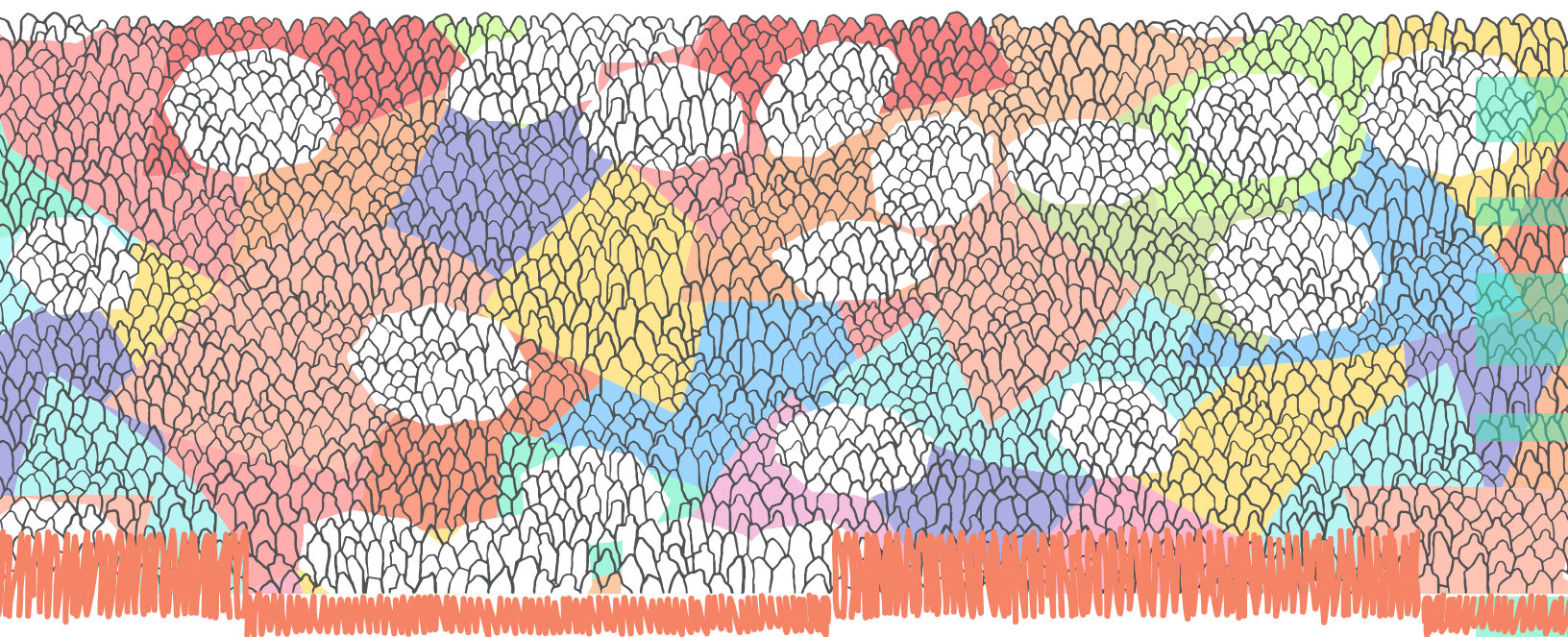


Estimates of the cost of essential health service packages and the graduation and school canteen programmes proposed in the National Policy on Social Protection and Promotion (PNPPS) of Haiti

Simone Cecchini ■ Varinia Tromben Rojas ■ Randolph Gilbert

Coordinators



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Coordinators**



This document was prepared by Simone Cecchini, Senior Social Affairs Officer in the Social Development Division of the Economic Commission for Latin America and the Caribbean (ECLAC), Varinia Tromben Rojas, Social Affairs Officer in the same Division; Randolph Gilbert, Coordinator and Focal Point for Haiti, and Sara Hess, Associate Economic Affairs Officer in the ECLAC subregional headquarters in Mexico; and Tamara Van Hemelryck, and Ludovic Queuille, consultants at ECLAC. It was prepared as part of the activities of the ECLAC/World Food Programme (WFP) project "Contribution Agreement between the World Food Programme's Haiti country office and the Economic Commission for Latin America and the Caribbean" and the project "Leaving no one behind in Latin America and the Caribbean: Strengthening institutions for social policy coherence and integration to foster equality" funded by the United Nations Development Account. Thanks are due to Pierre Ricot Odney, Director of the Studies and Programming Unit (UEP) of the Ministry of Social Affairs and Labour (MAST) of Haiti, and Nathalie Lamaute-Brisson, Antoine Morelvulliez, Clément Rouquette and Félix-Antoine Véronneau, all of the WFP Office in Haiti, for their comments on earlier versions of this document. The authors also wish to thank partners in the various institutions and organizations and all those who provided relevant information and comments for this study, either bilaterally or during the discussion workshops held in Port-au-Prince for the preparation of this document.

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Executive summary

The costing of the three mechanisms discussed in this study —exemption from payment for essential health service packages, graduation programmes and school canteens— all of which are proposed in the National Policy for Social Protection and Promotion (PNPPS) in Haiti (Ministry of Social Affairs and Labour (MAST), 2020), is a preliminary exercise that in combination with other tools can help public and social stakeholders decide what mechanisms will ultimately be made a priority. It can also help define the action plans that authorities will need to implement in the short and medium term.

As noted in an earlier paper (Tromben, Cecchini and Gilbert, 2020) that analyses the cost of cash transfers, policies in the field of social protection and promotion work together globally to ensure that the people public policies are intended for are treated as full rights holders and not passive “beneficiaries”. We re-confirm the comprehensive role played by an approach based on equality, participation and citizenship for people such as new mothers, older persons with limited motor skills or young schoolchildren, to name but a few of the numerous groups targeted in the vast universe of many and severe deprivations that affect a large swath of the Haitian population. Financial resources devoted to social protection and promotion, such as health, nutrition and anti-poverty programmes, are not only a social expenditure, but a real investment in human capacity and the country’s economy.

Whether in the area of first- and second-level health care services, in the targeting of extremely vulnerable and deprived population groups, or in the systematization of school feeding programs, the costs estimated in this document vary greatly according to the choices made between or within these different mechanisms, as well as to the (smaller or larger) scenarios adopted. A combination of the three mechanisms in their limited versions (i.e. a “small” Essential Health Service Package, EHSP, the graduation pilot project and geographical targeting for school canteens) is estimated to represent expenditures of some US\$ 82 million (or 1% of 2020 GDP), a significant amount in an economy where the tax burden averages barely 11%. By contrast, the more comprehensive combinations of these mechanisms (a “large” EHSP and universal coverage for school canteens, for example) carry an estimated cost of around US\$ 212 million (or 2.5% of 2020 GDP). In both cases, in that range of US\$ 82 million to US\$ 212 million (1%–2.5% of GDP), and for the purpose of the present costing exercise for PNPPS programmes, the (central) issue is financing.

In this regard, an examination of an increase in budgetary resources is timely. Dorsainvil (2020) points out that the need to increase such resources to finance PNPPS reflects a concern about the priorities it would be given absent any relaxation of budget limitations (p. 13) and a need to ensure that budget allocations cover the funding of the Policy over a sufficiently long timeline (p. 64).

The purpose of this type of approach is to ensure that the mechanisms in PNPPS discussed here, such as health services, support for true graduation of the poorest households and their real empowerment, school feeding programmes, and other mechanisms such as cash transfers, are actually implemented in a sustainable and predictable manner. Subject to inevitable trade-offs, including the prioritization of compatible approaches and action plans, social protection and promotion will depend on strong advocacy to secure sufficient funding. In the same study, Dorsainvil reports a readily disburseable annual budget of US\$ 100 to US\$ 115 million. In relation to the measures discussed here, 60% of this amount would finance the six essential health service packages (US\$ 60 million for the “small” version in 2020), 20% would provide support to some 11,000 households (US\$ 21 million), and nearly a quarter—24%— would cover a universal school feeding programme based on locally-sourced ingredients (US\$ 24 million). But beyond these considerations, the exercise proposed in this document for the three mechanisms and the results offers, above all, a method to help establish orders of magnitude based on the different scenarios (other options are of course possible), with a medium- to long-term timeline.

All of these mechanisms are to be rolled out gradually according to the size of the target populations, existing deficits and pre-existing or newly available financial resources, while also accommodating the institutional and territorial adjustments necessary for their implementation and uptake by the targeted communities. These mechanisms are expected to produce multiplier effects—explicit and implicit, tangible and intangible— including, first and foremost, no doubt, the emergence of an overall framework conducive to equity and social justice and based on human rights and dignity. This aspiration has long been neglected, replaced by a patchwork of uncoordinated action on the part of both public institutions and many of their partners (private, international or non-governmental organizations (NGOs)).

Each of the three mechanisms selected for analysis in this study has an institutional history and has produced very different results. Certain payment-exempt benefits or services in essential health service packages (EHSPs) (e.g. for malaria, vaccinations and HIV/AIDS) have been offered by the Ministry of Public Health and Population (MSPP) for decades, while graduation programmes in Haiti, such as Fonkoze’s Chimen Lavi Miyò (CLM) programme, launched in 2007, are much more recent and remain limited in scope (both in terms of the number of households covered and the number of stakeholders). The National School Canteen Programme (PNCS), created in 1997, covers about 30% of the target population and aims not only to respond to the nutritional needs of schoolchildren but also to provide social protection by reducing costs for households. In Haiti, as in other countries in the Latin American and Caribbean region or beyond, such mechanisms (mentioned in the analyses to illustrate or compare their implementation challenges even in countries with more robust institutions and less difficult circumstances) are fairly novel. Not only must they prove their effectiveness and efficiency (as a policy choice) but, above all, when the time comes, they must meet the targeted recipients’ expectations as assessed under agreed prioritization criteria (hence the importance of advocacy) in order to keep supply in line with demand in the short, medium and long terms on the basis of their potential impact, ease of implementation and cost. These last three factors interact and may fluctuate; thus, compromises will be needed, but ideally not made purely on the basis of budgetary constraints.

Lastly, it should be recalled that Haiti's growth and economic development objectives depend on a sustained, progressive transition to a comprehensive social protection and promotion policy, as noted in the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). That task falls to its promoter, the Government of Haiti. Efforts must be attuned to the needs of beneficiaries in order to achieve equality and fair social citizenship, which is central to the Policy and to the vision of ECLAC (2021) even more so today when the structural challenges specific to the Latin American and Caribbean region and to Haiti in particular are combined with the uncertainties caused by the coronavirus disease (COVID-19) pandemic.

ECLAC (2018) considers that greater equality can have very positive economic, political, social and cultural impacts, whereas inequality tends to reproduce fragmented societies with low levels of social interaction, limited reciprocal trust, a weak sense of belonging, a limited perception of common goals and little propensity to cooperate in the interest of promoting and protecting public goods. This manifests itself in various aspects of social relations, including violence and a lack of support for democracy, which reflect the influence of exclusionary institutions that exist in the region's societies (ECLAC, 2018, p. 52).

Introduction

This study focuses on the costing of three mechanisms proposed in the document for the National Policy on Social Protection and Promotion (PNPPS) of Haiti (Ministry of Social Affairs and Labour, 2020): the exemption from payment of essential health service packages, graduation programmes and school canteens. Approved by the Council of Ministers on 5 June 2020, the new National Policy aims to sustainably reduce poverty, reduce inequality and promote citizen empowerment. An earlier study by Tromben, Cecchini and Gilbert (2020) addressed in detail the estimated cost of cash transfers proposed in the social protection policy.¹

These mechanisms respond to the Haitian people's specific risks and needs in the areas of health, income generation and food, in a context of mass poverty, acute inequality, widespread food insecurity and high exposure to crises and natural disasters.

Chapter I presents a general methodological framework for all three mechanisms. In some cases, underlying assumptions are examined individually according to the specific characteristics of each mechanism and are detailed in the corresponding methodological sections. Chapter II analyses essential health service packages, which offer a spectrum of healthcare solutions for recipients at all stages of life as outlined in PNPPS. Chapter III deals with graduation programmes, offered to the most marginalized families (in conditions of ultrapoverty and extreme poverty) and based on an approach aimed at their gradual and sustainable transition out of poverty. Chapter IV addresses school feeding programmes, which seek to correct nutritional deficiencies in schoolchildren and thereby not only reduce the burden on households, but also improve the dire food insecurity that prevails in Haiti. The final chapter concludes with a series of considerations regarding the three mechanisms, their estimated costs and the challenges of their implementation, through the lens of PNPPS as a whole.

¹ Please refer to the PNPPS document (Ministry of Social Affairs and Labour, 2020) for a detailed list of all the mechanisms. Some of these mechanisms were excluded for methodological reasons, and others for lack of sufficient quantitative or qualitative information for a sound analysis.

It should be noted that the 2020 COVID-19 pandemic and its devastating effects in countries and around the world² are not included in the costing of the mechanisms presented here. One exception to this is the inclusion of new macroeconomic scenarios, in particular GDP trends, developed in the wake of the crisis.

In addition to the annexes herein, this document includes a series of Excel files containing a more detailed analysis of the various scenarios proposed and differentiated simulation exercises, bearing particularly on the development by public policy makers and partners of the PNPPS action plan according to priorities, resource availability, programmatic implementation deadlines and the like. Provided relevant adjustments are made, these exercises could also constitute a guide for approaching other mechanisms of interest.

² For an analysis of the impact of the pandemic on the economic and social situation in Haiti, see Ministry of Economic Affairs and Finance/Ministry of Planning and External Cooperation (2021).

I. Methodology for estimating costs

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Randolph Gilbert
Varinia Tromben Rojas*

Certain assumptions pertaining to the three mechanisms studied here—in particular regarding target populations, coverage levels and the gradual roll-out of their implementation over the 2020–2030 period—overlap with the scenarios examined in the paper on cash transfers (see Tromben, Cecchini and Gilbert, 2020). Others have been adapted to the specific characteristics of the mechanisms addressed in this paper.

A. Target population

The population projections used and the age groups targeted by the PNPPS mechanisms that will be quantified in this document constitute a common reference for all mechanisms. Data³ come from updated population projections published by the Statistics Division and available surveys (the 2016–2017 EMMUS household survey and 2003 census) and serve to establish or estimate the size of certain specific subgroups. However, given the specifics of the three mechanisms, certain adjustments have been made to the data.

As regards essential health service packages (EHSPs), for example, health needs, actual coverage and/or expected recourse to this coverage are considered. For the graduation programmes, the EMMUS 2016–2017 household survey is used to estimate the number of households living in severe multidimensional poverty, the number of ultrapoor, and the number of people per household. For school feeding programmes, the same survey is used to estimate the school attendance rate by age group. Details are given in each chapter.

³ See United Nations (2019). Medium-term population projections are used here. See definitions of projection variants [online] <https://population.un.org/wpp/DefinitionOfProjectionVariants/>.

B. Macroeconomic data

International Monetary Fund (IMF) macroeconomic data are used to calculate all costs for the 2019–2024 period (see table 1) which include the effects of the post-COVID-19 crisis. As IMF forecasts are available only for 2019–2025, the following assumptions have been made for subsequent years (2026–2030):

- Gross domestic product per capita and the exchange rate increase steadily over the 2026–2030 period, at an annual rate equal to the average of the last (2024–2025) forecast period.
- The annual inflation rate remains equal to the average of the last two years, 2024–2025.
- Poverty lines, tuition and the minimum wage are updated to account for inflation.

Table 1
Haiti: macroeconomic forecasts, poverty lines, the minimum wage and tuition fees, 2019–2030
(Billions of dollars, gourdes and percentages)

	Unit	2019	2020	2021	2022	2023	2024
Gross Domestic Product (GDP) (current prices)	Billions of dollars	8.7	8.3	8.1	8.3	8.6	8.9
Growth rate	Percentage	-1.2	-4.0	1.2	1.0	1.1	1.2
Inflation rate	Percentage	17.3	22.4	23.8	20.3	17.3	14.3
Exchange rate	Gourdes to the dollar	84.1	99.9	118.9	137.1	154.2	170.0
Poverty line (daily)	Gourdes	153.9	188.4	233.2	280.6	329.2	376.4
Extreme poverty line (daily)	Gourdes	78.3	95.8	118.6	142.8	167.5	191.5
Rural minimum wage (daily)	Gourdes	385.0	471.2	583.4	701.9	823.5	941.6
Urban minimum wage (daily)	Gourdes	440.0	538.5	666.7	802.2	941.2	1 076.1
School fees (annual)	Gourdes	4 500.0	5 507.8	6 818.6	8 204.2	9 625.6	11 005.2
	Unit	2025	2026	2027	2028	2029	2030
Gross Domestic Product (GDP) (current prices)	Billions of dollars	9.2	9.6	9.9	10.3	10.7	11.1
Growth rate	Percentage	1.4	1.4	1.4	1.4	1.4	1.4
Inflation rate	Percentage	11.3	12.8	12.8	12.8	12.8	12.8
Exchange rate	Gourdes to the dollar	184.1	199.4	215.9	233.8	253.2	274.2
Poverty line (par jour)	Gourdes	419.1	472.8	533.5	602.0	679.3	766.5
Extreme poverty line (daily)	Gourdes	213.2	240.6	271.4	306.3	345.6	389.9
Rural minimum wage (daily)	Gourdes	1 048.3	1 182.9	1 334.7	1 506.0	1 699.3	1 917.4
Urban minimum wage (daily)	Gourdes	1 198.1	1 351.8	1 525.3	1 721.1	1 942.0	2 191.3
School fees (annual)	Gourdes	12 252.9	13 825.6	15 600.1	17 602.4	19 861.7	22 410.9

Source: Prepared by the authors, on the basis of International Monetary Fund (IMF), *IMF Country Report*, No. 20/123, 2020 [online] <https://www.imf.org/en/Publications/CR/Issues/2020/04/20/Haiti-Request-for-Disbursement-Under-the-Rapid-Credit-Facility-Press-Release-Staff-Report-49353> (for 2019–2025 projections); Economic Commission for Latin America and the Caribbean (ECLAC) (for 2026–2030 projections); and estimations from World Bank/National Observatory on Poverty and Social Exclusion, *Investing in people to fight poverty in Haiti: reflections for evidence-based policy making*, Washington, D.C., 2014, with inflation projections.

C. Setting up the mechanisms

No programme or public policy can be implemented instantaneously; a transition/roll-out period must be included in estimates. In this study, the roll-out period for the graduation and school feeding programmes is from 2020 to 2030.

Underlying assumptions for the implementation of these two mechanisms, in terms of coverage of the target population, are shown in table 2. In 2020, in its “pilot” phase, the mechanism would cover only 5% of the target population. The following year, the mechanism would cover 10% of the target population, and so on, until 100% is covered in 2030, bearing in mind that the target population will vary each year according to demographic projections.

An exception to this approach is made for the essential health service packages (EHSPs). The services included in all the scenarios for the various EHSPs are already delivered on a regular basis at health establishments (see chapter II). The Policy does not propose to implement them from scratch, but to exempt the population groups eligible for each of the EHSPs from payment at the point of service in order to promote access. The assumptions used to estimate EHSP coverage are specific to each benefit and their target populations (several hundred in total) and appear in the section on estimating the demand for care in chapter II.

Table 2
Coverage assumptions for mechanism implementation, 2020–2030
(Percentages)

	2020	2021	2022	2023	2024	2025
Coverage of target population	5	10	20	30	40	50
	2026	2027	2028	2029	2030	
Coverage of target population	60	70	80	90	100	

Source: V. Tromben, S. Cecchini and R. Gilbert (2020), “Estimates of the cost of cash transfers under the National Policy on Social Protection and Promotion (PNPPS) in Haiti”, Project Documents (LC/TS.2020/96), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), 2020.

II. Estimating the cost of payment exemption mechanisms for Essential Health Service Packages (EHSPs)

*Ludovic Queuille
Varinia Tromben
Tamara Van Hemelryck*

A. Introduction

This chapter presents the costing of payment exemption for the essential health service packages (EHSPs) offered by the National Policy on Social Protection and Promotion (PNPPS) in Haiti (Ministry of Social Affairs and Labour, 2020). The exercise examines the costing of six of the nine EHSPs offered in the above-mentioned PNPPS mechanism, the purpose of which is to ensure good health for all, at all ages, on the basis of universal access to primary health care, and which provides for a gradual roll-out period of the EHSPs from 2020 to 2030.

Section B of this chapter presents the methodology and sources of information used to estimate the cost of the mechanism. The costing proposes three scenarios according to a list of benefits covered for each of the packages, with the exception of the package for people living with HIV (persons living with HIV), for which an estimate is given for only one scenario. The document presents the benefit selection process used to establish the different scenarios, the target population subgroups, and the estimates of health needs, coverage and costs of each benefit included in the different packages. The calculations include demographic and macroeconomic forecasts up until 2030 and therefore also the global crisis due to the coronavirus disease (COVID-19) pandemic; however, it should be noted that no revision of the planned mechanisms or their impact has been made to account for possible effects of the pandemic.

The second part presents the results of the costing of the payment exemption mechanism for six essential health service packages (EHSPs). Their cost varies greatly depending on the scenario: from US\$ 1.4 million (0.011 % of GDP) in 2020 for the EHSP for children (not including the administrative costs of its implementation) to US\$ 85.6 million (0.16 % of GDP) in 2030 for the EHSP for mothers and newborns (not including administrative costs).

B. Methodology for estimating the cost of the Essential Health Service Package (EHSP) payment exemption mechanism

This non-contributory social assistance mechanism meets the specific risks and needs of the Haitian population for access to health services and financial protection against the risks of illness, disability and those associated with motherhood in a context of massive poverty, significant inequalities, widespread food insecurity and high vulnerability to political, economic and health crises as well as natural and other disasters.

The nine payment-exempt EHSPs proposed in PNPPS by life cycle are as follows:

1. EHSP for mothers and newborns.
2. Children's EHSP.
3. EHSP for persons with disabilities (PWD).
4. EHSP for persons living with HIV/AIDS (persons living with HIV).
5. Older persons' EHSP.
6. Sexual and reproductive EHSP.
7. Returnees' EHSP.
8. Universal EHSP.
9. Post-crisis EHSP.

In the PNPPS document, most of these mechanisms are found under Strategic Area 3 – Social protection for health, old age and disability. Two types of EHSP, however —those for mothers and newborns (No. 1) and for children (No. 2)— are found in Strategic Area 1 – Childhood, while the post-crisis EHSP (No. 9) is included in Strategic Area 4 – Crisis-Responsive Social Protection and Promotion.

Our cost estimate does not include the EHSP for returnees (No. 7), the post-crisis EHSP (No. 9) or the universal EHSP (No. 8). Costing is not possible for the returnee EHSP for want of sufficiently accurate demographic data⁴ to quantify the recipients' health needs. Costing of the post-crisis EHSP cannot be generalized as it will be specific to a given crisis. The universal EHSP is not expected to be implemented in the short or medium term.

The definition of EHSPs that are considered a high priority for certain population groups is a highly context-specific process lasting several months and involving many stakeholders from different fields and sectors, organized at the national level in a well-founded, rigorous and inclusive manner (WHO, 2014). The costing presented here is in no way a substitute for the processes required in due course to define the exact content of each EHSP in PNPPS and to calculate the cost in cooperation with public authorities and with citizen participation (Alfred, 2012). This document is a preliminary, indicative estimate meant to inform the funding requirements of PNPPS and illustrate the approach to be taken later (Jamison and others, 2013).

⁴ The main sources of data collected on returnees and a table summarizing these data are nevertheless listed in section C of chapter I. We recommend the collection of more precise data on the number and profile of returnees, if possible, or access to the primary data collected, if potentially sufficient, to allow for processing as required for costing purposes.

1. Main references

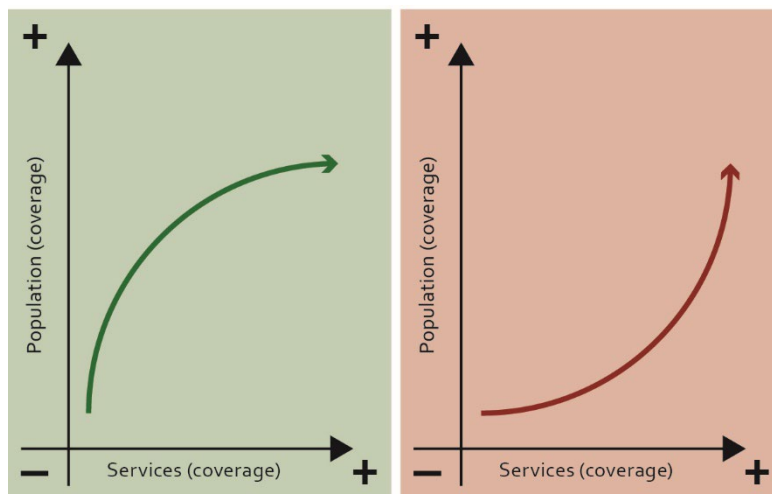
(a) The PNPPS approach: progressive universalism

Universal Health Coverage (UHC), equivalent to Social Health Protection (SHP) in the social protection sector, is defined by the World Health Organization (WHO) as all people receiving the health services that meet their needs without being exposed to financial hardship in paying for the services (WHO, 2014).

In simplified terms, two approaches can be used to develop UHC (see diagram 1 and Nicholson and others, 2015):

- (i) Extend the coverage of a priority package of services, however small, to the entire population (diagram 1, left).
- (ii) Prioritize certain population groups (diagram 1, right).

Diagram 1
Schematic view of the two main approaches to universal health coverage



Source: Prepared by the authors, on the basis of D. Nicholson and others, *Delivering Universal Health Coverage: A Guide for Policymakers. Report of the WISH Universal Health Coverage Forum 2015*, Doha, World Innovation Summit for Health, 2015.

Even though in theory the first approach (a) is preferable (Nicholson and others, 2015; Korpi and Palme, 1998), the National Policy on Social Protection and Promotion Policy opted for the second (b), better suited to its context (Ghebreyesus, 2017) and aligned with the National Health Policy (PNS), which seeks among other things to guarantee universal and free access to specific services and care for vulnerable groups through its cross-cutting strategic Social Protection in Health axis (Ministry of Public Health and Population, 2012 and 2013).

The policy opted for “progressive universalism” in coverage (Jamison and others, 2013; Francis-Oliviero and others, 2020) starting with a targeted approach for certain population groups deserving immediate protection before expanding gradually towards universal coverage (Ministry of Social Affairs and Labour, 2020, p.51.). In concrete terms, this involves the gradual —staggered— implementation of EHSPs Nos. 1 to 7 in an order and timeframe to be specified in due course, before that of the universal EHSP for the entire population (No. 9), when conditions permit.⁵

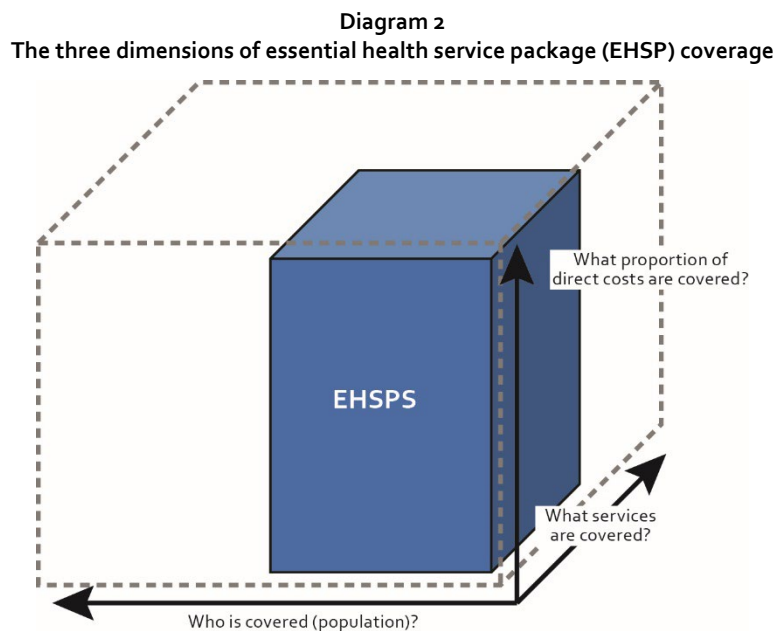
⁵ The post-crisis EHSP (No. 8) is implemented in the specific conditions of rapid-onset crises for a limited period of time and therefore cannot be programmed in advance.

(b) The three dimensions of coverage

Defining the type of EHSPs in PNPPS and estimating their costs is an iterative process involving three dimensions of coverage (see diagram 2) (WHO, 2010a and 2014):

- (i) Service coverage: what services are covered by these EHSPs?
- (ii) Population coverage: what population groups are covered by these EHSPs?
- (iii) Financial coverage: what costs are covered by these EHSPs?

In diagram 2, the dotted-line cube is a theoretical representation of UHC, wherein 100% of direct medical costs are covered for the entire population (see box 1) for the full range of available health services (WHO, 2010a). The blue cube is a representation of an EHSP requiring trade-offs between the benefits to include and the populations to cover for each service in cases where a payment exemption applies, as defined by PNPPS (Ministry of Social Affairs and Labour, 2020).



Source: Prepared by the authors, on the basis of World Health Organization (WHO), *The World Health Report. Health Systems Financing: The Path to Universal Coverage*, Geneva, 2010.

Box 1

Definitions of direct and indirect costs in the health economy

Economic analysis distinguishes two types of costs in the field of health care:

- (i) **Direct costs** are the purchase of services and goods related to an intervention. They are subdivided into direct medical costs (medication, doctor's fees, laboratory tests, X-rays, among others) and direct non-medical costs (intervention-induced expenses such as food, transportation and accommodation).
- (ii) **Indirect costs** are the financial consequences of a medical intervention in terms of work absence, lower productivity at work, loss of earnings due to the non-performance of certain professional activities or death from iatrogenic causes.

Source: Prepared by the authors, on the basis of E. Chamot and others, "Analyse économique appliquée à la santé: un tour d'horizon", *Bulletin des médecins suisses*, vol. 82, No. 39, 2001 [online] <https://archive-ouverte.unige.ch/unige:28070>.

(c) Estimating the cost of an essential health service package at the global level

Global references exist for the cost of essential health service packages. In 2001, the Commission on Macroeconomics and Health estimated that basic services could be provided for about US\$ 34 per person (WHO, 2001). In 2009, Rwanda, regularly cited as a benchmark despite its specificities, spent only US\$ 37 per person to offer a basic package of services to its citizens, despite a national income of about US\$ 400 per person.⁶ In 2010, the Task Force on Innovative International Financing for Health Systems estimated the cost of providing essential health services in 49 low-income countries at just under US\$ 44 per person in 2009 and just over US\$ 60 per person in 2015 (WHO, 2010b).

However, these global estimates are of little use at country level. The World Health Report 2010, which commissioned the above-mentioned research, points out this fact: "These figures, however, are simply an (unweighted) average across the 49 countries at the two points in time. Actual needs will vary by country: five of the countries in that study will need to spend more than US\$ 80 per capita in 2015, while six will need to spend less than US\$ 40" (WHO, 2010a, p. 25 and 2010b).

Costs do vary greatly from one country to another. They are determined by methodological factors, the epidemiological situation, the health system, and a number of other very context-specific variables. Global-level estimates serve global-level agendas.

(d) Total per capita health expenditure in Haiti

Conversely, national data must be taken into account when analysing results, bearing in mind that they may obviously change over time. The main reference indicator for our costing is health expenditure per capita. Total health expenditure per capita calculated by the Ministry of Public Health and Population (MSPP) according to the 2012/2013, 2013/2014, 2014/2015 and 2015/2016 national health accounts (NHA) was US\$ 64, US\$ 66, US\$ 59 and US\$ 63 respectively (rounded to the nearest dollar) (Ministry of Public Health and Population, 2015, 2017 and 2019a).⁷ For 2017 and 2018, current per capita health spending in Haiti according to the Global Health Accounts Database is estimated at US\$ 63 and US\$ 64 respectively.⁸

(e) Estimated costs of EHSPs in Haiti

EHSP costs are estimated based on target populations, the benefits included in each EHSP, unit cost and the (forecasted) quantity requested for each benefit.

The quantity of each benefit requested depends on the target population groups' health needs, their health needs in relation to the benefit, and the actual coverage for the benefit in relation to the said needs.

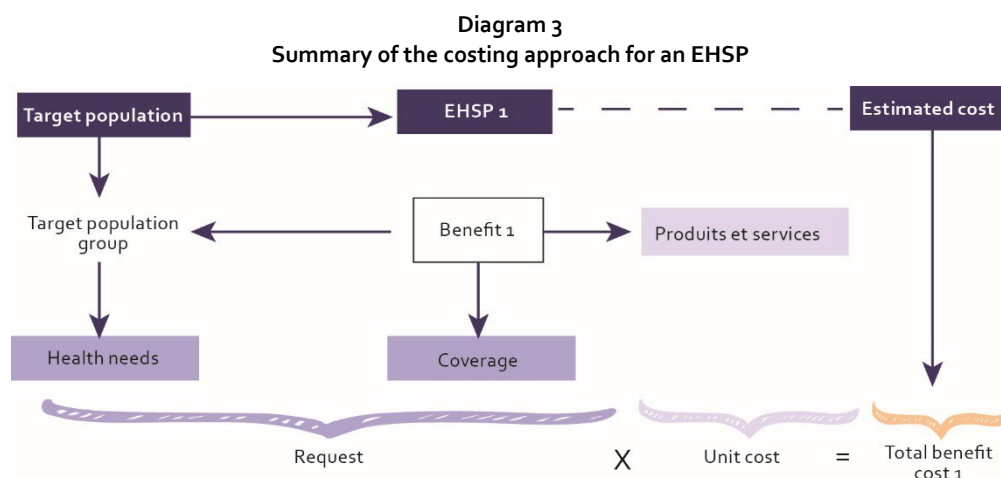
The total cost of an EHSP is the sum of estimated costs for each benefit included in that EHSP.

⁶ See World Health Organization (WHO), "Global Health Expenditure Database (GHED)" [online] <https://apps.who.int/nha/database/Home/Index/en>.

⁷ These MSPP estimates are based on the 2011 health accounts methodology standardized internationally by the International Classification of Health Accounts (ICHA). In addition to geographical and temporal parameters, health accounts are determined by an operational definition of "health care" based on all expenditures related to activities aimed primarily at the improvement, maintenance of the health status of individuals or the population in general and prevention of its deterioration (Ministry of Public Health and Population, 2019a), regardless of the disease (infectious disease, reproductive health, trauma, and so on), the funding regime (public administration, direct payment by households, rest of the world, etc.), the source of funding (internal transfer, foreign transfer, insurance premium, and so on), the funding agent (public administration, insurance company, household, and so on), the provider (hospitals, ambulatory health care, ancillary services, retailers, administrative financing services, etc.) or production factors (e.g. compensation, equipment, products).

⁸ Where data have not yet been produced by national authorities, the Global Health Accounts Database produces country-validated estimates (<https://apps.who.int/nha/database/Select/Indicators/en>) and interim country-validated estimates (14 February 2021).

The approach to estimating the costs of an EHSP is summarized in diagram 3. The next section examines in detail the various steps related to the different variables used to estimate the cost of EHSPs.



Source: Prepared by the authors.

2. Scenarios and estimated costs

This study uses three scenarios to estimate the costs of five EHSPs (the EHSP for mothers and newborns, the children's EHSP, the sexual and reproductive EHSP, the EHSP for persons with disabilities, and the older persons' EHSP) and a single scenario to estimate the costs of a sixth EHSP for people living with HIV.

Scenarios are contingent on the list of benefits included in the different versions of the EHSPs. Thereafter, cost estimates for these different scenarios are based on the target population groups for each benefit included in the EHSPs, the corresponding care requests (including changes in needs and actual coverage over time), the unit cost of benefits and changes in macroeconomic data.

(a) Different scenarios depending on EHSP content

(i) *Target populations of the six costed EHSPs*

EHSPs are defined according to the needs of their target population. EHSPs in PNPPS are targeted by category (see table 3) and payment exemption is universal for the target population when a health event justifies the inclusion of the benefit in the EHSPs (Ministry of Social Affairs and Labour, 2020, p. 75). This is indeed the most efficient approach in countries where the majority of the population lives in poverty or extreme poverty (Cecchini, 2009; Acosta, Leite and Rigolini, 2011).

Table 3
Target population of the six costed EHSPs

Essential health service package	Target population
1 EHSP for mothers and newborns	Pregnant women and parturient women, nursing mothers and newborns
2 Children's EHSP	Children under 5
3 Sexual and reproductive health EHSP	Expected users of sexual and reproductive health services
4 EHSPs for Persons with disabilities	Persons with disabilities (persons with disabilities)
5 EHSPs for persons living with HIV	Persons living with HIV/AIDS
6 Older persons' EHSP	Persons over 60

Source: Prepared by the authors, on the basis of Ministry of Social Affairs and Labour, "*Politique nationale de protection et promotion sociales*", Port-au-Prince, 2020.

(ii) *Criteria used to define EHSPs*

Many suitable options exist for the definition of high-priority benefit packages. However, certain principles are non-negotiable when aiming for universal health coverage (WHO, 2014). The most prosperous population groups must not be prioritized at the outset— as sometimes happens, for example, when the formal sector is favoured over the informal sector initially, whether for practical, political or other reasons. The inclusion in PNPPS of an EHSP payment exemption mechanism for vulnerable population groups already limits this risk considerably.

However, in defining EHSPs care must still be taken to avoid:

- Expanding coverage for low- or medium-priority benefits before securing nearly universal coverage of high-priority services.
- Prioritizing very costly services, coverage for which will provide considerable financial protection for minor health benefits compared to less expensive alternative services.

In keeping with these principles, benefit packages considered high-priority for certain population groups—EHSPs in the case of PNPPS— must be defined clearly and their costs estimated in order to arrange for their financing and avoid “empty promises” (Tangcharoensathien and others, 2019).

Owing to technical, material, financial and other constraints, EHSPs cannot include all services. Benefits included in EHSPs should be limited in number but reflect a coherent range of essential services in line with the health and social objectives of the National Health Policy and PNPPS (Ministry of Public Health and Population, 2012; WHO, 2014; Ministry of Social Affairs and Labour, 2020). Therefore, content must be determined using a prioritization process based on benefit selection criteria.

Many prioritization criteria exist for the formulation of high-priority benefit packages. Each country defines the criteria it considers most appropriate to its needs and limitations. Two similar countries can therefore formulate very different benefit packages or “care baskets” depending on the criteria used and the choices made on the road to universal health coverage.

In their exploratory review of the literature on criteria used to develop high-priority benefit packages, Hayati and others (2018) inventoried 19 criteria, which they divided into three categories (see table 4): intervention-related, epidemiological (disease)-related and community-related criteria.

Table 4
Criteria used (frequency) to develop high priority benefit packages

Intervention-related criteria	Disease-related criteria
Cost-effectiveness (20)	Burden of disease (10)
Effectiveness (19)	Externalities (2)
Budget impact (12)	Severity of disease (1)
Necessity (10)	Community-related criteria
Safety (6)	Equity (12)
Sustainability (5)	Affordability (5)
Feasibility (5)	Social values (4)
Costs of intervention (4)	Access (2)
Comprehensiveness (3)	
Maximizing the improvement of population health status (3)	
Scaling up (1)	
Innovation (1)	

Source: Prepared by the authors, on the basis of R. Hayati and others, “Scoping literature review on the basic health benefit package and its determinant criteria”, *Globalization and Health*, vol. 14, No. 26, 2018.

Hayati and others (2018) hold that these criteria are not always operationally defined. The most commonly used (in bold in table 4) are intervention-related criteria (cost-effectiveness, effectiveness and budget impact), followed by community-related criteria (equity) and disease-related (burden of disease), in that order. The criteria used by the largest number of countries are cost-effectiveness, effectiveness, budget impact, burden of disease, equity and necessity.

In 2002, the National Health Security Office (NHSO) of the Government of Thailand implemented a Universal Coverage Scheme" with a poorly ("implicitly") defined benefit package. It later made a very positive transition to an explicitly defined package, as recommended, by establishing a "positive list" of benefits included in the package (Tangcharoensathien, 2019). The National Health Security Office drew up this list of benefits using the following criteria:

- Cost-effectiveness.
- Equity.
- The capacity of the health system to deliver services that are selected fairly.

In the Republic of the Congo, the Ministry of Labour and Social Security (MTSS) and its partners defined the basket of services in its Universal Health Insurance (AMU) scheme using the following prioritization criteria (Ministry of Health and Population of the Republic of the Congo and World Bank, 2017):

- Cost-effectiveness.
- Financial protection.
- Burden of disease.
- Other ad hoc criteria in certain cases.

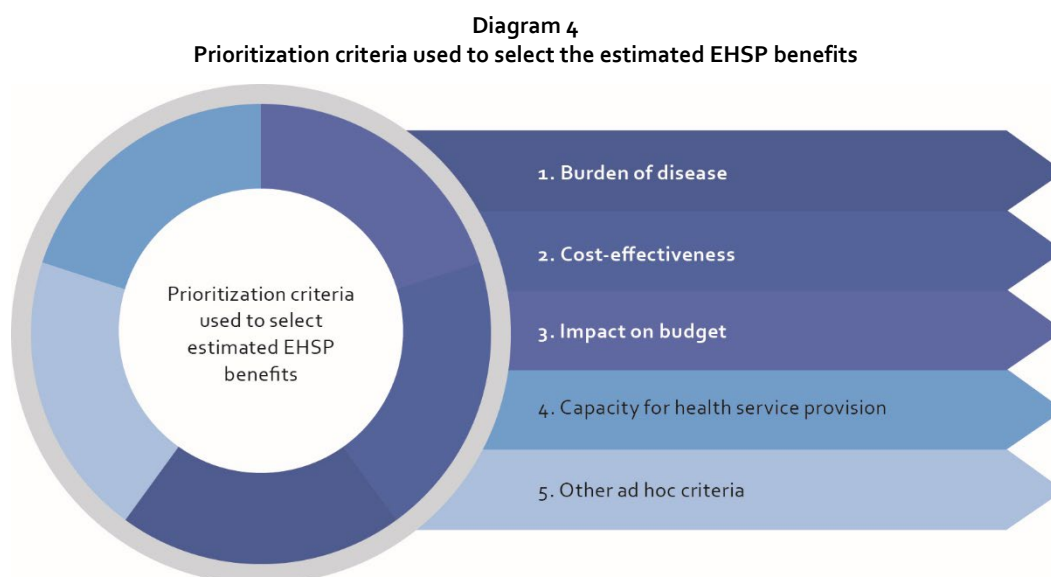
In 2015, the WHO Consultative Group on Equity and Universal Health Coverage, established for the period of 2012 to 2014, recommended classifying services as high-, medium- or low-priority using the following three criteria (WHO, 2014):

- Cost-effectiveness.
- Priority to the poorest.
- Financial risk protection.

For the immediate needs of the National Policy on Social Protection and Promotion, the criteria used to select EHSP benefits for costing purposes (see diagram 4) are as follows:

- Burden of disease.
- Cost-effectiveness.
- Impact on the Policy's budget.
- Capacity for health service provision (at targeted levels of care).
- Other ad hoc criteria in certain cases.

The other ad hoc criteria are only used in special cases to meet specific needs for certain services (including the treatment of leprosy, cholera and assisting victims of gender-based violence) that we consider non-negotiable for various reasons, including financial reasons, the goal of eradicating certain diseases and the influence of externalities).



Source: Prepared by the authors.

(iii) The three scenarios selected for EHSP content

We worked on three scenarios for each EHSP studied, with the exception of the EHSP for persons living with HIV, for which we worked on one scenario alone. For the other five we established three lists of health benefits that we define as limited ("small"), average ("medium") or preferable ("large"). We did not develop more than one scenario for the EHSP for persons living with HIV because the National HIV/AIDS Programme (PNLS) already subsidizes 100% of the cost of this population group's essential health services. The reference list for the selection of benefits included in the different versions of the EHSP is the Essential Service Package (Ministry of Public Health and Population, 2016a). The sources of information used for this selection are presented in the related section (see below).

In total, we estimate 16 different versions of the six EHSPs examined (see table 5).

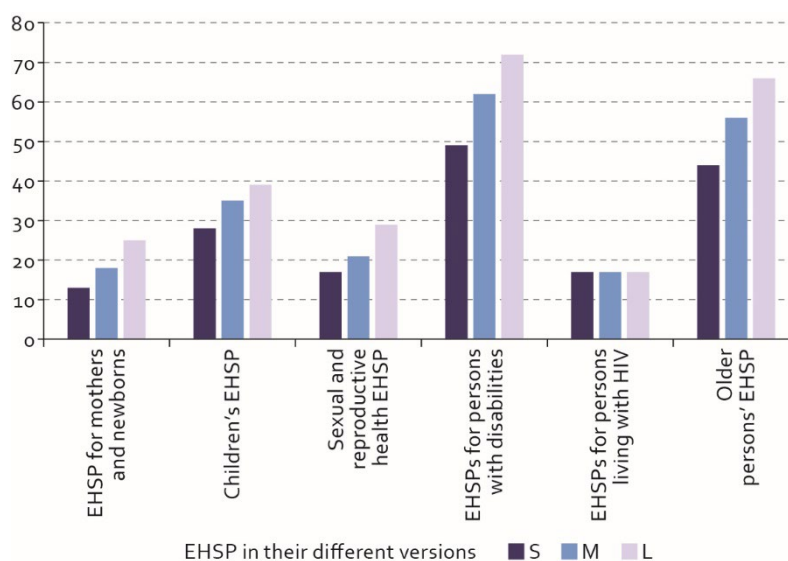
Table 5
The 16 versions of the six EHSPs processed

EHSP/Scenario	Limited list ("small")	Average list ("medium")	Preferable list ("large")
1 EHSP for mothers and newborns	1	1	1
2 Children's EHSP	1	1	1
3 Sexual and reproductive health EHSP	1	1	1
4 EHSPs for persons with disabilities	1	1	1
5 EHSPs for persons living with HIV		1	
6 Older persons' EHSP	1	1	1

Source: Prepared by the authors.

The benefit lists selected for each version of the estimated EHSPs are presented in annex II.A1. The number of benefits per EHSP ranges from 13 (EHSP for mothers and newborns, "small" version) to 72 (EHSP for Persons with disabilities, "large" version) depending on the EHSP (see figure 1). All benefits included in the lower ("small" or "medium") version are automatically included in the higher ("medium" or "large") version. There is a total of 248 benefits in the "large" versions of the six EHSPs costed.

Figure 1
Benefits by essential health service package
(Number)



Source: Prepared by the authors.

Table 6 shows the benefits included in the three scenarios of the EHSP for mothers and newborns by type of intervention, to illustrate their diversity and how many there are under each scenario. The S scenario has 13 benefits covering five types of interventions, while the L scenario has 25, covering 12 types of interventions.

Table 6
Number of benefits by type of intervention for the three scenarios of the EHSP for mothers and newborns

Type of intervention	Small	Medium	Large
Information, counselling and guidance on maternity and newborn health risks	3	3	3
Administration of iron and folic acid and nutritional monitoring of pregnant women	3	3	3
Pregnancy monitoring, prevention of mother-to-child transmission of HIV and post birth follow-up	3	3	3
Low-risk vaginal delivery	1		
Vaginal delivery with minimal risk or with moderate risk and/or complications		2	
Vaginal birth with minimal risk, with moderate risk and/or complications or with high risk and/or severe complications			3
Threat of abortion, incomplete, unavoidable early abortion		3	
Threat of abortion, incomplete, unavoidable or septic early abortion			4
Surgical treatment of obstetric fistulae			1
Eye infection prophylaxis, BCG and polio vaccination – oral polio vaccine (newborn)	3	3	3
Care of preterm and low birth weight infants		1	1
Newborn emergency care: treatment of neonatal hypoxia; early detection and treatment of perinatal infections; reception and care of newborns with life-threatening conditions			4
Total	13	18	25

Source: Prepared by the authors.

(b) Target population groups for the benefits included in the EHSP

Most of the benefits included in an EHSP are targeted to only a subgroup of its target population. For example, the prenatal consultations included in the EHSP for mothers and newborns are only for pregnant women and not for parturient or breastfeeding women or newborns; the early detection of prostate cancer included in the older persons' EHSP is only for men over 60, not women; and so on.

Table 7 presents the population subgroups used for each of the EHSPs studied.

Table 7
Population subgroups of each EHSP studied (number per EHSP)

EHSP for mothers and newborns (>5)	Older persons' EHSP (>4)
<ul style="list-style-type: none"> • Women of childbearing age (15–49) • Pregnant women • Subgroups of pregnant women at risk of specific health events^b • Live births and stillbirths • Live births 	<ul style="list-style-type: none"> • Persons over 60 (older persons) • Older men • Persons aged 60 to 65 • Subgroups of older persons at risk of specific health events^b
Children's EHSP (>5)	EHSP for persons living with HIV (>2)
<ul style="list-style-type: none"> • Children from 0–59 months • Newborns surviving beyond one month • Children under the age of 1 • Children from 12–59 months • Subgroups of children at risk of specific health events^b 	<ul style="list-style-type: none"> • Adults aged 15–49 • Subgroups of persons living with HIV/AIDS at risk of specific health events^a
Sexual and reproductive health EHSP (7)	EHSP for persons with disabilities (>8)
<ul style="list-style-type: none"> • Adults aged 15–49 • Women of childbearing age (15–49) • Women aged 30–49 • Women aged 35–49 • Women aged 40–70 • Men aged 18–59 • Victims of gender-based violence 	<ul style="list-style-type: none"> • Persons with disabilities (Persons with disabilities) • Persons with disabilities aged 5–19 • Persons with disabilities aged 5–65 • Persons with disabilities aged 10–19 • Persons over 35 • Persons with disabilities aged 50–75 • Persons with disabilities aged 60–65 • Subgroups of older persons at risk of specific health events^b

Source: Prepared by the authors.

^a See section 3.

^b See "number of users" (below) for more details.

(c) Estimating the demand for care

(i) Normative demand

A target population's needs are quantified by "normative demand", which is defined as the theoretical total quantity of each benefit included in the EHSP for the target population in order to optimize their health status in the area covered for a given period. That quantity is defined, in turn, by the health needs of the population based on health surveys, morbidity and mortality tables (Ministry of Public Health and Population, 2019b), the context, Ministry of Public Health and Population strategic and technical documents, and the opinions of public health experts, national health programme managers, and so on.

Quantifying these needs therefore depends on the size of population groups and subgroups targeted by the benefits included in the EHSPs presented above, but also on the prevalence⁹ and/or incidence¹⁰ of the health events covered by these benefits.

In table 8 we present three examples of the quantification of needs for benefits included in the children's EHSP, each with specific and therefore different target population subgroups and health needs.

Table 8
Examples of demand quantification for three children's EHSP benefits, 2020

Benefit	Target population	Cohort	Need (2020)	Needs quantification
Routine deworming of healthy infants	Surviving newborns	268 741	1	268 741
Assessment and treatment of mild to moderate dehydration	Children under the age of 1	295 922	3.18	941 032
Treatment of severe malnutrition without complications (outpatient therapeutic programme)	Children aged 0–59 months	1 262 941	0.08	101 035

Source: Prepared by the authors, on the basis of Ministry of Public Health and Population, *Budgétisation du paquet essentiel de services*, Port-au-Prince, 2018.

Table 8 illustrates the specific targeting and health needs for each benefit. The “Need” column is a factor expressing the number of persons in need in relation to the benefit delivered in 2020: for example, all children (factor 1) should be dewormed after the neonatal period (surviving newborns); all children under the age of one are likely to experience (on average) 3.18 episodes of mild to moderate dehydration (diarrhoea) requiring assessment and treatment; and 8% of children under five are likely to be severely malnourished without complications requiring treatment.

The “Needs quantification” column is the theoretical total of benefits to be delivered for the year 2020 to the target population groups for the health events covered by each benefit. With regard to diarrhoeal diseases, 941,032 services for the assessment and treatment of mild to moderate dehydration can be expected to resolve the theoretical total number of health problems of this type for the 295,922 children under the age of one who are covered.

Normative demand or needs quantification (B) for a given benefit (i) in an EHSP in a given year (A) is the product of the cohort size of the target population group (TP) and the factor expressing health needs (b) of that target population group in relation to the benefit in question:

$$B_{i,A} = PC_{i,A} * b_{i,A}$$

Needs quantification ($B_{i,A}$) is the theoretical total number of benefits to deliver to meet the health needs of the target population group covered by that benefit.

(ii) Demand quantification

For various reasons—a lack of trust in health services, distance from the health facilities where the Policy's payment exemption mechanism is implemented, or the inability to pay indirect costs— not all people experiencing health events covered by the benefits in an EHSP will actually seek services offered through the payment exemption mechanism. Our estimates therefore incorporate assumptions about the actual coverage and expected use of the benefits included in the EHSPs: demand quantification.

⁹ Prevalence: an epidemiological indicator of the frequency of a disease in a population (Ancelle, 2012).

¹⁰ Incidence: an epidemiological indicator of the rate of occurrence of a disease during a given period of time (Ancelle, 2012).

Demand quantification (D) for a given benefit (i) in an EHSP for year (A) is the product of needs quantification (B) for that benefit and expected coverage (c), i.e. the portion (%) of the population group targeted for the benefit in question (based on their health needs) that are expected to actually use the health services covered:

$$D_{i,A} = B_{i,A} * c_{i,A}$$

Demand quantification ($D_{i,A}$) is the estimated total number of benefits that would actually be delivered under the Policy for the package in question during year (A).

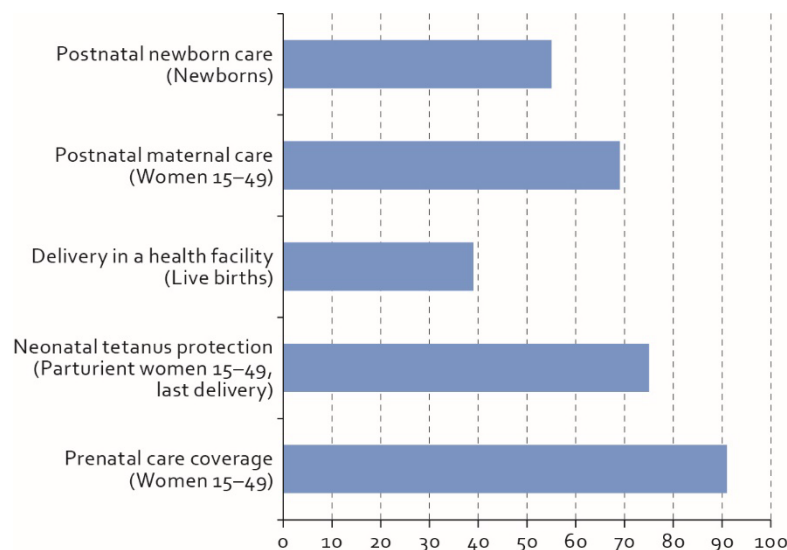
The formula developed to quantify needs (B) presented in the previous section is as follows:

$$D_{i,A} = PC_{i,A} * b_{i,A} * c_{i,A}$$

Benefits in the various versions of the EHSP are already delivered on a regular basis at health establishments. PNPPS does not propose to implement them from scratch. Rather, it proposes to exempt population groups eligible for EHSPs from payment at the point of service.

It should also be noted that actual coverage assumptions (%) for each benefit in the different EHSPs ($D_{i,A}$) are specific and therefore vary, as shown in the examples presented in figure 2: coverage of prenatal care, neonatal tetanus protection, delivery in a health facility and postnatal maternal and newborn care, all of which are part of the EHSP for mothers and newborns (Haitian Institute of Childhood/ICF, 2018).

Figure 2
Coverage of essential maternal and newborn health services (target population), 2016–2017
(Percentages)



Source: Prepared by the authors, on the basis of Haitian Institute of Childhood/ICF, *Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI 2016-2017)*, Pétiion-Ville, 2018.

The assumptions regarding implementation of the EHSP exemption mechanism are presented in the following section on changes in demand over time.

(iii) Changes in demand over time

Since our estimates of demand for care covering the period 2020–2030 are made year by year, they encompass changes over time in the three variables presented above (cohorts of target population groups, health needs, and actual coverage or expected use).

- For each benefit we established assumptions regarding changes in health needs over time on the basis of data available in health surveys, strategic and technical Ministry of Public Health and Population documents or, failing that, from national health programme officials. Identified trends in health needs are either stable (pregnancy monitoring, for example), on the rise (diabetes management), or in decline (diarrhoeal disease management). However, these projections rarely go beyond 2022. For that reason, we use the data available for the first three years of our estimate (2020 to 2022) and systematically re-use 2022 data for the subsequent years (2023 to 2030).
- Cohorts for the population groups targeted by the benefits quantified in our estimates are based on demographics (e.g., people over 60), health (e.g., parturient women), circumstances (e.g., persons with disabilities), or a combination of two or all three of these factors (e.g., Persons with disabilities with cataracts aged 60–65). Identified trends also vary from case to case. While demographic data evolve each year in a predictable manner based on available and recognized projections (see below), we use health and/or circumstantial data in the same we did for changes in health needs over time: available data is used for the years 2020 to 2022 and used again for the years 2023–2030.
- Data beyond 2022 sometimes exist in health sector literature for projections on the implementation of the mechanism studied (expected use or effective coverage), but often, the trends projected differ greatly (excessively) from those that can be established from trend-based scenarios. For example, comprehensive multi-year vaccination plans systematically call for 95% vaccination coverage in children under the age of one and pregnant women for all antigens in the national immunization schedule of the five-year plan, and are thus particularly out of step with the real trends in immunization coverage over the last 20 years or more. However, the literature shows us the real, immediate effects of the payment exemption on service uptake (Nguyen and others, 2018). Given the expected positive effects of the payment exemption, we validate the projections for various programmes—which, absent any demand incentive strategy, we consider optimistic—for the use of benefits in the 2020–2022 EHSPs based on available data, and we re-use the 2022 data for the years 2023–2030.

The sources of these data are specified in the section on information sources.

Estimating the demand for care related to benefits included in the different EHSPs therefore involves several hundred benefits, several dozen target population groups, health needs and levels of effective coverage specific to each benefit, as well as changes over time in the number of users, needs and their effective coverage.

(d) Estimating the unit cost of benefits included in EHSPs

(i) *Perspective in estimating costs*

The cost of a given health intervention varies according to whether we consider that cost from the point of view of society, the funder, the caregiver, or the user. (Castiel, 2004; Chamot and others, 2001). For example, the Ministry of Public Health and Population National Immunization Programme (PNV) carries heavy costs for international financial partners (World Bank, Gavi Alliance, PAHO/WHO, UNICEF, USAID and others) but costs the government very little in terms of its national budget, while services are “free” for children under the age of one for antigens in the national immunization schedule. These are three very different perspectives on the costs of childhood immunization.

The perspective of PNPPS on EHSP financing is that of third-party payment on behalf of the target population groups. Payment exemptions for EHSP benefits would in fact be paid for via PNPPS in the case of costs that are not already funded.

Thus, our estimate of EHSP costs does not include benefits already subsidized through the National Health Policy, whether by the national budget or by financial partners committed to financing national health programmes (PNLS, PNV and others). For example, eye infection prophylaxis for newborns, national immunization services and the prevention of mother-to-child transmission of HIV/AIDS (PMTCT), to name only a few, are provided free of charge as part of national health programmes because they are already 100% subsidized. These costs are not calculated in PNPPS and so are not included in our estimates for the Policy.

Accordingly, the tables of results (see annex II.A1) distinguish between costs estimated from the perspective of the National Health Policy (PNS) and costs estimated from the perspective of the National Policy on Social Protection and Promotion. PNPPS-perspective cost estimates correspond to PNS-perspective costs minus those already subsidized through national health programmes, whether by public or private financing or external funds (partners).

(ii) Unit costs of benefits

The estimated cost of an EHSP is the sum of all estimated cost of actual demand for each benefit included in that EHSP.

The estimated cost of actual demand (C) for a benefit (i) in an EHSP for one year (A) is the product of the number of such benefits actually delivered (the needs quantification discussed in the previous section (D)) and the estimated unit cost of the benefit (UC):

$$C_{i,A} = D_{i,A} * CU_i$$

The unit cost (UC) and the estimated cost of the actual demand for a given benefit are in US dollars.

The formula developed to estimate the cost of actual demand for a benefit, including the demand quantification (D), is as follows:

$$C_{i,A} = PC_{i,A} * b_{i,A} * c_{i,A} * CU_i$$

The unit cost of benefits in EHSPs is estimated by adding together the costs of consultation fees, materials (drugs and consumables such as blood bags, gloves, syringes, compresses, sticking plasters, for example) and necessary services (medical examinations and procedures such as tests, anaesthesia and x-rays together with other services such as hospitalization and operating rooms) for the provision of the benefit in question.

(e) Macroeconomic data

The unit costs of the benefits provided were first calculated in gourdes (HTG) at the national market rates for 2018, then converted to US dollars to estimate EHSP costs for the period under study (2020–2030).

Given that the consultation fee, input and reference medical service costs used to calculate the unit cost of benefits included in the various EHSPs have not changed for many years, as recommended by the literature and specialists (Brannon and others, 2019; IMS Institute for Healthcare Informatics, 2016; Lofgren, 2004; Ministry of Public Health and Population, 2018),¹¹ the unit cost estimate does not

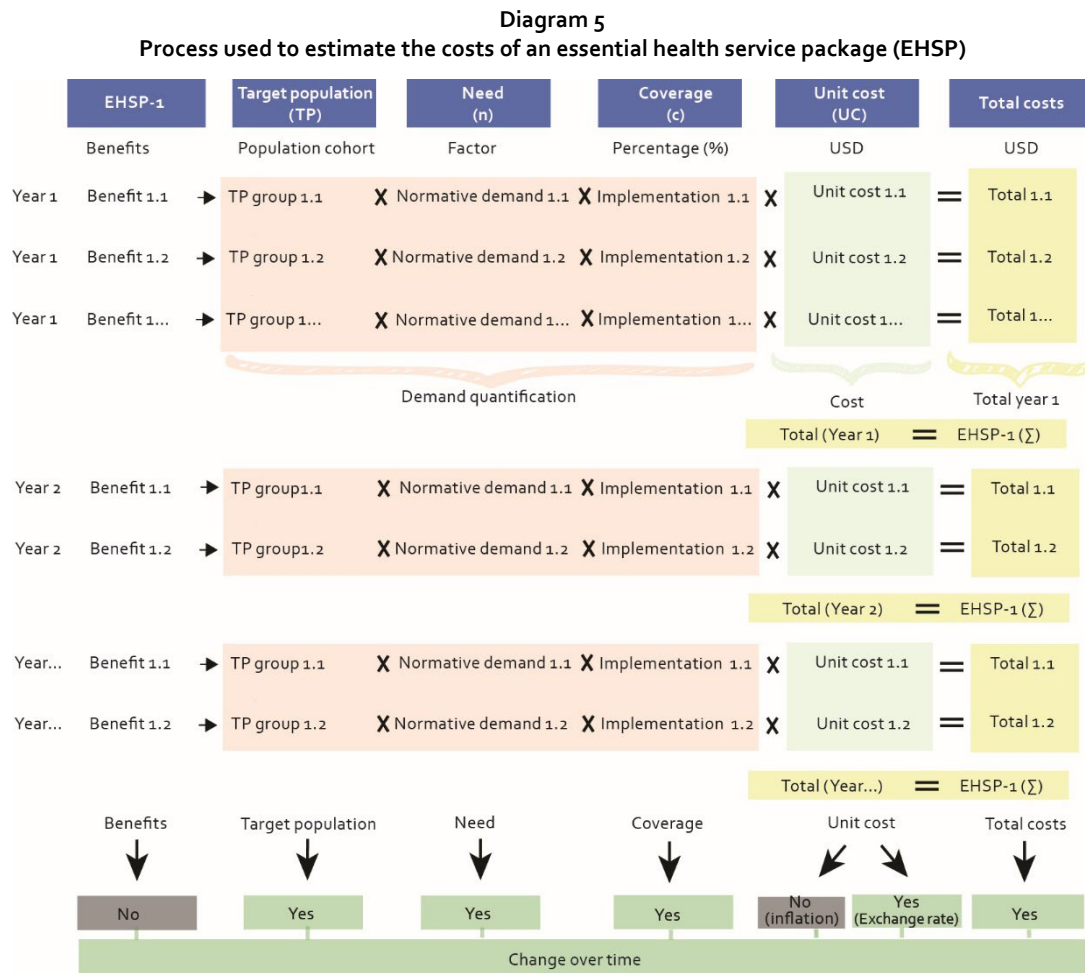
¹¹ The cost of basic medical material and services is in fact declining with the widespread use of essential and generic drugs, as well as innovation.

include any provision for inflation for these cost items over the study period. Other assumptions, for example involving inflation forecasts or exchange rate fluctuations, could be used, especially if the estimates are made in the national currency (gourde).

International Monetary Fund (IMF) macroeconomic data are used for the other costing calculations (see chapter I) for the period 2019–2024.

(f) Summary of the EHSP costing process

The process used to estimate EHSP costs (EHSP 1) is summarized in diagram 5.



Source: Prepared by the authors.

Estimating EHSP costs depends on the benefits included in the package, the target population groups for each benefit, the theoretical health needs of this population group for each of the included benefits, the expected effective coverage of these benefits for the said target population groups, and the unit cost of each benefit (line 1 of diagram 5).

The values of each of these variables are: the nature of each benefit under Benefits, the cohort size of the Target Groups for each benefit, a factor (prevalence, incidence, or PNS target) for Health Needs, a percentage for Expected Effective Coverage of each benefit for its target population groups, and the US dollar for the Unit Cost of each benefit (line 2 of diagram 5).

The estimated demand for a benefit is the product of the cohort size of the target population group, the theoretical health needs of that population group for the benefit in question, and the expected use of that benefit by the target population group (“demand quantification”, line 6 in diagram 5).

The estimated cost of a service included in the EHSP for a given year is the product of all the aforementioned quantitative variables, i.e. the product of the expected demand for a given benefit and the unit cost of that benefit (last column, on the right, of lines 3, 4 and 5 for year 1 in diagram 5). This cost is in US dollars. The formula is as follows:

$$C_{i,A} = PC_{i,A} * b_{i,A} * c_{i,A} * CU_i$$

The estimated cost of an EHSP (EHSPC) for a given year (A) is the sum of the estimated costs for each benefit (C) included in that package (lines 6, 9 and 11 in the figure for years 1, 2, and so forth). This cost too is in US dollars. The formula is as follows:

$$CPSES_A = \sum_{i=1}^n C_{i,A}$$

The variables “Target population groups”, “Theoretical health needs”, “Expected actual coverage” and “Unit cost of benefits” are likely to change from year to year (last line of the diagram). The only changes in unit costs taken into consideration are those related to the exchange rate. Inflation is assumed to be zero because the costs of products and services included in core benefits change very little, and most often downward when they do.

The benefit variable remains unchanged from year to year in our scenarios.

3. Information sources

In the following sections, we present the sources and assumptions used for annual projections over the 2020–2030 period and for the costing of EHSPs by dimension: selecting which benefits to include in the various EHSPs, the number of users based on targeting criteria, the demand for care and the unit cost per benefit.

(a) Deciding which benefits to include in the various EHSPs

The payment exemption mechanism of an EHSP is designed to meet the specific objective of ensuring that all enjoy the conditions needed for good health on the basis of universal access to primary health care (social assistance), as provided in strategic axis 3 of PNPPS (Ministry of Social Affairs and Labour, 2020). The emphasis on primary health care¹² is in line with national health sector priorities (Ministry of Public Health and Population, 2012, 2013, 2016a and 2021) and international recommendations for universal health (WHO, 1978, 2008, 2018a and 2018b; PAHO, 2014; PAHO/WHO, 2017 and 2019; WHO/UNICEF, 2018). PNPPS specifies that benefits included in the EHSPs will be primarily for level one care in the national health system, but that continuity of health care must be maintained.¹³ This makes it possible to include certain services normally delivered as part of level 2 care.

The sources used to select benefits for the different EHSP versions are the Ministry of Public Health and Population publication *Le paquet essentiel de services* (2016a) and the report on the essential service package (ESP) budgeting exercise conducted by the Ministry with support from the USAID “Health Finance and Governance” project in 2018 (Ministry of Public Health and Population, 2018).

¹² See WHO (2021).

¹³ The national health system is organized into three levels of care. Level one care (primary care) is delivered by three levels of facilities: Community Health Centres (first level), Health Centres (second level) or Community Reference Hospitals (third level).

The document *Le paquet essentiel de services* establishes what health services are offered in level 1 and 2 care in the national health system. It is the essential national framework for this costing exercise, notably because it covers a wide range of programmes and factors. It defines the general organization of the health system, the restructuring of primary care, the typical profiles of first- and second-level health facilities, the range of services, essential drugs and necessary equipment and materials, as well as the standards, norms and procedures for the provision of care, infrastructure and waste management.

Table 9 shows the 10 components of the essential health service package defined in *Le paquet essentiel de services*, the subcomponents and the number of benefits for each. In total, the package contains 41 subcomponents and 363 benefits.

A two-stage process was used to select services to include in each EHSP:

- (i) Pre-selection of ESP benefits (Ministry of Public Health and Population, 2016a) using the prioritization criteria presented above.
- (ii) Selection of benefits subject to availability of cost data in the report on the budgeting exercise conducted by the Ministry of Public Health and Population (2018).

(b) Number of users

As previously noted, EHSP benefits are not provided automatically to an entire target population. Most often they are provided to subgroups within that population in line with the specific situation and/or health event covered by the reference benefit (see above). In this section we identify the sources used to calculate the number of users on the basis of demographics, health or a combination of demographic, health and/or circumstantial criteria.

(i) Targeting population groups on the basis of demographics

The criteria of age and sex are used to target population groups on a demographic basis. To estimate the number of users in these groups we use the same sources and assumptions used to estimate the cost of cash transfers in PNPPS for consistency between the different studies (Tromben, Cecchini and Gilbert, 2020). The information is taken from the Ministry of Public Health and Population publication "Paquet essentiel de services" (2016a), the 2003 census, updates of population projections published by the Statistics Division¹⁴ and tabulations from the EMMUS 2016–2017 household survey. For population projections, we use the "medium-variant" projection.¹⁵

¹⁴ See United Nations (2019).

¹⁵ See definitions of projection variants [online] <https://population.un.org/wpp/DefinitionOfProjectionVariants/>. The medium-variant projection is defined as follows: in projecting future levels of fertility and mortality, probabilistic methods were used to reflect the uncertainty of the projections based on the historical variability of changes in each variable. The method takes into account the past experience of each country, while also reflecting uncertainty about future changes based on the past experience of other countries under similar conditions. The medium-variant projection corresponds to the median of several thousand distinct trajectories of each demographic component derived using the probabilistic model of the variability in changes over time. Prediction intervals reflect the spread in the distribution of outcomes across the projected trajectories and thus provide an assessment of the uncertainty inherent in the medium-variant projection.

Table 9
PES-defined essential health service offers (by component, subcomponent and number of benefits)

Components of the core service line, number of benefits in parentheses									
Women's and mothers' health (61)	Children's Health (47)	Communicable disease control (55)	Nutrition (21)	Chronic non-communicable diseases (34)	Eye care, control of preventable blindness and functional disability (42)	Mental health (31)	Surgical care (25)	Oral and dental care (26)	Emergency and intensive care (21)
Subcomponents, number of benefits in brackets									
Family planning and infertility (10)	Newborns (0–29 days) (10)	HIV infection management (21)	Treatment of child malnutrition (11)	Management of diabetes and complications (12)	Prevention of nutritional blindness (4)	Community approach to mental health (4)	Minor surgery (9)	Oral and dental health promotion (4)	Emergency medical and surgical care (14)
Gynaecological pathologies (15)	Children (2 months to 5 years) (17)	STI management (4)	Nutritional monitoring of persons living with HIV (3)	Management of hypertension and cardiovascular disease (9)	Cataract management (6)	Management of common mental health problems (27)	Major surgery (16)	Management of oral/dental emergencies (6)	Intensive care (7)
Gender-based violence (11)	Protection against immunocontrollable diseases (8)	Tuberculosis management (8)	Nutritional monitoring of pregnant women (4)	Chronic respiratory disease management (5)	Glaucoma management (8)			Management of tooth decay (5)	
Maternity risks (25)	Malnutrition control (12)	Vector-borne disease management (6)	Prevention of micronutrient deficiencies (3)	Cancer management (8)	Refractive error management (6)			Management of common pathologies in oral/dental health (6)	
		Zoonotic disease management (8)			Management of diabetic retinopathy (6)			Management of tumours, growths, salivary gland pathologies (5)	
		Cholera management (4)			Ocular trauma management (5)(5)				
		Leprosy management (4)							

Source: Prepared by the authors, on the basis of Ministry of Public Health and Population, *Le paquet essentiel de services*, Port-au-Prince, 2016.

Table 10 presents the projections for the target population groups on the basis of either age or sex (separately) or age and sex (together) in the EHSPs to estimate the costs of the payment exemption mechanism for health services outlined in the PNPPS document.

Table 10
Projections of population groups targeted on the basis of sex and age, 2019–2030
(Thousands)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Children under the age of 1	255	254	254	253	252	252	251	250	249	248	247	246
Children aged 0–59 months	1 266	1 263	1 261	1 257	1 253	1 249	1 245	1 243	1 239	1 233	1 227	1 222
Children aged 12–59 months	1 011	1 008	1 007	1 004	1 001	997	994	993	990	985	980	976
Adults aged 15–49	5 932	6 027	6 124	6 221	6 318	6 412	6 502	6 588	6 671	6 749	6 820	6 883
Women of childbearing age (15–49)	3 015	3 062	3 108	3 154	3 200	3 243	3 285	3 325	3 364	3 400	3 433	3 462
Women aged 30–49	1 424	1 460	1 499	1 538	1 576	1 612	1 646	1 680	1 712	1 741	1 768	1 790
Women aged 35–49	965	999	1 035	1 070	1 105	1 137	1 168	1 198	1 226	1 251	1 274	1 293
Women aged 40–70	1 247	1 287	1 330	1 375	1 423	1 471	1 520	1 566	1 612	1 659	1 707	1 755
Men aged 18–59	2 939	2 991	3 044	3 098	3 152	3 206	3 261	3 315	3 369	3 423	3 477	3 532
People over 60	855	883	910	938	968	998	1 028	1 057	1 087	1 117	1 147	1 176
Older men	389	402	414	427	440	453	466	479	493	506	519	532
Older persons aged 60 to 65	336	344	353	363	374	386	397	406	415	424	432	439

Source: Prepared by the authors, on the basis of demographic projections (medium-variant method) from United Nations, "World Population Prospects 2019", Department of Economic and Social Affairs (DESA), 2019 [online] <https://population.un.org/wpp/Download/Standard/Interpolated/>; and data from Haitian Institute of Childhood/ICF, *Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI 2016-2017)*, Pétion-Ville, 2018.

(ii) Targeting population groups on the basis of health data

In every EHSP studied here, certain benefits are linked to specific health events, with or without demographic considerations. The following sources were used to estimate the number of users targeted on this basis: *Le paquet essentiel de services* (Ministry of Public Health and Population, 2016a), the latest Demographic and Health Survey (DHS) (Haitian Institute of Childhood/ICF, 2018), national reference health programme literature (technical and strategic documents, plans, reports, and so on), the report on the budgeting exercise conducted by the Ministry of Public Health and Population (2018) with support from the 2018 USAID "Health Finance and Governance (HFG)" project and our own projections.

Table 11 presents the projections for target population groups on the basis of health data in the EHSPs to estimate the cost of the payment exemption mechanism for health services outlined in the PNPPS document.

The "Live birth", "Stillbirth" and "Surviving newborn" target groups are needed to quantify certain benefits. For example, the quantification of the "Normal and complicated delivery follow-up" is based on the number of total births (live births + stillbirths), the number of BCG and polio immunization benefits is based on the number of live births, and the number of immunization benefits for diphtheria, tetanus, pertussis, and other conditions is based on the number of surviving newborns. These three target groups are defined in box 2.

Box 2
Simplified definitions of live birth, stillbirth and surviving newborn

Live births (Eurostat, 2003): "Births of children that showed any sign of life. These comprise the number of births excluding stillbirths."

Stillbirths (Eurostat, 2003): "The expulsion or extraction from the mother of a dead foetus, after the time at which it would generally be presumed capable of independent extra-uterine existence (commonly taken to be after 24 or 28 weeks of gestation).

Infants who are born alive but die shortly after birth are excluded from this category."

Surviving newborns: Surviving newborns are those children who were born alive and did not die during the neonatal period, i.e. between their birth and the twenty-eighth day of life.

Source: Eurostat, "Demographic statistics: definitions and methods of collection in 31 European countries", *Working Papers and Studies* (3/2003/E/n° 25), Luxembourg, European Commission, 2003 [online] <https://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-CC-03-005-EN.pdf>.

Table 11
Projections of population groups targeted on the basis of health data, 2020–2030
(Thousands)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Pregnant women aged 15–49		267.7	271.8	275.8	279.7	283.5	287.2	290.7	294.1	297.3	300.1	302.6
Pregnant women exposed to HIV (HIV-positive) and/or who have had abortions		4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Live births	269.9	269.0	268.0	266.9	265.7	264.5	263.2	261.8	260.4	259.0	257.6	256.2
Stillbirths		5.3	5.4	5.5	5.6	5.6	5.7	5.8	5.8	5.9	6.0	6.0
Surviving newborns		268.7	267.7	266.7	265.5	264.3	262.9	261.6	260.2	258.8	257.4	256.0
Subgroups of children requiring malaria management (simple and severe malaria)												
• Under 6 months		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
• Aged 6–11 months		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
• Aged 1–2		0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
• Aged 6 months–1 year		0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
• Aged 2–3		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
• Aged 3–4		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Persons living with HIV requiring care	17.5	17.7	18.0	18.2	18.4	18.6	18.8	19.1	19.3	19.5	19.8	20.0

Source: Prepared by the authors, on the basis of demographic projections (medium-variant method) published by the United Nations Statistics Division; data and projections from Haitian Institute of Childhood/ICF, *Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI 2016-2017)*, Pétiion-Ville, 2018; and Ministry of Public Health and Population, *Rapport des comptes nationaux de santé 2012/2013*, Port-au-Prince, 2015; *Budgétisation du paquet essentiel de services*, Port-au-Prince, 2018.

(iii) Targeting population groups on the basis of a combination of factors (demographic, health and/or circumstantial)

For some or all of the costed EHSPs, targeting for benefits combines demographic, health and/or circumstantial criteria.

The number of "Victims of gender-based violence" (GBV) is estimated using information from *Paquet essentiel de services* (Ministry of Public Health and Population, 2016a) and the report on the 2018 Essential Health Service Package budgeting exercise conducted by the Ministry of Public Health and Population (2018) and our own projections. Table 12 presents the projections of GBV victims.

Table 12
Projected numbers of victims of gender-based violence (GBV), 2020–2030

	2020	2021	2022	2023	2024	2025
Victims of gender-based violence	1 056	905	755	755	755	755
	2026	2027	2028	2029	2030	/
Victims of gender-based violence	755	755	755	755	755	/

Source: Prepared by the authors, on the basis of data and projections from Ministry of Public Health and Population, *Rapport des comptes nationaux de santé 2012/2013*, Port-au-Prince, 2015; *Budgétisation du paquet essentiel de services*, Port-au-Prince, 2018.

To estimate the number of persons with disabilities, we use the same sources and assumptions used to estimate the cost of the cash transfers in PNPPS (Tromben, Cecchini and Gilbert, 2020). Information is taken from PES (Ministry of Public Health and Population, 2016a), from the latest DHS (Haitian Institute of Childhood/ICF, 2018), the population data sources already mentioned, the report of the Essential Health Service Package budgeting exercise (Ministry of Public Health and Population, 2018) and our own projections.

For estimates regarding disability, we refer to the latest DHS. EMMUS VI (2016–2017) indicates that 20% of the population reports difficulties in one of the following areas: eyesight, hearing, communication, ability to remember or concentrate, ability to walk or climb stairs, and ability to wash or dress oneself. Respondents have some difficulty in 16% of cases, a great deal of difficulty in 3% of cases, and in 1% of cases cannot function at all in one area. For the purpose of costing the EHSP for persons with disabilities, the target population is considered to be persons who report great difficulty or who cannot function at all. These persons with severe disabilities make up 3.5% of the population.

Table 13 presents only the main projections for Persons with Disabilities in order not to overload the publication. We do not present targeting data based on a combination of age, health and/or identification by national reference health programmes: persons with disabilities with asthma, requiring surgical treatment for glaucoma, requiring age-specific management of leprosy (children under 10 years old, children 10–14, and adults), diabetes and its complications, hypertension and cardiovascular disease, various mental health problems (cases of abuse and aggression, depression, childhood development disorders, children with learning difficulties, psychoses and epilepsies), and certain oral and dental procedures.

Table 13
Projections of persons with disabilities, 2019–2030
(Thousands)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Persons with disabilities	393	398	403	408	412	417	422	427	431	436	440	444
Persons with disabilities aged 5–19	125	125	125	126	126	126	127	127	127	127	127	127
Persons with disabilities aged 5–65	331	335	339	344	348	352	356	360	364	368	372	376
Persons with disabilities aged 10–19	81	82	82	82	83	83	84	84	84	84	84	84
Persons with disabilities over 35	122	126	130	134	137	141	145	149	153	157	160	164
Persons with disabilities aged 50–75	51	52	53	54	56	57	59	60	62	64	66	68
Persons with disabilities aged 60–65	24	24	25	26	27	28	29	29	30	31	32	33
Persons with disabilities with asthma	101	102	103	105	106	107	108	109	111	112	113	114

Source: Prepared by the authors, on the basis of demographic projections (medium-variant method) from United Nations, "World Population Prospects 2019", Department of Economic and Social Affairs (DESA), 2019 [online] <https://population.un.org/wpp/Download/Standard/Interpolated/>; and data and projections from Haitian Institute of Childhood/ICF, *Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI 2016-2017)*, Pétiion-Ville, 2018; and Ministry of Public Health and Population, *Rapport des comptes nationaux de santé 2012/2013*, Port-au-Prince, 2015; *Budgétisation du paquet essentiel de services*, Port-au-Prince, 2018.

As mentioned, we do not estimate the costs of the EHSP for returnees. For the record, however, the information collected on this target group was primarily based on a survey of the foreign-born population conducted by the Ministry of Public Health of the Dominican Republic in 2012 (Ministry of Public Health, 2014)¹⁶ which found that 87.3% were of Haitian origin, along with programme literature from the Groupe d'Appui aux Rapatriés et Réfugiés (GARR, Haiti) and the International Organization for Migration (IOM, 2017, 2018 and 2019). Table 14 summarizes the main demographic data collected on returnees for the years 2017, 2018 and 2019.

Table 14
Collected data on returnees, 2017–2019
(Numbers of people and percentages)

	2017	2018	2019
Number of returnees	40 212	49 783	101 806
Number who returned spontaneously	31 601	1 159	1 414
Total	71 813	50 942	103 365
Percentage of women	32	-	-
Percentage of men	68	-	-
Number of unaccompanied minors (UMs)	1 795	172	244

Source: Prepared by the authors, on the basis of information from the Groupe d'Appui aux Rapatriés et Réfugiés (GARR, Haiti).

The number of older persons was estimated using information from *Paquet essentiel de services* (Ministry of Public Health and Population, 2016a), the demographic data sources already mentioned, the report on the Essential Service Package budgeting exercise (Ministry of Public Health and Population, 2018) and our own projections. Table 15 presents the projections for older persons.

Table 15
Projections for older persons, 2019–2030
(Thousands)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Oder persons (OP)	855	883	910	938	968	998	1 028	1 057	1 087	1 117	1 147	1 176
OP with asthma	220	224	228	233	249	256	264	271	279	287	294	302
OP requiring surgical treatment for glaucoma	0.729	0.957	1.192	1.435	1.480	1.526	1.572	1.617	1.662	1.708	1.754	1.799
OP requiring treatment for leprosy	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
OP with diabetes and related complications	45	46	48	51	53	54	56	58	59	61	62	64
OP with hypertension and cardiovascular disease,	24	25	26	27	28	29	30	31	31	32	33	34
OP requiring dental care	10	11	13	14	14	15	15	16	16	17	17	17
OP with mental health problems	99	101	103	105	108	112	115	118	122	125	128	132

Source: Prepared by the authors, on the basis of demographic projections (medium-variant method) from United Nations, "World Population Prospects 2019", Department of Economic and Social Affairs (DESA), 2019 [online] <https://population.un.org/wpp/Download/Standard/Interpolated/>; and data and projections from Haitian Institute of Childhood/ICF, *Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI 2016-2017)*, Pétiion-Ville, 2018; and Ministry of Public Health and Population, *Rapport des comptes nationaux de santé 2012/2013*, Port-au-Prince, 2015; *Budgétisation du paquet essentiel de services*, Port-au-Prince, 2018.

^a Cases of abuse and aggression, depression, psychosis and epilepsy.

¹⁶ See International Organization for Migration (IOM) [online] <https://haiti.iom.int/fr>.

(c) Demand for care and unit costs of the benefits in EHSPs

Demand for care among the many population subgroups targeted for benefits included in the different versions of the EHSPs was estimated primarily using information from the report on the Essential Service Package budgeting exercise (Ministry of Public Health and Population, 2018) and, to a lesser degree, the programme literature of the Ministry of Public Health and Population (2020), supplemented by our own projections (from 2023).

The unit costs of the benefits included in the different versions of the EHSPs were estimated primarily using the information contained in the report on the Essential Service Package budgeting exercise (Ministry of Public Health and Population, 2018), along with a study of service pricing in public health institutions (Ministry of Public Health and Population, 2014), and our own projections beyond 2022. As a reminder, the availability of this unit cost is a condition for the inclusion of a benefit in the costing of an EHSP.

The projection data used for the demand for care for each benefit included in the different EHSPs and the unit costs used for the latter in the PNPPS perspective are transmitted to the Ministry of Social Affairs and Labour in electronic format (tables).

4. Administrative cost of implementation

Estimating the administrative costs of implementing the PNPPS-defined EHSP payment exemption mechanism depends on the context and approach (Ridde and others, 2014; Meda and others, 2020).

Our review of the literature on the many existing free health care policies in low-income countries such as Benin, Burkina Faso, Burundi, Mali, Niger and Senegal (Ridde and others, 2012; Ridde, Queuille and Kafando, 2012; Witter and others, 2016; Francis-Oliviero and others, 2020), and our consultations with experts on these specific policies, did not enable us to identify any expertise on the administrative costs of their implementation (Turcotte-Tremblay and others, 2016).

In Haiti, the main health programmes that have eliminated out-of-pocket payments for certain essential services are the Expanded Vaccination Programme (PEV) and the programmes to fight the diseases referred to as poverty-related: HIV/AIDS, malaria and tuberculosis. Results-based financing is another national health programme that can be used as a reference for estimating the administrative costs of implementing the payment exemption mechanism for EHSPs due to its results-based approach.¹⁷ This programme, launched in 2014, finances health institutions and their staff through the payment of bonuses conditional on the quantity and quality of services deemed to be priorities that are actually delivered at the primary level (Ministry of Public Health and Population, 2016b).

Of all these priority programmes, only the National HIV/AIDS Programme (PNLS) has produced and shared its administrative costs recently.¹⁸ Specifically, PNLS has completed its estimate of the flow of HIV/AIDS resources and expenditures for 2014, 2015, and 2016 (Ministry of Social Health and Population/National AIDS Programme, 2016 and, 2018).

This exercise, commonly referred to as REDES (AIDS resources and expenditure), is globally recommended to ensure annual monitoring of resources provided to countries in the fight against the HIV/AIDS epidemic. It involves a standardized approach based on a uniform method of reporting data and indicators to monitor progress in achieving the goals of the Declaration of Commitment adopted at the United Nations General Assembly Special Session on HIV/AIDS (UNGASS). The REDES exercise is a

¹⁷ See Ministry of Public Health and Population [online] <http://fbr.mspp.gouv.ht/>.

¹⁸ The absence of a consolidated expenditure report for the other programmes mentioned is surprising and regrettable given their size, importance and external funding. Apart from considerations of transparency and accountability, these data would enable an analysis of their efficiency and subsequent implementation, and even their relevance in a context of limited resources and almost immeasurable needs.

valuable analytical and planning tool as it provides information for decision-making and contributes to policy development in the response to the HIV epidemic (UNAIDS, 2009). It provides a common framework for in-country, inter-country and global monitoring and evaluation of the fight against HIV/AIDS.

Our assumptions are based on PNLs data, the only data produced and published in Haiti that could be used as a reference for estimating the administrative costs of implementing PNPPS EHSPs.

The REDES framework is divided into eight expenditure categories (UNAIDS, 2009; Ministry of Public Health and Population/National AIDS Programme, 2016 and 2018): i) Prevention; (ii) Care and treatment; (iii) Orphans and other vulnerable children; (iv) Social protection and social services; (v) Enabling environments; (vi) Research; (vii) Human resources; (viii) Programme management and administration. For our purposes we use expenditure data from the category “Programme management and administration”.

Expenditures in this category are defined as “expenses incurred at administrative levels outside the point of health care delivery” (UNAIDS, 2009). They are subdivided into the following intervention and activity expenses: i) Planning, coordination and programme management; (ii) Administration and transaction costs associated with managing and disbursing funds; (iii) Monitoring and evaluation; (iv) Operations research; (v) Serological surveillance; (vi) HIV drug-resistance surveillance; (vii) Drug supply systems; (viii) Information technology; (ix) Patient tracking; (x) Upgrading and construction of infrastructure; (xi) Programme management and administration not broken down by type; (xii) Programme management and administration not elsewhere classified.

Table 16 presents the costs of the items (i) Planning, coordination and programme management, (ii) Administrative and transaction costs associated with managing and disbursing funds, and (iii) Monitoring and evaluation, used to develop our assumptions, as a percentage of total programme costs. Only the years 2014, 2015 and 2016 are presented as there has been no REDES since.¹⁹

Table 16
Baseline 2014, 2015, and 2016 PNLs expenditure items and percentages for estimating
the administrative costs of the PNPPS EHSP payment exemption mechanism
(Percentages and dollars)

Baseline PNLs expenditure item	2014	2015	2016
Planning, coordination and programme management (percentages)	2.52	2.44	8.50
Administration and transaction costs associated with managing and disbursing funds (percentages)	2.23	3.20	6.27
Monitoring and evaluation (percentages)	1.85	3.01	2.02
Total administrative costs (percentages)	6.60	8.65	16.79
Total cost of PNLs (dollars)	137 722 259	127 773 951	110 600 638

Source: Prepared by the authors, on the basis of Ministry of Public Health and Population/National AIDS Programme, *Rapport REDES 2016. Estimation du flux des ressources et dépenses liées au VIH/Sida*, Port-au-Prince, 2018; and *Rapport REDES 2014 et 2015. Estimation du flux des ressources et dépenses liées au VIH/Sida*, Port-au-Prince, 2016.

Over the 2014–2016 period, expenditures for planning, coordination and programme management averaged 4.5%, Administration and transaction costs associated with managing and disbursing funds averaged 3.9%, and Monitoring and evaluation averaged 2.3%. Combined, these expenditures averaged 10.7%, trending upwards between 2014 (totalling 6.6%) and 2016 (16.8%).

¹⁹ It is a pity that the only priority health programme that made an effort to produce and publish these consolidated resource and expenditure data—and likely the programme with the largest budget—has not done so since 2016. We say “likely” since no valid cost estimate can be made given the lack of consolidated, publicly available data from other priority health programmes.

One hypothesis to explain that increase is the 20% drop in total PNLs expenditure between 2014 (US\$ 138 million) and 2016 (US\$ 111 million). The share of administration costs for 2016 is much higher than for 2014 and 2015. That increase is largely due to increases in Planning, coordination and programme management (8.50% in 2016 versus 2.52 and 2.44% in 2014 and 2015).

In our work, the smallest estimated costs are those of the children's EHSP (Small version), estimated at US\$ 1.4 million in 2020. The largest are those of the EHSP for mothers and newborns (Large version), estimated at US\$ 85.6 million in 2030. The cost of all six large-version EHSPs combined is estimated at US\$ 321 million in 2030.

Based on 2014, 2015, and 2016 PNLs management and administrative expenditure data, we propose the following assumptions for estimating the administrative costs of implementing the EHSPs:

- 20% of all EHSP costs for cumulative expenditures of less than US\$ 50 million,
- 15% of all EHSP costs for cumulative expenditures of between US\$ 50 and US\$ 150 million,
- and 10% of all EHSP costs for cumulative expenditures of more than US\$ 150 million.

C. Results of the costing of the Essential Health Service Packages (EHSPs)

This section presents the costing of six of the nine essential health service packages (EHSPs) offered by the National Policy on Social Protection and Promotion (PNPPS) in Haiti (Ministry of Social Affairs and Labour, 2020). Owing to the particular characteristics of the populations with health needs, the results will be presented separately for each package. For each, an analysis will be made of the three scenarios considered and the benefits included, with the exception of the health package for persons living with HIV, where only one scenario is presented. The lists of benefits included in the different scenarios of each EHSP are attached in annex II.A1.

In all estimates presented here on the health service packages, the payment exemption costs for essential services are higher for the Large version of benefits, since it contains a greater number of benefits. For each proposed package, this broader set of benefits represents the desirable care to be provided to individuals who require medical services. Some trends in estimated costs are common to almost all EHSPs, mainly for the following two reasons: i) costs change less from 2023 onwards because, in the absence of consistent projections, coverage levels are constant; ii) the relative share of estimated costs in relation to GDP decreases over time because our assumptions of GDP growth are higher than those regarding change in demand (population in need and coverage) and those regarding the unit costs of the benefits included in the various EHSP scenarios. We also present the weight (relative share) of the estimated costs of the benefits included in the EHSPs, divided into categories and subcategories of "diseases" for each scenario.

After reviewing the cost estimates by package, we present results consolidating the total estimated costs for all EHSPs followed by a comparative analysis of the weight of each package in the total estimated cost.

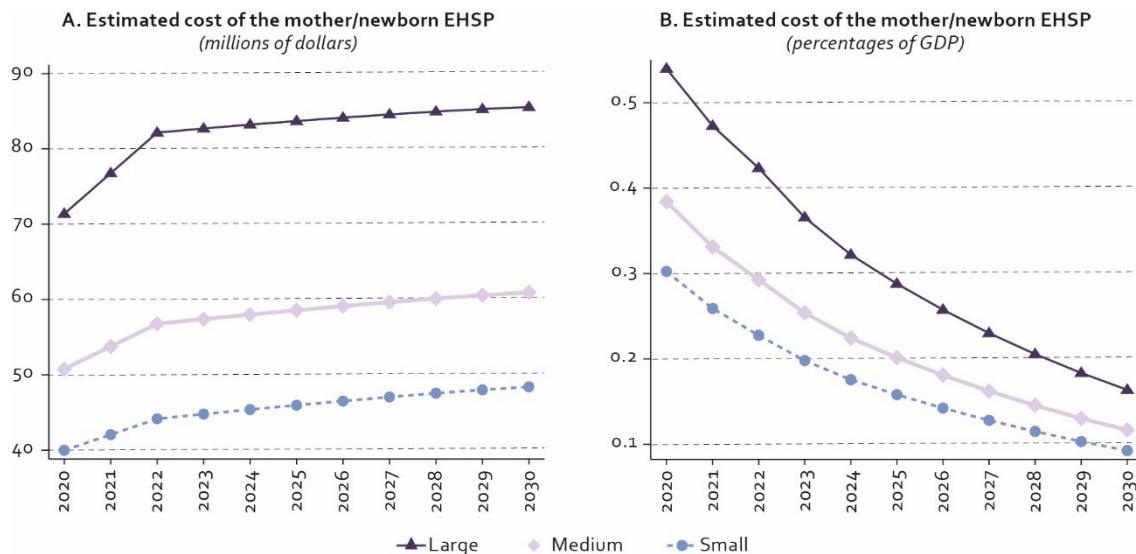
1. EHSP for mothers and newborns

The EHSP for mothers and newborns is intended for pregnant and parturient women, nursing mothers and newborns. Thus, this health package probably constitutes a baby's first encounter with the health system and therefore encompasses prenatal consultations for pregnant women and postnatal consultations for breastfeeding women, as well as the first examinations of newborns, for example. The benefits included in this EHSP fall under the categories of "women's and mothers' health", "children's health" (for newborns only) and "nutrition".

Our calculations do not include the estimated costs of the “delivery with high risk and/or severe complications (CEONC functions)” benefit even though it is included in the desirable (“Large”) scenario, because the source used does not provide data on the population in need or the unit cost for this benefit.

As seen in figure 3, the cost of benefits in the EHSP for mothers and newborns varies between 0.10% and just over 0.50% of GDP. If we consider the short list of benefits (Small scenario), between 2020 and 2030 the cost of the EHSP for mothers and newborns varies between US\$ 40.0 and US\$ 48.4 million; as for the desirable (Large) scenario, it would cost US\$ 71.4 million in 2020 and US\$ 85.6 million in 2030.

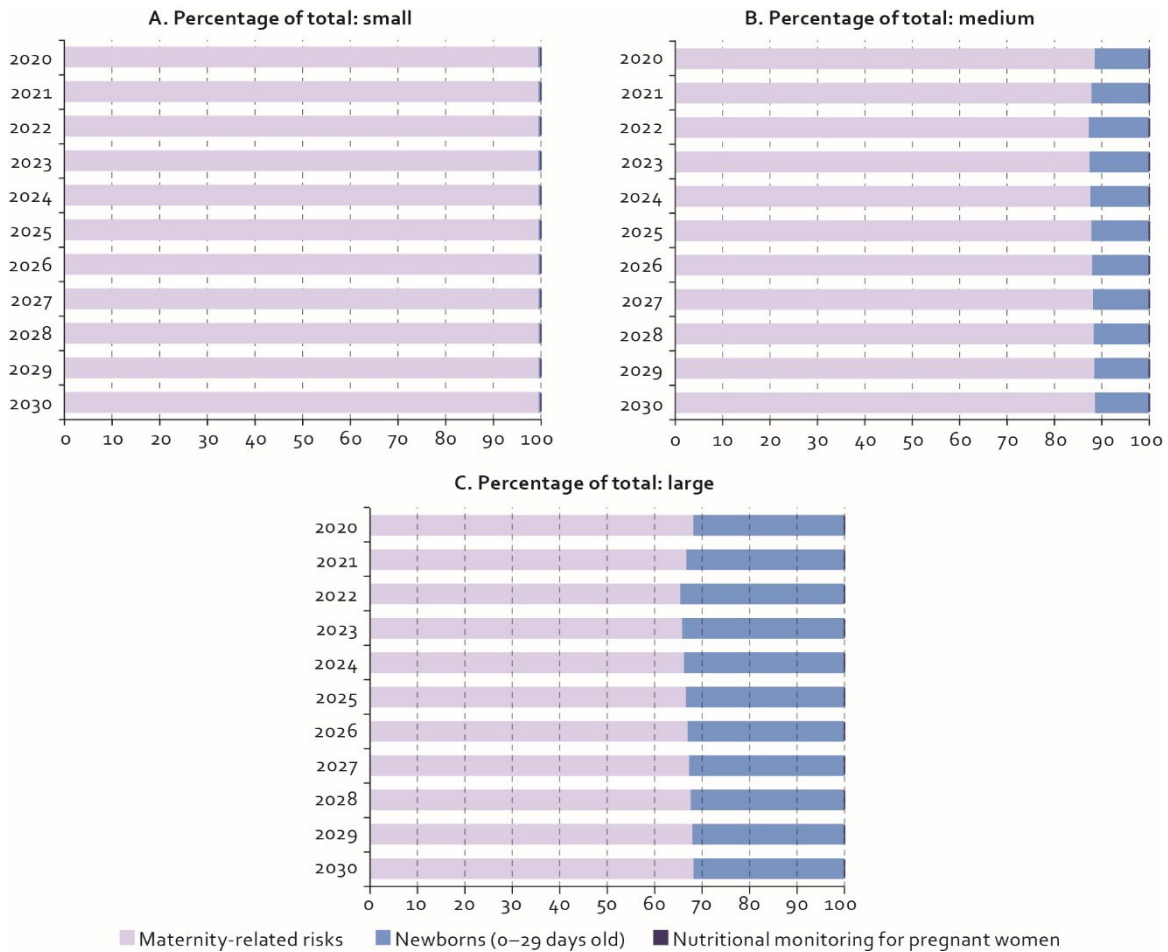
Figure 3
Cost estimates for each scenario of the EHSP for mothers and newborns
(Millions of dollars and percentages of GDP)



Source: Prepared by the authors.

The estimates show that maternity-related risks (women’s and mothers’ health) represent the largest costs in each scenario (see figure 4). The Medium list, and still more the desirable list, show that the cost of payment exemptions to cover newborns’ increases, representing up to 30% of the total cost of the EHSP. The estimated cost of the desirable package (Large scenario) for 2020 represents 0.53% of the country’s GDP. Nutritional monitoring for pregnant women represents a minor proportion of the costs. This is because two of the three services it comprises (Information, advice and guidance and Periodic assessment/monitoring of nutritional status) are included in the pregnancy monitoring and the third (Iron and folic acid distribution) has a very low unit cost (13 gourdes).

Figure 4
Breakdown of the health sub-categories in the EHSP for mothers and newborns
(Percentages of total)



Source: Prepared by the authors.

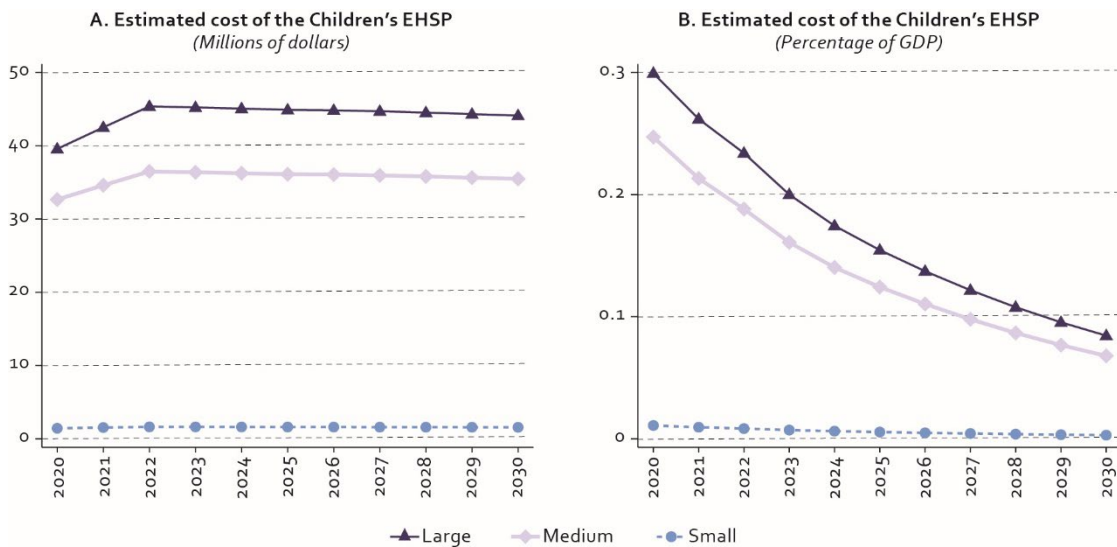
2. Children’s EHSP

The child benefit package covers three costing areas: the health of children under 5, the fight against communicable diseases and the fight against malnutrition. It is clear in figure 5 that the costs of the Small version of this package are very low and should remain so over the years under consideration, at around US\$ 1.5 million. That is because the benefits of immunization, the fight against child malnutrition and malaria management are already heavily subsidized by the National Health Policy. The estimated cost of this package ranges from US\$ 1.4 million in 2020, for the short list, to US\$ 45.4 million in 2022 for the desirable benefits list.

Our calculations do not include the estimated costs of the “Systematic treatment of moderate cases/Fight against malnutrition/Medical management of detected cases” benefit, even though it is covered in the Medium and Large scenarios, because the source used does not give a unit cost for that benefit.

What is special in this case is that the absolute figures are more or less stable between 2020 and 2030 for the three lists of proposed benefits, because demand changes little (for demographic reasons in particular). The cost of implementing the Medium list was US\$ 32.7 million in 2020 and is projected to increase by less than 10%. Trends in costs for the desirable EHSP are similar, ranging from US\$ 39.6 million in 2020 to US\$ 44.1 million in 2030. In addition, the cost gap between the short and desirable benefit lists decreases significantly between 2020 and 2030, from 28 percentage points to 8 percentage points.

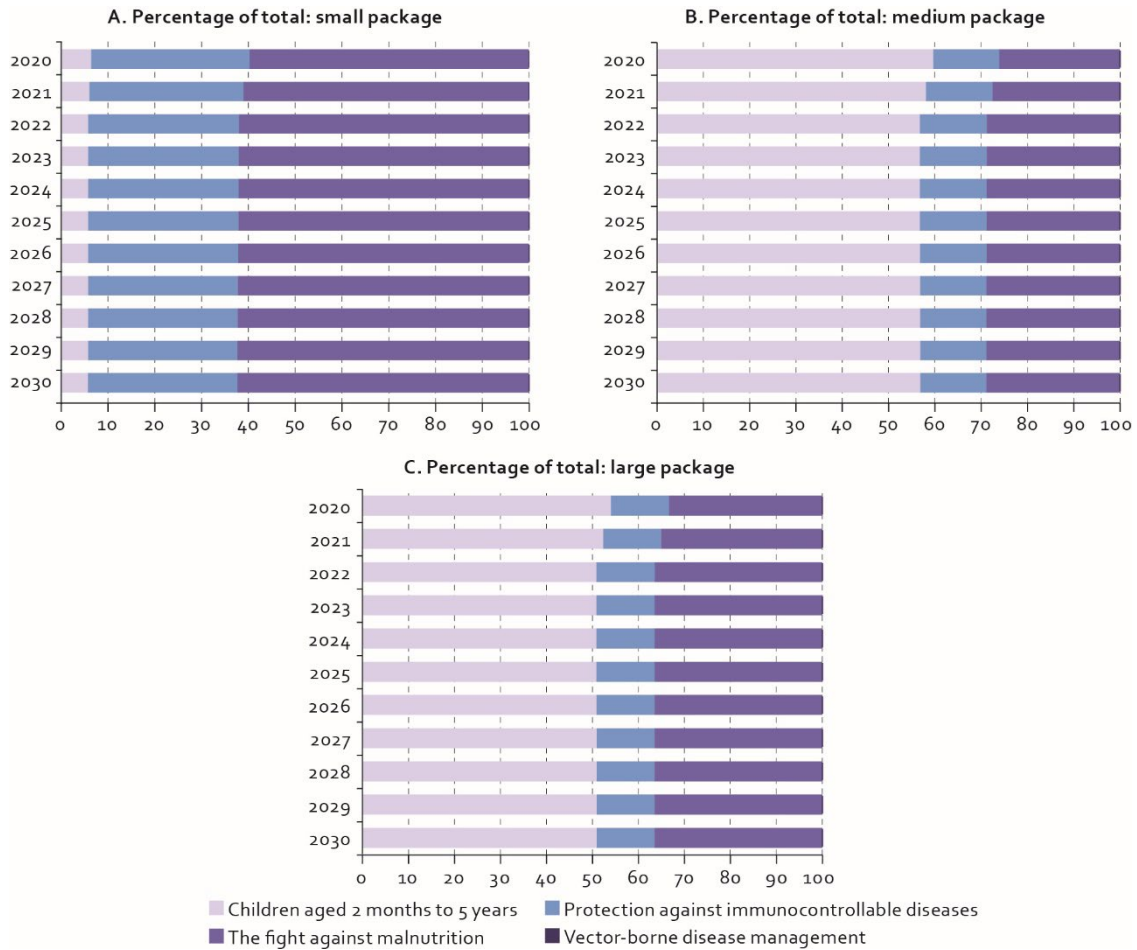
Figure 5
Cost estimates for each scenario of the children's EHSP
(Millions of dollars and percentages of GDP)



Source: Prepared by the authors.

Among the health subcategories of the Children's EHSP, the fight against malnutrition accounts for more than 60% of the estimated costs for the restricted scenario, and protection against immunocontrollable diseases is the second-most important sub-category, accounting for about 35% of the estimated costs of this package. However, in the medium and desirable scenarios (Medium and Large), the costs of benefits for children aged 2 months to 5 years become greater. In particular, desirable-list benefits (Large scenario) account for 50% of all costs, with the other half incurred by the fight against malnutrition and protection against immunocontrollable diseases (figure 6). Vector-borne disease management represents a very low share of the costs, because essential services are already provided to children at no cost through the National Malaria Control Programme (PNCM) of the Ministry of Public Health and Population and its partners.

Figure 6
Breakdown of the health sub-categories of the children’s EHSP
(Percentages of the total cost of the children’s EHSP)



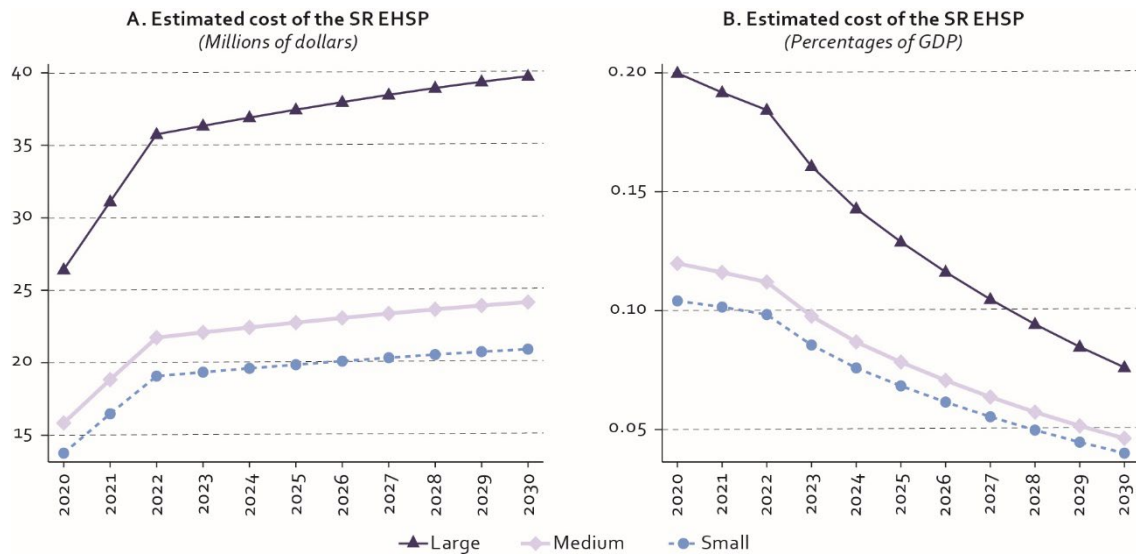
Source: Prepared by the authors.

3. Sexual and reproductive health EHSP

The sexual and reproductive health EHSP is intended for expected users of sexual and reproductive health services, namely adults aged 15 to 70 and subgroups such as women of childbearing age, men aged 18 to 59 and victims of gender-based violence. The benefits included in this EHSP address women’s and mothers’ health and the control of transmissible diseases. The cost of this specific health package amounts to a minimum of US\$ 13.8 million in 2020 to meet health needs with a limited list of benefits (Small scenario) and a maximum of US\$ 39.8 million by 2030 if the target population receives the benefits on the desirable list (Large scenario) (see figure 7). In 2020, costs varied between 0.10% to 0.20% of GDP depending on the scenario and fell to less than 0.0505% in the case of the short (Small) and medium (Medium) benefit lists.

This package is exceptional in that the costs of the short (Small) and medium (Medium) lists are very similar, while the costs of the desirable (Large) list are almost twice as high.

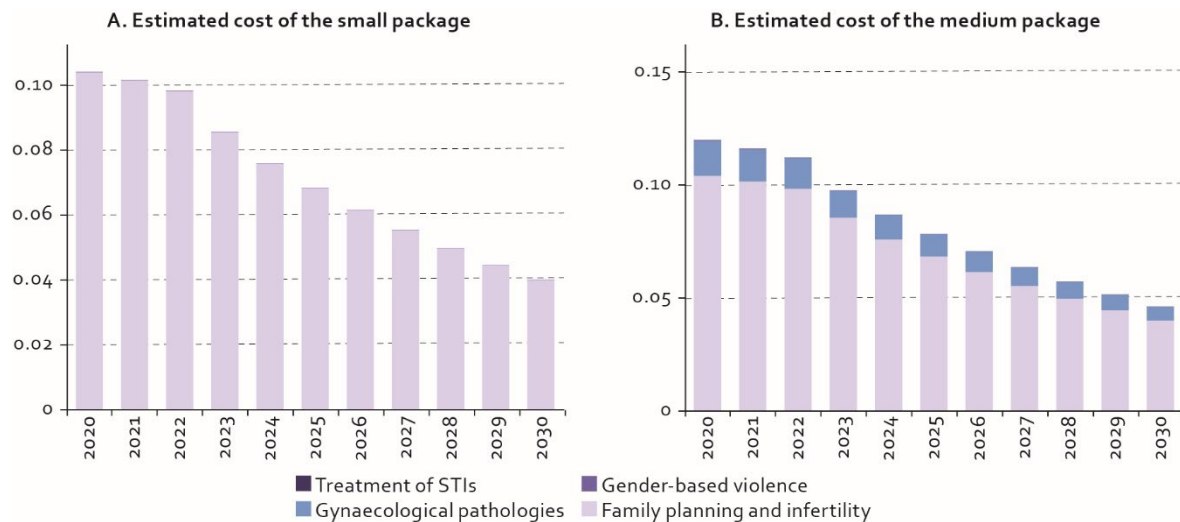
Figure 7
Cost estimates for each scenario of the sexual and reproductive health EHSP
(Millions of dollars and percentages of GDP)

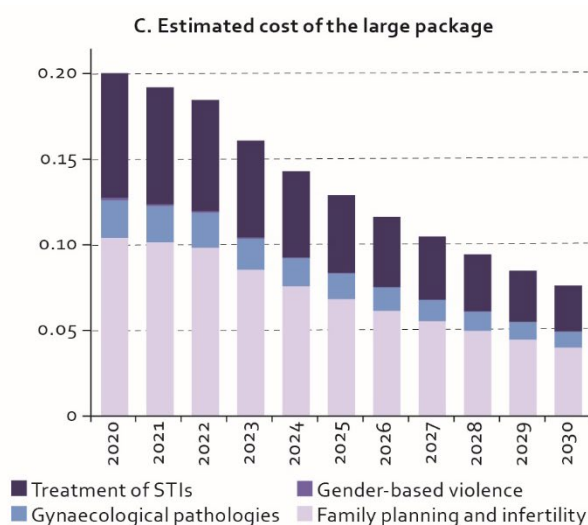


Source: Prepared by the authors.

Figure 8 shows that “Family planning and infertility” weighs the most in the cost estimate of this package. However, as the number of benefits in the scenarios increases, this benefit weighs less, while those concerning gynaecological pathologies and STI management weighs more. The “Gender-based violence” (GBV) subcategory is estimated to incur low costs because the target population and coverage data in the source are “programmatic”, unlike the other subcategories for which data are based on prevalence or incidence (needs-based). The cohorts in programmatic baseline data on GBV are small and probably inadequate.

Figure 8
Breakdown of the health sub-categories of the sexual and reproductive health EHSP
(Percentages of GDP)





Source: Prepared by the authors.

4. EHSP for persons with disabilities

This EHSP targets people with “severe disabilities” (see 3. Information sources, above). In the absence of any benefits specific to the needs of persons with disabilities in *Le paquet essentiel de services* (2016a), we selected the benefits for the different scenarios so as to take into account the diversity of persons with disabilities health needs. Thus, five areas are covered by this EHSP: communicable disease control, chronic non-communicable diseases, eye care, oral and dental care, and mental health.

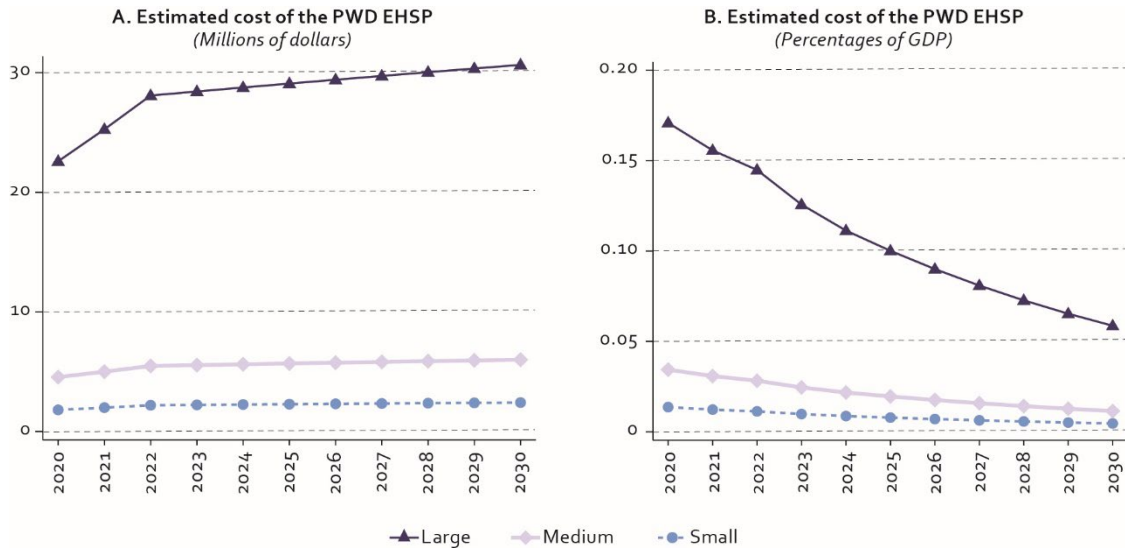
Our calculations do not include the estimated costs of the “Clinical screening through routine urological consultations” (Diagnosis and treatment of prostate cancer) benefit, even though it is a part of the Large scenario, because the source used does not provide a unit cost.

The cost of the benefits package for persons with disabilities varies considerably from the Small, Medium to Large scenario. The first and second scenarios cost US\$ 1.8 million and US\$ 4.5 million in 2020 in comparison with the desirable list of benefits, estimated for the same year at US\$ 22.6 million and rising to US\$ 30.6 million in 2030 (about 0.06% of GDP). Figure 9 shows that the costs of the Small and Medium packages are very similar. The much higher cost of the desirable (Large) package is explained by the high cost of the additional benefits it includes which are not on the medium and restricted lists. For example, the diagnosis and treatment of mental illnesses, and in particular cases of psychosis (including persecutory delusions) and severe depression, are significantly more expensive since they require several consultations and medication. Such is also the case of the surgical treatment of tumours or masses, which is very costly because it involves consultations, surgeries and post-operative follow-up, among other expenses.

This package covers more areas than the previous ones for all three scenarios and has the most sub-categories and benefits, together with the older persons’ EHSP, due to the target population’s characteristics and needs. As shown in figure 10, the largest share of costs in the restricted (Small) package is for common mental health problems, while in the Medium package the largest share is for eye injuries, and in the Large package for tumours, growths and salivary gland pathologies. The share of costs for benefits to control communicable diseases is low because HIV/AIDS is covered by another EHSP; STIs are covered by the Sexual and reproductive EHSP; essential services for tuberculosis and malaria are already exempt from payment through priority health programmes for these diseases,

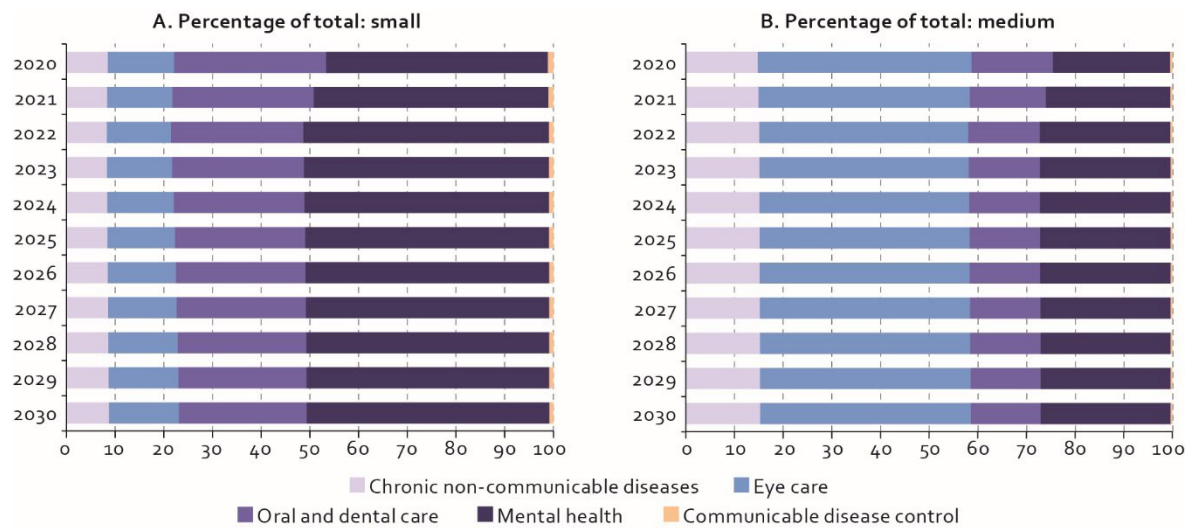
cholera is almost eliminated (last case in January 2019) and, finally, cases of leprosy and zoonoses are few and far between. However, while a variety of areas are covered and the list of benefits quite long, the target population cohorts are smaller than those of the other EHSPs, so the estimated costs are less than 0.2% of GDP in 2020 and close to 0.06% in 2030.

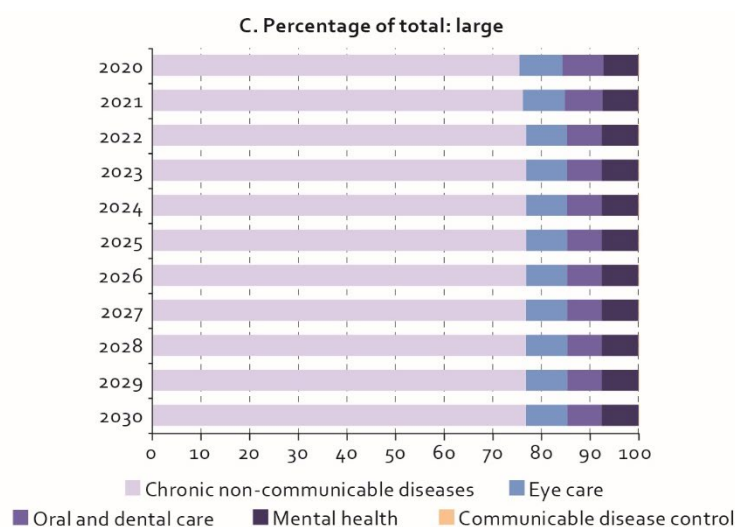
Figure 9
Cost estimates for each scenario of the EHSP for persons with disabilities
(Millions of dollars and percentages of GDP)



Source: Prepared by the authors.

Figure 10
Breakdown of the health subcategories of the EHSP for persons with disabilities
(Percentages of the total cost of the EHSP for persons with disabilities)





Source: Prepared by the authors.

5. EHSP for persons living with HIV/AIDS

Unlike the other EHSPs, the EHSP for persons living with HIV/AIDS does not have three benefit scenarios because the National HIV/AIDS Programme (PNLS) already subsidizes 100% of the cost of essential health services for this population group. Accordingly, the following table presents the cost estimates for the 11-year timeframe from the perspective of the Ministry of Public Health and Population and its PNLS. In other words, this EHSP is already subsidized and would not involve any cost for PNPPS given the current PNLS funding conditions.

Only the “Management of HIV infection” subcategory of the PES communicable disease control category (Ministry of Public Health and Population, 2016a) is covered by this EHSP.

Table 17 shows that costs are stable, though with a drop in dollar costs in the first three years. From 2023 onward costs increase, ranging from US\$ 119.7 million in 2020 to US\$ 122.5 million in 2030. This amounts to a shift in spending from 0.9% of GDP in 2020 to 0.2% in 2030. In 2019, 160,000 people in Haiti were living with HIV, 54% of whom were women over the age of 15 (see UNAIDS, 2021). As the services it includes are expensive, the cost of this EHSP is considerable.

Table 17
Estimated cost of the EHSP for persons living with HIV/AIDS
(Millions of dollars and percentages of GDP)

Year	Millions of dollars	Percentages of GDP
2020	120 889	0.91
2021	120 186	0.74
2022	119 659	0.62
2023	120 075	0.53
2024	120 480	0.47
2025	120 867	0.42
2026	121 238	0.37
2027	121 592	0.33
2028	121 923	0.30
2029	122 223	0.26
2030	122 488	0.23

Source: Prepared by the authors.

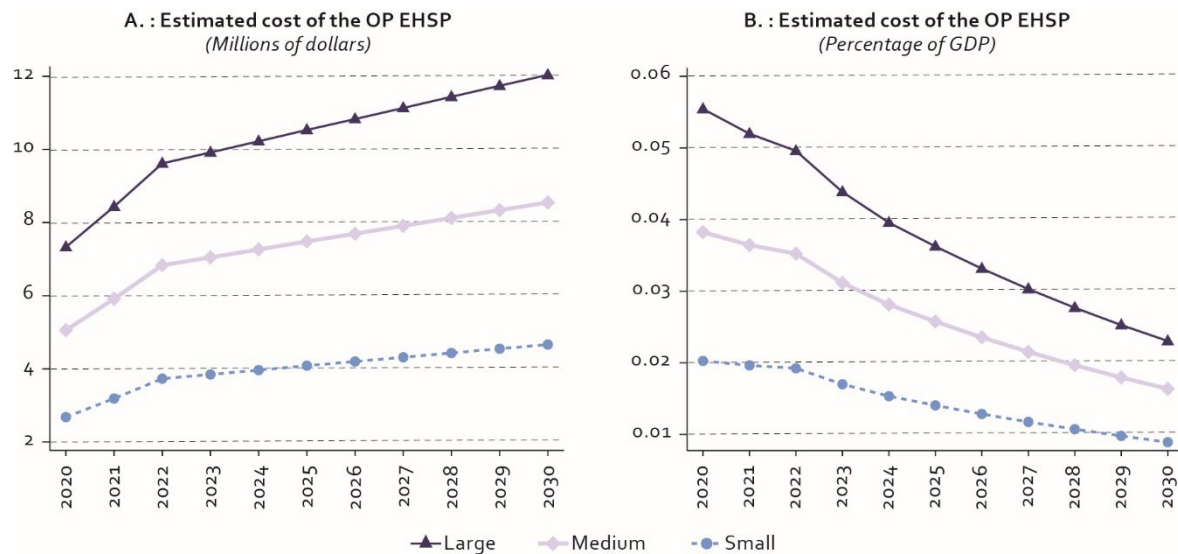
6. Older persons' EHSP

The older persons' EHSP is for elderly persons aged 60 or over. In the absence of any benefits specific to older persons' needs in *Le paquet essentiel de services* (Ministry of Public Health and Population, 2016a), we selected the benefits included in the different scenarios so as to cover the diversity of older persons' health needs. Thus, five areas are covered by this EHSP: communicable disease control, chronic non-communicable diseases, eye care, oral and dental care, and mental health. Although the United Nations population projections for Haiti currently indicate a life expectancy of 64 years, that is expected to increase, especially if health measures such as those proposed are implemented to improve the living conditions, care and health of people in this age group.

Our calculations do not include the estimated costs of the "Clinical screening through routine urological consultations" (Diagnosis and treatment of prostate cancer) benefit, even though that benefit is a part of the Large scenario, because the source used does not give a unit cost for it.

In figure 11, the cost differential between the three scenarios is similar. Thus, in 2030, costs are estimated at US\$ 4.6 million for the first (Small) scenario, US\$ 8.5 million for the second (Medium) and US\$ 12.0 million for the third (Large). Furthermore, it is worth highlighting that the cost of the three scenarios increases significantly (in absolute value) over time for demographic reasons (ageing of the population), but decreases in terms of GDP.

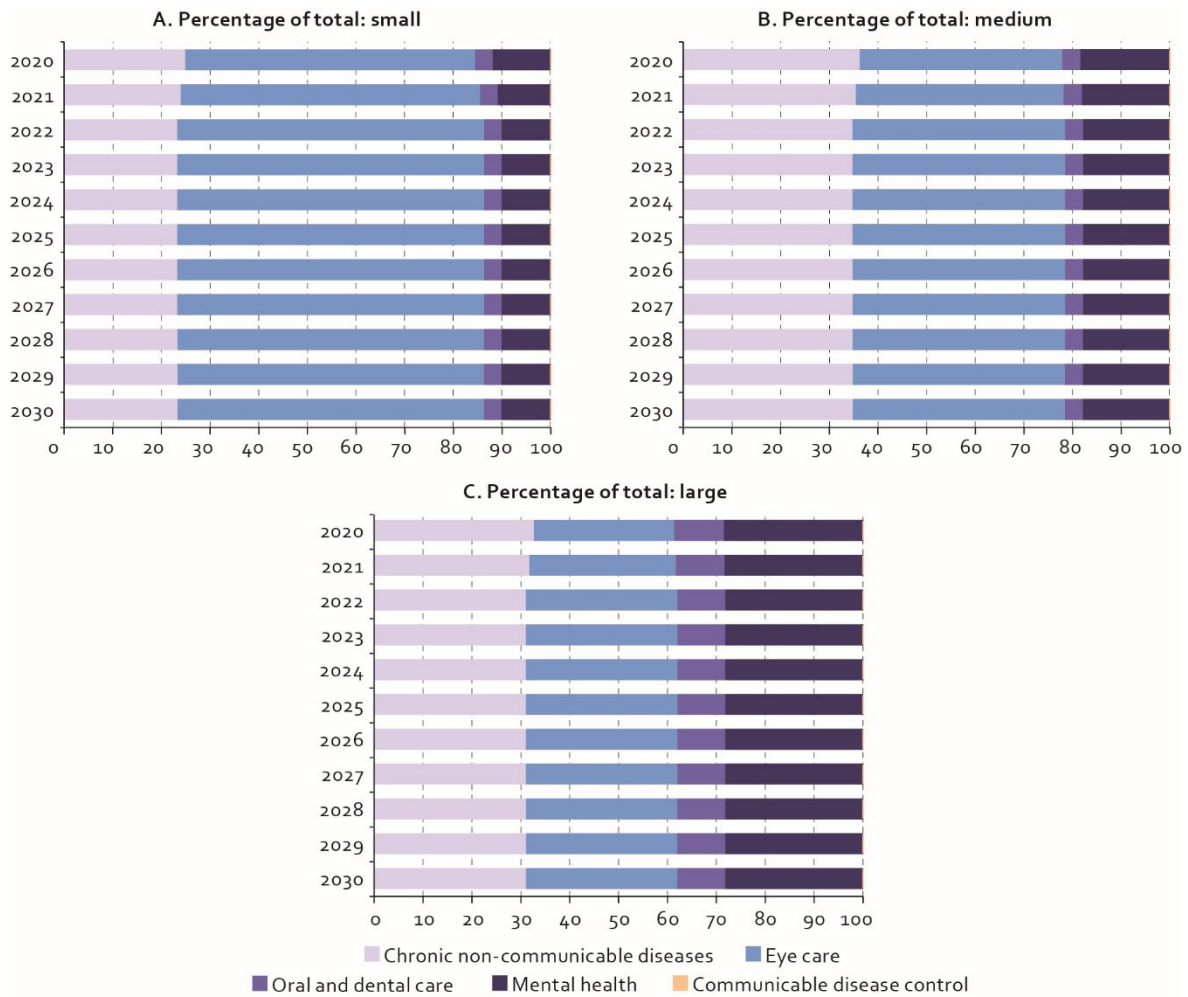
Figure 11
Cost estimates for each scenario of the older persons' EHSP
(Millions of dollars and percentages of GDP)



Source: Prepared by the authors.

Glaucoma treatment, surgery and community follow-up are the most expensive benefits, followed by diabetes and its complications in the Small and Medium scenarios. In the Large scenario of desirable benefits, chronic non-communicable diseases such as respiratory diseases, eye care (glaucoma management in particular) and mental health are the areas incurring the highest costs. The costs of controlling communicable diseases are marginal in this package, as they are in the EHSP for persons with disabilities, for similar reasons persons with disabilities (see above).

Figure 12
Breakdown of the health sub-categories of the older persons' EHSP
(Percentages of the total cost of the older persons' EHSP)

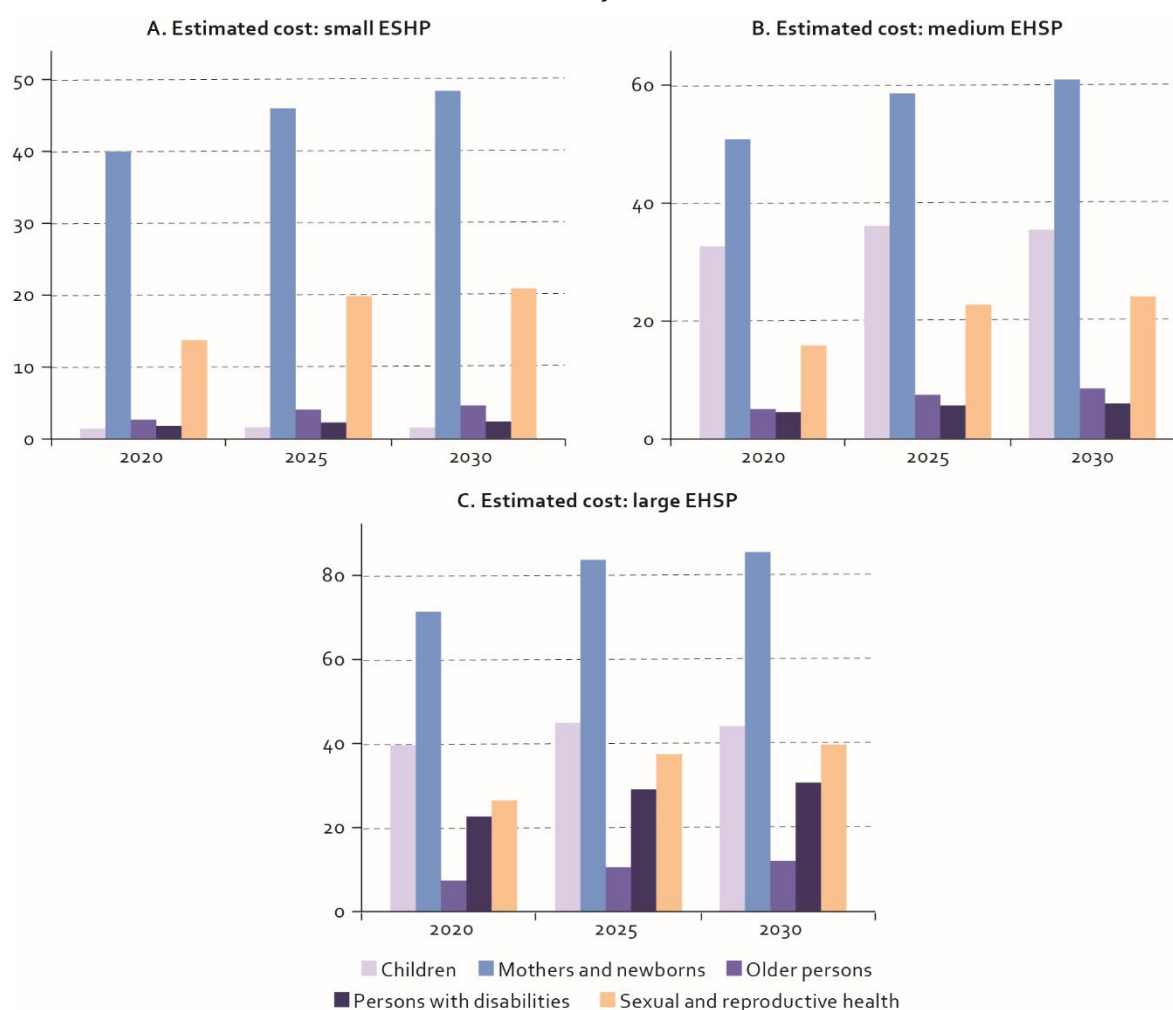


Source: Prepared by the authors.

7. The six EHSPs

To begin with, it should be noted that the services offered in the EHSP for persons living with HIV/AIDS are already 100% subsidized by the health sector and so carry no cost for PNPPS. Figure 13 shows the estimated costs of the other five packages by scenario for the years 2020, 2025 and 2030 without administrative costs. In their Small versions, three packages (Children, Persons with disabilities and Older persons) incur very low costs, ranging from US\$ 1.6 to US\$ 4.1 million in 2025. The estimated costs of the Sexual and reproductive health EHSP and the EHSP for mothers and newborns are higher, at US\$ 19.9 million and US\$ 46 million respectively. In their Large versions, their estimated costs increase rather sharply, with the exception of the Older persons' EHSP (US\$ 10.5 million). The costs of the Persons with disabilities, Sexual and reproductive health and Children's EHSPs in 2025 range from US\$ 29.1 million to US\$ 44.9 million, while the Mothers and newborns EHSP peaks at US\$ 83.7 million.

Figure 13
Estimated costs of the different EHSPs in the three proposed scenarios
(Millions of dollars)



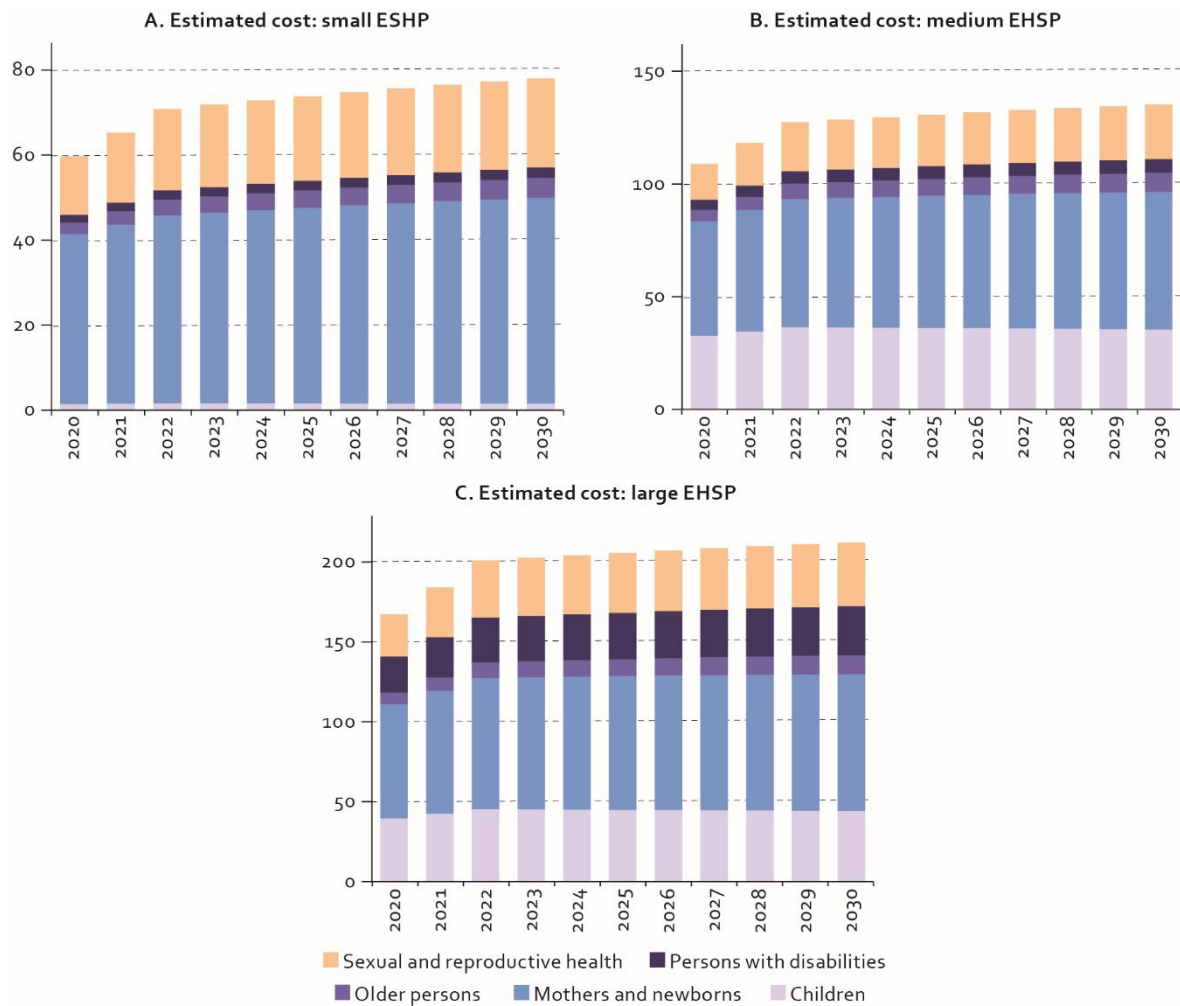
Source: Prepared by the authors.

The cost of the five health packages proposed to cover the health care needs of the most vulnerable populations in Haiti are shown in figure 14 according to the scenarios and assumptions set out in this chapter. The first panel, top left (panel A), shows the estimated cost for the restricted (Small) list of benefits. Its total cost reaches US\$ 59.6 million in 2020 and nearly US\$ 77.9 million in 2030, the large majority of which is benefit payments for the EHSP for mothers and newborns.

Panel B shows the estimated cost of the EHSPs with a Medium list of benefits, starting at US\$ 137.9 million in 2020 and peaking at US\$ 166.9 million in 2030. This scenario places more emphasis on child-focused benefits, unlike the restricted (Small) scenario. In Panel C, which is the desirable (Large) list of health benefits for each EHSP, costs range from US\$ 266.3 million in 2020 to US\$ 321.0 million ten years later. These costs do not include the EHSP specifically intended for people living with HIV/AIDS, which is covered by the National HIV/AIDS Programme (PNLS).

Figures 14 (millions of dollars) and 15 (percentage of GDP) show the cumulative estimated costs per year from 2020 to 2030 of these same five EHSPs for the three scenarios proposed. This presentation gives an idea not only of the absolute aggregate cost—US\$ 60 to US\$ 78 million for implementation of the Small package between 2020 and 2030— but also, in the second case, the relative burden (as a percentage of GDP), which trends downward, from 1.25% to less than 0.50% of GDP in the most generous scenario of the Large package.

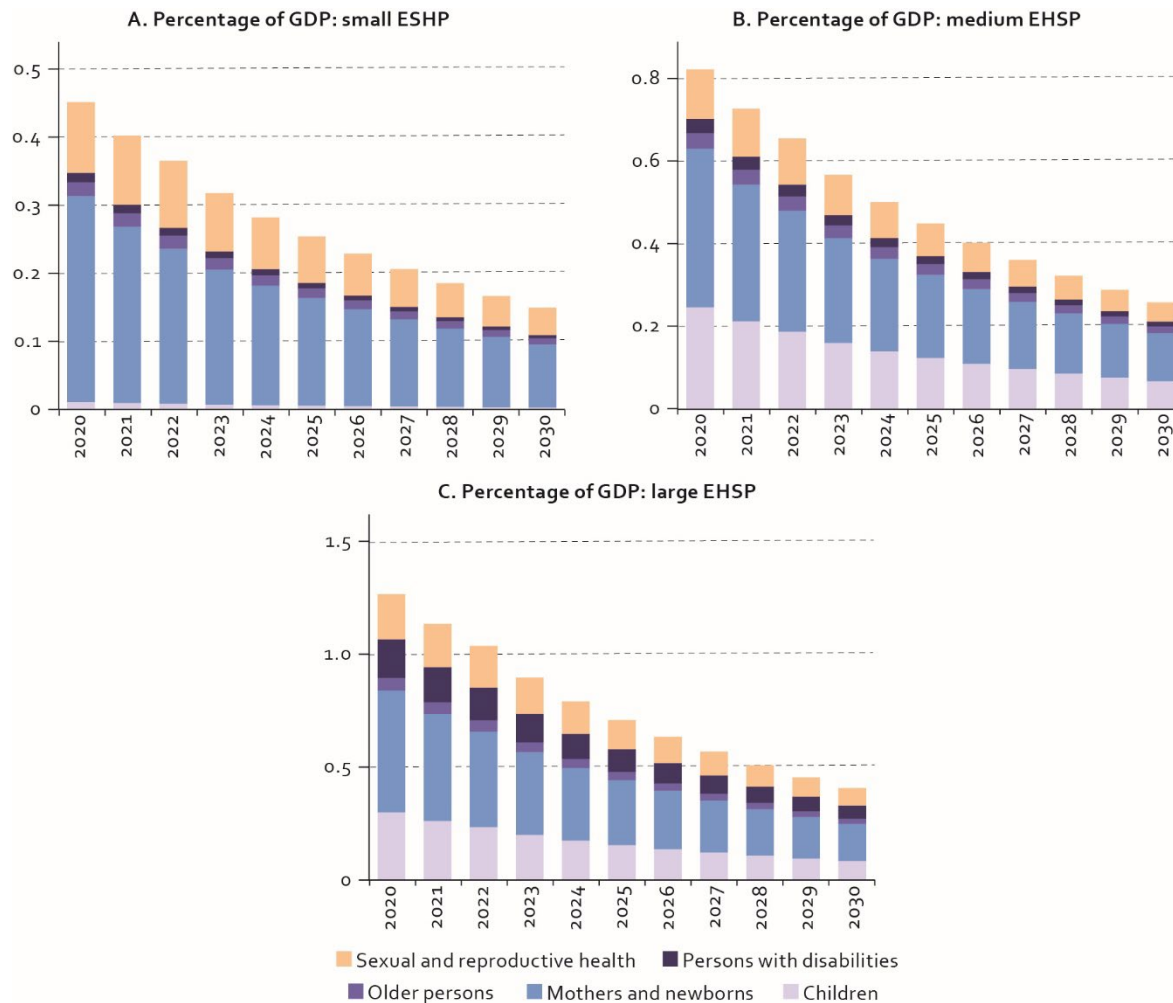
Figure 14
Estimated cumulative costs of the different EHSPs^a in the three proposed scenarios
(Millions of dollars)



Source: Prepared by the authors.

^a The EHSP for people living with HIV is not included because the costs of this package are not part of PNPPS. These are covered by the PNLS, which is directly administered by the Ministry of Health.

Figure 15
Estimated costs of the EHSPs^a in the three proposed scenarios
(Percentages of GDP)



Source: Prepared by the authors.

^aThe benefits package for people living with HIV is not shown since the costs of this package are not part of the social protection policy. The costs of this package are covered by the PNLS, which is directly administered by the Ministry of Health.

Table 18 presents the estimated costs of the five packages by scenario for the years 2020 to 2030 with the administrative costs, which are calculated using the assumptions presented in the related section (see above, B. 4.). The estimated costs of the Small version of the Children's EHSP remain at or below US\$ 2 million year to year. Those of the Large version of the EHSP for mothers and newborns peak at US\$ 98.4 million in 2030. The combined implementation of several of these EHSPs would decrease the administrative costs calculated separately, whenever the total of their cumulative costs exceeds the US\$ 50 million and US\$ 150 million thresholds defined in our assumptions.

Table 18
Estimated cost of EHSPs including administrative costs^a
(Millions of dollars)

	Children's EHSP			EHSP for mothers and newborns			Sexual and reproductive health EHSP			Older persons' EHSP			EHSP for persons with disabilities		
	Small	Medium	Large	Small	Medium	Large	Small	Medium	Large	Small	Medium	Large	Small	Medium	Large
2020	1.7	37.6	45.5	48.0	58.4	82.1	16.5	19.0	31.7	3.2	6.1	8.8	16.5	19.0	31.7
2021	1.8	39.8	48.9	50.5	61.8	88.3	19.8	22.6	37.3	3.8	7.1	10.1	19.8	22.6	37.3
2022	2.0	42.0	49.9	53.0	65.3	94.5	22.9	26.1	42.9	4.5	8.2	11.5	22.9	26.1	42.9
2023	1.9	41.8	49.8	53.8	66.0	95.1	23.2	26.5	43.6	4.6	8.5	11.9	23.2	26.5	43.6
2024	1.9	41.7	49.6	54.5	66.7	95.7	23.5	26.9	44.3	4.8	8.7	12.3	23.5	26.9	44.3
2025	1.9	41.5	49.4	55.2	67.4	96.3	23.8	27.3	44.9	4.9	9.0	12.6	23.8	27.3	44.9
2026	1.9	41.5	49.3	55.8	68.0	96.8	24.1	27.7	45.6	5.0	9.2	13.0	24.1	27.7	45.6
2027	1.9	41.4	49.2	56.5	68.6	97.3	24.4	28.1	46.2	5.2	9.5	13.4	24.4	28.1	46.2
2028	1.9	41.2	49.0	57.1	69.2	97.7	24.7	28.4	46.7	5.3	9.8	13.7	24.7	28.4	46.7
2029	1.9	41.0	48.8	57.6	69.7	98.1	24.9	28.7	47.3	5.5	10.0	14.1	24.9	28.7	47.3
2030	1.9	40.8	48.5	58.1	70.1	98.4	25.1	29.0	47.7	5.6	10.3	14.4	25.1	29.0	47.7

Source: Prepared by the authors.

^aAdministrative costs are defined as follows: 20% of cumulative expenditures of less than US\$ 50 million; 15% of cumulative expenditures of between US\$ 50 and US\$ 150 million; 10% of cumulative expenditures of more than US\$ 150 million.

D. Conclusion

This chapter is a preliminary estimate to shed light on the financing needs of PNPPS for the implementation of the Essential Health Service Package (EHSP) payment exemption mechanism and to illustrate the approach to be taken later by the parties directly involved. It provides estimates for the cost of only six of the nine EHSPs in the Policy: the returnees' and post-crisis EHSPs are excluded out of a concern for feasibility, and the universal EHSP excluded out of a concern for short-term relevance, given the increasing universality of the Policy.

Naturally, our findings are tempered by the limitations inherent in the methods used to produce them. It would have been much easier to work with a national fee schedule for medical procedures on the basis of the third-party payer approach adopted by the Policy. However, such a fee schedule does not exist: fees vary from one health institution (HI) to another, or even from one user to another within a single institution (the rationale for these differences is undefined). Similarly, expenditure data for the various national programmes are neither consolidated nor made available—with some exceptions—and while cost data on health services are produced regularly, they are partial, fragmented and contrasted. Thus, we consider the choice of basing our methodological strategy on PES (Ministry of Public Health and Population, 2016a) to be the most suitable for the needs of the exercise commissioned by the Ministry of Social Affairs and Labour. It defines the supply of services for the first and second levels of care targeted by the Policy's EHSPs; it lists the benefits selected for their essential character by component (category) and subcategory; it is interprogrammatic (cross-cutting) and was the subject of a budgeting exercise in 2018 (Ministry of Public Health and Population, 2018).

The estimated costs vary greatly from package to package and from scenario to scenario. The proposed Children's EHSP was costed at US\$ 1.4 million in its restricted (Small) version in 2020 (excluding the administrative costs of implementation). For demographic reasons, its cost was projected to grow only slightly until 2030 (US\$ 1.6 million). The cumulative estimated costs of the Children's EHSP, the EHSP for Persons with disabilities and the EHSP for Older persons for their Small

versions would be less than US\$ 10 million, including administrative costs (US\$ 9.5 million), in 2025. The cost of the EHSP for Mothers and newborns (Large version), would peak in 2030 at US\$ 98.4 million including administrative costs. In relation to Haiti's current total health expenditure²⁰ of US\$ 715 million (2018),²¹ the Small version of the Children's EHSP, including its 2020 administrative costs (US\$ 1.7 million), would represent only 0.2% of total expenditure, while the Medium version of the Sexual and reproductive (SR) EHSP, including its 2020 administrative costs, would represent 4% (US\$ 31.7 million). The data presented as percentages of GDP in the results—ranging from 0.0% for the Small version of the Children's EHSP to 1.3% for all six EHSPs studied—should be assessed keeping in mind that total current health spending has fluctuated between 7.7% and 10.2% of GDP since 2010. Given that public spending on health in Haiti represented only 0.4% to 0.5% of GDP from 2014 to 2019, despite a 6% target set by countries in the Americas Region (PAHO/WHO, 2014; Cid, Matus-López and Báscolo, 2018; ECLAC/PAHO, 2020), and given the results of efforts to expand the national budgetary framework made during the development of PNPPS, together with a possible rapid decrease of estimated costs as a percentage of GDP should growth in Haiti recover somewhat—in particular thanks to demographic dividends—we consider that the financial framework required to phase in the EHSP payment exemption mechanism proposed by PNPPS does exist. We estimate that the cumulative costs of the six EHSPs would barely exceed 0.2% of GDP in 2030. In Benin, Burkina Faso and Mali, which are also low-income countries, health care payment exemption policies for mothers and newborns exist and are fully funded by the State (Witter and others, 2016).

The Ministry of Social Affairs and Labour, Ministry of Public Health and Population and other relevant stakeholders should not yield to the temptation to replace payment exemption as defined by PNPPS and, for a long time, by the National Health Policy (Ministry of Public Health and Population, 2012) and as recommended by the World Bank (World Bank, 2017) with a partial payment subsidy—there is a risk that most of the expected benefits will be lost. Indeed, the literature shows that full payment exemption care strategies deliver much higher levels of effectiveness and cost-effectiveness in contexts of poverty and very low health service uptake (Nguyen and others, 2018 and 2020). This is due to an all-or-nothing threshold effect. It would be a pity to maintain the financial barrier preventing access to the health services necessary to improve people's health, ensure the profitability of investments (Stenberg and others, 2017a and 2017b) and foster the country's economic development simply to make small savings. The question of financial viability, which will inevitably be raised, must therefore be addressed in the same way it has been for years—in some cases, decades—concerning priority national health programmes (for example vaccination, mothers' and child health, HIV/AIDS, tuberculosis, malaria and results-based financing).

Despite the significant resources available, the health sector has not been able to deliver significant results (Hashimoto, Lauré and Rajkumar, 2020). Most resources are spent on improving the supply of health services in certain vertical programmes without enough attention paid to demand or other areas that are completely neglected. As a result, health service uptake is very low, even for primary health care. The EHSP payment exemption proposed by PNPPS is an opportunity to rebalance these investments and make it possible to successfully transform the national health system, by increasing demand and carrying out necessary reform for more realistic governance and more strategic purchasing using the appropriate instruments.

We invite authorities and stakeholders (including from a demographic perspective) to analyse our findings, make the necessary trade-offs and conduct the exercise of prioritizing and estimating the cost of EHSPs to be implemented in the short term. We recommend they use the UHC Compendium, a tool recently developed by the WHO for this type of exercise (WHO, n/d).

²⁰ Not including capital expenditures.

²¹ See Global Health Expenditure Database [online] <https://apps.who.int/nha/database>.

Annex II.A1

Lists of benefits covered in each version of the EHSPs studied

1. EHSP for mothers and newborns

The Small package includes:

1. Information, counselling and guidance on maternity risks.
2. Information, counselling and guidance as part of the nutritional monitoring of pregnant women.
3. Administration of iron and folic acid as part of the nutritional monitoring of pregnant women.
4. Nutritional monitoring of pregnant women (periodic assessment).
5. Complete pregnancy monitoring.
6. Antiretroviral treatment for HIV-positive pregnant women (as part of the prevention of mother-to-child transmission of HIV (PMTCT)).²²
7. Low-risk vaginal delivery.
8. Normal and complicated delivery follow-up.
9. Information, counselling and guidance on newborn health.
10. Early assessment of newborns.
11. Prophylaxis for eye infections (newborns).
12. Calmette-Guérin (BCG) vaccination (newborns).
13. Polio vaccination – oral polio vaccine (OPV) (newborns).

The Medium package includes:

1. Information, counselling and guidance on maternity risks.
2. Information, counselling and guidance as part of the nutritional monitoring of pregnant women.
3. Administration of iron and folic acid as part of the nutritional monitoring of pregnant women.
4. Nutritional monitoring of pregnant women (periodic assessment).
5. Complete pregnancy monitoring.
6. Antiretroviral treatment for HIV-positive pregnant women (for PMTCT).²³
7. Low-risk vaginal delivery.
8. Vaginal delivery with low risk and/or moderate complications (basic emergency obstetric and neonatal care (BEONC)).
9. Normal and complicated delivery follow-up.
10. Risk of abortion, incomplete abortion, unavoidable early abortion and complete abortion.
11. Information, counselling and guidance on newborn health.
12. Early assessment of newborns.
13. Prophylaxis for eye infections (newborns).
14. BCG vaccination (newborns).
15. Polio vaccination – (OPV) (newborns).
16. Care of preterm and low birth weight infants.

²² The "Antiretroviral treatment of HIV-positive pregnant women (for PMTCT)" benefit is also included in the EHSP for PLWHIVs.

²³ Ibid.

The Large package includes:

1. Information, counselling and guidance on maternity risks.
2. Information, counselling and guidance as part of the nutritional monitoring of pregnant women.
3. Administration of iron and folic acid as part of the nutritional monitoring of pregnant women.
4. Nutritional monitoring of pregnant women (periodic assessment).
5. Complete pregnancy monitoring.
6. Antiretroviral treatment for HIV-positive pregnant women (for PMTCT).²⁴
7. Low-risk vaginal delivery.
8. Vaginal delivery with low risk and/or moderate complications (BEONC functions).
9. Delivery with high risk and/or severe complications (Comprehensive Emergency Obstetric and Neonatal Care (CEONC)).
10. Management of obstetric fistulae (surgical treatment).
11. Normal and complicated delivery follow-up.
12. Risk of abortion, incomplete abortion, unavoidable early abortion and complete abortion.
13. Septic abortion.
14. Information, counselling and guidance on newborn health.
15. Early assessment of newborns.
16. Prophylaxis for eye infections (newborns).
17. BCG vaccination (newborns).
18. Polio vaccination – (OPV) (newborns).
19. Management of neonatal emergencies: treatment of neonatal hypoxia, early detection and treatment of perinatal infections, reception and care of newborns with life-threatening conditions.
20. Care of preterm and low birth weight infants.

2. Children's EHSP

The Small package includes:

1. Information, counselling and guidance on newborn health.
2. Routine deworming of healthy infants.
3. Monitoring of growth and psychomotor development.
4. Protection against immunocontrollable diseases (vaccination).
5. Prevention of vitamin A deficiency, screening, nutritional management and malnutrition follow-up.
6. Treatment of mild to moderate dehydration (diarrhoeal diseases).
7. Treatment of uncomplicated and severe malaria.
8. Treatment of mild to moderate respiratory syndromes (respiratory diseases).

The Medium package includes:

1. Information, counselling and guidance on newborn health.
2. Routine deworming of healthy infants.
3. Monitoring of growth and psychomotor development.
4. Protection against immunocontrollable diseases (vaccination).

²⁴ Ibid.

5. Prevention of vitamin A deficiency, screening, nutritional management and malnutrition follow-up.
6. Treatment of diarrhoeal diseases (mild, moderate and severe dehydration).
7. Treatment of uncomplicated and severe malaria.
8. Treatment of respiratory diseases (mild to moderate respiratory syndromes and severe pneumonia).
9. Early detection and treatment of moderate ear and throat infections.

The Large package includes:

1. Information, counselling and guidance on newborn health.
2. Routine deworming of healthy infants.
3. Monitoring of growth and psychomotor development.
4. Protection against immunocontrollable diseases (vaccination).
5. Prevention of vitamin A deficiency, screening, nutritional management and malnutrition follow-up.
6. Treatment of diarrhoeal diseases (mild, moderate and severe dehydration).
7. Treatment of uncomplicated and severe malaria.
8. Treatment of respiratory diseases (mild to moderate respiratory syndromes and severe pneumonia).
9. Early detection and treatment of moderate to severe ear and throat infections and throat abscesses.
10. Screening and treatment of sickle cell disease.

3. Sexual and reproductive EHSP

The Small package includes:

1. Information, counselling and referral for family planning, infertility, gynaecological pathologies, gender-based violence (GBV) and the treatment of sexually transmitted infections (STIs).
2. Different methods of contraception (oral, injectable, implants, condoms, natural methods and female and male sterilization).
3. A minimum package of benefits in GBV situations: assessment, notification (forensic record), pregnancy testing, emergency contraception, tetanus vaccination, HIV testing and (ART) prophylaxis.

The Medium package includes:

1. Information, counselling and referral for family planning, infertility, gynaecological pathologies, gender-based violence (GBV) and the treatment of sexually transmitted infections (STIs).
2. Different methods of contraception (oral, injectable, implants, condoms, natural methods and female and male sterilization).
3. Clinical screening for breast and cervical cancer.
4. A medium benefit package in GBV situations: assessment, notification (forensic record), pregnancy testing, emergency contraception, tetanus vaccination, HIV testing and (ART) prophylaxis.

The Large package includes:

1. Information, counselling and referral for family planning, infertility, gynaecological pathologies, gender-based violence (GBV) and the treatment of sexually transmitted infections (STIs).
2. Different methods of contraception (oral, injectable, implants, condoms, natural methods and female and male sterilization).
3. Clinical screening for breast and cervical cancer.
4. A comprehensive benefit package in cases of GBV.
5. STI management: treatment of syphilis, gonorrhoea, chlamydia, trichomoniasis, pelvic inflammatory disease (PID) and urinary tract infections (UTI).

4. EHSP for persons with disabilities

The Small package includes:

1. Information, counselling, referral and (community-based) follow-up for the management of leprosy, chronic non-communicable diseases, eye care, oral and dental care, and mental health therapy.
2. Leprosy management: treatment (multi-drug therapy).
3. Diabetes management: routine and voluntary diabetes screening.
4. Management of hypertension and cardiovascular disease: systematic monitoring of blood pressure.
5. Chronic respiratory disease management: treatment of stable asthma.
6. Cancer management: early detection of prostate cancer.
7. Eye care: cataract treatment and medical treatment of glaucoma.
8. Oral and dental care: promotion and distribution of dental kits, dressings (temporary filling with eugenol), acute pain management (toothache), routine dental check-ups, dental cavity prophylaxis (fluoride gel), diagnosis and treatment of gingivitis and early detection and supportive treatment of tumours, growths, salivary gland pathologies.
9. Mental health: mental health education sessions, early detection of mental disorders and disturbances, support for cases of abuse and aggression, diagnosis and treatment of child developmental disorders, support for children with learning difficulties and management of epilepsy.

The Medium package includes:

1. Information, counselling, referral and (community-based) follow-up for the management of leprosy, chronic non-communicable diseases, eye care, oral and dental care, and mental health therapy.
2. Leprosy management: Treatment (multi-drug therapy).
3. Diabetes management: routine and voluntary screening and confirmatory diagnosis and treatment of diabetes.
4. Management of hypertension and cardiovascular disease: routine monitoring of blood pressure and treatment of patients with high blood pressure but low absolute risk of stroke/diabetes (< 20%).
5. Chronic respiratory disease management: treatment of stable and exacerbated asthma.
6. Cancer management: early detection of and routine screening for prostate cancer.

7. Eye care: cataract treatment, medical and surgical treatment of glaucoma, screening for and management of refractive errors, diabetic retinopathy and inflammation and infections of the eye (red eye) and minor trauma (superficial palpebral wounds, mild irritants).
8. Oral and dental care: promotion and distribution of dental kits, dressings (temporary filling with eugenol), acute pain management (toothache), routine dental check-ups, dental cavity prophylaxis (fluoride gel), diagnosis and treatment of gingivitis and early detection and supportive treatment of tumours, growths, salivary gland pathologies.
9. Mental health: mental health education sessions, early detection of mental disorders and disturbances, support for cases of abuse and aggression, diagnosis and treatment of child developmental disorders, support for children with learning difficulties, diagnosis and treatment of mild to moderate depression, and epilepsy management.

The Large package includes:

1. Information, counselling, referral and (community-based) follow-up for the management of leprosy, chronic non-communicable diseases, eye care, oral and dental care, and mental health therapy.
2. Leprosy management: treatment (multi-drug therapy).
3. Diabetes management: routine and voluntary screening and confirmatory diagnosis and treatment of diabetes complications.
4. Management of hypertension and cardiovascular disease: routine monitoring of blood pressure and treatment of patients with high blood pressure but low absolute risk of stroke/diabetes (< 20%).
5. Chronic respiratory disease management: treatment of stable and exacerbated asthma and management of treatment failures and complications.
6. Cancer management: early detection of and routine clinical screening for prostate cancer in routine urological consultation.
7. Eye care: cataract treatment, medical and surgical treatment of glaucoma, screening for and management of refractive errors, diabetic retinopathy and inflammation and infections of the eye (red eye) and minor trauma (superficial palpebral wounds, mild irritants).
8. Oral and dental care: promotion and distribution of dental kits, dressings (temporary filling with eugenol), acute pain management (toothache), reduction of temporomandibular dislocation, alveolar and mandibular fractures, restoration or extraction of fractured teeth following trauma, routine dental examination, dental cavity prophylaxis (fluoride gel), conservative cavity treatment/tooth restoration, tooth extraction, diagnosis and treatment of gingivitis, treatment of periodontitis (including management of complications), and early detection, supportive treatment and biopsy for confirmatory diagnosis, surgical removal/treatment of tumours, growths, salivary gland pathologies.
9. Mental health: mental health education sessions, early detection of mental disorders and problems, support for cases of abuse and aggression, diagnosis and treatment of child developmental disorders, support for children with learning difficulties, diagnosis and treatment of mild, moderate or severe depression, diagnosis and treatment of psychoses (in particular persecutory delusions) and epilepsy management.

5. EHSP for persons living with HIV/AIDS

Only one package is proposed for the EHSP for persons living with HIV since core HIV management benefits are already funded and exempt from payment. The Large package includes:

1. Information, counselling and guidance for the management of the HIV infection and nutritional monitoring of persons living with HIV.

2. Voluntary counselling and testing (VCT).
3. Prevention of mother-to-child transmission (PMTCT).²⁵
4. Management of children under the age of five living with HIV: cotrimoxazole prophylaxis, first-, second- and third-line paediatric ART.
5. Management of adults living with HIV: first-, second- and third-line ART.
6. Collaborative HIV/AIDS and tuberculosis (TB) interventions: Screening for HIV + cases for TB and HIV-TB co-infected patients who have received both antiretroviral (ARV) and TB treatment.
7. Management of HIV/AIDS-related opportunistic infections.
8. Community-based follow-up of persons living with HIV.

6. Older persons' EHSP

The Small package includes:

1. Information, counselling and referral, and (community-based) case follow-up for chronic non-communicable diseases, eye care, oral and dental care, mental health and leprosy management.
2. Routine and voluntary diabetes screening.
3. Systematic monitoring of blood pressure (hypertension and cardiovascular diseases).
4. Treatment of stable asthma (chronic respiratory diseases).
5. Early detection of prostate cancer (cancers).
6. Cataract treatment and medical treatment of glaucoma (eye care).
7. Dressings (temporary filling with eugenol), acute pain management (toothache), routine dental check-ups, dental cavity prophylaxis (fluoride gel), diagnosis and treatment of gingivitis and early detection and supportive treatment of tumours, growths, salivary gland pathologies.
8. Mental health education sessions, early detection of mental disorders and problems, support for cases of abuse and aggression, and epilepsy management (mental health).
9. Treatment (multi-drug therapy) (leprosy management).

The Medium package includes:

1. Information, counselling and referral, and (community-based) case follow-up for chronic non-communicable diseases, eye care, oral and dental care, mental health and leprosy management.
2. Routine and voluntary screening and confirmatory diagnosis and treatment of diabetes.
3. Routine monitoring of blood pressure and treatment of patients with high blood pressure but low absolute risk of stroke/diabetes (< 20) (hypertension and cardiovascular disease).
4. Treatment of stable and exacerbated asthma (chronic respiratory diseases).
5. Early detection of and routine screening for prostate cancer (cancers).
6. Cataract treatment, medical and surgical treatment of glaucoma, screening for and management of refractive errors, diabetic retinopathy and inflammation and infections of the eye (red eye) and minor trauma (superficial palpebral wounds, mild irritants) (eye care).
7. Dressing (temporary filling with eugenol), acute pain management (toothache), reduction of temporomandibular dislocation, alveolar and mandibular fractures, routine dental check-ups, dental cavity prophylaxis (fluoride gel), conservative cavity treatment / tooth restoration, diagnosis and treatment of gingivitis, and early detection, supportive treatment and biopsy for confirmatory diagnosis of tumours, growths, salivary gland pathologies (oral and dental care).

²⁵ Ibid.

8. Mental health education sessions, early detection of mental disorders and problems, support for cases of abuse and aggression, diagnosis and treatment of mild to moderate depression, and epilepsy management (mental health).
9. Treatment (multi-drug therapy) (leprosy management).

The Large package includes:

1. Information, counselling and referral, and (community-based) case follow-up for chronic non-communicable diseases, eye care, oral and dental care, mental health and leprosy management.
2. Routine and voluntary screening and confirmatory diagnosis and treatment of diabetes complications.
3. Routine monitoring of blood pressure and treatment of patients with high blood pressure but low absolute risk of stroke/diabetes (< 20%) (hypertension and cardiovascular disease).
4. Treatment of stable and exacerbated asthma and management of treatment failures and complications (chronic respiratory diseases).
5. Early detection of and routine clinical screening for prostate cancer in routine urological consultations.
6. Cataract treatment, medical and surgical treatment of glaucoma, screening for and management of diabetic retinopathy and inflammation and infections of the eye (red eye) and minor trauma (superficial palpebral wounds, mild irritants) (eye care).
7. Dressings (temporary filling with eugenol), acute pain management (toothache), reduction of temporomandibular dislocation, alveolar and mandibular fractures, restoration or extraction of fractured teeth following trauma, routine dental check-ups, dental cavity prophylaxis (fluoride gel), conservative cavity treatment/tooth restoration, tooth extraction, diagnosis and treatment of gingivitis, treatment of periodontitis (including management of complications), and early detection, supportive treatment and biopsy for confirmatory diagnosis and surgical removal/treatment of tumours, growths, salivary gland pathologies (oral and dental care).
8. Mental health education sessions, early detection of mental disorders and problems, support for cases of abuse and aggression, diagnosis and treatment of mild, moderate or severe depression, diagnosis and treatment of psychoses (in particular persecutory delusions) and epilepsy management (mental health).
9. Treatment (multi-drug therapy) (leprosy management).

III. Estimates of the cost of graduation programmes

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A. Methodology for estimating the cost of graduation programmes

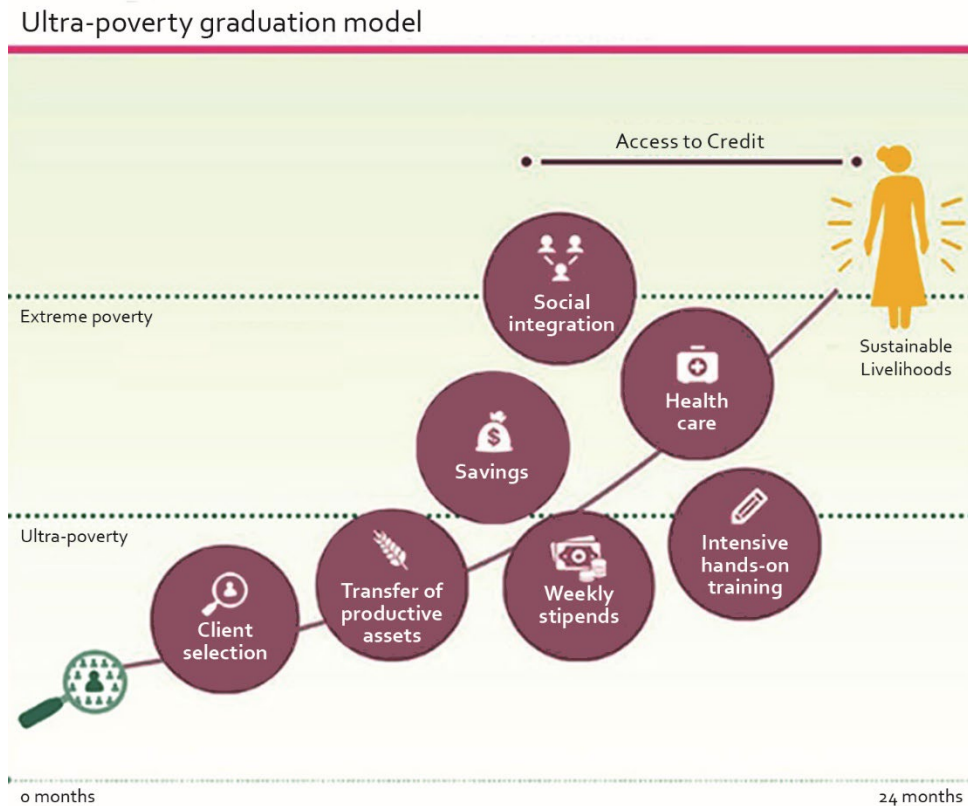
The National Policy for Social Protection and Promotion (PNPPS) document in strategic Axis 2 (Work, Employment and Employability) considers graduation, or progression, programmes as one of the mechanisms to reduce the incidence of poverty in households with the capacity to work (see Ministry of Social Affairs and Labour, 2020, table 11, p.66). What do these programmes involve?

The graduation approach focuses on helping the poorest and most vulnerable households develop sustainable livelihoods, increase incomes, and move out of extreme poverty. It consists of a carefully sequenced, multisectoral intervention comprising social assistance to ensure basic consumption, skills training, seed capital, and employment opportunities to jump-start an economic activity, financial education and access to savings, and mentoring to build confidence and reinforce skills. The interventions are time bound (generally 24 to 26 months) to preclude long-term dependence. (De Montesquiou and McKee, 2016, p.1.).

This approach—reducing poverty through **graduation programmes** (see diagrams 6 and 7)—has its origins in the Bangladesh-based organization Building Resources Across Communities (BRAC). BRAC launched its first graduation programme in 2002, targeting people in ultrapoverty (a subcategory of the extremely poor), who generally lack access to the most basic social protection services. Instead of using a piecemeal approach that addresses only one need of **ultrapoor households** (such as consumption support) while disregarding other equally important needs, the

main idea of such programmes is to use a **holistic approach** offering a combination of consumption support, access to certain assets, income-generating training programmes for households, and a savings programme to help them absorb future crises.

Diagram 6
Graduation model: evolution over time

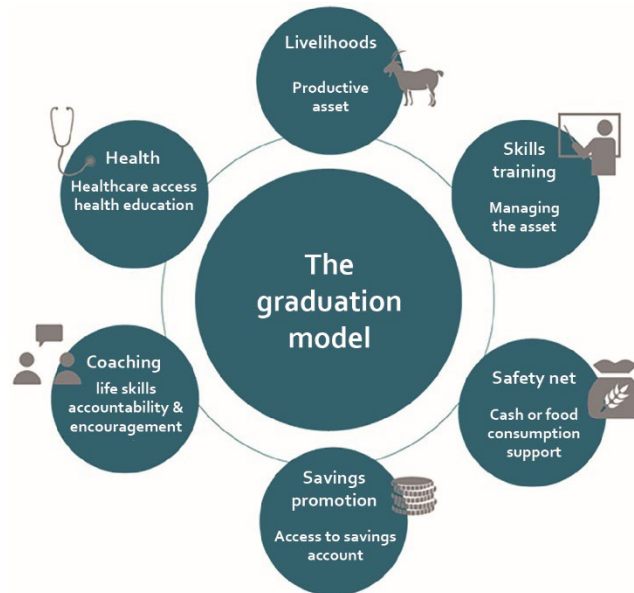


Source: The Borgen Project, "Brac Graduation Model: Success in Fight against Poverty", 2015 [online] <https://borgenproject.org/brac-graduation-model-success-in-fight-against-poverty/>.

Ultrapoor households are "confronted by a multitude of interconnected and cyclical problems. They have little or no land or productive assets and simultaneously struggle to cope with food shortages, poor health, social stigma, and a lack of basic services like clean water and sanitation. They are mostly excluded from social services and healthcare, live in climate vulnerable remote areas disconnected from markets, and are often unable to work due to prolonged illnesses or disability in the family." (BRAC, 2020, p. 36) "Conventional development programmes have not been able to cope with these complex, interrelated needs" (Mahbub, 2018).²⁶

²⁶ See BRAC (2020).

Diagram 7
Components of the graduation model mechanisms



Source: Innovations for Poverty Action (IPA), "The Ultra-Poor Graduation Approach. Case Studies" [online] <https://www.poverty-action.org/impact/ultra-poor-graduation-model>.

Following the success of the BRAC programme, more and more graduation programmes have sprung up around the world,²⁷ including in Haiti where the non-profit organization Fondation Kole Zepòl (Fonkoze) launched the Chimen Lavi Miyò (CLM) programme in 2007.²⁸ Given the high costs and intensive start-up effort required for these programmes, the majority of graduation programmes, as in the examples reported in annex III.A1, are small-scale and targeted to hundreds of households. In the case of CLM, given its limited resources, 8,029 families (about 40,000 people) were covered between 2007 and 2018, and 1,000 households were enrolled in 2020 in southeast Haiti. Larger-scale implementation should be considered for graduation programmes in PNPPS, which could produce some economies of scale, for example in terms of administrative costs.

In order to propose a costing of graduation programmes in Haiti, the CLM programme will serve as a primary reference. It is undoubtedly one of the most robust programmes of its kind, and offers relatively extensive documentation of its interventions. Other international experiences will also be taken into account. The Poverty Action Lab,²⁹ for example, proposes an assessment of the impact and cost-effectiveness of graduation programmes in six countries using a panel approach. Another is the experience examined in the budget exercise conducted by the Partnership for Economic Inclusion (De Montesquiou, Sheldon and Hashemi, 2018).³⁰

Some of the assumptions and scenarios underlying the estimation of graduation programme costs are fully consistent with those already reported in Tromben, Cecchini and Gilbert (2020) and in the methodology section of this paper and will therefore not be repeated here in detail, but simply stated below. They are the assumptions and scenarios relating to: (i) demographic projections for the 2020–2030 period; (ii) the composition of households; (iii) macroeconomic projections for the 2020–2030 period; and (iv) scenarios for the implementation of PNPPS over the

²⁷ See BRAC (2016).

²⁸ Annex III.A1 provides examples of graduation programmes in different countries.

²⁹ See Banerjee and others (2015).

³⁰ See Partnership for Economic Inclusion [online] <https://socialprotection.org/connect/stakeholders/partnership-economic-inclusion-pei>.

same period and covering the target populations. During the “pilot” phase, only 5% of the target population would be covered; this would increase to 10% the following year, and so on, until 100% of the target population is covered in 2030, keeping in mind that each year the target population varies in relation to demographic projections. Also to be considered—in the medium and long term—will be Haiti’s own progress or setbacks in the fight against the determinants of poverty.

For graduation programmes, specific assumptions must be made. These will depend not only on the choice of programmes, but also on the target population and its evolution, as well as on the structure and costs of these programmes, which together will ultimately allow an estimate of the costs of graduation programmes under the Policy. Those elements will be looked at in that order in the exercise presented below.

B. Target population: severe multidimensional poverty and the ultrapoor

The first step is to establish the **target population**. One fundamental tool for this purpose are surveys that capture the income or living conditions of households in Haiti considered to be experiencing income poverty (see Post-earthquake Living Conditions Survey (ECVMAS) 2012) or multidimensional poverty (see Mortality, Morbidity and Utilization Survey (EMMUS-VI) 2016–2017). As noted above, graduation programmes generally target ultrapoor households as their target population; however, there is no clear definition or standard measure of that population group.³¹ BRAC holds that the operational definition of ultrapoverly is highly dependent on the local context. For example, the ultrapoor in Peru may not be food insecure but suffer from geographic isolation that prevents them from accessing medical care, while in Haiti food insecurity is a major problem for the ultrapoor.

In this costing exercise, given the sources of information available, a methodological choice is necessary. Either one takes as a proxy for the ultrapoor those individuals living in **severe multidimensional poverty** (MPI, $k > 0.5$)³² already identified in the estimates of the latest Mortality, Morbidity and Service Utilization Survey (EMMUS-VI) and who in 2016–2017 made up about 18.5% of the population (more than 2 million people); or one sets a more stringent criterion for the deprivation threshold of individuals considered to be ultrapoor, i.e. MPI, $k > 0.6$.³³ This second approach—namely, a more stringent deprivation criterion (MPI, $k > 0.6$)—was the one finally chosen.³⁴ Thus calculated, **the incidence of ultrapoverly is 9.6% among** the total population in 2016–2017: about 1 million people or 216,000 households if we assume an average of five persons per family.³⁵ An even more limited incidence of ultrapoverly could be defined by considering only such households found in rural areas.

Once this decision is made, it remains to define the assumptions concerning the trajectory (evolution) of the incidence of ultrapoverly that will be applied to projections for the years spanning the 2020–2030 period. One option is to consider that incidence as unchanged in subsequent years. However, we can reasonably suppose that the impact of public policies over the 10-year period will lead to a progressive decline in the incidence of ultrapoverly, barring solid arguments to the contrary, in the case of Haiti or elsewhere.

³¹ Tromben, Cecchini and Gilbert (2020, table 1, p. 30) report that from an operational perspective, the following criteria are used to identify ultrapoor populations: food insecurity, productive assets, savings, access to health care, education and social isolation status (Dharmadasa and others, 2016).

³² See the cash transfer costing paper by Tromben, Cecchini and Gilbert (2020).

³³ See Greeley (2019, table 1, p. 2) who notes in box 1, page 2, “We define ultra-poverty as having an MPI score of 60 per cent or higher”. This new scenario was calculated directly from the EMMUS-VI database.

³⁴ It should be noted that FONKOZE uses its own criteria grid and not the EMMUS data, as the latter only cover representative samples at the national or *departmental* level, not local.

³⁵ Estimates reported by Fonkoze at the national level indicate 100,000 ultrapoor households, based on a poverty scorecard methodology. For indices of the Poverty Probability Index type, also refer to [online]<https://www.povertyindex.org/>.

In their review of the impact of the CLM programme in Haiti, Huda and Simanowitz (2009) found that 20% of recipients were able to move out of extreme poverty (income of less than US\$ 1 per day) and 10% out of poverty (income of more than US\$ 2 per day). However, the authors point out that the actual goal of the CLM programme—then in its initial stages—was not only to reduce poverty but also to involve people in extreme poverty in microcredit programmes that would enable further progress. It should be noted, however—based on international experiences in this area—that the ultrapoor, once “graduated”, do not necessarily become clients of microfinance institutions (MFIs). In Haiti in particular, the CLM programme is aimed at supporting the creation of village savings and loan associations (VSLAs), especially in rural areas, as these could—all else being equal—afford the ultrapoor an alternative.

Serent (2017) establishes a benefit-cost ratio of 3.66 for CLM, as well as social benefits (positive externalities) in education and health. However, no subsequent research has been identified that specifically estimates the reduction in the incidence of multidimensional ultrapoverly as a result of the implementation of graduation programmes. At the international level, a recent publication by the World Bank (Andrews and others, 2021) examines both the conceptual and operational aspects in an exhaustive manner through the lens of several experiences.

These analyses are taken into account in this paper, which also (and especially, for the sake of methodological consistency) makes use of the poverty reduction hypotheses of the above-mentioned report by Tromben, Cecchini and Gilbert (2020)³⁶ in the graduation programme exercise. Applied herein to households in conditions of ultrapoverly ($k > 60\%$) that are targeted by the graduation programmes, these hypotheses posit a 4% yearly reduction in the incidence of severe multidimensional poverty over the 2020–2024 period, and 3% per year in 2025–2030) (see table 19 below).³⁷

Table 19
Haiti: change in the incidence of severe multidimensional poverty, 2006–2030
(Percentages)

Year	Severe multidimensional poverty ($k > 50\%$)		Ultrapoverly (severe multidimensional poverty with $k > 60\%$)	
	Incidence	Relative annual change	Incidence	Relative annual change
2006	32.3		18.2	
2012	24.7	-5.4	11.2	-6.4
2016–2017	18.5	-4.4	9.6	-3.6
2018–2024		-4.0		-4.0
2025–2030		-3.0		-3.0

Source: Prepared by the authors, on the basis of S. Alkire, J. Mr. Roche and A. Vaz, “Changes over time in multidimensional poverty: methodology and results for 34 countries”, *World Development*, vol. 94, Amsterdam, Elsevier, 2017; and S. Alkire and others, “Changes over time in the global multidimensional poverty index: a ten country study”, *OPHI MPI Methodological Note*, No. 48, Oxford Poverty and Human Development Initiative (OPHI), 2019.

³⁶ Based on the results of Alkire and others (2019) and Alkire, Roche and Vaz (2017), who estimated for Haiti an annual variation in the number of people living in multidimensional poverty of -2.4% between 2006 and 2012, and -2.3% between 2012 and 2016–2017.

³⁷ An even smaller target population of the ultrapoor could possibly be defined, considering not all households in such conditions, but only those headed by women (43% according to EMMUS-VI) whose school-age children do not attend school, that being the population group targeted in Fonkoze’s interventions through its CLM programme. See Fonkoze (n/d).

C. Structure and costs of graduation programmes

We use the Fonkoze CLM programme—the structure and costs of its mechanisms—as our reference in estimating the cost of graduation programmes on a national scale in. The costs of the CLM programme are structured as follows: **launch and start-up costs (2.7%)**, **direct costs (49.4%)**, **ancillary costs (18.8%)** and **indirect costs (29.1%)**. Start-up costs are for preliminary surveys and household selection (targeting); the duration of these activities—carried out before the actual launch of the programme—is not included in the 18-month implementation period, but their cost is estimated. Direct costs cover the economic assets (poultry, goats, etc.) and direct support provided to households. Ancillary costs include expenditure on health and other social development activities, while indirect costs are for office overhead and administrative costs.

However, other similar programs outside Haiti are also useful in calibrating the assumptions that will ultimately be made. For example, Banerjee and others (2015) divide costs into three categories: direct transfers (cost of assets and food supply), total supervision costs (salaries of the implementing organization’s staff, equipment, training, travel), and start-up costs (see annex III.A1 for an excerpt from Banerjee and others, *op. cit.*). Asset transfer is usually one of the most expensive components of these programmes. For the six countries under review (Ethiopia, Ghana, Honduras, India, Pakistan and Peru), the assets are reported to cost between US\$ 437 and US\$ 1,228 per household at purchasing power parity (PPP). This amount is based on the price of four to eight goats in local markets. As for transfers to support household consumption at the start of the programme, the average for the six countries in the study was the monetary equivalent of 2,402 to 5,142 calories or about one kilo of rice per day per household at local prices.

Furthermore, the Partnership for Economic Inclusion (2018) study suggests including the following costs in the budgets of such programmes:³⁸

- Programme design process and field visits prior to implementation.
- Targeting—the process of identifying recipients.
- Consumption support.
- Savings programme—activities to establish relationships between households and financial institutions.
- Asset transfers.
- Training and support.
- Human resources/administration.

According to data provided by a Fonkoze official during an interview conducted by ECLAC officers in December 2019, the pilot phase of the CLM programme cost approximately US\$ 1,933 per recipient and subsequently an average of US\$ 1,650 for the 18-month intervention period, or US\$ 92 per household per month. Approximately one-third of the monthly amount takes the form of direct cash transfers (US\$ 30). These costs are similar to those reported by Serent (2017): US\$ 1,492 per participant (2009), adjusted for inflation in the local currency (2015).

³⁸ Chapter 6 of the report by Andrews and others (2021) addresses several aspects of this subject in detail, in particular the recent creation (2020) of the Quick Costing Tool by the Partnership for Economic Inclusion (PEI), which allows a more comprehensive approach. The study also focuses on the complexity and difficulties inherent in the forms of differentiation and arbitration to consider when including (or excluding) certain items as “administrative” or “direct” costs.

It is often reported that the pilot phase or first years of the implementation of programmes of this nature incur significantly higher administrative (indirect) costs. On that basis, we project higher indirect costs in the first year in our costing scenarios of a public graduation model, the expectation being that it would fall by 20% thereafter.

The estimate was based on the amounts (in unadjusted dollars)³⁹ reported in the CLM programme documentation for an average length of 18 months. The costs are divided into four categories as follows: (i) start-up costs, (ii) direct costs, (iii) indirect expenses (supervision) and (iv) other indirect expenses. As already mentioned, the start-up costs cover a preliminary survey and the selection of households. Direct costs cover the economic assets⁴⁰ (poultry, goats), direct support and other assets distributed to households (under the heading of health and hygiene) such as cement, water filters, and so on. Indirect costs cover programme supervision and other indirect costs include management costs (overhead) and administrative costs for the main office in charge of the programme. Direct costs,⁴¹ cover certain assets such as poultry, goats and sheep, as well as the start-up capital for the commercial activities chosen by the CLM members (a one-time payment of US\$ 175). The CLM documentation did not stipulate the amount of any other assets, but we thought it appropriate to assume a value of US\$ 200.⁴² The direct costs category also includes weekly transfers (450 gourdes a week, for 6 months or 24 weeks, for a total of approximately US\$ 138 at the March 2021 exchange rate). It is worth noting that in the early days of CLM such allowances were paid in kind (rice). The shift to cash transfers has proven to be much more in line with families' needs, allowing them to purchase food (or other non-food necessities) in local markets and acquire certain management practices such as saving.

Other indirect costs include supervision costs, administrative expenses, salaries, rent, and so on that were incurred during programme implementation and monitoring.⁴³

D. Target population scenarios

Below are summary tables of the two different scenarios for the target population.

The first scenario (table 20), in which targeted households are in a situation of severe multidimensional poverty (MPI, $k > 0.6$), predicts a gradual reduction of the number of households in a situation of ultrapovertry at a constant rate of 4.9%⁴⁴ per year over the entire 2020–2030 period. By the end of the period, in 2030, 5.8% of the population is expected to be ultrapoor.

The second scenario considered (table 21) —and the one finally chosen for the costing of graduation mechanisms— predicts a gradual and differentiated reduction in the incidence of households in ultrapovertry:⁴⁵ 4.0% per year over the 2020–2024 period and 3.0% per year over the 2025–2030 period. Such a scenario suggests that both the graduation measures analysed here, and other social protection and promotion measures —other cash transfer programmes, for example— generate positive effects.

³⁹ It should be remembered that direct transfers are made for a relatively short period (8 months) and paid in dollars. The same approach (without adjustment for inflation) was used for school canteens (see the methodology section of this report).

⁴⁰ Assets selected may vary, depending on the choices made by CLM members with the support of the mentors/case managers based on preferences, market availability and location.

⁴¹ With a lower weighting than observed internationally, however (see Banerjee and others, 2015).

⁴² These data are consistent with information recently provided by CLM staff (May 2021).

⁴³ See Fonkoze (n/d) figure (p. 4) and attached table (p. 6).

⁴⁴ This is the observed average annual rate of reduction in the incidence of multidimensional extreme poverty between 2005–2006 (32.3%) and 2016–2017 (18.5%).

⁴⁵ See table 1 below.

Other more or less flexible scenarios could be posited regarding: (i) the target population —for example, a broader coverage of households to include those not in a situation of ultrapoverly or, on the contrary, subgroups of these, (ii) quicker or slower programme implementation, implying an objective of reducing the incidence of ultrapoverly on a shorter or longer timeline. In these and other scenarios, the order of priorities established, and the resources (financial, of course, but also organizational) available for their implementation, will be key factors in the final results obtained.

Table 20
Scenario 1 target population, 2020–2030: ultrapoor households with a constant reduction in the incidence of poverty (4.9% per year)

	2020	2021	2022	2023	2024	2025
Total population (<i>in thousands</i>)	11 402	11 541	11 680	11 817	11 954	12 088
Incidence of SMP–ultrapoverly ^a (<i>in percentages</i>)	9.6	9.6	9.6	9.6	9.6	9.6
Population in SMP–ultrapoverly (<i>in thousands</i>)	1 094	1 108	1 121	1 134	1 147	1 160
Incidence with constant annual reduction (4.9% per year)	9.6	9.1	8.7	8.3	7.9	7.5
Population in SMP–ultrapoverly with annual reduction (<i>in thousands</i>)	1 094	1 053	1 014	975	938	902
Number of households (average 5 persons per household) (<i>in thousands</i>)	218 929	210 742	202 822	195 158	187 734	180 542
Coverage rate (<i>in percentages</i>)	5	10	20	30	40	50
Coverage (number of households) (<i>in thousands</i>)	10	21	40	58	75	90
	2026	2027	2028	2029	2030	
Total population (<i>in thousands</i>)	12 220	12 351	12 480	12 607	12 733	
Incidence of SMP–ultrapoverly ^a (<i>in percentages</i>)	9.6	9.6	9.6	9.6	9.6	
Population in SMP–ultrapoverly (<i>in thousands</i>)	1 173	1 185	1 198	1 210	1 222	
Incidence with constant annual reduction (4.9% per year)	7.1	6.8	6.4	6.1	5.8	
Population in SMP–ultrapoverly with annual reduction (<i>in thousands</i>)	867	834	801	770	739	
Number of households (average 5 persons per household) (<i>in thousands</i>)	173	166	160	154	147	
Coverage rate (<i>in percentages</i>)	60	70	80	90	100	
Coverage (number of households) (<i>in thousands</i>)	104	116	128	138	147	

Source: Prepared by the authors, on the basis of figures from the Oxford Poverty and Human Initiative (OPHI)–United Nations Development Programme (UNDP), Haitian Institute of Childhood/ICF, *Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI 2016-2017)*, Pétion-Ville, 2018, and own estimates.

^a SMP–ultrapoverly: severe multidimensional poverty, ultrapoverly ($k > 0.6$).

Table 21
Scenario 2 target population, 2020–2030: ultrapoor households with a gradual and differentiated reduction in the poverty rate (4% in 2020–2024 and 3% in 2025–2030)

	2020	2021	2022	2023	2024	2025
Total population (<i>in thousands</i>)	11 402	11 541	11 680	11 817	11 954	12 088
Incidence of SMP–ultrapoverly ^a (<i>in percentages</i>)	9.6	9.6	9.6	9.6	9.6	9.6
Population in SMP–ultrapoverly (<i>in thousands</i>)	1 094	1 108	1 121	1 134	1 147	1 160
Incidence with constant annual reduction (4.9% per year)	9.6	9.2	8.8	8.5	8.2	7.9
Population in SMP–ultrapoverly with annual reduction (<i>in thousands</i>)	1 094	1 063	1 033	1 003	974	956
Number of households (average 5 persons per household) (<i>in thousands</i>)	218	212	206	200	194	191
Coverage rate (<i>in percentages</i>)	5	10	20	30	40	50
Coverage (number of households) (<i>in thousands</i>)	10	21	41	60	77	95

	2026	2027	2028	2029	2030
Total population (<i>in thousands</i>)	12 220	12 351	12 480	12 607	12 733
Incidence of SMP–ultrapoverty ^a (<i>in percentages</i>)	9.6	9.6	9.6	9.6	9.6
Population in SMP–ultrapoverty (<i>in thousands</i>)	1 173	1 185	1 198	1 210	1 222
Incidence with constant annual reduction (4.9% per year)	7.7	7.4	7.2	7.0	6.8
Population in SMP–ultrapoverty with annual reduction (<i>in thousands</i>)	937	919	900	882	864
Number of households (average 5 persons per household) (<i>in thousands</i>)	187	183	180	176	172
Coverage rate (<i>in percentages</i>)	60	70	80	90	100
Coverage (number of households) (<i>in thousands</i>)	112	128	144	158	172

Source: Prepared by the authors, on the basis of figures from the Oxford Poverty and Human Initiative (OPHI)-United Nations Development Programme (UNDP), Haitian Institute of Childhood/ICF, *Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI 2016-2017)*, Pétion-Ville, 2018, and own estimates.

^a SMP–ultrapoverty: severe multidimensional poverty, ultrapoverty ($k > 0.6$).

E. Outcomes of the graduation model mechanisms

The table below (table 22) presents a summarized version of the cost of graduation mechanisms over the 2020–2030 period. The scenario used here corresponds to the target population presented in table 19, i.e. ultrapoor households (MPI, $k > 0.6$) with an assumption of a gradual and differentiated reduction in the poverty rate over the 2020–2030 period. Divided into the four main categories—start-up costs, direct costs, supervision and other indirect costs—costs per household amount to about US\$ 2,037 in the pilot year (2020) and US\$ 1,632 over the following years—a 20% reduction.

In this scenario, for all target households—from 10,946 (in 2020) to 172,964 (in 2030)—graduation programme interventions range from US\$ 22.3 million in the first pilot year (2020) to US\$ 282.3 million in 2030. Such interventions would represent about 0.26% and 2.4% of gross domestic product (GDP) respectively.

It should be noted that the ultrapoor households targeted by graduation models are generally **those able to work**. The exercise below includes no such breakdown or subcategorization, which would reduce the size of the target population and thus the budget ceilings. Though not presented here, such a distinction could be made if necessary, by **primarily taking into account indicators of working-age members** of households.

Table 22
Haiti: costing of graduation mechanisms for the target population of ultrapoor households
(Thousands of dollars)

Cost headings ^a	Cost structure by heading (dollars per recipient) ^b		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	Year 1	Year 2+											
	Coverage (number of households) ^b												
1. Start-up costs Initial survey, salaries and staff training	24	19	263	404	785	1 144	1 482	1 817	2 138	2 445	2 739	3 019	3 286
2. Direct costs													
<i>Cost of assets</i> International: 4–8 goats at local prices; Haiti: poultry, goats etc.	175	175	1 916	3 723	7 234	10 539	13 646	16 732	19 689	22 519	25 225	27 807	30 269
<i>Cost of health and hygiene products</i>	200	200	2 189	4 255	8 267	12 045	15 595	19 122	22 502	25 736	28 828	31 779	34 593
<i>Food support</i> One kilo of rice per day, US\$ 5.50 per week, for 8 months	138	138	1 511	2 936	5 704	8 311	10 761	13 194	15 526	17 758	19 891	21 928	23 869
<i>Other direct costs:</i> staff salaries and training, travel, equipment, office rental	600	500	6 568	10 637	20 668	30 113	38 989	47 805	56 254	64 341	72 071	79 448	86 482
3. Supervision and (4.) other indirect costs	900	600	9 852	12 764	24 802	36 135	46 786	57 366	67 505	77 209	86 485	95 338	103 778
Total cost	2 037	1 632	22 298	34 719	67 460	98 288	127 258	156 035	183 614	210 010	235 238	259 320	282 277
Total cost (Percentage of GDP)			0.26	0.39	0.73	1.03	1.29	1.51	1.72	1.89	2.05	2.18	2.28

Source: Prepared by the authors, on the basis of figures from the Oxford Poverty and Human Initiative (OPHI)-United Nations Development Programme (UNDP), Mortality, Morbidity and Utilization Survey (EMMUS 2016–2017), the CLM-Fonkoze programme and own estimates.

^aHeadings and cost structure based on information reported by the CLM-Fonkoze programme. See Fonkoze (n/d).

^bNumber of new households added to the graduation programme each year.

F. Conclusions

The conceptual approach to graduation programmes implies a set of parallel and integrated mechanisms—health, education and credit—to afford households a medium- and long-term path out of ultrapovertry. The exercise presented here looks at the costing of only one (core) component of this scheme during the first stage of implementation (18 months): increased household consumption, asset transfers and mentoring, with the associated direct and indirect costs.

It should be emphasized too that graduation programmes are only one of many PNPPS initiatives implemented in response to the challenges of social protection and promotion, and an integrated management of these programmes would contribute in the medium term to breaking the intergenerational transmission of extreme poverty. In choosing and implementing these programmes, attention must be paid not only to the financial resources committed but also, and above all, to an array of prerequisites for their implementation. Unlike cash transfer programmes, the impact of which can be readily monitored and evaluated as they are centrally managed, graduation programmes require proximity to recipients. This includes continuous monitoring during implementation to continuously evaluate progress, with a view to ensuring programme success and the effective graduation of recipient households for their real empowerment, free from the constant pressure of survival.

As mentioned in relation to Haiti (Fonkoze-CLM) and other countries, programmes of this nature are relatively costly (estimated at approximately US\$ 1,600 per recipient family) and require long-term support mechanisms that mobilize human and financial resources. As with all mechanisms, scaling up and certain synergies with other social protection and promotion mechanisms (other than graduation) could reduce the cost of these programmes. As quantified in the present exercise, by 2030 this would amount to US\$ 282 million (2.4% of GDP). In comparative terms, and for the same year, this would be an amount similar to the universal coverage of three cash transfer mechanisms, namely payment exemption for preschools and elementary school on the one hand, and maternity benefits on the other.

Graduation programmes should be viewed as one of the promising initiatives of PNPPS, capable of federating and consolidating them and thereby increasing their overall effectiveness. This integrated approach confers graduation programmes their potential, though it must be kept in mind that to ensure their successful launch, expansion and scaling up,⁴⁶ all stakeholders (public authorities, private and social sectors, and the recipients themselves) must come to a consensus on an inclusive and rights-based approach and compromise as necessary on the prioritization of their implementation.

⁴⁶ See Andrews and others (2021, chapters 2 and 4) and the following remark: "Scaling up is the process by which a program shown to be effective on a small scale or under controlled conditions or both is expanded, replicated, and adapted into broader policy and programming. Scaling up is about quality of impact, scale, and sustainability, as well as processes of change and adaptation; the concept goes beyond a functional consideration of coverage" (Andrews and others, 2021, p.30).

Annex III.A1

International experiences with the graduation model

Based on Banerjee and others (2015), we present below the characteristics of graduation programmes in only two of the countries studied —Ethiopia and Honduras. These two experiences are selected to illustrate the extreme cases of an efficient cost-benefit ratio (Ethiopia) and a negative ratio (Honduras). The full study covers six countries, for which the comparative cost-benefit ratios of graduation programmes are summarized below in table III.A1.1.

(i) Ethiopia – Relief Society of Tigray (REST), 458 households.

Households benefiting from this programme must also be participants in a cash-for-work programme, with at least one family member able to work and no loans contracted by the household. The asset transfer value is US\$ 1,229.87 (PPP), or approximately 7.98 goats at local prices. For five days of work, they receive support in the form of 15 kg of wheat, 0.66 kg of chickpeas and 400 ml of oil, of a total value of about US\$ 25.99 (PPP). The programme covered 458 households and produced a cost-benefit ratio of 260%.

(ii) Honduras — PLAN International Honduras and Organización de Desarrollo Empresarial Feminino Social (ODEF), 800 households.

All households received an asset transfer worth 4,750 lempiras (US\$ 537 PPP). Most (83%) of the participants took poultry, 6% chose pigs and 5% fish. All participants received training in business management. Households received 1,920 lempira (US\$ 217 at 2014 PPP) in consumption support. This was a one-time transfer rather than a weekly or monthly one. After two years, overall and food consumption did not increase, and asset ownership decreased. This was mainly because a large proportion of the chickens died of disease. The programme's overall cost-benefit ratio was negative (-198%).⁴⁷

Table III.A1.1
Cost-benefit analysis of graduation programmes: a comparative table
(PPP 2014 dollars)

Headings	Ethiopia	Ghana	Honduras	India	Pakistan	Peru
1. Direct expenses	1 228	680	724	700	2 048	1 095
<i>Asset costs</i>	1 228	451	537	437	1 043	854
<i>Food support</i>	-	229	18	263	911	241
2. Total cost of supervision	1 900	2 832	1 633	407	-	3 358
<i>Salaries of operational staff</i>	347	1 994	801	297	-	2 477
<i>Equipment</i>	33	119	112	1	-	55
<i>Training</i>	850	44	121	19	-	111
<i>Travel costs</i>	174	293	210	17	-	55
<i>Other supervision costs</i>	496	382	388	73	-	660
3. Total direct costs (3 (= 1+2))	3 127	3 513	2 356	1 107	4 680	4 452
4. Indirect costs	464	1 159	313	150	470	507
<i>Start-up costs</i>	43	133	104	38	-	45
<i>Other indirect costs</i>	421	1 026	209	112	470	462
5. Total costs (3+4) ^a	3 591	4 672	2 670	1 257	5 150	4 960
6. Total costs (3+4) ^b	4 157	5 408	3 090	1 455	5 962	5 742
Exchange rate with PPP adjustment factor	3.41	2.19	1.9	3.52	4.44	1.84
Benefits (total)	10 805	7 175	-6 118	6 298	10 678	8 380
Cost-benefit ratio (<i>percentages</i>)	260	133	-198	433	179	146

Source: Prepared by the authors, on the basis of A. Banerjee and others, "A multifaceted program causes lasting progress for the very poor: evidence from six countries", *Science*, vol. 348, 2015 [online] <http://www.econ.yale.edu/~cr2/pdf/Science-2015-TUP.pdf>.

^a These costs are calculated as if they were all incurred immediately at the beginning of the year 0.

^b These costs are calculated as if they were inflated to year 3 at an annual discount rate of 5%.

⁴⁷ See Karlan and Thuysbaert (2015).

IV. Estimates of the cost of school canteens

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The school feeding mechanism is part of strategic axis 1 (children) of the National Policy on Social Protection and Promotion (PNPPS), and particularly challenge 2, which seeks to reduce absenteeism from school due to financial barriers and school dropout. School canteens are an effective way to promote school retention and prevent malnutrition among children in primary years 1 to 9. Moreover, if as proposed in the Policy these canteens succeed in integrating local products, while also pursuing social promotion oriented towards small businesses and farms, the programme could generate effects on the local economy and the budgets of families working in the agricultural sector.

A. The benefits of school feeding

The food and food security situation of Latin America and the Caribbean is particularly delicate. In 2019, about 48 million people were undernourished, which amounts to a prevalence rate of 7.4%. That figure increased by 9 million people between 2015 and 2019 and could increase significantly due to the health crisis caused by COVID-19. In the latest published assessment of the State of Food Security and Nutrition in the World it was estimated, without any consideration of the consequences of COVID-19, that that figure would increase to 9.5% in Latin America and the Caribbean by 2030. This is all the more worrying as food insecurity is increasing faster in Latin America and the Caribbean than in the rest of the world: by 8.8% between 2014 and 2019 (FAO and others, 2020).⁴⁸

⁴⁸ See FAO and others (2020, chapter 1.1).

In Haiti, the situation is even more serious and extreme. The prevalence of undernourishment in 2019 was 48.2%, the highest in the region.⁴⁹ In 2019, according to the National Emergency Food and Nutrition Security Survey (ENUSAN),⁵⁰ more than 50% of the Haitian population was in a situation of moderate or severe food insecurity.

Malnutrition will be made even more severe by the Covid-19 crisis. Some 4.4 million people were estimated to suffer from phase three food insecurity or above between March and June 2021 according to the IPC (Integrated Food Security Phase Classification),⁵¹ up from the 3.67 million identified for the period from October 2019 to February 2020 (WFP/FAO, 2020). Vulnerable households that were already food insecure are particularly at risk.

This is mainly because Haiti's economy, which suffers from structural problems (an underproductive agricultural sector, for example) and does not generate sufficient decent jobs, is characterized by a labour market with massive unemployment and endemic underemployment and informal work that cause poverty and malnutrition. Also very sensitive to external problems and crises, it is constantly reeling from extreme weather phenomena and natural disasters such as floods caused by heavy rainfall seasons, hurricanes and earthquakes, which have an impact on agriculture. The country is highly dependent on food imports from the United States and European Union countries—a situation that will be aggravated in 2020 by the economic and financial consequences of the pandemic.

Since the recognition of the human right to food, one of the major challenges of social protection and promotion policies has been the eradication of hunger and malnutrition, which still cause health problems and are an obstacle to economic and social development, with particularly high costs for children. Article 24 of the Convention on the Rights of the Child⁵² states that "States Parties shall pursue full implementation of this right and [...] combat disease and malnutrition" and specifies that this can be achieved "through the provision of adequate nutritious foods and clean drinking-water." Thus, school feeding programs are being implemented as a strategy to ensure that children have access to at least one full meal per day. They aim to ensure that children, and sometimes their families, receive nutritious food through schools or as a condition of school attendance.⁵³

Sustainable Development Goal 2: Zero Hunger of the United Nations Agenda 2030 aims to "end hunger, achieve food security and improved nutrition and promote sustainable agriculture". It follows that school feeding programmes too have an impact on national and local economic development and are thus among the strategies to combat not only food insecurity but also poverty (Bundy and others, 2009).

The many benefits of school feeding can be classified under four pillars (see figure 1): health and nutrition, education, agriculture and social protection (WFP, 2020). In terms of health and nutrition, this mechanism offers access to food and a means of reducing child malnutrition by managing the products, calories, and nutrients in the foods that are offered. As is shown in diagram 8, school feeding involves three institutional sectors: the public sector, the private sector and civil society. The coordinating role of the public sector is fundamental in all sectors and all four pillars: regulation and promotion in the agricultural pillar; provision of health services and public nutrition policies in the health and nutrition pillar; programmes and mechanisms in the social protection pillar; and coordination and implementation of school feeding programmes in the education pillar. A very interesting feature of this mechanism is its potential to integrate different stakeholders and sectors of society in an intersectoral

⁴⁹ Ibid.

⁵⁰ The National Emergency Food and Nutrition Security Survey gives a snapshot of the population of Haiti. It is based on 7,560 households, 4,410 of which are in rural areas and 3,150 in the Port-au-Prince metropolitan area. See ENUSAN (2019).

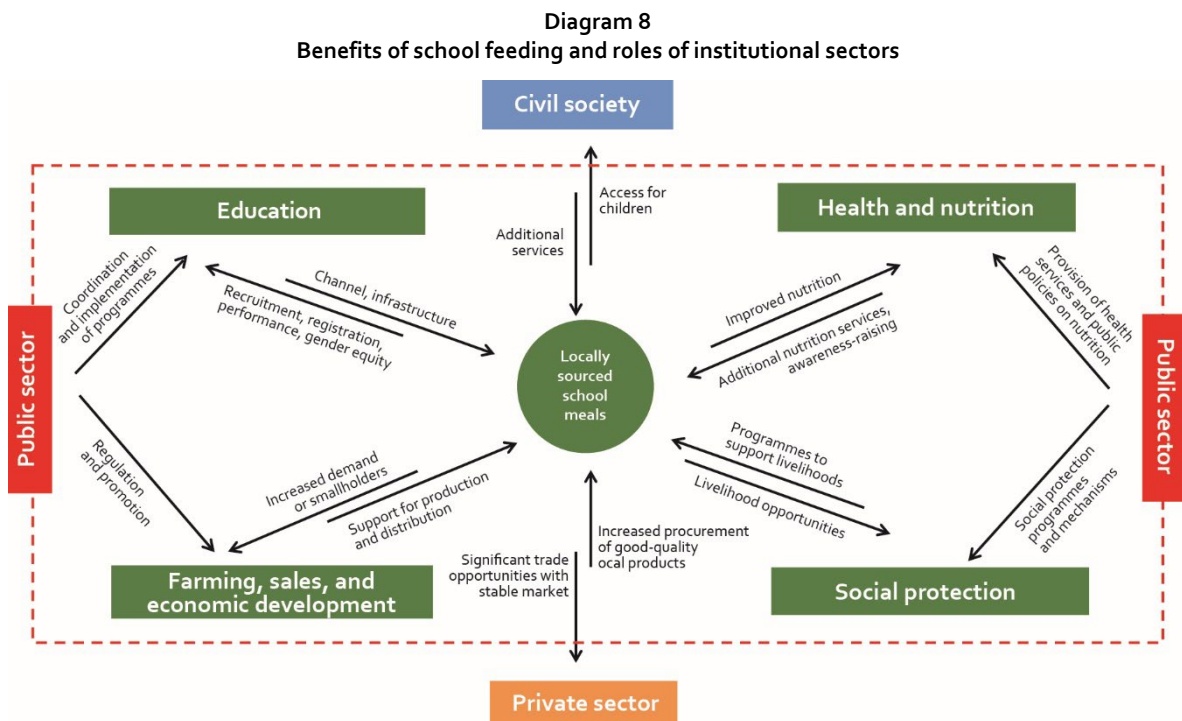
⁵¹ See IPC (n/d).

⁵² See OHCHR (n/d).

⁵³ Haiti's first school feeding programme, run by the World Food Programme (WFP), began in 1963. At that time, school feeding programmes focused exclusively on access to food via social assistance for poor communities in times of crisis (Bundy and others, 2018b).

endeavour along with the production chains necessary for the proper functioning of the programme: schools must have facilities to provide meals, teachers must encourage students to change their eating habits, and cooks, food, equipment and other products are needed to make the meals, all of which also requires a local market, and so on.

The aim is to prevent and combat micronutrient deficiencies, promote healthy eating habits throughout life and encourage healthier food choices.



Source: Prepared by the authors, on the basis of World Food Programme (WFP), *A Chance for Every Schoolchild Partnering to Scale up School Health and Nutrition for Human Capital. WFP School Feeding Strategy 2020 – 2030*, 2020 [online] <https://www.wfp.org/publications/chance-every-schoolchild-wfp-school-feeding-strategy-2020-2030>.

Studies of such mechanisms show that the provision of food packages and nutritional interventions benefit child development and contribute to human capacity building. Among the main findings of a series of World Bank reports are the impact of schooling on health outcomes and, more specifically, the effect of school feeding programmes (Bundy and others, 2018a). On the one hand, children attend school more regularly since they receive a meal there (which deters dropout, boosts enrolment, and enhances cognitive abilities); on the other, these programmes ensure that children are in good health, appropriately nourished and receive the nutrients essential to their physical and mental development (Bundy and others, 2018b). Finally, according to WHO,⁵⁴ a healthy diet helps protect children from malnutrition and non-communicable diseases and provides essential macronutrients and micronutrients. Therefore, it is essential to be able to pass on good eating habits to the youngest while teaching them about the benefits of a healthy lifestyle and the risks associated with overweight, obesity or malnutrition. Such habits are of particular importance for girls' development, as certain health conditions are more prevalent in girls and expose them to vulnerability and exclusion (Bundy and others, 2018b).

⁵⁴ See WHO (2020).

Several studies show the positive effects of feeding programmes on education. First, these mechanisms make school attractive. In countries such as India, Bangladesh, Uganda and Burkina Faso, according to reviews of various impact studies on this type of programme, school feeding increases child enrolment by an average of 9% (Bundy and others, 2018b). Second, a meta-analysis of data from about 62 low- and middle-income countries found that these programmes do have a positive effect on students, as they help with retention: children who receive a meal attend school four to seven more days per year than those who do not (Kristjansson and others, 2016). In addition, a systematic review of 52 low- and middle-income countries found that this type of intervention has positive impacts on school participation and learning. Children who are better nourished have better cognitive development and perform better on mathematics and language skills tests (Snilstveit and others, 2015). Finally, according to UNESCO (UNESCO and others, 2020), when feeding programmes involve the entire school community, there are positive effects, academically speaking, on the inclusion of girls and vulnerable children from poor families and those who are sick or malnourished or have dependencies or disabilities. Thus, integrated feeding interventions contribute to social cohesion and help reduce marginalization.

As regards agriculture and local markets, school programmes can help increase agricultural production among small- and medium-scale farmers and contribute to food system improvement (WFP, 2020), provided that the products used to prepare the meals are of domestic origin. Meals provided to children that are prepared primarily with local products will increase the demand both for agricultural products and for transport to bring them to the schools. Therefore, the intervention can influence the entire food supply chain, while creating jobs, improving product quality and generating more diversity. Women play a fundamental role in agriculture, especially in small-scale production and in rural areas (WFP, 2020; WFP/FAO, 2018).

Finally, feeding programmes provide a social safety net for communities and families. ENUSAN (2019)⁵⁵ notes that the poorest households spend 85% of their budget on food and must often resort to loans to successfully buy the food needed to feed the family unit. If children eat at school, this is an indirect monetary transfer to households, who are relieved of the cost of the meal. Moreover, as already mentioned, food-insecure households are even more vulnerable to economic problems and the consequences of crises in general, because their budget can only cover essential goods such as food. Feeding programmes can thus lighten household budgets. The proportion of food-based spending that could be reduced through the implementation of school canteens is equivalent to 10% of household income, allowing a redistribution of expenditure (WFP, 2019).

School feeding programmes can definitely have a positive impact on children's and families' nutrition, but also on children's education, the school community, the agricultural sector, the entire production chain, and therefore on the local economy and the country's development.⁵⁶ Importantly, there is a wide variety of ways to implement this type of intervention, such as offering only snacks or hot meals accompanied by snacks, or also adding food to eat at home and share with the family. The community's needs, the objectives to be achieved and, of course, the available budget must be taken into account when deciding how to proceed. In addition, the different types of interventions can be differentiated by the coordination and participation of the different stakeholders in the school community, local community and families.

⁵⁵ See FSC (2020).

⁵⁶ For a long time, the option of using local products was marginalized, for two reasons: first, these programmes were linked to food donations (surpluses from developed countries) and therefore did not support a national value chain approach. Second, the cost factor (short-term vision) systematically took precedence, with no consideration of the other medium- and long-term effects that strengthening local production may have yielded.

Consequently, this mechanism is needed in low-income countries that are food insecure, such as Haiti, where the National School Canteen Programme (PNCS) has been in place since 1997, financed mainly by international cooperation and the participation of numerous civil society organizations, international agencies and religious organizations. However, these interventions remain insufficient and require coordination with government institutions. Next, we present the current situation of the school canteens.

B. School canteens in Haiti

Schools have more presence and reach than any other institution in Haiti (Ministry of National Education and Vocational Training, 2016). The education sector is comprised of more than 15,000 schools and nearly 100,000 teachers, while the health sector operates with 966 functional institutions (Ministry of National Education and Vocational Training 2014b; Ministry of Public Health and Population, 2020)⁵⁷ Haiti has significant infrastructure throughout its territory that can be used to distribute food to schoolchildren.

Although the “school canteen” mechanism is proposed in PNPPS (Ministry of Social Affairs and Labour, 2020), school feeding programmes have existed in Haiti for a long time and a number of programmes coexist, supported by either NGOs, religious congregations and/or international funding. Haiti also has a national school feeding policy and strategy instituted by the Ministry of National Education and Vocational Training (Ministry of National Education and Vocational Training, 2016), focused on three main strategic areas of intervention:

- (i) Food services: the universal provision of quality food in schools (snacks and hot meals) with the participation of the private and voluntary sectors.
- (ii) Support for the local economy and local food production: the purchase of local food products and the involvement of the private and voluntary sectors revitalizes the local economy and contributes to a sustainable increase in food production by producers.⁵⁸
- (iii) National capacity development: institutional strengthening of the National School Canteen Programme (PNCS) in its important role in defining standards, coordinating and managing operator contracts, and involving local authorities and communities in decentralized implementation arrangements.

The school feeding programmes in Haiti identified in this study are as follows:

- The National School Canteen Programme (PNCS) funded by the World Food Programme (WFP): this programme provides centralized purchasing and distribution of food for hot meals; there is a management committee of people from participating schools which organizes community meal preparation.
- The school feeding programme of the Education For All (EFA) programme managed by the Ministry of National Education and Vocational Training: this programme provides centralized purchasing and distribution of food for hot meals (decentralized for snacks); there is a management committee tasked with oversight of participating schools; community meal preparation.

⁵⁷ There are more than 15 schools for each health centre.

⁵⁸ On this subject, one noteworthy experience is the “Let Agogo” project of the Haitian NGO Veterimed, which ran from 2007 to 2015/16 and involved the distribution at school canteens of a free glass of cow’s milk throughout the school year to disadvantaged school children. See [online]: <https://lenouvelliste.com/lenouvelliste/article/48987/Let-Agogo-dans-les-ecoles-nationales>.

- The pilot school feeding project run by the Ministry of Social Affairs and Labour, integrated into the Kore Lavi programme (terminated in 2019): this programme provided snacks and hot meals prepared outside school premises: decentralized purchasing of 100% local food; private sector food preparation and distribution; supervised by school principals and the community.
- The school feeding programme managed by WFP/Nippes: this programme provides hot meal and milk; purchasing and distribution of “regional”, 100% local food; management committee tasked with oversight of participating schools; community meal preparation.

Table 23 presents the unit costs (per student per day and per 1,000 calories) of the school canteen programmes in Haiti in 2016, along with the coverage (number of students) and the percentage of local products used in meal preparation. The cost per student ranged from US\$ 0.27 for the PNCS/WFP programme, which offered only 20% local products, to US\$ 1.33 for the Kore Lavi programme, which offered 100% local products.

Table 23
Haiti: unit cost of different school canteen programmes, 2016

	Cost per day (dollars)	Cost per 1 000 kcal (dollars)	Coverage (students)	Local products (percentages)
PNCS/WFP (Hot meals)	0.27	0.45	592 000	20
EFA (Meals and snacks)	0.58	0.48	140 000	23
MAST/Kore Lavi (Meals and snacks)	1.33	0.88	4 000	100
WFP/Nippes (Meals and milk)	1.26	1.75	3 500	100

Source: Food and Agriculture Organization of the United Nations (FAO)/Latin American Integration Association (LAIA)/Economic Commission for Latin America and the Caribbean (ECLAC), “Programme National des Cantines Scolaires”, Food and Nutrition Security Platform (FNS) [online] <https://web.archive.org/web/20170710223116/http://plataformacelac.org/en/programas/o/hti>.

The National School Canteen Programme (PNCS) is a Haitian school feeding programme created in July 1997. Over the course of the 2015–2016 school year, it is estimated that approximately 867,000 school-aged children received school meals. The current school feeding coverage in Haiti is 30% of basic education (primary and secondary) pupils. The Programme’s stated objective is to provide structural support in shaping school canteen initiatives into a sustainable intervention to strengthen the food security and nutritional status of its beneficiaries—school-age children. In the year of its creation, aid agencies provided the Programme with canteen services (at that time based exclusively on imported products) for 612,000 pupils. The initial project aimed to cover 1.3 million pupils enrolled in the three cycles of basic education. This project excluded “dry (food) rations” because of their perverse effects on local markets and national production.

The Haitian government then moved towards full ownership of the process and direct implementation of its actions. From that day to now, the Programme has directly managed food resources through a centralized warehouse where the logistics of supplying schools are handled.

Despite the importance of school feeding in national policies, the Programme is not truly institutionalized in government structures. A number of NGOs and religious congregations are involved in school feeding without the support of government institutions; they usually receive foreign financial support instead. These actors represent a significant amount of funding for the sector that is not accounted for.

Such is the case, for example, of the NGO “Bureau National de Nutrition et Développement” (BND), which is dedicated to the fight against hunger in Haiti. Its main activity is to support school canteens in the distribution of food aid, with the aim of reducing hunger in the short term and keeping the beneficiary schoolchildren in the classroom longer. BND acts as a liaison between the schools and the European Union, its main donor. According to the latest information published on their website, for the 2019–2020 school year, the EU/BND programme distributed 209,587 meals in 745 schools (IDB, 2020).

In close collaboration with the National School Canteen Programme (PNCS) and the World Food Programme (WFP), BND implements activities to distribute a snack made from local products: cassava with peanut butter. The support of these various international organizations and institutions will enable BND to reach approximately 18,500 pupils, each of whom will receive two 40-gram cassava slices spread with 20 grams of peanut butter, syrup or AK-100 (a maize porridge) each school day.

C. Methodology and scenarios

School canteens are a means of promoting school retention, preventing malnutrition among children enrolled in basic education (years 1 to 9), and addressing the challenge of reducing non-attendance due to financial barriers. To estimate the cost of implementing this mechanism, we must define several scenarios that consider different targeting and meal costs based on the experience of other countries and the literature on school feeding programmes. The estimate also takes into account the phase-in period starting in 2020 and ending in 2030, as presented in chapter 1 on estimation methodology.

1. The number of recipients and scenarios

We use information from the 2003 census and updates of population projections published by the Statistics Division to estimate the number of recipients.⁵⁹ The target population for the school canteen mechanism is estimated at 2,185,000 children between the ages of 6 and 14 in 2019 (equivalent to 19.4% of the population of Haiti). This age group corresponds to the three levels of elementary school: the first two levels (years 1 to 6) correspond to basic education (age 6–11), and the first three classes of the third cycle (from age 12 to 14).⁶⁰ The interventions carried out in this age group can have positive effects on long-term health and educational outcomes. In addition, an extension of the mechanism could be considered, to children attending kindergarten (preschool), with the idea that eating habits should be learned at an early age and that this period is fundamental for children’s future development (Schultz, Appleby and Drake, 2018). Such an extension would mean an increase of 753,000 children (see appendix IV.A4 for details of results that include this expanded age category).

However, an additional assumption must be kept in mind to arrive at an accurate estimate of the target population, since the school canteen mechanism is developed within schools and is therefore linked only to schoolchildren likely to receive the food. Using the EMMUS 2016–2017 household survey it is possible to tabulate and determine the proportion of children attending school during a given year and present the results for each *département*. Table 24 shows the net attendance rate at the primary level (84.1% nationally) and the net attendance rate for each age group (6–11 and 12–14). At the national level, 83.1% and 27.7% of children in each age group, respectively, (about 1.421 million children) attend school, leaving 764,000 children outside the feeding mechanism. However, since the mechanism seeks to provide quality food to children who attend school, without restriction, for purposes of estimating the cost of the mechanism we consider the gross attendance rate, regardless of the level (primary or secondary) and the official age of attendance. In other words, we consider that 92.5% of children aged 6–14 attend school.

⁵⁹ See United Nations (2019). Medium-term population projections are used here. See definitions of projection variants [online] <https://population.un.org/wpp/DefinitionOfProjectionVariants/>.

⁶⁰ See IBE (2006).

Table 24
Haiti: number of children aged 6–14, school attendance and multidimensional child poverty status by *département*
(Thousands and percentages)

Year	Number of children aged 6–14 (thousands)	Net attendance rate, primary level ^a (percentage)	Net attendance rate, by level ^a		Gross attendance rate ^b			Multidimensional poverty (percentage)	Severe multidimensional poverty (percentage)
			Primary (aged 6–11) (percentage)	Secondary (aged 12–14) (percentage)	Children aged 6–14 (percentage)	Children aged 6–11 (percentage)	Children aged 12–14 (percentage)		
	2019	2016–2017	2016–2017	2016–2017	2016–2017	2016–2017	2016–2017	2016–2017	2016–2017
National	2 185	84.1	83.1	27.7	92.5	91.8	93.0	47.1	22.9
Metropolitan area	365	90.1	90.1	49.0	95.4	95.2	95.7	17.5	4.8
Rest of West	357	79.7	78.4	28.4	92.0	90.9	94.8	51.4	27.7
Southeast	135	81.1	78.5	12.6	93.0	92.5	94.0	54.5	23.3
North	232	86.1	85.4	27.7	93.2	92.4	94.9	44.2	20.2
Northeast	88	87.9	87.2	23.9	93.1	92.1	95.5	47.3	21.8
Artibonite	340	82.1	81.3	21.4	92.1	91.6	93.3	55.2	27.7
Centre	203	82.1	81.2	20.4	89.2	89.3	89.2	59.8	33.3
South	161	79.9	77.9	21.4	89.3	88.4	91.7	51.9	27.3
Grande Anse	100	83.8	82.8	16.1	89.1	87.5	92.4	65.1	32.8
Northwest	132	87.4	86.6	27.3	93.6	93.2	94.5	53.1	23.9
Nippes	70	91.4	90.3	24.2	95.9	95.9	96.0	46.1	18.5

Source: Prepared by the authors, on the basis of medium-term demographic projections from the United Nations Population Division and from the Mortality, Morbidity and Utilization of Services Survey (EMMUS 2016–2017). The net school attendance rate (primary level) presented in this column corresponds to data from table 2.11 of the EMMUS VI report. The definition of the net attendance rate for primary school is the percentage of the population of official primary school age (6–11 years) who attend primary school.

^aNet attendance rate by level is the percentage of the population of official attendance age for the level (in this case 6–11 years) who are currently attending school at the corresponding level (in this case primary). The percentage corresponding to children aged 12–14 is calculated according to the number of children who go to secondary school and has not been restricted to the officially corresponding grades for these ages.

^bGross attendance rate is the percentage of the population attending school. In this case, it would be the number of children aged 6–14 who attend school as a percentage of all children aged 6–14.

Different target population scenarios can be devised on the basis of this information. These scenarios offer the possibility of concentrating available economic resources on assistance for the most vulnerable families and gradually reaching the entire population targeted by the mechanism. The proposed target population scenarios are as follows:

- Scenario 1 (universal coverage): all children who attend school between the ages of 6 and 14 are covered.⁶¹
- Scenario 2 (categorical targeting and multidimensional poverty): children aged 6–14 living in multidimensional poverty who attend school.
- Scenario 3 (categorical targeting and severe multidimensional poverty): children aged 6–14 living in severe multidimensional poverty who attend school.
- Scenario 4 (categorical and geographical targeting): children aged 6–14 who attend school and live in the *départements* of Centre, Grand'Anse and Nord-Ouest, selected because these are the *départements* best covered by SIMAST, the information system of the Ministry of Social Affairs and Labour, and where food insecurity and multidimensional poverty are widespread.
- Scenario 5 (categorical and geographical targeting / severe multidimensional poverty): children in the same *départements* as in scenario 4 but who are also living in severe multidimensional poverty.

It is necessary to specify some additional elements of these scenarios. Poverty is one of the factors that aggravate food insecurity, since families living in poverty lack the financial means to buy and access food. Accordingly, these are the households that should be prioritized in policies aimed at preventing malnutrition in school children. However, in the event that available resources are insufficient to meet this group's needs, geographical targeting presents a solution for phasing in this mechanism. This involves selecting certain *départements* that, on the one hand, have significant SIMAST coverage —affording the information needed to more precisely identify the target population— and, on the other hand, the poorest households (severe multidimensional poverty) as well as the highest incidence of malnutrition.⁶² According to the World Food Programme, this is all the more important as the classification of the phases of food insecurity in IPC, the Integrated Food Security Phase Classification of September 2020, estimates the number of people who were in food crisis at 4 million between August 2020 and February 2021, with a possible increase to 4.4 million from the period of March to June 2021 due to irregular rainfall, the persistent economic crisis, political instability, and the effects of Covid-19 restrictions. All of these have implications for local food production and supply.⁶³

Table 25 details the target population for each scenario, which makes it clear that the scenarios are in descending order, from universal coverage to those that employ targeting and cater for the most vulnerable children who have problems accessing food and food of good quality. The data presented in table 26 do take into account the assumption of phased implementation over time.

⁶¹ Some 8% of children are thought to be excluded from school canteens (due to non-attendance) and no PNPPS mechanism is in place to feed these children. Complementary mechanisms ought to be found for them, as the estimates presented here are only for students attending school.

⁶² See annex IV.A1 for a table giving the characteristics of each *département* included in the selection for geographic targeting.

⁶³ See WFP/FAO (2020).

Table 25
Haiti: target population of school canteens based on the five scenarios defined, 2020–2030
(Number of children)

	Scenario 1 Universal	Scenario 2 Multidimensional poverty	Scenario 3 Severe multidimensional poverty	Scenario 4 Geographical targeting ^a	Scenario 5 Geographical targeting and severe multidimensional poverty
2020	101 240	47 684	23 184	19 775	5 980
2021	202 953	95 591	46 476	39 643	11 988
2022	406 862	191 632	93 171	79 472	24 032
2023	611 532	288 032	140 041	119 450	36 121
2024	816 482	384 563	186 974	159 482	48 227
2025	1 020 924	480 855	233 791	199 416	60 303
2026	1 224 159	576 579	280 332	239 114	72 307
2027	1 426 920	672 079	326 765	278 719	84 284
2028	1 628 981	767 250	373 037	318 187	96 219
2029	1 830 051	861 954	419 082	357 462	108 095
2030	2 029 472	955 881	464 749	396 414	119 875

Source: Prepared by the authors.

^a Geographical targeting pertains to the following *départements*: Nord-Est; Grand-Anse and Nord-Ouest.

2. Scenarios taking into account the different costs of school meals

The cost structures of food programmes can vary considerably and involve different types of food, beverages and even different product origins, depending on the institution that manages the programme, the budget and the objectives. Most commonly, hot meals and snacks are provided, plus bottled milk or water. The costs also include kitchen implements, food transport and storage, and monitoring of implementation.

To estimate the costs of such a mechanism, we assume an average of 175 school days per year. That assumption is based on several sources (see table 26). First, the last five official school calendars published by the Ministry of Education indicate school years ranging between 176 and 194 days in length. Second, two costing exercises for school feeding programmes (by the Inter-American Development Bank and the World Bank) assume 140 and 150 school days in a school year. However, school attendance was interrupted by two events during the 2019–2020 school year: the October 2019 lockdown and COVID-19, beginning in March 2020.

Table 26
Haiti: number of school days per year according to official calendars
(Days per school year)

School calendars of the Ministry of Education and Vocational Training:	School days per year
2016–2017	186
2017–2018	194
2018–2019	192
2019–2020	189
2020–2021	176
IDB (2020)	140
World Bank (2007)	150
Medium	175

Source: Prepared by the authors, on the basis of data from the Ministry of National Education and Vocational Training of Haiti, the Inter-American Development Bank (IDB) and the World Bank.

Four different scenarios for school meal costs are presented below:

- (i) Scenario 1: A cost of US\$ 1.33 per day per child (Kore Lavi (CARE/Ministry of Social Affairs and Labour) for a hot meal and snacks made with 100% local products.⁶⁴
- (ii) Scenario 2: A cost of US\$ 0.84 per day per child (IDB, Bureau de Nutrition et développement (BND)) for a hot meal and snack made with between 30% and 55% local products.⁶⁵
- (iii) Scenario 3: A cost of US\$0.55 per day per child (WFP, equal to the average for 32 middle-income countries).⁶⁶
- (iv) Scenario 4: A cost of US\$0.36 per day per child (WFP, equal to the average for 28 low-income countries).⁶⁷

The scenarios depend on the products used to make the meals and their cost of production, the number of calories in the food and certain characteristics such as transport costs and the mode of food delivery. In addition to the different scenarios, the estimate assumes that the mechanism will be phased in (see chapter I).

D. Outcomes

Figures 16 and 17 show the results of costing the school canteen scheme for children aged 6–14 attending elementary school.

The cost of the school canteen mechanism for children aged 6–14 varies according to the scenarios and assumptions presented in the previous section (see figure 15). The first panel shows the cost when the amount is equivalent to US\$ 1.33 and 100% of the food products are of national origin. In 2030, the cost is expected to vary from 0.3% of GDP for level-5 coverage of the population (geographical targeting according to the incidence of severe multidimensional poverty) to 4.3% of GDP for universal coverage.

Similarly, panel B shows the cost of school canteens as presented by the Inter-American Development Bank (IDB), where the amount is equivalent to US\$ 0.84 per day per child and varies from 0.2% to 2.7% of GDP. Panel C, which corresponds to the average cost of school canteens in middle-income countries, varies from 0.1% to 1.8% of GDP. Finally, for the least generous amounts (panel D, corresponding to US\$ 0.36 per day per child), costs vary from 0.07% to 1.2% of GDP.

Figure 16 presents the same results in millions of dollars, following the same layout as the previous results; Panel A shows the highest school feeding cost for children aged 6–14 and Panel D shows the lowest cost, since it corresponds to low-income countries' average spending on school feeding programmes. In 2030, the cost is expected to vary from US\$ 27.9% of GDP for level-5 coverage of the population (geographical targeting according to the incidence of severe multidimensional poverty) to US\$ 472.4 for universal coverage. Similarly, for Panel B, the range is from US\$ 17.6 million to US\$ 298.3 million. For Panel C, which corresponds to the average expenditure of middle-income countries, it ranges from \$11.5 million to \$195.3 million.

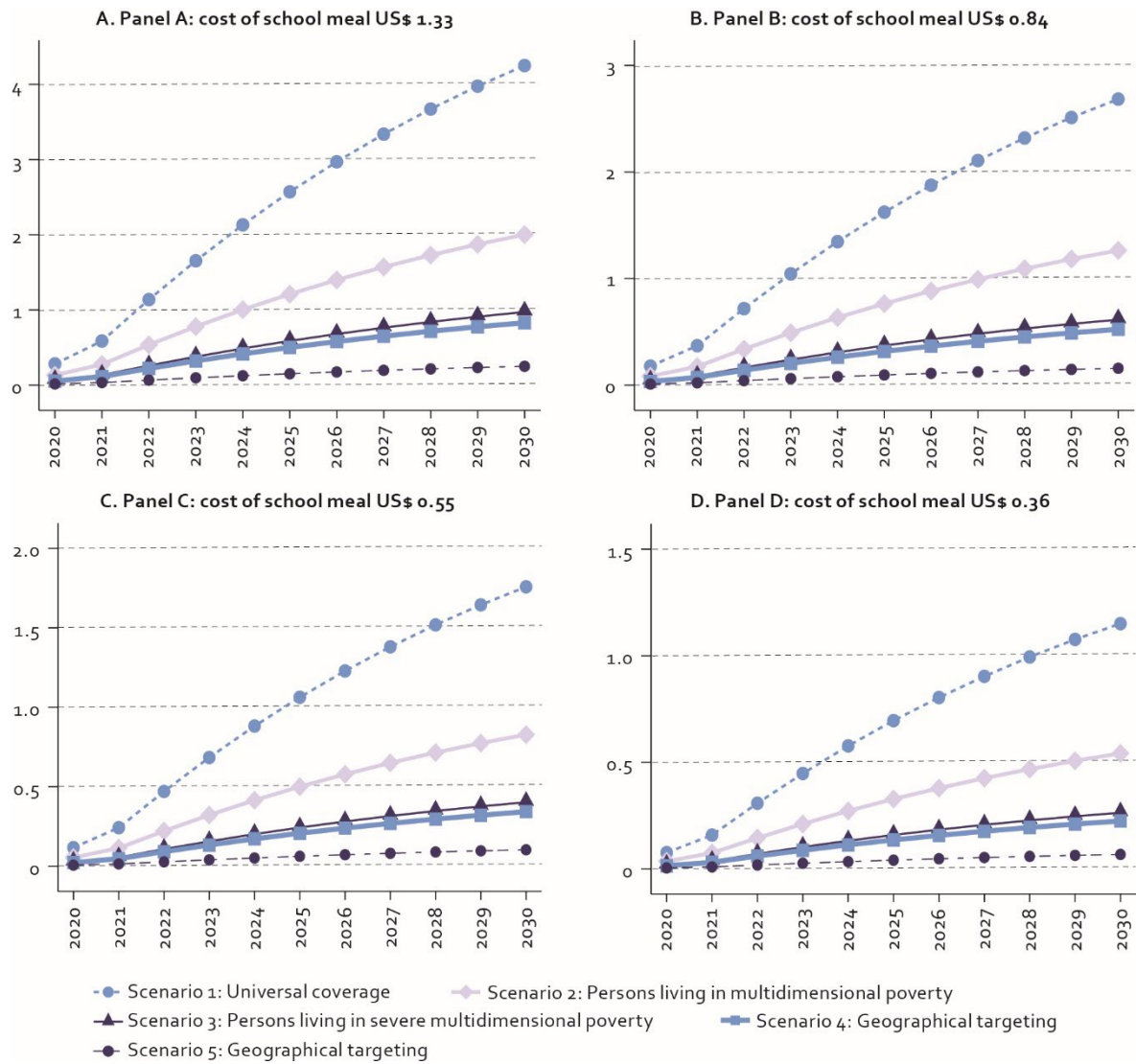
⁶⁴ See FAO/LAIA/ECLAC (n/d).

⁶⁵ See IDB (2020).

⁶⁶ See WFP (2020), Drake and others (2017) and Bundy and others (2018b).

⁶⁷ Ibid.

Figure 16
Haiti: cost of school canteens for children aged 6–14, 2020–2030
(Percentages of GDP)

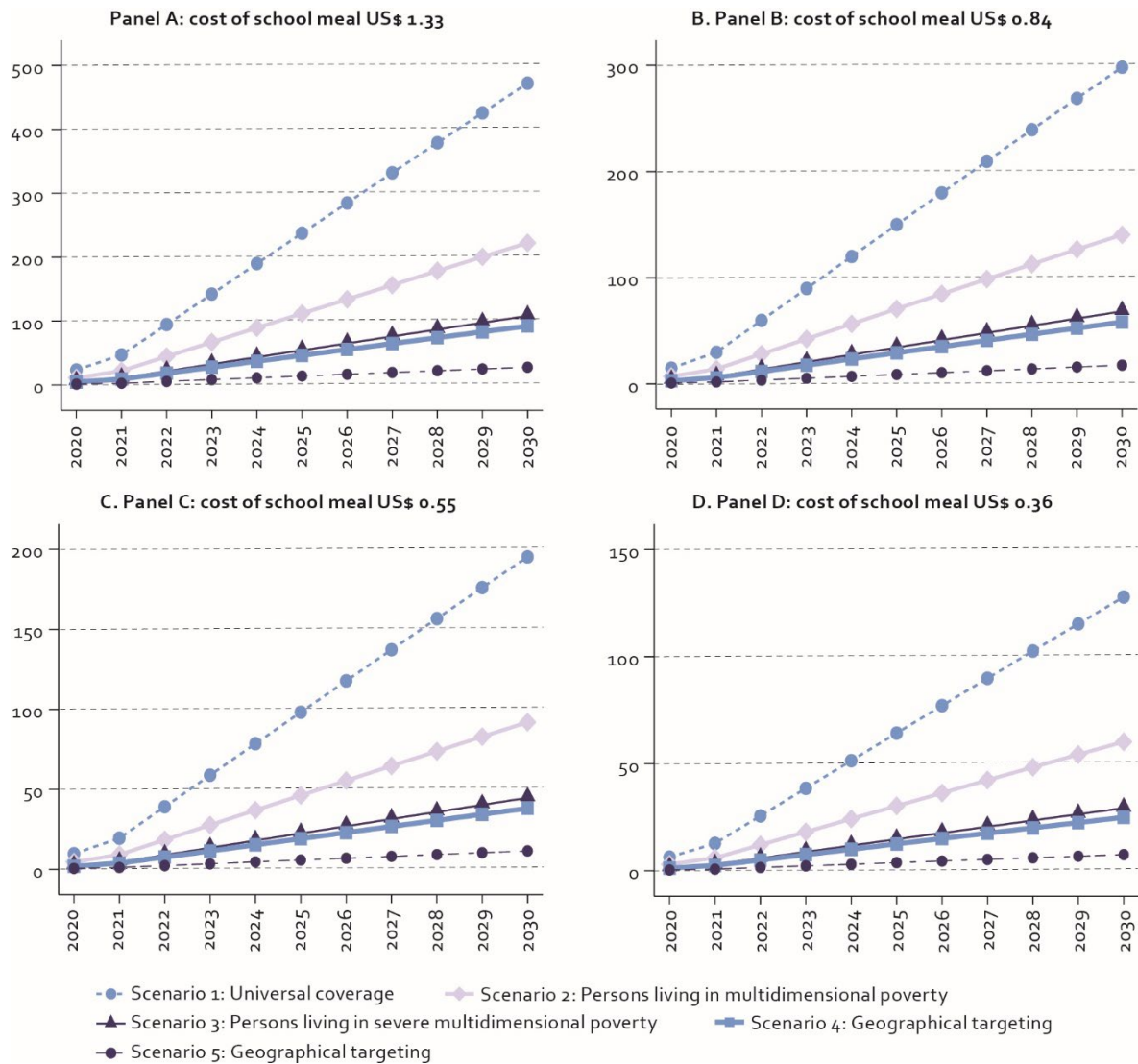


Source: Prepared by the authors.

Finally, for the least generous amounts (panel D), costs vary from US\$ 7.6 million to US\$ 127.9 million.⁶⁸

⁶⁸ See annex for tables of results of estimates for each scenario (in millions of dollars and as a percentage of GDP).

Figure 17
Haiti: cost of school canteens for children aged 6–14, 2020–2030
(Millions of dollars)



Source: Prepared by the authors.

E. Conclusion

Since the recognition of the human right to food, one of the major challenges of social protection and promotion policies has been the eradication of hunger and malnutrition, which are still a source of health problems and an obstacle to economic and social development, with particularly high costs for children. The school feeding mechanism of the National Policy on Social Protection and Promotion seeks to prevent and combat micronutrient deficiencies, promote lifelong healthy eating habits and encourage pupils to eat a varied diet. Although several programmes already exist in the country, they remain insufficient and require real coordination by governmental institutions in order to have lasting effect.

The results of the costing estimates of the school feeding mechanism for children aged 6–14 vary according to both the target population scenarios and the school meal cost scenarios. These scenarios are also based on a gradual implementation of the mechanism in order to try to alleviate the resulting fiscal pressure this entails, and keeping in mind that it is not the only mechanism able to respond to the challenges of social protection and promotion. In the first year, for example, meal costs range from US\$ 0.4 million (lowest cost and categorical, geographic targeting, in conditions of severe multidimensional poverty) to US\$ 23.6 million (highest cost and universal targeting). For 2030, and based solely on products of national origin, the cost is expected to vary from US\$ 27.9 million (0.3% of GDP) for coverage based on targeting that gives priority to children from 6–14 years old living in severe multidimensional poverty who attend school and live in the *départements* of Centre, Grand'Anse and Nord-Ouest, to US\$ 472.4 million (4.3% of GDP) for universal coverage.

The other scenarios present lower cost structures, corresponding to different types of food and beverages and even different product origins, as well as different population targeting. Thus, different strategies are possible depending on the financial resources available and taking into account the fact that this mechanism is not the only one called for by the Policy.

The implementation of such a mechanism is therefore an effective strategy to combat malnutrition and hunger in school children and in some cases their families. Furthermore, school feeding programmes confer other benefits, as access to at least one full meal can also help reduce absenteeism and dropout, improve children's health, and provide better social protection for poor families. It should also be noted that the school feeding programmes can also bring about positive outcomes for national economic development and the budgets of families working in the agricultural sector if the canteens can, as proposed in this chapter, incorporate local products and thus enable small businesses and farms to also benefit from social promotion policy.

Annex IV.A1

Selection of *départements* for the geographical targeting of school canteens

Table IV.A1.1 presents the different elements used to select the *départements* for the geographical targeting scenario.

Table IV.A1.1
Vulnerability in the Haitian population, by *département*
(Thousands and percentages)

	SIMAST coverage ^a	Incidence of severe multidimensional poverty ^b	School attendance ^c	Population ^d	Malnutrition ^d
		(Percentages of population)	(Percentages)	(Thousands)	(Percentages of children under 5)
1 Metropolitan area	None	3.3	95.4	2 320	11.7
2 Reste-Ouest	2 municipalities	23.0	92.0	1 812	16.0
3 Southeast	4 municipalities	18.5	93.0	665	5.0
4 Nord	None	16.8	93.2	1 216	10.0
5 Nord-Est	3 municipalities	16.5	93.1	410	12.0
6 Artibonite	4 municipalities	24.5	92.1	1 680	11.0
7 Centre	4 municipalities	30.9	89.2	845	25.0
8 Sud	2 municipalities	21.9	89.3	850	8.0
9 Grand'Anse	12 municipalities	29.4	89.1	508	9.0
10 Nord-Ouest	9 municipalities	20.2	93.6	591	11.0
11 Nippes	None	16.4	95.9	366	10.0

Source: Prepared by the authors.

^a Information obtained directly from SIMAST. Updated September 2020.

^b Authors' estimates, based on the methodology proposed in EMMUS VI (2016–2017).

^c Gross attendance rate is the percentage of the population attending school. In this case, it would be the number of children aged 6–14 who attend school as a percentage of all children aged 6–14. Estimates from EMMUS VI (2016–2017) and 2020 United Nations World Population Prospects.

^d See ENUSAN (2019). Comprises children with severe or moderate malnutrition and children at risk of malnutrition. See also Food Security Cluster [online] <https://fscluster.org/haiti/overview>; and the WFP Hunger Map [online].

Annex IV.A2

Detailed results of school feeding cost estimates of different scenarios

The following tables present the detailed results of the school canteen cost estimates in dollars for each scenario and target population. The four scenarios are based on the cost of one meal per child per day. The costs are then multiplied by the target population for each targeting method and by the average number of school days (175). For the targeting of children aged 6–14 who are in school, the same groups are considered: (i) universal targeting; (ii) categorical targeting under conditions of multidimensional poverty; (iii) categorical targeting under conditions of severe multidimensional poverty; (iv) categorical and geographical targeting; (v) categorical and geographical targeting under conditions of severe multidimensional poverty. Each table represents a scenario with the different target populations.

Table IV.A2.1
Cost of school feeding programme for scenario 1 (US\$ 1.33 per meal per day) based on population coverage
(Millions of dollars)

Year	Scenario 1 Universal	Scenario 2 Multidimensional poverty	Scenario 3 Severe multidimensional poverty	Scenario 4 Geographical targeting	Scenario 5 Geographical targeting and severe multidimensional poverty
2020	23.6	11.1	5.4	4.6	1.4
2021	47.2	22.2	10.8	9.2	2.8
2022	94.7	44.6	21.7	18.5	5.6
2023	142.3	67.0	32.6	27.8	8.4
2024	190.0	89.5	43.5	37.1	11.2
2025	237.6	111.9	54.4	46.4	14.0
2026	284.9	134.2	65.2	55.7	16.8
2027	332.1	156.4	76.1	64.9	19.6
2028	379.1	178.6	86.8	74.1	22.4
2029	425.9	200.6	97.5	83.2	25.2
2030	472.4	222.5	108.2	92.3	27.9

Source: Prepared by the authors.

Table IV.A2.2
Cost of school feeding programme for scenario 1 (US\$ 1.33 per meal per day) based on population coverage
(Percentages of GDP)

Year	Scenario 1 Universal	Scenario 2 Multidimensional poverty	Scenario 3 Severe multidimensional poverty	Scenario 4 Geographical targeting	Scenario 5 Geographical targeting and severe multidimensional poverty
2020	0.28	0.13	0.06	0.06	0.02
2021	0.59	0.28	0.13	0.11	0.03
2022	1.14	0.54	0.26	0.22	0.07
2023	1.65	0.78	0.38	0.32	0.10
2024	2.13	1.00	0.49	0.42	0.13
2025	2.57	1.21	0.59	0.50	0.15
2026	2.97	1.40	0.68	0.58	0.18
2027	3.34	1.57	0.76	0.65	0.20
2028	3.67	1.73	0.84	0.72	0.22
2029	3.98	1.87	0.91	0.78	0.23
2030	4.25	2.00	0.97	0.83	0.25

Source: Prepared by the authors.

Table IV.A2.3
Cost of school feeding programme for scenario 2 (US\$ 0.84 per meal per day), by population coverage
(Millions of dollars)

Year	Scenario 1 Universal	Scenario 2 Multidimensional poverty	Scenario 3 Severe multidimensional poverty	Scenario 4 Geographical targeting	Scenario 5 Geographical targeting and severe multidimensional poverty
2020	14.9	7.0	3.4	2.9	0.9
2021	29.8	14.1	6.8	5.8	1.8
2022	59.8	28.2	13.7	11.7	3.5
2023	89.9	42.3	20.6	17.6	5.3
2024	120.0	56.5	27.5	23.4	7.1
2025	150.1	70.7	34.4	29.3	8.9
2026	180.0	84.8	41.2	35.1	10.6
2027	209.8	98.8	48.0	41.0	12.4
2028	239.5	112.8	54.8	46.8	14.1
2029	269.0	126.7	61.6	52.5	15.9
2030	298.3	140.5	68.3	58.3	17.6

Source: Prepared by the authors.

Table IV.A2.4
Cost of school feeding programme for scenario 2 (US\$ 0.84 per meal per day), by population coverage
(Percentages of GDP)

Year	Scenario 1 Universal	Scenario 2 Multidimensional poverty	Scenario 3 Severe multidimensional poverty	Scenario 4 Geographical targeting	Scenario 5 Geographical targeting and severe multidimensional poverty
2020	0.18	0.08	0.04	0.03	0.01
2021	0.37	0.17	0.08	0.07	0.02
2022	0.72	0.34	0.16	0.14	0.04
2023	1.04	0.49	0.24	0.20	0.06
2024	1.35	0.63	0.31	0.26	0.08
2025	1.62	0.76	0.37	0.32	0.10
2026	1.88	0.88	0.43	0.37	0.11
2027	2.11	0.99	0.48	0.41	0.12
2028	2.32	1.09	0.53	0.45	0.14
2029	2.51	1.18	0.58	0.49	0.15
2030	2.69	1.26	0.61	0.52	0.16

Source: Prepared by the authors.

Table IV.A2.5
Cost of school feeding programme for scenario 3 (US\$ 0.55 per meal per day), by population coverage
(Millions of dollars)

Year	Scenario 1 Universal	Scenario 2 Multidimensional poverty	Scenario 3 Severe multidimensional poverty	Scenario 4 Geographical targeting	Scenario 5 Geographical targeting and severe multidimensional poverty
2020	9.7	4.6	2.2	1.9	0.6
2021	19.5	9.2	4.5	3.8	1.2
2022	39.2	18.4	9.0	7.6	2.3
2023	58.9	27.7	13.5	11.5	3.5
2024	78.6	37.0	18.0	15.4	4.6
2025	98.3	46.3	22.5	19.2	5.8
2026	117.8	55.5	27.0	23.0	7.0
2027	137.3	64.7	31.5	26.8	8.1
2028	156.8	73.8	35.9	30.6	9.3
2029	176.1	83.0	40.3	34.4	10.4
2030	195.3	92.0	44.7	38.2	11.5

Source: Prepared by the authors.

Table IV.A2.6
Cost of school feeding programme for scenario 3 (US\$ 0.55 per meal per day), by population coverage
(Percentages of GDP)

Year	Scenario 1 Universal	Scenario 2 Multidimensional poverty	Scenario 3 Severe multidimensional poverty	Scenario 4 Geographical targeting	Scenario 5 Geographical targeting and severe multidimensional poverty
2020	0.12	0.05	0.03	0.02	0.01
2021	0.24	0.11	0.06	0.05	0.01
2022	0.47	0.22	0.11	0.09	0.03
2023	0.68	0.32	0.16	0.13	0.04
2024	0.88	0.42	0.20	0.17	0.05
2025	1.06	0.50	0.24	0.21	0.06
2026	1.23	0.58	0.28	0.24	0.07
2027	1.38	0.65	0.32	0.27	0.08
2028	1.52	0.72	0.35	0.30	0.09
2029	1.64	0.77	0.38	0.32	0.10
2030	1.76	0.83	0.40	0.34	0.10

Source: Prepared by the authors.

Table IV.A2.7
Cost of school feeding programme for scenario 4 (US\$ 0.36 per meal per day), by population coverage
(Millions of dollars)

Year	Scenario 1 Universal	Scenario 2 Multidimensional poverty	Scenario 3 Severe multidimensional poverty	Scenario 4 Geographical targeting	Scenario 5 Geographical targeting and severe multidimensional poverty
2020	6.4	3.0	1.5	1.2	0.4
2021	12.8	6.0	2.9	2.5	0.8
2022	25.6	12.1	5.9	5.0	1.5
2023	38.5	18.1	8.8	7.5	2.3
2024	51.4	24.2	11.8	10.0	3.0
2025	64.3	30.3	14.7	12.6	3.8
2026	77.1	36.3	17.7	15.1	4.6
2027	89.9	42.3	20.6	17.6	5.3
2028	102.6	48.3	23.5	20.0	6.1
2029	115.3	54.3	26.4	22.5	6.8
2030	127.9	60.2	29.3	25.0	7.6

Source: Prepared by the authors.

Table IV.A2.8
Cost of school feeding programme for scenario 4 (US\$ 0.36 per meal per day), by population coverage
(Percentages of GDP)

Year	Scenario 1 Universal	Scenario 2 Multidimensional poverty	Scenario 3 Severe multidimensional poverty	Scenario 4 Geographical targeting	Scenario 5 Geographical targeting and severe multidimensional poverty
2020	0.08	0.04	0.02	0.01	0.00
2021	0.16	0.07	0.04	0.03	0.01
2022	0.31	0.15	0.07	0.06	0.02
2023	0.45	0.21	0.10	0.09	0.03
2024	0.58	0.27	0.13	0.11	0.03
2025	0.70	0.33	0.16	0.14	0.04
2026	0.80	0.38	0.18	0.16	0.05
2027	0.90	0.43	0.21	0.18	0.05
2028	0.99	0.47	0.23	0.19	0.06
2029	1.08	0.51	0.25	0.21	0.06
2030	1.15	0.54	0.26	0.22	0.07

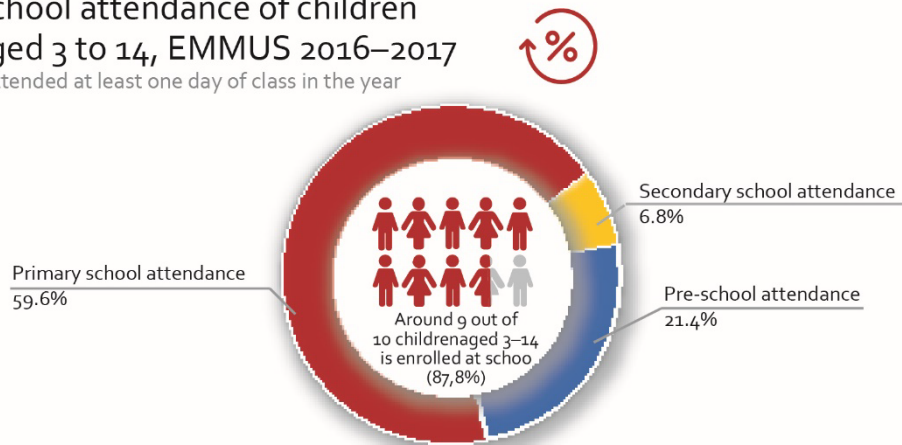
Source: Prepared by the authors.

Annex IV.A3

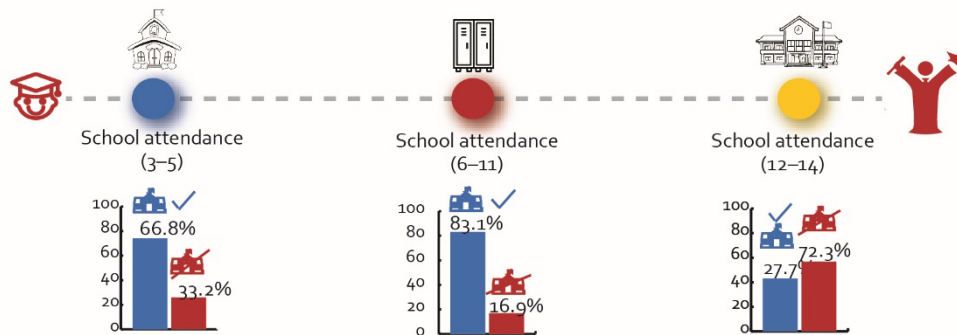
Diagram IV.A3.1
 Infographic: school attendance of children aged 3–14, EMMUS, 2016–2017

School attendance of children aged 3 to 14, EMMUS 2016–2017

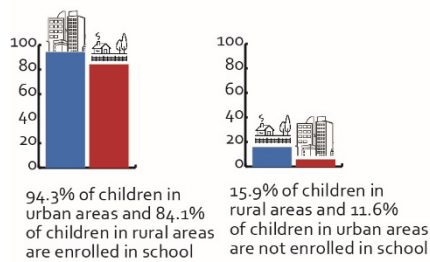
*attended at least one day of class in the year



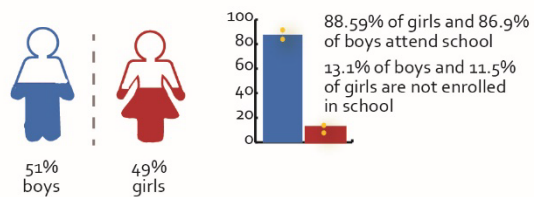
School attendance rate by age



Enrollment rate by geographical area



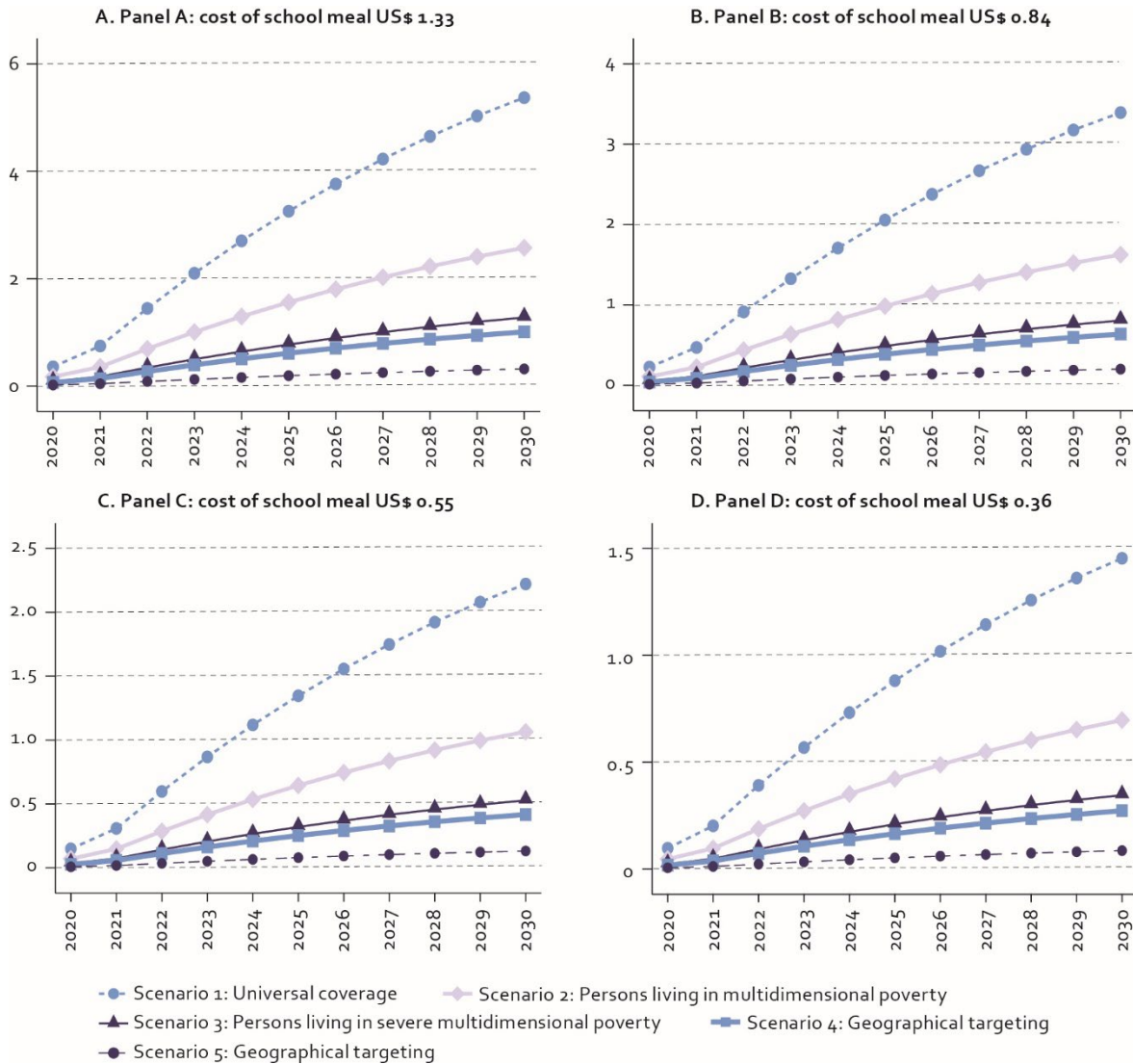
Breakdown of students by gender



Source: Prepared by the authors.

Annex IV.A4 Results of the estimates for children aged 3–14

Figure IV.A4.1
Haiti: cost of school canteens for children aged 3–14, 2020–2030
(Percentages of GDP)



Source: Prepared by the authors.

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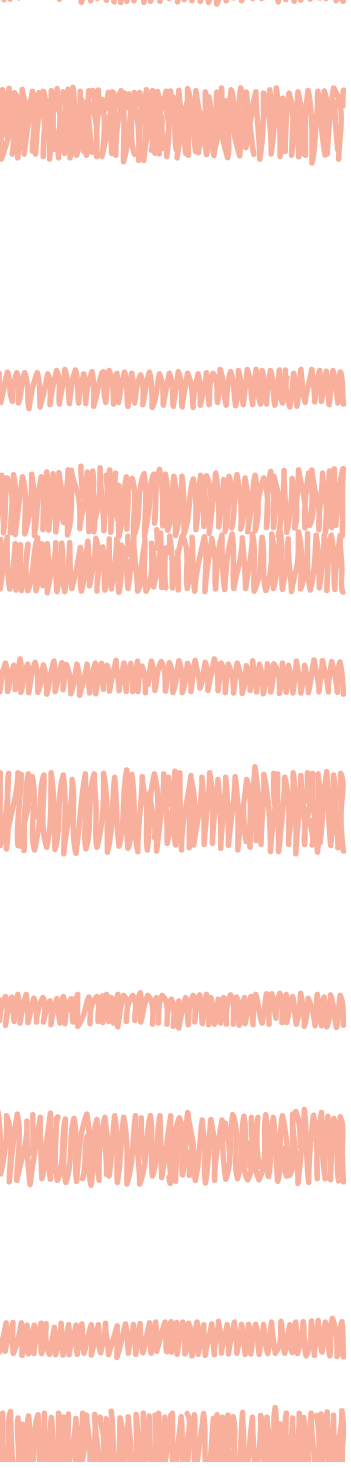
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This document presents an estimate of the cost of three mechanisms proposed in the National Policy on Social Protection and Promotion (PNPPS) of Haiti, enacted on 12 June 2020: exemption from payment for essential health service packages, graduation programmes and school canteens. A first costing exercise conducted by ECLAC in 2020 examined 11 cash transfer mechanisms; this second exercise looks at three non-monetary transfer mechanisms. The objective of both exercises is to support the prioritization of selected mechanisms and their application in national and *departement*-level action plans to ensure the effective implementation of PNPPS in Haiti.

