BDT 80.57

however, allocation of development budget is based on planned activities of the 4th HPNSP per year which decreased year-to-year (shown in Table 1). As shown in Figure 6, the total resource gap over fiscal years 2017-2022 for ESP in Bangladesh is projected to be BDT 7,385 Crore (USD 917 Million), which is about 19% of the total allocated resources for ESP over this period.

**Figure 6: Estimated Resource Gap for ESP for FY2017-2022**




## 6. Way Forward

HFG estimated resource gap for public sector ESP provision to be USD 917 Million (BDT 7,385 Crore) for the period FY2017-2022. This is based on the plans and coverage targets as presented in the PIP of the 4th HPNSP. The following are suggested next steps:

- Validate the findings of this study: Present and discuss the results in a clear and practical way to wider groups of GOB officials to validate and triangulate the estimates, and if required, estimates could be adjusted based on input.

- Mobilize resources: Use these findings to advocate for mobilizing additional resources, both domestically and from external sources, if the 4th HPNSP targets are to be achieved. The upcoming mid-term review in 2019 provides an opportunity to advocate for increased allocations.
- Maximize efficiency: Improve financial management and budget execution, as well as identify ways to spend current resources more efficiently (where possible) to improve fiscal space.

The resource gap estimated here could be an underestimate as the cost of ESP calculation used for this analysis with health system cost did not include inflation. Moreover, this estimated resource gap is only for public sector provision of ESP. Future research could consider the ESP services delivered from both private and NGO sectors.

Among the ESP service areas and their sub-components, some programmes are expected to have resource gaps while others will have a surplus (e.g., family planning (FP) and management of other common conditions). The overall ESP is expected to have a net resource gap.

In the context of 4th HPNSP and overall budget for health sector, the resource gap for ESP (USD 917 Million) is relatively moderate, and additional advocacy initiatives would reduce this resource gap for ESP and enable Bangladesh to achieve UHC.

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