Public Disclosure Authorized
Public Disclosure Authorized
Public Disclosure Authorized

A Guiding Framework for Nutrition Public Expenditure Reviews

Huihui Wang, Kyoko Shibata Okamura, Ali Winoto Subandoro, Yurie Tanimichi Hoberg, Lubina Qureshy and Mamata Ghimire

WORLD BANK GROUP
GLOBAL FINANCING FACILITY

A GUIDING FRAMEWORK FOR NUTRITION PUBLIC EXPENDITURE REVIEWS

Huihui Wang, Kyoko Shibata Okamura,
Ali Winoto Subandoro, Yurie Tanimichi Hoberg,
Lubina Qureshy and Mamata Ghimire

DECEMBER 2021

TABLE OF CONTENTS

Table of Figures ..... **IV**

List of Tables ..... **V**

Table of Boxes ..... **VI**

Acknowledgements ..... **VII**

1. About This Document **1**

2. Introduction **4**

2.1. Global Context for Nutrition Financing 4

2.2. Landscape of Nutrition Budget and Expenditure Analysis Work 5

2.3. Why a Nutrition Public Expenditure Review? 7

3. Preparation Phase **11**

3.1. Defining the Scope 11

3.2. Establishing an NPER Team 13

3.3. Preparing a Work Plan 15

3.4. Identifying Data Sources 16

3.4.1. Data Sources for Nutrition Financing 16

3.4.2. Data Sources for Nutrition Results 19

4. Key Elements of an NPER **22**

4.1. Country Context 23

4.2. National Nutrition Strategy 25

4.3. Institutional Framework and Budget Process 26
4.4. Identifying Nutrition Expenditure 29
4.5. Analysis 43
4.5.1. Expenditure Levels and Trends 43
4.5.2. Composition of Expenditure 45
4.5.2.1. Administrative Levels 45
4.5.2.2. Nutrition Categories 46
4.5.2.3. Sector Composition 47
4.5.3. Service Coverage and Utilization 47
4.5.4. Effectiveness 52
4.5.5. Efficiency 54
4.5.5.1. Allocative Efficiency 55
4.5.5.2. Technical Efficiency 57
4.5.5.3. Administrative Efficiency 58
4.5.6. Equity 63

5. Using the NPER for Greater Impact 67
5.1. Way Forward on Policy Dialogue and Institutional Strengthening 67
5.2. Improving the Quality of Future NPERs 69

6. References 71

Annex 1: Lancet Framework of Nutrition 76

Annex 2: Nepal Multi-sector Nutrition Plan-II Results Structure 77

Annex 3: List of NPERs and Other Related Documents 78

TABLE OF FIGURES

Figure 1. Conceptual Structure of NPERs 2

Figure 2. Nutrition Activities Span Different Government Levels and Multiple Line Ministries 12

Figure 3. Example from the Indonesia NPER: Stunting Rate Relative to Comparators 24

Figure 4. Example from the Bhutan NPER: Stunting by Region, Area, Age, and Wealth 24

Figure 5. Example from the Tanzania NEPR: Budget Process Diagram 28

Figure 6. Example from the Indonesia NPER: Flow of Nutrition Financing 29

Figure 7. Flow-Chart of Steps to Identify Nutrition Expenditure 30

Figure 8. Breakdown of Nutrition-Specific and Nutrition-Sensitive Spending 48

Figure 9. Example from the Rwanda NPER: Optima Simulation Result 56

Figure 10. Example from the Bhutan NPER: Absorption Rates for Nutrition-Related Interventions by Ministry 59

Figure 11. Example from the Indonesia NPER: Budget Execution by Intervention 60

Figure 12. Example from the Ethiopia Health Sector PER: Ministry of Health-Managed External Assistance 62

Figure 13. Example from the Tanzania NPER: District-level Nutrition Spending per Child under 5 Plotted Against the Stunting Rate 64

Table 1. Example from the Indonesia NPER: Nutrition-Related Interventions 31

LIST OF TABLES

Table 1. Example from the Indonesia NPER: Nutrition-Related Interventions 31

Table 2. Programs and Interventions by Nutrition Category 33

Table 3. Use of Disaggregation Weights for Bundled Budgets 42

Table 4. NPER Examples Where Weights Were Used as Proxy for Nutrition Contributions 42

Table 5. Select Key Metrics in NPERs 44

Table 6. Breakdown of Expenditure by Broad Nutrition Categories (from NPERs) 46

Table 7. Results Framework of Nepal National Multi-Sector Nutrition Plan-II, 2018–22 50

Table 8. Example from the Bhutan NPER: Subnational Nutrition-Related Expenditures, 2016-17 63

Table 9. Example from the Zambia Health Sector PER: BIA Results on the Distribution of Outpatient and Inpatient Services 66

TABLE OF BOXES

Box 1. NPERs and Their Role in Promoting Policy Dialogue....9

Box 2. Main Government Entities Involved in NPERs....14

Box 3. Experience from the Bangladesh NPER on Estimating Donor Funding for NGO-Implemented Nutrition Investments....19

Box 4. How NPERs are Aligned with National Nutrition Policy Goals....26

Box 5. Examples of Keywords Used in the Bhutan NPER by Sector/Ministry....34

Box 6. Example from Indonesia for How to Perform a Keyword Search on Multiple Datasets....35

Box 7. Guidance on High-Cost Nutrition-Sensitive Budget Line Items....36

Box 8. Using Weights to Assess the Contribution of Indonesia's National Health Insurance....40

Box 9. Assessing the Effectiveness of Health Spending in Mozambique....53

Box 10. Potential Bottlenecks in the Flow of Funds in Indonesia....60

Box 11. Collecting Data on Off-Budget External Nutrition Financing in Rwanda....62

ACKNOWLEDGMENTS

This Guiding Framework for Nutrition Public Expenditure Review was prepared by a World Bank and Global Financing Facility (GFF) team of Mamata Ghimire (ET Consultant, World Bank), Yurie Tanimichi Hoberg (Consultant, World Bank), Kyoko Shibata Okamura (Nutrition Specialist, World Bank), Lubina Qureshy (Consultant, World Bank), Ali Winoto Subandoro (Senior Nutrition Specialist, GFF), and Huihui Wang (Senior Economist/Task Team Leader, World Bank). Overall guidance was provided by Meera Shekar (Global Lead for Nutrition, World Bank). Kseniya Bieliaieva and Juliana Williams of the World Bank provided administrative support. The report has benefitted from thoughtful peer review comments from Annalies Borrel (UNICEF), Zelalem Yilma Debebe (World Bank), Augustin Flory (Results for Development/R4D), and Patrick Hoang-Vu Eozenou (World Bank) as well as substantive technical comments from Xiaohui Hou, Yi-Kyoung Lee, Moritz Piatti, Denise Silfverberg, Ajay Tandon, all from the World Bank.

The team is grateful to Oscar Parlback for editing the document as well as to Melina Yingling for preparing the graphics.

Financial support for this work was provided by the Government of Japan through the Japan Trust Fund for Scaling Up Nutrition.

1

ABOUT THIS DOCUMENT

1. **The main purpose of this Guiding Framework document is to present the key elements of a Nutrition Public Expenditure Review (NPER) and offer guidance, practical steps, and examples on carrying out an NPER.** It targets a wide-ranging audience, including country nutrition policy makers, development partners (DPs), government technical staff, and advocates and practitioners who are tasked with carrying out NPERs (who are also the main target audience). The Guiding Framework draws upon good practices from the growing body of NPERs as well as common practices and expertise from Public Expenditure Reviews (PERs). However, given the limited number of existing NPERs, this document should be considered as a starting point, or a "living document," and is not meant to provide a comprehensive coverage of a standard methodology for NPERs, as this would require further work and analysis.

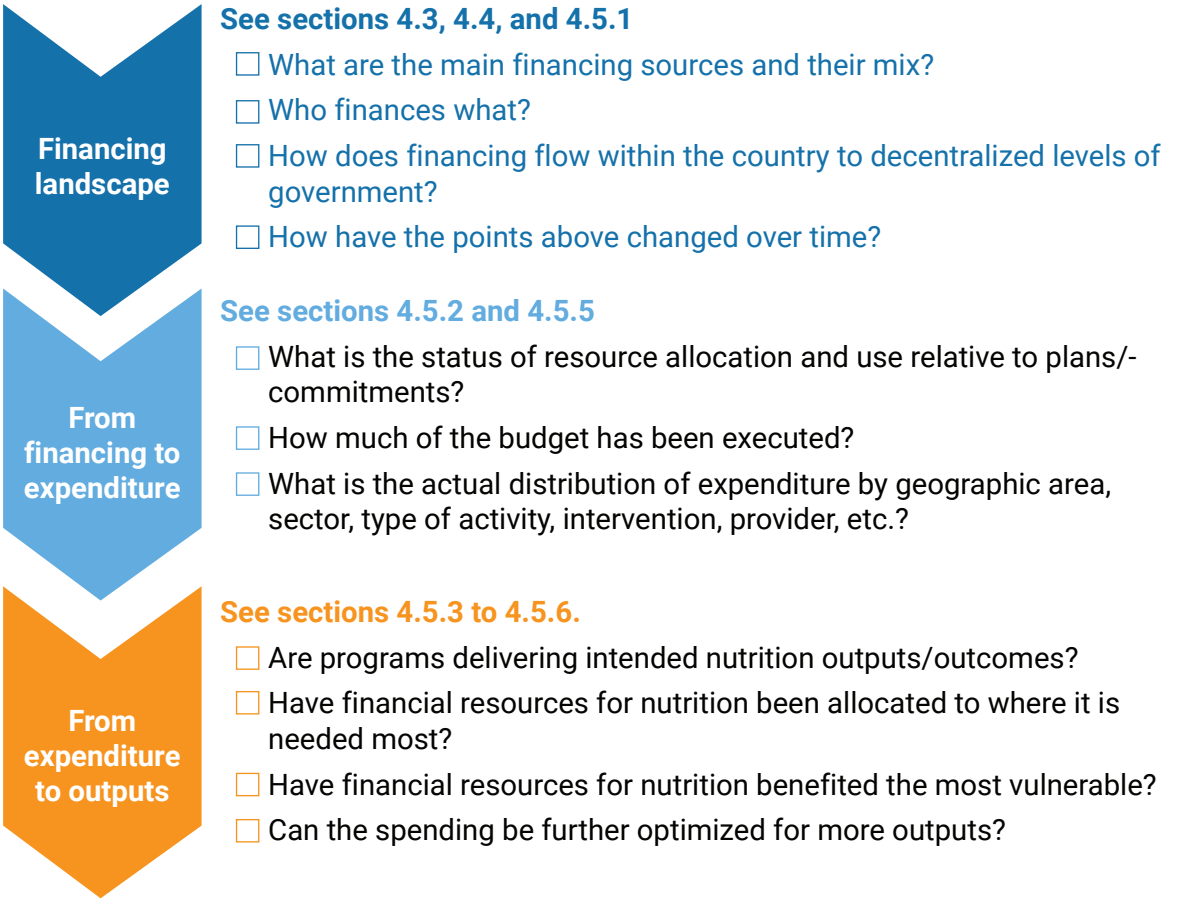
The Guiding Framework draws upon good practices from the growing body of NPERs as well as common practices and expertise from other PERs.

2. **Specifically, this Guiding Framework aims to be a useful tool for practitioners involved in developing an NPER.** It does this by: (i) situating NPERs within the context of other similar efforts such as a nutrition budget analysis or sector-specific PERs; (ii) presenting the literature of existing NPERs and related literature to serve as reference; (iii) providing guidance on preparatory work before beginning an NPER (i.e., defining the scope, setting up an NPER team, and identifying data sources); (iv) providing guidance on conducting the core analysis (i.e., framing the analysis, analyzing the institutional framework, and linking the analysis to the policy dialogue); and (v) clearly identifying knowledge gaps and necessary additional work to enhance the robustness of future NPER analysis.

3. **NPERs determine the level of a country's overall nutrition public spending and assess whether the expenditure profile is fit-for-purpose for the country to achieve its nutritional goals and objectives.** However, this requires access to sufficient quality data and adequate technical capacity on the NPER team as well as among supporting stakeholders, especially with data collection and cleaning.

4. **When data availability or data quality is an issue or technical capacity is lacking, NPER teams may need to limit the scope of the study.** Figure 1 presents the broad conceptual structure (and some related questions) that underpins NPERs. A full-fledged NPER aims to explain how financing ultimately leads to desired outputs by presenting information on three main sequential building blocks: financing landscape, from financing to expenditure, and from expenditure to outputs. In a less ideal situation, teams may choose to limit the scope of the study to only one or two of these building blocks and postpone a full NPER until data and/or capacity constraints are addressed.

FIGURE 1. CONCEPTUAL STRUCTURE OF NPERS



NOTE: Listed questions are indicative (not comprehensive). A more comprehensive list of questions is included at the beginning of each section, starting from Section 4.3.

5. **To inform future NPER teams and aid them in deciding a feasible scope, this document presents data and analytical challenges that were faced by previous NPER teams.** The document shows the kinds of analyses that NPERs have been able to carry out and those that they were unable to perform due to data and/or capacity constraints. It is important to note that no NPER to date has carried out some key analyses such as an effectiveness analysis or technical efficiency analysis (which are commonly undertaken in PERs) due to lack of quality data.

6. **In the final section, this document presents further work at both the global and country levels that is needed to create the conditions necessary to carry out more comprehensive NPERs.** As of December 2021, only 7 NPERs have been completed, and none of them have successfully been able to examine all the standard PER criteria of effectiveness, efficiency, and equity. Therefore, more work by technical and financial stakeholders in the global nutrition community is urgently needed to enable more comprehensive NPERs to be undertaken in the future. As such, this document is expected to be updated periodically in the form of a 'living document' by revising/updating guidance and including relevant new information and experience from future NPERs.

7. **Finally, this document is structured in the following way.** Section 2 (introduction) presents the complementarity and value added offered by NPERs to existing analytical tools such as the Scaling Up Nutrition (SUN) budget analysis, Systems of Health Accounts (SHA) framework, and other nutrition-sensitive sectoral PERs. Section 3 (preparation phase) lays out issues that the NPER should address before conducting the study, such as defining the scope, developing an inclusive NPER team, and drafting a work plan. Section 4 (key elements of an NPER) presents the various parts of a comprehensive NPER, from a description of the country context to the standard analysis of effectiveness, efficiency, and equity. Finally, the document concludes with Section 5 (using the NPER for greater impact), which identifies future work that is needed to overcome current constraints and enable more robust analysis in future NPERs.

2

INTRODUCTION

2.1. GLOBAL CONTEXT FOR NUTRITION FINANCING

8. **Nutrition investments impact human capital formation, which in turn affects economic growth.** Malnutrition is intrinsically connected to human capital, as undernutrition contributes to 45 percent of child mortality, and stunting is known to be associated with lost productivity and earnings in adulthood (Shekar et al. 2017). Moreover, one in five adult deaths can be attributed to dietary risk factors. Nutrition investments, particularly in the first 1,000 days of a person's life, yield high returns and have proven to be cost effective.[1] Two landmark reports by the World Bank, Scaling Up Nutrition: What Will It Cost? (Horton et al. 2010) and An Investment Framework for Nutrition (Shekar et al. 2017), shed light on the costs of scaling up high-impact nutrition interventions to achieve the global nutrition targets endorsed by the World Health Assembly (WHA) in 2012, which have since been adopted as the Sustainable Development Goals' (SGDs) nutrition targets for 2030.

9. **Growing recognition of the value of nutrition investments, its multi-sectoral nature, and the need for stronger coordination and accountability mechanisms led to the establishment of the current global architecture for nutrition.** Annex 1 presents the Lancet framework of nutrition, which illustrates the multi-sectoral dimension of nutrition as represented by both nutrition-specific and nutrition-sensitive interventions. The Scaling Up Nutrition (SUN) movement[2] was launched in 2010 as a unique global movement to catalyze support for countries prepared to "scale up nutrition" through a multi-sectoral and multi-stakeholder approach that involves networks of governments, DPs, foundations, civil society organizations, and business entities. In 2013, the Nutrition for Growth (N4G) initiative[3] was

1. Lancet Maternal and Child Nutrition series of 2008 and 2013.
2. https://scalingupnutrition.org/
3. https://nutritionforgrowth.org/

launched, where government, DPs, and business and civil society leaders convene a summit every four years and publicly announce commitments to nutrition policies. The commitments, including financial commitments, made by the participating stakeholders are followed up through several forums and analytical work, including the annual Global Nutrition Report that gathers and publishes information on progress made against those commitments.[4] One of the main goals of the Global Nutrition Report is to promote global accountability for nutrition investments and results.

One of the main goals of the Global Nutrition Reports is to promote global accountability for nutrition investments and results.

10. **Despite these efforts, high quality data on nutrition-related financing is scarce, making it difficult to assess the level and effectiveness of investments.** The World Bank's Investment Framework for Nutrition (Shekar et al. 2017) estimated the need for an additional US$7 billion per year in high-impact nutrition-specific interventions to achieve the global targets for stunting, anemia in women, exclusive breastfeeding, and the scaling up of the treatment of severe wasting. Recognizing the underfunding of nutrition interventions and a lack of reliable financing information and accountability, the N4G Summit in Tokyo in 2021 will focus on the need for effective and sustainable financing for nutrition (i.e., "more money for nutrition and more nutrition for the money spent"). However, tracking the expenditure of multisectoral interventions, such as nutrition-related investments, requires significantly more work than sector-specific expenditures, such as investments in agriculture, education, or health. Even though it is an important step in operationalizing their commitments to achieving the WHA and SDG nutrition targets through a multisectoral approach, most countries do not quantify the level and distribution of public financing for nutrition. Put simply, there are many more unknowns in the basic parameters of nutrition financing (e.g., what is being spent and by whom and on what?) compared to traditional sectors, each of which are often governed by a single ministry.

2.2. LANDSCAPE OF NUTRITION BUDGET AND EXPENDITURE ANALYSIS WORK

11. **The 2020 Global Nutrition Report (Development Initiatives 2020) states that sparse data on nutrition-related financing, which (when available) is often disparate, incomplete,**

4. https://globalnutritionreport.org/resources/nutrition-growth-commitment-tracking/

or incomparable, makes it almost impossible to accurately track progress in nutrition investments. However, in recent years, there has been a significant increase in effort to improve the availability of information on nutrition financing from domestic as well as DP sources. These include the SUN budget analysis, the nutrition budgeting and financial analysis by the United States Agency for International Development (USAID)-funded Strengthening Partnerships, Results, and Innovations in Nutrition Globally project (SPRING), analyses of the World Health Organization (WHO)-supported System of Health Accounts (SHA) data, and PERs that focus on nutrition, conducted by the World Bank and the United Nations Children's Fund (UNICEF) either as standalone NPERs, as part of a broader exercise such as the Human Capital Public Expenditure and Institutional Reviews, or as sector-specific PERs that include some examination of nutrition spending.

12. **SUN Budget Analysis:** The SUN budget analysis exercise, which has been conducted in 50 countries to date, is based on self-reporting by governments and uses a SUN Secretariat-provided excel template and guidelines (Fracassi et al. 2020 and MQSUN+ 2020). It focuses on assessing budget allocations instead of actual spending. The relatively light requirement of the SUN budget analysis has allowed it to be rolled out in many countries in a relatively short period of time, making valuable contributions in terms of mobilizing attention to country-level nutrition financing and accountability needs. However, it does not cover the full public financial management (PFM) process, including accounting for actual spending, nor does it include a full and robust analysis of the effectiveness, efficiency, and equity of public expenditure. Nevertheless, the 3-step methodology of identifying, categorizing, and analyzing nutrition budgets developed for the SUN budget analysis has gone through multiple revisions since it was introduced in 2015, and it was used as the basis for the SPRING work (in Nepal and Uganda; the SPRING project closed in 2018) as well as for most NPERs (to quantify nutrition-related expenditure), with some country-specific customization.

13. **System of Health Accounts (SHA):** The WHO-supported SHA tracks health funding and expenditure and disaggregates data on nutrition. The SHA provides an internationally standardized framework for the systematic measurement of health care revenues and expenditures, including nutrition, and the comparison of results over time and across countries. However, the SHA only monitors nutrition expenditure within the health sector and does not cover important nutrition investments in other sectors. Moreover, the SHA only assigns one code for all expenditures related to nutritional diseases, which does not allow for an analysis of specific categories such as nutrition-specific/-sensitive interventions, major intervention packages defined in the national health/nutrition plan, etc.

14. **The World Bank's Human Capital Public Expenditure and Institutional Review (HC PEIR):** The HC PEIR applies a cross-cutting human capital lens to assess the contributions of public expenditures and institutions to a set of country-specific human capital (HC)

outcomes, including nutrition. It examines expenditure levels, trends, distribution, sufficiency/sustainability, and efficiency/equity as well as expenditure alignment, complementarity, and optimization across sectors toward HC outcomes. It also identifies institutional bottlenecks to translating policies, programs, and expenditures into outcomes. Moreover, the HC PEIR analyzes the enabling environment for the acceleration of HC outcomes with regard to political economy, social norms/values, and demand-side factors. The World Bank is rolling out HC PEIRs in select countries: Bangladesh, Kenya, Burkina Faso, Argentina (Province of Mendoza), and Togo.

15. **Sector-specific PERs that include some analysis on nutrition**: A PER is a standard World Bank analytical work that serves as a diagnostic tool for countries to investigate the use of public finances in meeting policy priorities. A general PER assesses government-wide expenditures. Sectoral PERs focus on specific themes or sectors such as health, education, agriculture, or water. Examples to date of sector-specific PERs that have some analysis on nutrition include health sector PERs (Zambia), early childhood development PERs (Paraguay), and agriculture sector PERs (Lesotho and Rwanda). These sector PERs provide insights into nutrition-related expenditure within the respective sector, but they do not provide a full picture of the total nutrition expenditure program (and its impact) that spans multiple sectors. The nutrition analysis embedded in these sector PERs also tend to be disjointed from the main PER analysis and treated as a less detailed add-on exercise to the main sectoral analysis.

2.3. WHY A NUTRITION PUBLIC EXPENDITURE REVIEW?

16. **When done well, an NPER goes beyond simply quantifying how much is allocated or spent on nutrition and answers how well money is being spent to achieve nutrition outcomes and identifies specific recommendations for improvement.** The NPER process involves identifying and analyzing nutrition-related expenditure through commonly accepted methodologies (e.g., the SUN methodology) that are adapted to the country context.

The NPER process involves identifying and analyzing nutrition expenditures through commonly accepted methodologies that are adapted to the country context.

17. **An NPER is different from sector-specific PERs in that nutrition expenditures span many sectors.** An NPER offers a quantitative evaluation of a country's nutrition-related public expenditure through a multi-sectoral analysis

of its financial data and investigates if the expenditure served to improve nutrition outcomes. Its ultimate utility lies in the ability to interpret the results of the analysis to guide policy making (Pradhan 1996). However, NPERs explore the association between financing and intended outcomes, not causality. This means that NPERs do not strive to determine the attribution of a specific intervention or program toward outcomes, which is the domain of impact evaluation studies.

18. Some expected benefits of NPERs are that they:

- Provide an opportunity to extend the policy dialogue on nutrition by engaging ministries of finance and/or planning and key line ministries in multisectoral discussions on nutrition change policies and their fiscal implications.
- Produce a clear analysis on the effectiveness, efficiency, and equity of public expenditure on nutrition to formulate evidence-based actionable recommendations on strategic resource allocation or course corrections.
- Provide an opportunity to develop or strengthen a country's nutrition strategy and associated costed investment plans by illustrating how actual expenditures are supporting these strategies.
- Promote transparency (through publication and consultation) in what constitutes nutrition spending and prevent overestimating by applying evidence-based weights to budget line items that are not sufficiently disaggregated in budget data.
- Help mobilize domestic and external resources for the nutrition agenda by highlighting policy objectives that require additional financing. For external financing, the NPER informs the government's dialogue with DPs on identifying development assistance priorities and areas in need of external financing.
- Highlight the strengths and weaknesses of the institutional framework for addressing nutrition.
- Become an entry point for future work on strengthening the overall PFM cycle—budget tagging, tracking, and evaluation—to mainstream the tracking of nutrition expenditures.

19. Ultimately, NPERs aim to carry out an in-depth analysis of the effectiveness, efficiency, and equity of nutrition-related public spending to formulate evidence-based actionable recommendations on strategic resource allocation or course corrections (Box 1). The existing portfolio of NPERs is small (there are only seven NPERs to date), and none of them have included an in-depth analysis of the effectiveness, efficiency, and equity of nutrition expenditure, mainly due to a lack of access to disaggregated data.

BOX 1. NPERS AND THEIR ROLE IN PROMOTING POLICY DIALOGUE

NPERs are fairly new public expenditure tools (the oldest NPER was published in 2018). To date, NPERs have been completed in Bangladesh (UNICEF 2020), Bhutan (World Bank 2020), Indonesia (World Bank 2020), Nepal (World Bank 2019, unpublished), Rwanda (World Bank 2020), Sri Lanka (UNICEF and World Bank 2020), and Tanzania (UNICEF 2018) (see Annex 3 for a complete list).

NPERs are being used as entry points for broadening the policy dialogue on nutrition in their respective countries to strengthen PFM and achieve better nutrition results.

- In **Bangladesh**, the NPER facilitated a major policy shift to focus on aligning program design for improving nutrition in key sectors. For instance, the Cabinet Division (under the Prime Minister's office responsible for overall coordination among all ministries) is currently undertaking a review of major social safety net programs to make them nutrition and gender sensitive, and it has agreed to include a nutrition chapter in the upcoming revision of the National Social Security Strategy.
- In **Indonesia**, the findings from the NPER informed the policy dialogue on addressing several systemic challenges in PFM, such as delays in fund transfers and a weak focus on results in the planning and budgeting process, which results in spending inefficiency. The NPER also highlighted challenges with tracking subnational spending due to a lack of a standardized Chart of Account across districts.
- In **Rwanda**, the NPER contributed to advancing the dialogue with the Ministry of Finance to strengthen nutrition-responsive budgeting and adopt policy reforms related to budget tagging, tracking, and evaluation, which in turn will enable the government to oversee nutrition-related activities across all agency budgets and levels of government.

20. **NPERs also shed light on institutional aspects that may affect nutrition outcomes.** This is particularly important for a multi-sectoral agenda such as nutrition, which is often seen as 'somebody else's agenda.' NPERs describe the flow of funds to public nutrition-related interventions and identifies bottlenecks that may be preventing the country's PFM systems from optimizing planning, budgeting, and spending for nutrition. For example, in Rwanda, the findings from the NPER informed the scope of additional work on strengthening the nutrition-responsive PFM system. This included the issuance of a Ministerial Instruction by the

Ministry of Finance during the planning and budgeting phase to: (i) instruct relevant ministries and agencies to consider early childhood development throughout the budget process; and (ii) ensure that activities are prioritized and aligned with the National Early Childhood Development Program, which coordinates all nutrition activities in the country.

21. **The coronavirus disease of 2019 (COVID-19) pandemic has served as a reminder that the ability to track and measure the impact of public spending on nutrition is important during economic or social crises.** During such crises, governments often struggle to balance the implementation of urgent short-term emergency response measures with maintaining medium- to long-term policies aimed at protecting the vulnerable from the impact of malnutrition and human capital loss. NPERs can help governments identify, track, evaluate, and plan public spending on key nutrition measures and assist efforts to hold both financiers and implementers accountable.

NPERs can help governments identify, track, evaluate, and plan public spending on key nutrition responses

3

PREPARATION PHASE

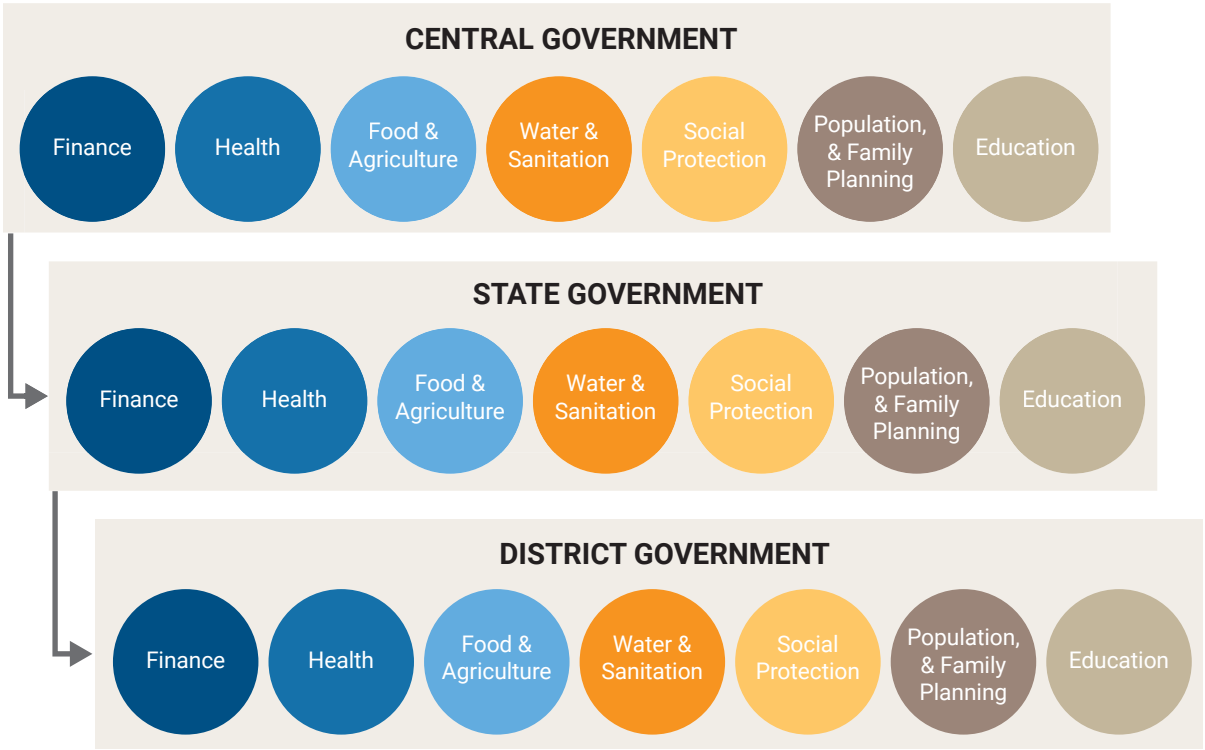
3.1. DEFINING THE SCOPE

22. **When preparing an NPER, the first step is to decide on the breadth (sectoral and government level) and depth (level of analytical detail) of the analysis.** In terms of the breadth, the NPER should cover not only the sectors that currently have expenditure programs that address nutrition (e.g., health, food & agriculture, and water & sanitation) but also the government levels that execute these programs (Figure 2). In terms of the depth, the conceptual structure of NPERs (as presented in Figure 1) should be referenced to determine the coverage of each block within the conceptual structure. Inclusion or exclusion of particular topics should depend on numerous factors, including the: (i) objectives of the NPER, as determined by the entire NPER team (what questions is the NPER trying to answer?); (ii) policy priorities, as articulated in the country's nutrition strategy; (iii) budget available to the NPER team; (iv) timeframe for the analysis; and (v) availability of data and related analytical studies to support the NPER.

23. **When deciding on the breadth of the NPER, it is also important to consider whether it should include off-budget expenditures that do not appear in official public expenditure data.**[5] In the context of nutrition, there may be off-budget programs funded by multilateral or bilateral development agencies, non-governmental organizations (NGOs), or private companies. This type of external funding is not recorded in the national budget. Therefore, the determination of whether to include it or not (and if so, what to include and exclude) depends primarily on the scale and importance of the development programs, as well as on the available access to data or willingness to engage in primary data collection (e.g., through surveys). If the NPER team determines that externally funded programs constitute a fairly large portion of the

5. Unlike some health sector PERs, existing NPERs do not include household expenditures due to lack of available data.

FIGURE 2. NUTRITION ACTIVITIES SPAN ACROSS DIFFERENT GOVERNMENT LEVELS AND MULTIPLE LINE MINISTRIES



country's nutrition expenditure, there is a high rationale for their inclusion. Several NPERs have included expenditures from DPs, including Bangladesh, Rwanda, and Tanzania.

24. **A PER typically limits its scope to the expenditure side of public finance and does not examine the revenue side.** A program focused on the revenue side of nutrition could refer, for example, to certain taxes that may have large impact on nutrition, such as taxation for sugar-sweetened beverages, which more than 40 countries had adopted as of March 2019 (Shekar and Popkin 2020). In some countries, certain tax policies could have a significant impact on nutrition outcomes by affecting people's behavior in ways that affect nutrition such as the consumption pattern of unhealthy foods and drinks. Therefore, while an examination of the revenue side is usually not part of a PER, an NPER team could potentially consider including such non-expenditure policies in future NPERs if such policies are expected to have an overbearing influence on nutrition outcomes or on the effectiveness or efficiency of their existing nutrition expenditure programs.[6]

6. No NPER to date has included such an analysis.

25. **NPERs can also be used to assess elements of existing major nutrition-related expenditure policies that affect the level and patterns of spending.** This is often addressed in PERs that focus on specific sectors, such as agriculture, where PERs are used with the primary objective of recommending concrete reforms of existing legacy programs, but it has not been explored in the existing set of NPERs. For example, NPERs could assess large-scale supplementary feeding (i.e., fortified food) programs, as these programs often consume the bulk (or majority) of nutrition spending, but they are highly political and based on weak evidence, prone to leakage, and are often unsustainable. Thus, NPERs could be useful in efforts to understand the efficiency of spending, which could inform future policy dialogues.

26. **In terms of depth of the analysis, the team must decide on the choice of analysis to determine the effectiveness, efficiency, and/or equity of nutrition expenditure.** Unlike sector PERs, no existing NEPR has been able to carry out an effectiveness or technical efficiency analysis. In the preparation phase, the team needs to study the available data, assess its quality, and decide on which analysis to carry out. The NPER should clearly indicate why certain key analyses are omitted, and it could supplement any omission with qualitative assessments. NPERs can also help identify and make concrete recommendations on critical data gaps that need to be addressed to answer key performance and accountability questions.

3.2. ESTABLISHING AN NPER TEAM

27. **The purpose of an NPER is to help policymakers make better policy, planning, and budgetary decisions.** Without government engagement, the NPER will be a stand-alone research exercise that does not serve its main objective of influencing policy to achieve better results. It is, therefore, important that the NPER team consist of members of the government and technical and/or financial organizations so that all parties are actively involved and assume ownership of the NPER and its recommendations and conclusions.

28. **The NPER team should decide on the main government entity to engage based on the intended purpose of the NPER.** The main government entity is often: (i) the agency that chairs the existing national nutrition coordination body, which has the mandate to coordinate government efforts to improve nutrition; (ii) the Ministry of Finance or Planning; or (iii) the Ministry of Health, with the active participation of other ministries, depending on the demand, the intended purpose, and data requirements (Box 2). If the issues to be addressed require actions by specific government ministries, these authorities should be engaged in the NPER process. For example:

- PFM issues related to spending levels, the overall budget cycle, budget releases, and accountability usually require actions by the Ministry of Finance.
- Issues related to decentralization, including fiscal transfers, usually require actions by the Ministry of Local Government.
- Issues on the composition of spending usually require actions by the line ministry(ies) such as health, agriculture, or social welfare.

BOX 2. MAIN GOVERNMENT ENTITIES FOR EXISTING NPERS

- **Bangladesh:** Finance Division, Ministry of Finance
- **Bhutan:** Ministry of Health and the Ministry of Agriculture and Forests
- **Indonesia:** Vice President's Office, which heads the oversight body of multisectoral nutrition program
- **Nepal:** National Planning Commission
- **Rwanda:** National Early Childhood Development Program, which coordinates all nutrition activities
- **Sri Lanka:** Nutrition Technical Working Group chaired by the Department of National Planning, with members from the Presidential Secretariat
- **Tanzania:** Prime Minister's Office

29. **The role of each member of the NPER team needs to be clear.** The team needs to decide on the competencies of staff and consultants from technical and/or financial organizations. If a nutrition specialist is leading this effort on behalf of the organization, he/she may want to recruit staff or a consultant with complementary skills such as PFM. Practitioners from government entities can have varying roles, from leading the entire process to being part of the preparation team, and they can be updated throughout the process or engaged at the beginning and end of the process. The team will need to weigh the benefits and costs of proposed NPER team structures and assess trade-offs. The team should consider:

- Ensuring that government entities are part of the preparation team, which may help to obtain easier access to public expenditure data. Public officials can facilitate access to information from different government sources and aid in the interpretation of the NPER.
- Engaging senior government officials at various stages of preparation to speed up the adoption of recommendations.
- Involving a large group of technical experts in the analytical process, which could enhance the rigorousness of the exercise but would likely add to the cost and time required to complete it. To ensure the uptake of recommendations, the team could encourage broad stakeholder engagement by adopting a participatory process and plan (at least during the planning and dissemination/follow-on dialogue stages) that includes platforms to facilitate a dialogue across sectors.

3.3. PREPARING A WORK PLAN

30. Best practices suggest to prepare a Work Plan that covers the areas addressed in this preparatory phase as well as any country-specific issues and include administrative elements such as budget, timeframe, and team composition. This document can be used to form a common understanding between all parties of the NPER team, including government entities, to ensure there are no misunderstandings. A well-researched Work Plan should facilitate the actual drafting of the NPER and clarify agreed objectives, concepts, and scope. While each Work Plan should be customized to satisfy the requirements by the funding organization (or other stakeholders), common elements include:

A well-researched Work Plan should facilitate the actual drafting of the NPER and clarify agreed objectives, concepts, and scope.

- Context;
- Government request (if applicable);
- Objectives and audience;
- Synthesis of recent literature, link to past and ongoing activities, and value addition of the proposed NPER;
- Scope and methodology of the study;
- Consultation plan with key stakeholders;
- Dissemination plan;
- Resources/budget;

- Team composition, including non-nutrition public sector management specialists, consultants (with expertise identified), and government officials;
- Timetable;
- Technical review (or quality control) process such as composition of a technical advisory group or names of individual peer reviewers; and
- Key annexes such as a draft outline of the report, a brief overview of the nutrition context (main trends and issues), and a list of key references;

3.4. IDENTIFYING DATA SOURCES

31. **Broadly, two types of data are needed for an NPER:** (i) data on nutrition financing to quantify nutrition expenditures; and (ii) data on performance indicators to understand the impact of financial investments. The main source of financing data is the country's financial management information system (FMIS) or other complementary data sources, while potential sources of performance data include population-based surveys and program administrative records. If the financing data quality is poor, the NPER team may need to undertake small sample surveys and highlight efforts to improve data quality in the recommendation section of the NPER.

3.4.1. DATA SOURCES FOR NUTRITION FINANCING

32. **A comprehensive dataset on nutrition financing should:**
    - Cover budget allocation, execution, and realized spending across all sectors that deliver nutrition-specific and -sensitive interventions. Such data should be over at least a few years to ensure that the analysis is not dominated by any single-year anomalies.
    - Capture the flow of funds (including identification of fund holders at different levels), financing sources, and the economic classification of spending (e.g., salaries, goods and services, and capital expenses).
    - Disaggregate spending across all government levels (i.e., national, regional, and subregional).
    - Present a programmatic classification for each budget line item.

33. **A general starting point for collecting nutrition financing data is the country's audited official budget data system managed by the Ministry of Finance.** Many countries provide this information through a FMIS that records budget formulation, execution (e.g., commitment control, cash/debt management, and treasury operations), accounting, and

reporting. Some countries have automated and integrated the FMIS, and the budget is recorded in an integrated FMIS (IFMIS) platform.[7] The automated nature of an IFMIS allows the authorities to access readily available timely and accurate information, which is critical to the management of government finances and public funds, which are characterized by large transaction volumes and data dispersal across multiple sites around the country (World Bank 2014). There are also countries that participate in the BOOST initiative, which offers a tool to better utilize the FMIS/IFMIS data by improving the organization and analysis of data in a user-friendly format.[8] The Ministry of Finance often keeps detailed records of expenditure data for different ministries and levels of government, although the level of data available vary across countries. The level of disaggregation needed for an NPER will most likely require access to subnational data, not only at the provincial level but possibly also at the district/local level.

34. **Complementary data sources can be used to supplement government data.** Potential complementary data include:

- **National Health Accounts (NHA) data:** The WHO's NHA tracks spending that flows through the health sector.[9] Nutrition expenditures are captured mainly within the nutrition deficiencies category—one of the five spending categories tracked by the NHA. The NHA, however, is unlikely to capture nutrition-relevant financing for programs related to disease prevention and control, maternal care, and non-communicable diseases, among others. As the NHA primarily targets financing only in the health sector, relying entirely on the NHA dataset will underestimate nutrition-related spending. Nevertheless, NHA information could fill gaps in domestic data reporting in the health sector.

7. When FMIS and other PFM information systems (e.g., e-procurement, payroll, debt management, etc.) are linked with a central data warehouse to record and report all daily financial transactions offering reliable consolidated platforms, this system can be referred to as an integrated FMIS (IFMIS). Broadly, an IFMIS consists of a set of computer programs, databases, associated processes, procedures, and technology platforms that enable government finance and accounting staff to carry out their day-to-day operational tasks.
8. Launched in 2010, the World Bank's BOOST program has active engagements in over 90 developing countries to provide quality access to budget data. The initiative strives to make well-classified and highly disaggregated budget data available to governments, practitioners, researchers, and civil society and promotes their effective use for improved budgetary decision making, analysis, transparency, and accountability. The appeal of the BOOST approach is that it provides user-friendly platforms where all expenditure data can be easily accessed and used to examine trends in allocations of public resources as well as analyze potential sources of inefficiencies so that citizens can become better informed about how governments finance the delivery of public services. More details can be found at: https://www.worldbank.org/en/programs/boost-portal/about-boost.
9. The NHA include data on public, private, and donor health expenditure, although countries, especially low- and middle-income countries, may not update their datasets regularly. Price et al. (2016) reports that only 41 countries, overwhelmingly Organization for Economic Co-operation and Development (OECD) member countries, provide regular updates to the NHA.

- **Insurance claims data.** Data from insurance agency can be relevant for the NPER analysis in countries where insurance schemes make up a significant share of nutrition financing, particularly for expenditures on nutrition-specific interventions and some nutrition-sensitive interventions such as maternal and child service. Specifically, insurance records (e.g., information on claims, patient management records, etc.) that can provide detailed information on interventions received could be useful for identifying nutrition-related expenditures.[10] Moreover, as a further potential use, insurance claims data could demonstrate the effectiveness of nutrition spending through an examination of spending on medical care that could have been avoided with better nutrition programs (there are no examples of such analysis carried out to date in NPERs).

- **Off-budget DP data.** In many countries where a significant part of the health sector is financed by bilateral and multilateral DPs, off-budget funding is reported in separate datasets such as the Aid Information Management System (AIMS),[11] Aid Management Platform (AMP),[12] and the OECD's Creditor Reporting System (CRS).[13] AIMS or AMP is recommended because they are considered of sufficiently high quality, while CRS, which is based on voluntary reporting at an aggregated level, is only recommended when the other two are unavailable. When multiple off-budget data sources are available, the NPER team should consider using only one database to curb the risk of double counting, but the decision should be made by considering the completeness and quality of available data. A country can also use one database and validate off-budget information with data from the next available source, as done in the Bangladesh NPER for DP funding to NGOs and foundations (Box 3). In countries where none of these data sources are available, the team would need to collect primary data, as done in the case of the Rwanda NPER. The Global Financing Facility, a multi-stakeholder global partnership housed in the World Bank, has developed the Resource Mapping and Expenditure Tracking tool (RMET) for this purpose, which can be used to collate DP data.[14]

10. Obviously, the usefulness of this as a data source depends on the payment mechanisms and the level of record completeness. A fee-for-service system may be more straightforward than a capitation system, especially when the capitation is not accompanied by pseudo-billing. In general, most of the information can be found from insurance records related to ambulatory visits, but the team needs to consider the pattern of service delivery utilization.
11. https://iatistandard.org/en/iati-tools-and-resources/aims/.
12. For a general description, see https://developmentgateway.org/expertise/aid-management/. For a list of countries and the URL of their respective AMPs, see Annex F of SUN (2020).
13. https://stats.oecd.org/Index.aspx?DataSetCode=crs1.
14. For more information, see https://www.globalfinancingfacility.org/resource-mapping-and-expenditure-tracking-lessons-learned-countries

BOX 3. EXPERIENCE FROM THE BANGLADESH NPER ON ESTIMATING DONOR FUNDING FOR NGO-IMPLEMENTED NUTRITION INVESTMENTS

In Bangladesh, the NPER team hypothesized that there is a significant amount of investment for nutrition outside of the government system through NGO-implemented activities funded by donors. To estimate the size of such investments, the Bangladesh NPER used multiple databases: Country the Investment Plan (CIP) Development Partners sheet, the Aid Information Management System (AIMS) under the Economic Relations Division (ERD) of the Ministry of Finance, and the OECD-DAC Creditor Reporting System (CRS), all of which captured donor funding to NGOs. The AIMS and CIP databases were screened first by relevant thematic areas (nutrition, health, water, sanitation, and hygiene (WASH), social protection, livelihoods, education, and agriculture) and then by a key word search to identify relevant projects/programs. The information in the CRS database was more limited and therefore only used for triangulation of the information found in AIMS and in the CIP Development Partners sheet. From the list of projects/programs identified through the key word search, some were dropped as they were deemed not relevant. For those projects/programs that were unclear in terms of their nutrition relevance, a search of project/program websites, donor/implementing organization websites, and available project documents was undertaken to determine inclusion or exclusion. After some final adjustments on the implementation time period of the projects/programs, the NPER estimated that NGO-implemented nutrition investments funded by donors was approximately US$736 million over three years, which was approximately 10 percent of the total government expenditure on nutrition during that time.

Source: Begum et al. 2018

3.4.2. DATA SOURCES FOR NUTRITION RESULTS

35. **The goal of nutrition financing is to improve nutrition results.** Thus, the NPER team needs to identify data sources for nutrition performance indicators, based primarily on the output, outcome, or impact levels of the results framework (or log frame) of the national nutrition plan/strategy.[15]

15. If the national nutrition plan/strategy does not include a results framework (or log frame), the NPER team will need to discuss and agree within the team what the specific outputs, outcomes, and impacts are based on a reading of the nutrition plan/strategy.

36. The NPER team may need to access multiple data sources for performance indicators on the national and subnational level. Where there are overlapping data sources, the NPER team should determine the most accurate source of information with the main government entity. Potential data sources include:

> **The ultimate goal of nutrition financing is to improve nutrition results.**

- **Nationally or regionally representative household surveys,** which are the most likely sources of both impact data as well as other monitoring and evaluation indicators. The most frequently used surveys are the Demographic and Health Surveys (DHS) and the Multiple-Indicator Cluster Surveys (MICS), which include a range of population, health, and nutrition and socioeconomic indicators that are standardized across countries. The DHS and MICS are usually updated every five or ten years. Additionally, some countries conduct nutrition-focused "SMART surveys"[16] to provide data in between the DHS and MICS, although these are usually only done in countries suffering from fragility, conflict, and violence. Aside from the DHS and MICS, there may be other nationally representative household surveys. For example, the Basic Health Research (Riset Kesehatan Dasar, RISKESDAS) household survey in Indonesia provided the Indonesia NPER team with information on nutrition-related output, intermediate outcome, and final outcome indicators.

- **Program administrative data** generated as a part of a program's operations could be useful for output and intermediate outcome indicators. Data quality may, however, vary across countries/programs, and indicators need to be carefully interpreted. Data could be vetted by comparing indicators from different sources, and data quality could be assessed through consultations with project staff on the process of collecting and recording data. The NPER team should also check if the country uses the District Health Information software (DHIS2), a health information management system (HMIS) platform, which collects aggregated data on routine services at health facilities, staffing, equipment, and infrastructure, among other variables. The DHIS2 covers both input and output indicators and can provide insights into how the quality of nutrition-related data is addressed (DHIS2 2020).

16. "SMART surveys" are recognized as the standard methodology by national Ministries of Health, donors, and implementing partners of the Global Nutrition Cluster such as international NGOs and UN agencies that wish to undertake nutrition and mortality surveys. The Global Nutrition Cluster (GNC) is a group of 33 members from various NGOs involved in nutrition, which meets regularly to exchange information on nutrition emergencies at the global level. With UNICEF as the lead agency, the GNC develops open access to institutional archives and resources for cluster implementation in a user-friendly manner. For more details see: https://smartmethodology.org/about-smart/.

37. **In some countries, the government already utilizes a 'country performance monitoring dashboard'-like system that integrates financial and sector performance data into one dataset.** This contrasts with the more common case where financial and sector performance data are recorded in separate databases. As it relates to nutrition, this implies a dashboard where expenditure on nutrition and some key nutrition performance outcomes are displayed side-by-side in one system. This is not commonly found in most developing countries but is best practice in terms of understanding the linkage between financing and the corresponding outcomes. For example, a recent reform in Indonesia focuses on connecting various financial and performance monitoring data systems to make it easier to share and analyze information. The Ministry of Finance's Online Monitoring System of the Financial Management Information System (OM-SPAN), which provides information on budget allocation and execution, has been connected to an online integrated performance monitoring application called SMART, which in turn records output data on each work unit in the ministry or agency using OM-SPAN. Thus, information on budget realization and results at the output level are simultaneously accessible to track spending and outputs, enabling stock taking and quick evaluation by line ministries.

4

KEY ELEMENTS OF AN NPER

38. **This section presents key elements that are recommended to be covered in an NPER.** The headings of this section can be considered a skeleton outline of an NPER.

Skeleton outline of an NPER:

- (Introduction)
- Country context
- National nutrition strategy
- Institutional framework and budget process
- Identifying nutrition expenditure
- Analysis
  - » Expenditure levels and trends
  - » Composition of expenditure
  - » Service coverage and utilization
  - » Effectiveness
  - » Efficiency
    - Allocative efficiency
    - Technical efficiency
    - Administrative efficiency
  - » Equity
- (Conclusion, recommendations, moving forward)

4.1. COUNTRY CONTEXT

39. **To understand the country context, the NPER team needs to present key economic and health indicators (and their link to nutritional outcomes) as well as nutritional indicators.** It also needs to describe how these have changed over time and how they compare with peer countries. Relevant metrics to present include:

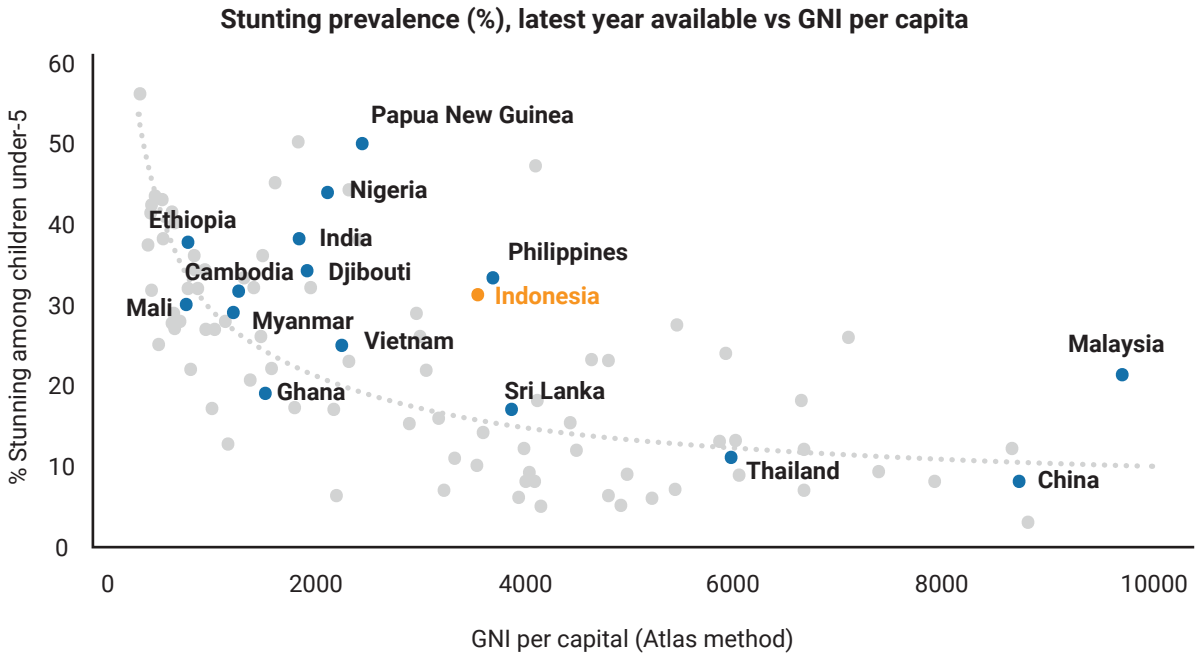
    - **[economic]** poverty rate, per capita gross national income (GNI) or gross domestic product (GDP), annual GNI/GDP growth rate, population, population growth rate, human capital index, shared prosperity indicators, size of government spending, government revenues, debt;
    - **[health]** per capita health expenditure, life expectancy at birth, fertility, under-five/infant/maternal mortality rates, disease burden (top ten causes of death and disability, top ten risk factors causing death and disability);[17] and
    - **[nutrition]**[18] under-five stunting, reproductive age female anemia rate, low birth weight, under-five overweight, exclusive breastfeeding up to six months, childhood wasting.

40. **Comparisons with regional peers and/or appropriate benchmarks (e.g., regional average, global average, and countries at similar income levels) put the country's health and nutrition statistics in perspective.** Benchmarks that compare a country's metrics with relevant peer countries can be a simple yet powerful way of highlighting spending inefficiency that often resonate with policymakers. For example, Indonesia successfully decreased early childhood mortality from 97 to 32 per 1,000 live births between 1990 and 2017. However, its stunting rates remain among the highest in the world (27.7 percent in 2019) and much higher than those of other countries of similar income levels such as Sri Lanka (13 percent) (Figure 3). .

41. **The NPER should also reveal any within-country disparities.** Such data can highlight geographical areas with the highest need (or areas that are most in need of nutrition interventions), provide guidance on what kind of analysis the NPER should undertake, and feed into policy recommendations for strategies to reach the last mile or inform fiscal transfer strategies to reduce disparities. For instance, the Bhutan NPER shows that stunting rates are higher in Eastern Bhutan and rural areas, and the prevalence of stunting among households in the poorest income quintile (35 percent) is markedly higher than among households in the richest quintile (5 percent) (Figure 4).

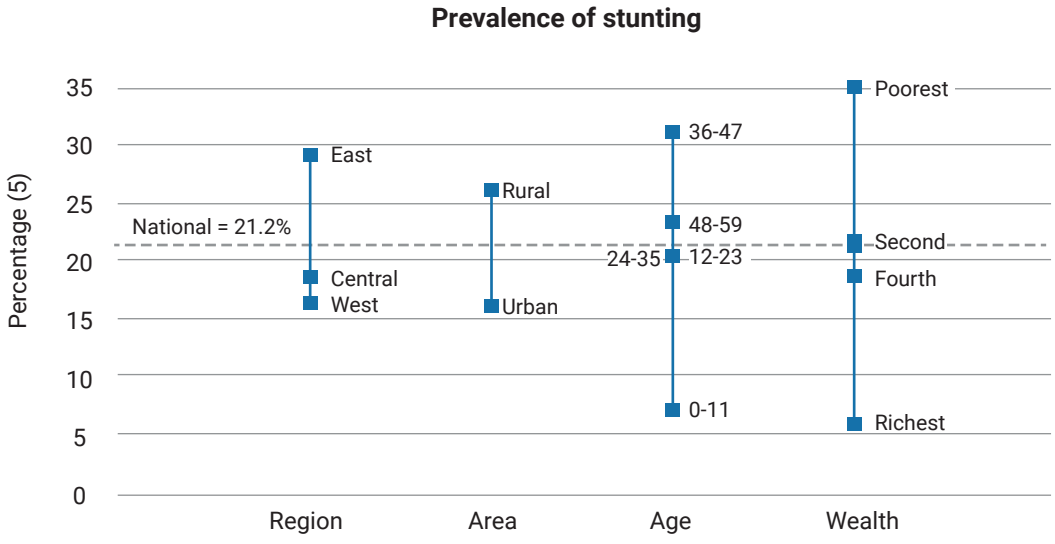
17. This is available at the Institute for Health Metrics and Evaluation's website: http://www.healthdata.org/gbd/gbd-2019-resources.
18. These six indicators are those tracked under the global nutrition targets endorsed by the World Health Assembly (WHA) in 2012 (WHO 2012, 2020), which were subsequently adopted as SDG2 nutrition targets.

FIGURE 3. EXAMPLE FROM THE INDONESIA NPER: STUNTING RATE RELATIVE TO COMPARATORS



Source: World Bank 2020a; Word Development Indicators data for 2019; data for Indonesia from RISKESDAS 2018.

FIGURE 4. EXAMPLE FROM THE BHUTAN NPER: STUNTING BY REGION, AREA, AGE, AND WEALTH



Source: World Bank 2019b.

4.2. NATIONAL NUTRITION STRATEGY

42. **NPERs should be guided first and foremost by the country's nutrition strategy.** The national nutrition strategy relates to NPERs in two main ways. First, NPERs should present a clear view of the country nutrition strategy to set the context, although this may not be a simple straightforward task in countries where there are multiple strategies that address nutrition, each with their own set of identified priorities that are not necessarily coherent. Second, the priorities of the country's nutrition strategies should determine key areas of the NPER, from the scope of work to the types of analyses that will be carried out. Specifically, NPERs should try to assess whether nutrition financing levels and trends have been consistent with priorities identified in the nutrition strategy, and whether with the existing nutrition financing, results envisioned in the country nutrition strategy have been achieved (or not).

43. **NPERs should clearly present the country's nutrition strategy and specific objectives.** Anchoring the NPER to the country's policy framework would make it more relevant to policymakers and help them meet their policy commitments (Box 4). For example, a country's primary nutrition goal may be to reduce stunting due to malnutrition, or it may be to address all three dimensions of malnutrition (undernutrition, micronutrient deficiency, and overweight and obesity).[19] However, there could be less-ideal situations such as where countries do not have a national nutrition policy, the nutrition strategy is not a stand-alone strategy and is instead a part of health-sector priorities, or there is a nutrition strategy but with very limited scope. In these scenarios, the NPER team needs to agree with the government on what the country's nutrition objectives are before embarking on the NPER.

44. **NPERs should assess the clarity, alignment, and appropriateness of nutrition strategies and goals.** Questions to address include:

    - Are the country's nutrition goals clearly stated and supported by clearly articulated strategies or action plans? If the country has subnational nutrition strategies/plans, are they aligned with national strategies/plans?
    - Are they broadly aligned with the Lancet Framework of nutrition (see Annex 1)?
    - Are priorities evidence-based and aligned with global recommendations for high-impact interventions?
    - Do different strategies complement each other or are they contradictory?
    - Are institutional arrangements clearly presented with roles and responsibilities for different agencies?

19. None of the NPERs to date have addressed overweight/obesity in examining the performance of the nutrition expenditure.

- Are goals supported by tangible results indicators, target values, and clear timelines (to achieve the targets)? Is there a process for measuring progress?
- Are interventions costed out so that identified priority interventions are not just a 'wish list'?

BOX 4. HOW NPERS ARE ALIGNED WITH NATIONAL NUTRITION POLICY GOALS

The **Bhutan** NPER is aligned with the Food and Nutrition Security (FNS) policy document, which outlines the country's nutrition strategy. Bhutan prioritizes efforts to reduce micronutrient deficiencies and improve nutrition among adolescent girls, children under the age of five, women of reproductive age, and pregnant and lactating women.

The **Indonesia** NPER focuses on stunting, as the country's authorities view human capital as one of the key pillars for achieving Indonesia's 2045 vision. Reducing stunting is an essential component of human capital, and Indonesia's stunting rates are among the highest in the world.

In **Rwanda**, the NPER is aligned with the objectives of the National Early Childhood Development Program (NECDP) Strategic Plan, which coordinates all interventions that support early childhood development from conception to six years of age. It is characterized by eight strategic directions aimed at increasing the coverage and quality of high-impact, evidence-based integrated early childhood development interventions. The fact that the information on outcomes and expenditures is not regularly published and its activities are not costed out in the NECDP Strategic Plan are challenges to its successful implementation.

4.3. INSTITUTIONAL FRAMEWORK AND BUDGET PROCESS

45. Indicative questions that NPERs could address include:

- What are the characteristics of the institutional framework for addressing nutrition in the country (including any nutrition coordination mechanisms)? What are the key delivery platforms across sectors and levels of government?

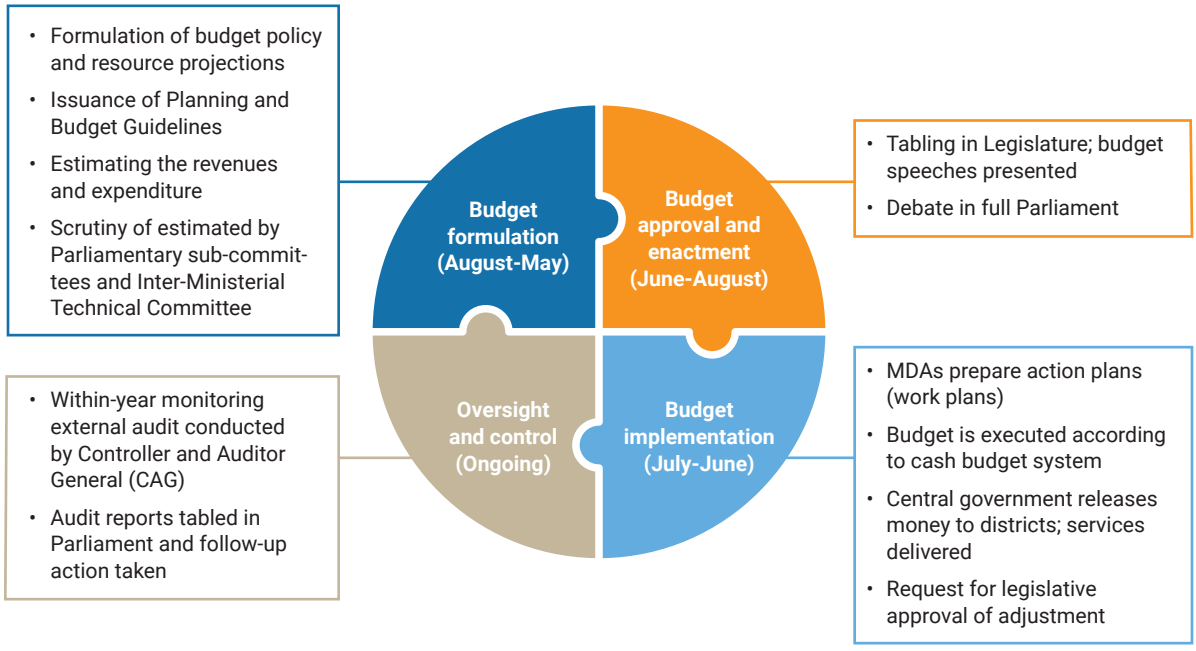
- How does financing flow (including to decentralized levels of government and various delivery platforms)?
- What are the government planning and budget management systems that are applicable to multisectoral policy and plans?

46. The NPER needs to describe and assess the country's institutional framework for addressing nutrition. Many countries have established an inter-ministerial nutrition coordination mechanism, which drives the coordination of interventions included in the country's nutrition strategy. These mechanisms can be chaired by the prime minister, vice president, the minister of health, or by the head of another government agency. The NPER should describe its specific mandates and roles and assess the strength and how the mechanism is carrying out its mandate. The NPER should discuss the overall effectiveness of the nutrition coordination mechanism, including: (i) whether it is playing any role (or have the potential to play such a role in the future) in the national budget process that combines a top-down, whole-of-government policy framework, led by central finance and planning agencies, with a bottom-up process of expenditure planning by spending agencies; (ii) its tools to hold stakeholders accountable; (iii) its ability to follow up on whether budgets have been released, understand what activities have been implemented, and monitor cash flow issues across implementing agencies; and (iv) whether the legislative branch is engaged in the process.[20]

47. In terms of the budget process, PERs typically present a step-by-step annual budget process diagram and/or fund flow diagram to show how financing flows to beneficiaries. The annual budget process diagram of a given country would show how the central finance and planning agencies initiate the budget process usually 6–9 months before the start of the fiscal year. This is typically done by preparing a pre-budget policy document that lays out the macroeconomic framework and proposes the broad allocation of resources in line with government plans and policies. This is followed by numerous steps such as the issuing of budget circulars and ceilings, the preparation of budget proposals by spending agencies, negotiations with central financing and planning agencies, budget approval processes involving parliamentary approval, the release of funds, reporting on budget use, and culminating with an independent audit of final accounts after the fiscal year. The fund flow diagram highlights where the funds originate, the authorities that administer them, and where they are finally spent. The schematic of the financing flows can help the NPER team organize and focus the analysis by identifying key financiers and government authorities involved in nutrition-related expenditure. Figure 5 is an example of the budget process diagram from the Tanzania NPER.

20. If the NPER has a significant emphasis on these institutional issues, the team may consider calling the document a Nutrition Public Expenditure and Institutional Review. Thus far, there is only one such document: the Rwanda Nutrition Public Expenditure and Institutional Review.

FIGURE 5. EXAMPLE FROM THE TANZANIA NEPR: BUDGET PROCESS DIAGRAM



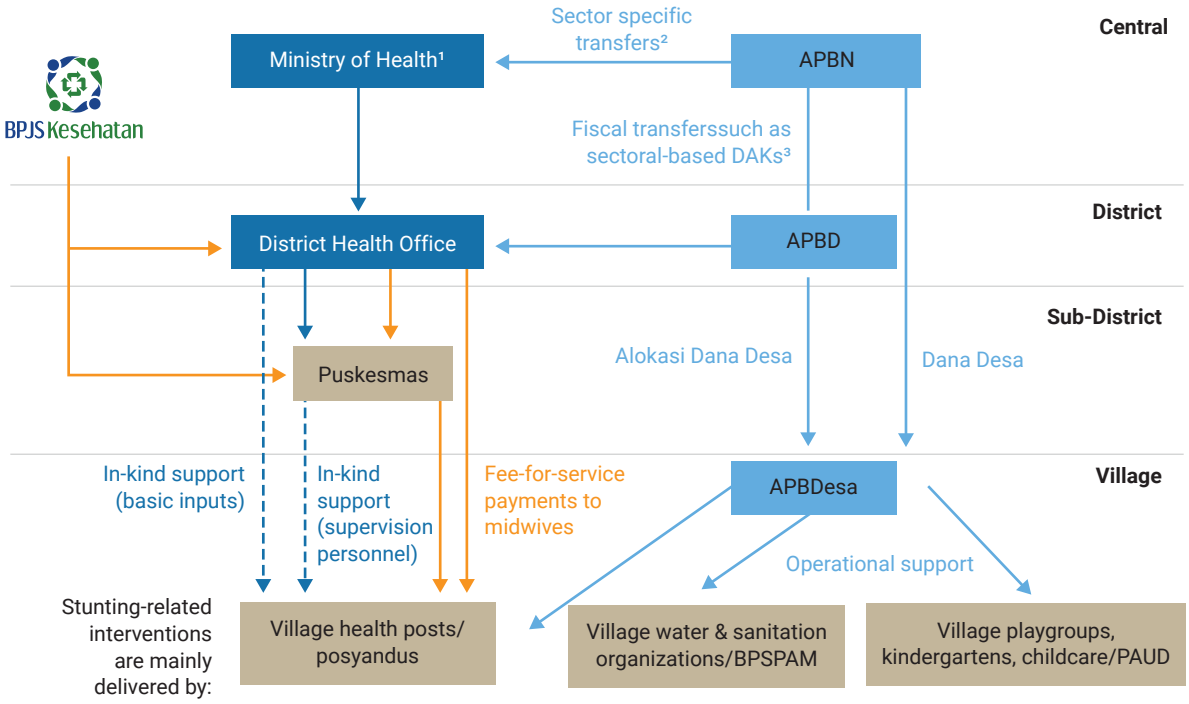
Source: Tanzania Ministry of Finance and Planning (MoFP) and UNICEF.

48. **Given the multisectoral nature of nutrition programs, NPERs may include an assessment of how the current PFM system coordinates nutrition expenditures across sectors and levels of government.** Multisectoral nutrition programs involve several government agencies, programs, and subprograms that requires PFM mechanisms to guide the planning and budgeting phase to ensure that nutrition-related activities of all agencies are prioritized and aligned with the national nutrition policy. The NPER team can conduct an assessment of how current PFM systems work to manage the budget formulation process and monitor budget releases across all agencies against appropriations. In Indonesia and Rwanda, a detailed discussion on PFM process has helped the analysis and formulation of recommendations to improve the quality and availability of financing data.

49. **Since nutrition-related activities are multisectoral, there are likely many implementing agencies and delivery platforms involved in executing nutrition expenditure.** The NPER team should identify the country's prevailing delivery channels for a variety of nutrition services. Nutrition-specific interventions are usually delivered through health service delivery platforms, and many nutrition services are already integrated into health care delivery systems. However, in many countries some nutrition services are delivered outside the formal health sector (e.g., through community-level platforms outside the public health system). Furthermore, nutrition-sensitive interventions are delivered through other delivery platforms such as schools to reach the intended target group (e.g., adolescent girls). Hence,

it would be good to explain the different delivery platforms involved. For example, the Rwanda NPER shows that financing for nutrition-sensitive activities is channeled through 29 programs and 54 subprograms. In Indonesia, there are three main delivery platforms: village health posts, village water and sanitation organizations, and village playgroups (Figure 6).

FIGURE 6. EXAMPLE FROM THE INDONESIA NPER: FLOW OF NUTRITION FINANCING



Note: JKN=national health insurance scheme; BPJS-Kesehatan=national health insurance agency; APBN=state budget; APBD=district budget; APBDesa=village budget.

Source: World Bank 2020a.

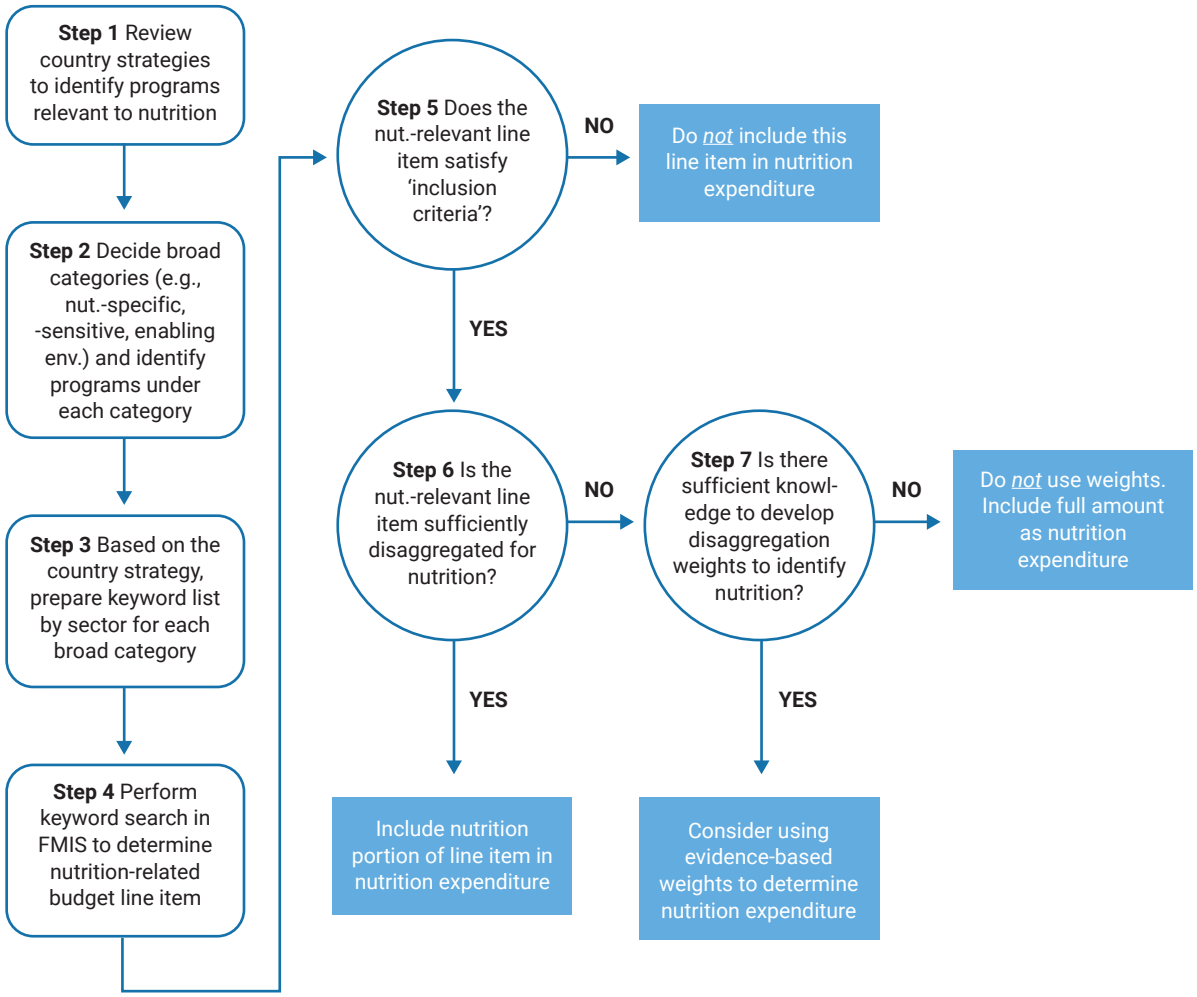
4.4. IDENTIFYING NUTRITION EXPENDITURE

50. Indicative questions that NPERs could address to identify nutrition expenditure:

- How is the level of nutrition expenditure determined?
- Should disaggregation weights be used in determining the level of nutrition expenditure? If so, when and how?
- How do we deal with high-cost, nutrition-sensitive interventions (e.g., infrastructure for water pipes)? Should all of it be counted as nutrition expenditure?

51. **To identify nutrition expenditure items, the NPER team should follow the 7 steps outlined in the flow chart outlined in Figure 7.** It is important to note that the use of disaggregation weights does not appear until the last step (Step 7), after a budget line item has passed the inclusion criteria filter (Step 5).

FIGURE 7. FLOW-CHART OF STEPS TO IDENTIFY NUTRITION EXPENDITURE



52. **Step 1: Review country strategies/action plans to identify which programs and interventions are relevant to nutrition.** It is also important for the NPER team to identify the sectors and ministries responsible for the programs and interventions. Table 1 includes an example of a list of identified interventions from the Indonesia NPER.

TABLE 1. EXAMPLE FROM THE INDONESIA NPER: NUTRITION-RELATED INTERVENTIONS

	Interventions
Nutrition-specific	• Supplementary feeding for chronic energy-deficient women • Iron folic acid supplementation • Exclusive breastfeeding counseling • Prenatal health checkups • Infant young child feeding counseling • Integrated management of chronic malnutrition • Growth monitoring and promotion • Vitamin A supplementation • Micronutrient supplementation • Complete immunization • Zinc supplementation • Integrated management of child illness
Nutrition-sensitive	[Water and sanitation] • Access to clean water and drinking water • Access to improved sanitation facilities [Social insurance and assistance] • Access to health insurance • Access to family planning services • Access to conditional cash transfers [Awareness, behavior change, and parenting and caring practices] • Nutrition and health awareness raising • Provision of interpersonal behavior change counseling • Provision of parenting counseling • Provision of early childhood education, early child stimulation, and child development monitoring • Provision of adolescent reproductive health counseling • Women's empowerment and child protection [Food and agriculture] • Provision of food assistance for poor and near poor households • Nutritious food security programs • Access to fortified staple foods • Access to nutritious food product information

53. **Step 2: Decide on broad categories (e.g., nutrition-specific/sensitive interventions and enabling environment) and identify programs and interventions under each category.** The Lancet framework for nutrition (Annex 1) constitutes a good starting point to identify categories, as it is based on an extensive review of existing evidence. Another benefit of using the Lancet framework for categorization is that it allows for a comparison across countries. If a country decides to use a different method of categorization than the Lancet framework (e.g., placing a school feeding program in the nutrition-specific category rather than in the nutrition-sensitive intervention category), it is good practice to document the justification for future reference. Table 2 includes a list of the interventions and programs under each nutrition category extracted from the Lancet framework.

54. **Step 3: Prepare a comprehensive list of keywords by sector and ministry. An important resource for the NPER team to develop a list of keywords for an NPER is The SUN Budget Analysis for Nutrition, which presents an initial summary list of keywords from 30 countries (Fracassi et al. 2020).**[21] National nutrition strategies and plans are equally important resources that can be helpful to identify relevant keywords. In the process of creating a country-specific list of keywords, it can be useful to review search terms used in other NPERs (Box 5).[22] Based on a review of these resources, the team should finalize a list of keywords that will be utilized in the next step. In some instances, the team may need to include variations of the keywords since they could be recorded slightly differently in different parts of the FMIS/IFMIS. For example, to capture expenditure related to iron supplementation, the team may need to specify not just 'iron' or 'iron supplementation' but also 'iron/folic acid supplementation' (since tablets may contain both iron and folic acid and not just iron), 'Fe,' '(Fe),' 'Fe3,' 'Fe/folic acid,' 'iron-containing tablets,' or other similar terms. Similarly, keywords may need to consider commonly used abbreviation norms (e.g., specifying 'vitamin A,' 'vit. A,' and 'vit A' for vitamin A supplementation).

National nutrition strategies and plans are equally important resources that can be helpful to identify relevant keywords.

21. Annex B of Fracassi et al. 2020.
22. The Indonesia NPER used a list of keywords to include as well as a list of keywords to exclude. This may be an option if local experts can determine common inclusion errors from past work. For example, for food supplementation programs, some keywords to include are 'food supplementation,' 'provision of milk for children under 5…,' and '*taburia* (multiple micronutrient supplements for children),' and some keywords to exclude are '*lansia* (elderlies),' 'patient,' and 'whitening.' (Indonesia Ministry of National Development Planning et al. 2018).

TABLE 2. PROGRAMS AND INTERVENTIONS BY NUTRITION CATEGORY (LANCET FRAMEWORK)

Defining nutrition categories	Programs and interventions
Specific: direct high-impact nutrition interventions	• Adolescent health and preconception nutrition • Maternal dietary supplementation • Micronutrient supplementation or fortification • Breastfeeding and complementary feeding • Dietary supplementation for children • Dietary diversification • Feeding behaviors and stimulation • Treatment of severe acute malnutrition • Disease prevention and management • Nutrition interventions in emergencies
Sensitive: indirect nutrition interventions with nutrition-relevant objectives, outcomes, and/or actions	• Agriculture and food security • Social safety nets • Early child development • Maternal mental health • Women's empowerment • Child protection • Classroom education • Water and sanitation • Health and family planning services
Enabling: interventions that enhance and improve the governance and increase the effectiveness of nutrition interventions	• Rigorous evaluations • Advocacy strategies • Horizontal and vertical coordination • Accountability, incentives regulation, legislation • Leadership programs • Capacity investments • Domestic resource mobilization

Note: Lancet Framework in Annex 1.
Source: Black et al. 2013.

BOX 5. EXAMPLES OF KEYWORDS USED IN THE BHUTAN NPER BY SECTOR/MINISTRY

- **Ministry of Works and Human Settlement (MOWHS):** 'water', 'hygiene', 'sanitation', 'toilet', 'sewerage', 'waste', 'wash', excluding 'storm-water', irrigation water', 'bypass road' + 'water', 'water" + 'hostel'
- **Ministry of Environment (MOE):** water', 'hygiene', 'sanitation', 'toilet', 'sewerage', 'RWSS', 'waste', 'wash'
- **Ministry of Agriculture and Forests (MOAF):** 'livestock' + 'school', 'vegetable' + 'school'
- **Ministry of Health:** 'water', 'hygiene', 'sanitation', 'toilet', 'sewerage', 'waste', 'wash'
- **Gross National Happiness Commission:** 'food' + 'nutrition', 'home'+ 'garden', + 'vegetable' + 'farming'
- **Ministry of Home and Cultural Affairs:** 'water', 'hygiene', 'sanitation', 'toilet', 'sewerage', 'RWSS', 'waste'

Source: World Bank 2019b.

55. **Step 4: Perform a search of the identified keywords in the electronic government expenditure dataset (FMIS/IFMIS) and other data sources (as needed) for each relevant field.**[23] A comprehensive classification has the following hierarchical fields: program, subprogram, activity, and output, with each field representing a more disaggregated classification of the former. If further disaggregation is needed, the keyword search can be supplemented with a search in another dataset (Box 6). The search should yield a list of nutrition-relevant budget line items that can be further assessed for inclusion in the list of nutrition expenditure (or not).

23. Data sources on nutrition financing presented in Section 3.4.1 should be used in this step.

BOX 6. EXAMPLE FROM INDONESIA FOR HOW TO PERFORM A KEYWORD SEARCH ON MULTIPLE DATASETS

In Indonesia, the Ministry of Finance's fiscal data do not include any subclassification beyond broad categories of nutrition spending. This can lead to overestimation of what constitutes nutrition spending. The data contain the categories 'sector,' 'program,' and 'output,' among others. Each program is categorized into outputs, but there is no further subcategory of activities. At the output level, some nutritional interventions are categorized together with non-nutritional interventions. For example, deworming, which is a nutrition intervention, is combined with filariasis—a non-nutrition intervention. Likewise, the output under immunization does not specify the type of vaccination. Instead, the aggregated immunization expenditure includes vaccines for pilgrimage and influenza and not just those pertaining to nutrition. To unpack information beyond the output level, the NPER team needed to analyze activity-level data. For this purpose, the NPER team reviewed the annual work plan and budget data of the Ministry of Health. This dataset is an extension of Ministry of Finance data, as it disaggregates output data by subclassification. The team then performed a keyword search on data under the activity field and included only those interventions that were relevant to nutrition.

Source: World Bank 2020a.

56. **Step 5: Determine whether a nutrition-relevant budget line item (that was identified in Step 4) satisfies the inclusion criteria to be counted as a nutrition expenditure (determine Yes/No for each budget line item).** The NPER team should carefully craft inclusion criteria to determine whether budget line items identified in Step 4 should be included as part of nutrition financing or not. The application of this step will likely be straightforward for nutrition-specific related budget line items (most will satisfy the criteria and be a 'Yes' in Step 5). However, it is particularly important to apply an inclusion criteria filter to nutrition-sensitive interventions to determine whether they should be included as nutrition expenditure or not. If a budget line item satisfies the inclusion criteria ('Yes' in Step 5), it should be included as nutrition expenditure in full, without any sort of discounting of costs at this stage. In Step 6, it will be examined whether the budget line item is sufficiently disaggregated. If a budget line items does not satisfy the inclusion criteria ('No' in Step 5), it should not be counted as nutrition expenditure. Given the lack of evidence on the impact of many nutrition-sensitive interventions, the NPER team should not attempt to use any sort of weights to discount for the impact of nutrition-sensitive interventions, even when such interventions are

very costly (Box 7).[24] This means that Step 5 should be answered in a Yes/No manner for all interventions, including high-cost nutrition-sensitive interventions such as infrastructure costs. The correct use of weights occurs in Step 7, which involves identifying the share of nutrition in a budget line item that bundles nutrition and non-nutrition activities.

BOX 7. GUIDANCE ON HIGH-COST NUTRITION-SENSITIVE LINE ITEMS

Even after excluding some line items by using the inclusion criteria described in Step 5, there may be high-cost nutrition-sensitive interventions that pass the inclusion criteria filter ('Yes' in Step 5). This could be due to the NPER not systematically developing or applying inclusion criteria when determining whether a budget line item should be included or not. Examples of such programs are infrastructure costs (e.g., water pipes to provide clean water, school latrine/toilets, village health clinic construction costs, and irrigation schemes), broad agriculture support programs for high-nutrients crops (e.g., fertilizer subsidies, improved seeds, livestock support, and aquaculture support), cash transfer programs, and school feeding programs. These programs do address underlying causes of malnutrition (and are included in the Lancet framework), and many do have improving nutrition as one of their overall program goals. The inclusion of these high-cost line items in the calculation of nutrition expenditure will undoubtedly mean that they will dominate less-costly nutrition-specific line items. This may seem counterintuitive, and teams may be compelled to use weights as a proxy for the likely contribution of these high-cost nutrition-sensitive interventions (Table 4). However, using weights as a proxy for its contribution to nutrition is not consistent with SUN guidance, which positions weights as a tool to address the issue of budget line items lacking sufficient disaggregation.

To expand the use of weights as proxy for contribution to nutrition would require a solid research findings and evidence on the impact of all nutrition-contributing activities, which are not available to date. In the absence of such evidence, NPERs should not use weights to attempt to discount for perceived lower contribution to nutrition of nutrition-

24. ACF International et al. (2017) presents an alternative methodology that was used in the nutrition budget analysis by Burkina Faso in 2016. This is an alternative methodology that makes a lot of sense but has high data requirements and is not discussed in the SUN guidance. The methodology introduces two separate weights (i.e., W1 = portion of budget allocated to nutrition and W2 = the impact of the intervention on nutrition). Both weights were developed based on expert interviews and technical consultation with experts from multiple ministries. Nutrition financing was determined by multiplying W1 x W2 to the budget line item.

BOX 7. CONT.

sensitive interventions (even when such interventions are very costly). This will likely result in a nutrition financing landscape where a very high share (i.e., 80-90 percent) of nutrition financing falls under nutrition-sensitive interventions, which is in fact what is reported for most countries.

TABLE 4. NPER EXAMPLES WHERE WEIGHTS WERE USED AS PROXY FOR NUTRITION CONTRIBUTIONS

(Not Consistent with Current SUN Guidance)

Country	Year	Weights used as proxy for contribution to nutrition
Bangladesh	2019	No
Bhutan	2020	No
Indonesia	2020	Yes (Assumptions were used on a few large programs based on expert judgement or analysis of administrative data—see Annex 1 of the Indonesia NPER for details.)
Nepal	2019	Yes (Each nutrition-sensitive program was provided with weights as a proxy for the proportion of the line item that is contributing to nutritional outcomes—see Annex 7 of the Nepal NPER for details.)
Rwanda	2020	No (But weights were used in a sensitivity analysis presented in Annex 4-5. Partial attribution was provided to nutrition sensitive and enabling environment investments. Interventions were classified into quartiles to 100 percent, 75 percent, 50 percent, or 25 percent. Activities that were only marginally relevant were attributed only 10 percent share.)
Sri Lanka	2020	No
Tanzania	2018	Yes (Based on expert judgement, default value of 10 percent was used when an objective basis could not be determined.)

57. **SUN is a good starting point for teams to build their inclusion criteria (MQSUN+ 2020).** This methodology includes the following considerations:[25]

    - The budget line item clearly reflects a sectoral priority that is included in multisectoral planning efforts for nutrition.
    - It is possible to identify the target population in terms of direct and indirect beneficiaries.
        - » Direct beneficiaries: 1,000 days window of opportunity (pregnant and lactating women and children under 2 years of age), children, adolescents, and women of reproductive age.
        - » Indirect beneficiaries: such as households and communities at risk of malnutrition (segmented by livelihoods, vulnerability, etc.)
    - It is possible to define a measurable outcome and recognize where this outcome stands within the nutrition impact pathways (such as in the UNICEF Conceptual Framework of the determinants of child undernutrition).

58. **Step 6: Determine whether budget line items ('Yes' in Step 5) are sufficiently disaggregated between nutrition-related and non-nutrition related interventions ('Yes'/'No' for each budget line item).** Ideally, data in the government's FMIS/IFMIS (and other data sources that are utilized) are sufficiently disaggregated, and the NPER team can easily identify budget lines that correspond to nutrition. In this case, the NPER team should include those budget lines as nutrition expenditure. However, in most cases there will be at least some line items where this is not the case. In that case, the team should proceed to Step 7.

59. **Step 7: For budget line items that are not sufficiently disaggregated ('No' in Step 6; "bundled operational budget"), determine whether there is sufficient evidence to develop disaggregation weights ('Yes'/'No' for each line item that was a 'No' in Step 6).** For those budget lines with insufficient disaggregation in budget lines (as is often the case), the most updated guidance from SUN suggests that countries use "evidence-based" disaggregation weights based on either interviews or expert consultation with key stakeholders or document reviews. This could allow the team to accurately establish what proportion of line items

25. Another emerging methodology that is currently being discussed within the SUN Donor Network is the use of OECD Nutrition Policy Markers that were developed in 2018 based on the donor resource tracking principles of (1) policy relevant, (2) technically accurate and evidence-based, (3) timely and reliable, (4) long-term, (5) standardized, and (6) transparent (USAID Advancing Nutrition 2021 forthcoming). According to this methodology, donors review a project and give it a score of 0, 1, or 2 depending on the nutrition objective identified within the project (0 = project does not target nutrition at all, 1 = project has **significant** nutrition objective (in which nutrition is a deliberate objective, but not the main reason for undertaking the project), and 2 = project has a **principal** nutrition objective). Once these scores are assigned, then the donors report on costs for projects with scores of 1 or 2 as nutrition expenditure.

can be attributed to nutrition.[26] For example, the Indonesia NPER applied disaggregation weights to the National Health Insurance (*Jaminan Kesehatan Nasional,* JKN) program to determine its contribution to nutrition (Box 7). If evidence-based disaggregation weights can be constructed ('Yes' in Step 7), the NPER has the option of applying them to the relevant line items. However, if that is not the case ('No' in Step 7), the NPER should use the full cost without the use of more subjective disaggregation weights and noting the possibility of overestimation. In the past, SUN included guidance for NPERs to use less precise normative disaggregation weights.[27] However, in its updated guidance, this practice is no longer recommended due to its highly subjective nature.[28] Practitioners need to be fully aware that the use of disaggregation weights is a temporary solution until the accounting system can tag line items at a more detailed level, making the process of weighting redundant.

60. **Personnel cost:** Personnel cost is a common form of a bundled budget ('No' in Step 6). SUN (2020) states that in most cases, the associated personnel costs are likely to be presented at the ministry level, meaning that it is not possible to know what personnel are allocated to which program or service delivery channel, although in some cases, there may be disaggregation at the departmental or program level. The NPER should clearly state how personnel costs are presented in the data source and treated to determine the nutrition expenditure. When personnel costs are presented at the ministry level, SUN guidance suggests using the most disaggregated data and estimate the proportion or personnel time dedicated to nutrition-related programs. This means that to adequately identify personnel allocations, the NPER team needs to: (i) decide which of the ministries' core personnel from key sectors are involved in nutrition; and (ii) review the functions of these personnel and understand how much time is allocated to identified nutrition-related interventions. If there is enough information to carry out such an analysis, the default position is to leave out personnel costs reported at the aggregated ministry level and note any potential underestimation.

26. Both options still involve a subjective assessment based on the practitioners' judgement, and the process could jeopardize replicability and transparency if the process is complicated, and the procedure is not documented adequately.
27. Fracassi et al. (2020) list the following typologies of normative weights that have been attempted by various countries: (i) the dual approach (25 percent for sensitive and 100 percent specific) and (ii) the quadruple system (25 percent, 50 percent, 75 percent, and 100 percent).
28. In the 2020 updated supplemental guidance, SUN states that assigning weights is subjective, imprecise, and confusing, and that its only merit is that the exercise of assigning weights brings stakeholders together to look closely at their budgets and programs, which can sensitize them to each ministries'/agencies' contribution to nutrition (MQSUN+ 2020).

BOX 8. USING WEIGHTS TO ASSESS THE CONTRIBUTION OF INDONESIA'S NATIONAL HEALTH INSURANCE

The Ministry of Health has a single program to provide insurance premium assistance through the National Health Insurance (*Jaminan Kesehatan Nasional,* JKN) scheme, with the objective to cover 96.8 million citizens. If the entire JKN budget of IDR 26.7 trillion (FY 2019) is ascribed as nutrition expenditure, it will be a gross overestimation. Therefore, the Indonesia NPER used weights using the following assumptions/steps:

Ministry of Health (024)

- Activity code: 5610. JKN.
- Output code: 501. Number of populations would be covered by JKN.
- Volume: 96.8 million people would be covered by JKN.
- Budget allocation for this activity output: IDR 26.7 trillion (US$1.8 billion).
- Weighting assumptions: Only 2 percent of pregnant women and 10 percent of children under 5 years old are part of the 96.8 million JKN participants (or weigh is 12 percent). It is estimated that only 70 percent of insurance services for pregnant women and children will be related to efforts to reduce stunting.
- Formula: 12 percent x 70 percent x IDR 26.7 trillion.
- Out of the total budget of IDR 26.7 trillion, only IDR 2.2 trillion (US$160 million) is assumed to contribute to efforts to reduce stunting (the nutrition goal used in the NPER).

Source: World Bank (forthcoming)

61. **General principles on using weights:** Table 3 shows the various ways that existing NPERs have approached the use of disaggregation weights for bundled operational budgets and personnel costs. Given the large variance across NPERs, future NPERs should consider the following general principles when determining whether to use weights or not:

- Any international comparisons of nutrition spending (total or for subcategories such as nutrition-specific or nutrition-sensitive interventions) must clarify the use of different methodologies across countries.
- Weights should not be used as a proxy to discount for the nutrition impact of nutrition-sensitive interventions, even when such interventions are very costly (Box 8).
- When presenting data, it is important to indicate whether nutrition-sensitive expenditures are weighted or unweighted. If disaggregation weights are used for bundled budgets (e.g., bundled operational budgets, personnel cost), the methodology should be clearly spelled out in an Annex.
- The NPER should always present the unweighted nutrition expenditure (total, nutrition-specific, nutrition-sensitive subtotals) as reference to allow for comparison with other countries (or future NPERs in that country).

TABLE 3. USE OF DISAGGREGATION WEIGHTS FOR BUNDLED BUDGETS

(WEIGHTS USED OR NOT USED)

Country	Year	Bundled operational budget	Personnel cost
Bangladesh	2019	No	No
Bhutan	2020	No	No
Indonesia	2020	Yes (e.g., JKN: 1 percent [Box 7])	Partly Yes (Salaries in district-level budgets are included without any weights, but it is unclear whether salaries at the central or village level are included)
Nepal	2019	No	No
Rwanda	2020	No (there are ongoing discussions and reform efforts to make nutrition budget data more granular).	No
Sri Lanka	2020	No	Yes (For each ministry/department that implements nutrition interventions, the ratio of total human resources costs has been estimated with respect to total non-human resources costs, and the same ratio of human resources costs has been applied for all nutrition-related expenditure by each ministry)[29]
Tanzania	2018	Yes (The term "apportionment percentage" is used. Weights ranged from 0-100 percent, based on interview notes and policy documents, and the default value of 10 percent was used if a value could not be determined)	Yes (For ministries, department, and agencies as well as local government authorities with nutrition-relevant activities, both the budget and expenditure for salaries were included, apportioned by the percentage of non-salary recurrent and development budget allocations that were deemed to be related to nutrition)

29. However, there were two exceptions: (a) for school programs, teachers' salaries (which represent about 80 percent of total human resources expenditure) were excluded from the assigned human resources costs; and (b) for national WASH programs, human resources costs were not added because these are large-scale programs that are outsourced to firms, and labor costs are largely covered by project costs.However, there were two exceptions: (a) for school programs, teachers' salary (about 80 percent of total HR expenditure) were excluded from the assigned HR costs, and (b) for national WASH programs, HR costs were not added as those are large-scale projects that are outsourced to firms and labor costs are largely covered by the project costs.

4.5. ANALYSIS

62. Once the country nutrition context is presented, the nutrition expenditure is quantified through the steps identified in the previous section, its alignment to the country's nutrition goals assessed, the NPER can move onto the analysis part. Based on the interest, budget, and data availability, the NPER team can decide which types of analyses to carry out. Typical analysis in a sector PER explore: (i) expenditure levels and trends, (ii) composition, (iii) service coverage and utilization, (iv) effectiveness, (v) efficiency, and (vi) equity.

4.5.1. EXPENDITURE LEVELS AND TRENDS

63. Indicative questions that NPERs could address:

- What is the most recent year's level of nutrition expenditure?
- How has the level of nutrition expenditure changed over time?
- How does the country's expenditure level compare to relevant comparators?

64. To put identified nutrition expenditure data into context, NPERs should present a few key metrics such as: (i) expenditure per person or child, (ii) share of total government expenditure, and (iii) percentage of GDP (Table 4). It is recommended to present such information in multiple standardized ways to enable comparisons over time as well as across countries.[30] For per capita expenditure, it is useful to calculate nutrition-specific and nutrition-sensitive expenditure separately, as there are some benchmark data for nutrition-specific interventions (there are none for nutrition-sensitive interventions).

- **Expenditure per person (or per child under the age of 5):** Based on existing nutrition spending data, Shekar et al. (2017) report that government spending on nutrition is on average US$0.85 per child under age 5 in 15 low-income countries, on average US$4.66 per child under age 5 in 13 lower-middle-income countries, and on average US$8.15 per child under age 5 in 3 upper-middle-income countries. The same study notes that to reach global nutrition targets, an additional US$10 per child under age 5 is necessary (beyond current expenditure) for high-impact nutrition-specific interventions in countries that carry the highest burden of stunting, anemia, and wasting and the lowest rates of breastfeeding.
- **Share of total government expenditure:** In the agriculture sector in Sub-Saharan Africa, the African Union-led Comprehensive Africa Agriculture Development

30. However, comparison should always be caveated because there is no uniformity on what to include as nutrition spending, whether salaries and large capital investment such as infrastructure are included, and on approaches to use of weights, etc.

Programme (CAADP) has a target that African countries allocate 10 percent of their total annual budgets toward boosting agricultural productivity. Although compliance is weak, the goal is regularly monitored and reported widely to encourage governments to increase spending on agriculture.[31] Unlike in agriculture, there is no agreed benchmark or tracking system on how much governments should spend on nutrition as a percentage of total expenditure. Countries can, however, look at existing NPERs for relevant comparators.

- **Percentage of GDP:** NPERs can calculate the share of nutrition expenditure in the country's GDP. This value can be referenced against estimates on GDP due to reductions in stunting. Galasso and Wagstaff (2017) estimate that stunting costs 7 percent and 9-10 percent of per capita GDP in Africa and South Asia, respectively, while Horton and Steckl (2013) estimate the effect to be about 4–11 percent of per capita GDP in Africa and Asia.

TABLE 5. SELECT KEY METRICS IN NPERS

Country	Per capita expenditure (US$)	% in total government expenditure	% of GDP
Bangladesh	$18	9%	1%
Bhutan	$29 (nut. specific only: $8.15)	3.5%	1%
Indonesia	$8.4	2.6%	0.2%
Nepal	$7	23%	0.84%
Rwanda	• $5.25 ($36 per child under 5) • nut.-specific only $0.8 ($5.8 per child under 5)	2.5%	n/a
Sri Lanka	$39.6	5.2%	1%
Tanzania	n/a	3.8%	0.9%

Note: Methodology used in quantifying nutrition expenditure differ from country to country, so caution should be exercised in comparing these key metrics.

31. Agricultural expenditure is tracked and reported regularly at: https://www.nepad.org/caadp/tracking-progress.

4.5.2. COMPOSITION OF EXPENDITURE

65. Indicative questions that NPERs could address:

- What are the main financing sources and their mix?
- Who finances what?
- What is the broad share of financing for nutrition-specific and nutrition-sensitive interventions?
- Which sectors have the highest financing levels for nutrition?

66. An important contribution of the NPER is to help the government understand nutrition financing in a multitude of different ways. Most PERs also present the economic composition of expenditure by separating recurrent (i.e., wages, salaries, goods, and services) and capital (i.e., works and capital goods) expenditure. Such an exercise can provide insights into imbalances in the distribution of expenditure (e.g., insufficient funds to cover recurring expenses to maintain existing investments). However, except for vertically administered nutrition interventions where data on the economic composition of expenditure may be available, most nutrition-related interventions are cross-sectoral or part of larger service delivery systems, which makes it difficult to identify costs related to only nutrition (see Section 4.4 on when weights should and should not be used).

4.5.2.1. ADMINISTRATIVE LEVELS

67. The NPER needs to examine the breakdown of nutrition expenditure at both the central and subnational government levels by using the institutional framework and funds flow diagram. Insights into the distribution of spending by level of government can clarify spending responsibilities. Identifying the administrative level where expenditure is made can help the NPER team identify where accountability lies for challenges related to the execution of spending and help determine how disaggregated the analysis needs to be. For example, the Bhutan NPER found that nutrition expenditures are more decentralized than spending in other sectors. Unlike the 70:30 breakdown of total government expenditure between central and subnational authorities, nutrition-related expenditures were split more evenly between the central and subnational level.

4.5.2.2. NUTRITION CATEGORIES

68. **The NPER also needs to examine the breakdown of spending between the broad nutrition categories agreed to in Step 2.** These include nutrition-specific nutrition-sensitive interventions and the enabling environment.[32] In all NPERs, nutrition-sensitive spending represents the largest share of spending on nutrition since it spans multiple sectors and a variety of projects, including interventions that are not directly targeted at nutrition (but address underlying conditions that affect nutrition) (Table 5). As stated in Section 4.4, this is due to the presence of high-cost nutrition-sensntive interventions such as the construction of pipes for potable water or irrigation canals and fertilizer distribution programs to support crop diversification.

TABLE 6. BREAKDOWN OF EXPENDITURE BY BROAD NUTRITION CATEGORIES (FROM NPERS)

Country	Breakdown (nut.-specific : nut.-sensitive)
Bangladesh	2%: 98%
Bhutan	30%: 70%
Indonesia	10%: 90%
Nepal	13%:87%
Rwanda*	16%: 80%
Sri Lanka	10%: 90%
Tanzania*	2%: 96%

Note: The methodology used in quantifying nutrition expenditure differ from country to country, so these key metrics should be viewed with some caution. (*): **Rwanda:** In addition, 4 percent for enabling environment. **Tanzania:** In addition, 2 percent for "unknown/multiple," where the budget line was deemed to include both nutrition-specific and nutrition-sensitive interventions but where no one category was thought to dominate. In practice, this category was reserved for nutrition-related local government salaries and medical supplies.

32. Another emerging category that is currently being discussed within the SUN Donor Network is direct/indirect nutrition activities (USAID Advancing Nutrition, 2021 Forthcoming). USAID Advancing Nutrition (2021, Forthcoming) does not include the definition of direct/indirect nutrition activities but includes an indicative list. Direct nutrition activities are broken down into: (i) direct healthcare sector nutritional interventions (e.g., maternal and child micronutrient supplementation, including home fortification and delayed cord clamping); and (ii) other sectoral strategies directly affecting nutrition (e.g., iodized or micronutrient fortified salt and nutritional interventions in schools). Similarly, indirect nutrition activities are broken down into: (i) indirect health care sector nutritional interventions (e.g., family planning and reproductive health services, disease prevention, and management strategies, especially for diarrhea); and (ii) other sectoral strategies indirectly affecting nutrition (e.g., household food security and universal education, with a gender focus).

69. **There is no international benchmark percentage indicating an optimal split between nutrition-specific and nutrition-sensitive interventions.** Rather, it depends on the specific country context. Also, an international comparison can be misleading given the different methodologies countries use to report on nutrition financing. As an illustrative example, Figure 8 presents nutrition spending (budget allocation, not actual spending) as reported by countries to SUN and presented in the 2017 Global Nutrition Report (Development Initiatives 2017). The share of nutrition-specific spending in most countries is less than 10 percent, with Vietnam being a major outlier, where nutrition-specific spending is higher than nutrition-sensitive spending.

4.5.2.3. SECTOR COMPOSITION

70. **NPERs need to examine the sector composition of public expenditure and identify major programs that have been identified as nutrition expenditure.** This is often done separately for nutrition-specific and nutrition-sensitive interventions. In the Sri Lanka NPER, the team identified three program areas that contributed about 90 percent of all nutrition-sensitive investments: (i) the *Samurdhi* (cash-assistance) welfare program (39 percent); (ii) agricultural food security programs, particularly fertilizer subsidies (29 percent); and (iii) water sanitation and hygiene (WASH) programs (25 percent). Two interventions alone represented 80 percent of all nutrition-specific interventions: the fortified food supplement program (*Thriposha*) and the school meal program.

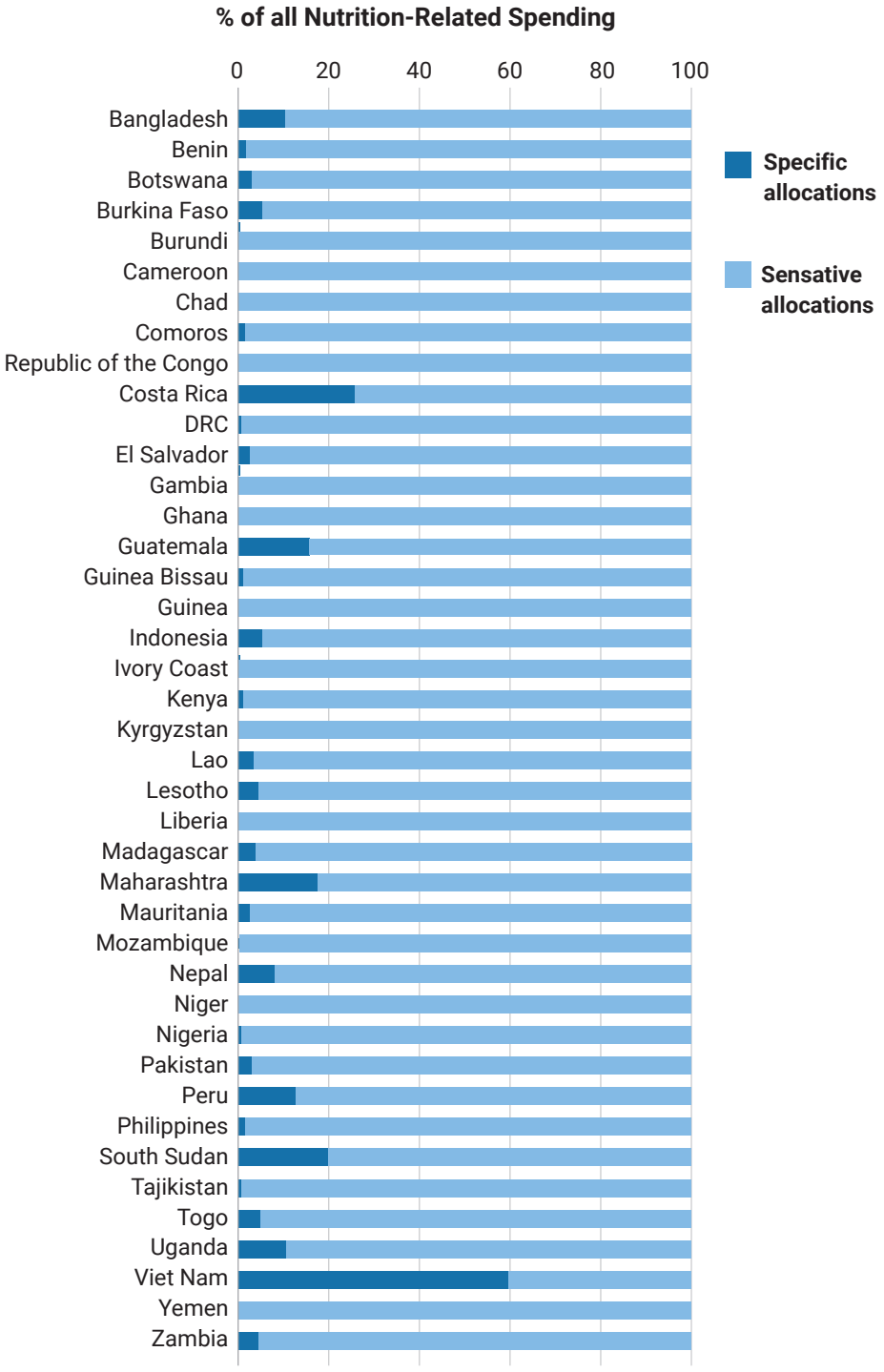
4.5.3. SERVICE COVERAGE AND UTILIZATION

71. **Indicative questions that NPERs could address:**

- What are the coverage and utilization of proven high-impact nutrition interventions across sectors?
- What is the distribution pattern of services across geographical areas and socioeconomic factors?
- What are some bottlenecks to implementing effective interventions?
- What are the key critical intervention gaps?

72. **It may be useful to present some trends of key nutrition metrics based on the theory of change of the country's nutrition strategy.** Data on the service coverage and utilization of selected key cross-sectoral interventions would serve as key links between system inputs and outcomes and provide interim evidence of how countries are performing in terms of achieving their nutrition goals. This would set up for a subsequent analysis to be performed in the NPERs (i.e., efficiency, effectiveness, and equity) that, among others, assess the link

FIGURE 8. BREAKDOWN OF NUTRITION-SPECIFIC AND NUTRITION-SENSITIVE SPENDING



Source: Development Initiatives, 2017

between financing and outcomes. In the absence of a standard minimum set of interventions and its performance measurement indicators, a results framework (or log frame) associated with national nutrition strategies could help NPER teams in identifying a set of relevant interventions/indicators for analysis. Global benchmark and reference lists of essential nutrition services, such as the Lancet framework and the WHO Essential Nutrition Actions (ENA), could also be consulted. The analysis, whenever possible, should investigate service utilization at all levels, focusing on its distribution across government administrative levels, socioeconomic quintiles, gender, and the urban–rural split, as well as between different levels of service delivery platforms (e.g., curative care from higher-level health facilities, preventative/promotive services at primary health care facilities, and community outreach).

73. **It is essential that the NPER includes robust theory of change and/or pathways of impact that demonstrate how interventions contribute toward the achievement of nutrition outcomes.** Table 6 presents how a results framework can be constructed for nutrition-specific and -sensitive outcomes based on the results framework presented in Nepal's Multi-sector Nutrition Plan-II (2018-2022) (National Planning Commission 2017). Nepal's results indicators consist of four levels developed through a thorough theory of change analysis: (i) 'Goal (Impact)' that primarily reflects the 6 WHA global nutrition targets; (ii) 'Outcomes' grouped into nutrition-specific and nutrition-sensitive interventions and the enabling environment; (iii) 'Outputs' with service utilization level indicators; and (iv) 'Key Activities,' which can also serve as indicators since they have specified annual targets. While the terminology to define the levels vary by country, it is important that the framework is based on a theory of change and has a concrete set of service utilization and activity level indicators that support each of the higher-level outcomes and goals. Nepal's MSNP-II also sets a target value for each of these indicators for each year of implementation, which can be referred to when assessing the effectiveness of the investment made (Annex 2).

TABLE 7. RESULTS FRAMEWORK OF NEPAL NATIONAL MULTI-SECTOR NUTRITION PLAN-II (2018-2022)

Goal (Impact): Improved maternal, adolescent, and child nutrition by scaling up essential nutrition-specific and sensitive interventions and creating an enabling environment for nutrition	**Baseline**	**Targets**				
		2018	**'19**	**'20**	**'21**	**'22**
• Prevalence of stunting among children under 5 years reduced • Prevalence of wasting among under 5-year-old children reduced • Prevalence of low birth weight reduced • % reduction in children under 5 with overweight and obesity • % reduction in overweight and obese women of reproductive age (WRA) • % of women with chronic energy deficiency (measured as body mass index) reduced						
Outcome 1 (Nutrition-Specific): Improved access to and equitable use of nutrition-specific services						
• Increased % of children aged 6-23 months having minimum acceptable diet • Increased % of children aged 6-23 months having minimum acceptable diet • Reduced % of anemia among children aged 6-59 months • Reduced % of anemia among adolescent girls (10-19 years) • Reduced % of anemia among WRA (15-49 years) • Reduced prevalence of under 5-years old children with diarrhea in last two weeks • Reduced prevalence of under 5-years old children with diarrhea in last two weeks						

TABLE 7. CONT.

Outcome 2 (Nutrition-Sensitive): Improved access to and equitable use of nutrition-sensitive services and improved healthy habits and practices						
• Reduced proportion of population below minimum level of dietary energy consumption • Increased % people using safe drinking water • Increased % people using improved sanitation facilities that are not shared • Increased % of people practicing hand washing with soap and water before feeding baby (0–2 years) and after cleaning babies' bottoms • Percentage of women aged 20–24 years who are married or in union before age 18 • Increased gross enrolment rate (GER) (boys and girls) in early child education and development (ECED)/pre-primary education (PPE) • Decreased % of out-of-school children (boys and girls) in basic education • Increased basic education cycle completion rate (boys and girls)						
Outcome 3 (Enabling Environment): Improved policies, plans, and multi-sectoral coordination at the federal, provincial, and local government level to enhance the nutrition status of all population groups						
• Percentage of farmland owned by women or in joint ownership • No. of local, provincial, and federal government plans that include nutrition and food security programs in line with MSNP-II • Availability of national MSNP-II document • Availability of national budget code for nutrition and food security • National Capacity Development Master Plan for implementation of MSNP-II produced • Multi-sector commitment and resources for nutrition increase to at least 3.5% of total government budget • Financial resource tracking in place						

Source: Recreated by authors based on Annex 1 of National Planning Commission (2017)

4.5.4. EFFECTIVENESS[33]

74. Indicative questions that NPERs could address:

- Are programs delivering the intended nutrition outputs/outcomes?
- Is there any correlation between expenditure for certain programs and nutrition output/outcome indicators that those programs target?

75. The ultimate objective of nutrition financing is to achieve intended nutrition outcomes. The NPER investigates the broader question of whether nutrition investments address the objectives presented in the country's nutrition strategy. An assessment of the effectiveness of public expenditure focuses on whether spending delivers the outcomes targeted by the government's strategic plans. Bhutta et al. (2013) in the 2013 Lancet series on maternal and child nutrition identify a list of interventions that have been assessed to reduce child deaths resulting from malnutrition. However, the effectiveness of each intervention depends on the specific local context and how the intervention is delivered, such as the level and local determinants of malnutrition, differences in the characteristics of beneficiaries (including age), the availability of service infrastructure, and the government's implementation capacity. A review of impact evaluations by the World Bank shows that interventions that are found to be effective in a randomized controlled trial in a research setting often deliver different results when implemented under field conditions in different settings (World Bank 2010).

76. Properly assessing effectiveness requires impact evaluations of major nutrition programs, which are typically outside the scope of an NPER. However, the NPER team should review the literature for recent impact evaluations of major programs (as identified in the NPER) and use the main findings to formulate reform options or recommendations. Alternatively, the NPER itself could be used as an entry point to carry out future impact evaluations of major programs.

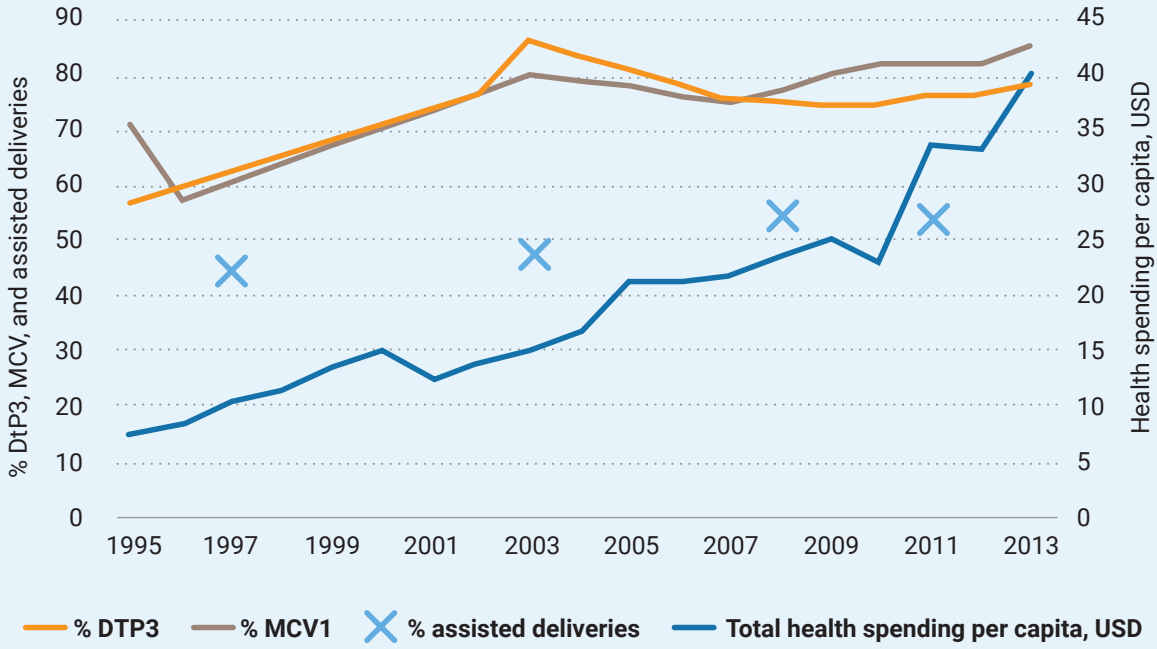
77. In the absence of impact evaluations, the effectiveness of nutrition spending can be explored by comparing trends in expenditure and outcomes. Box 9 includes an example from Mozambique's health-focused PER, which constructed a graph that compares trends in expenditure and outcomes, followed by a qualitative analysis to understand what drives the identified trends on how to evaluate the effectiveness of public spending (World Bank 2016).

33. None of the existing NPERs have properly assessed effectiveness by referencing any country-level impact evaluations or using other proxy means.

BOX 9. ASSESSING THE EFFECTIVENESS OF HEALTH SPENDING IN MOZAMBIQUE

An effectiveness analysis of health spending requires: (i) a comparison of trends in health financing and outcomes; and (ii) an analysis of factors driving the trends.

Comparison of trends. The graph below shows health spending per capita in Mozambique against key intermediate outcomes: the combined diphtheria, pertussis, and tetanus vaccine (DPT3); the measles containing vaccine dose 1 (MCV1); and the percentage of assisted deliveries, all of which ultimately contribute to reducing child mortality (one of the country's long-term objectives). Despite some fluctuations, per capita health financing has been increasing steadily, especially since 2010. Health outcomes, however, show a relatively flatter trend over the same period, which raises questions about the effectiveness of health spending in Mozambique.



BOX 9. CONT.

Analysis of factors driving the trends. An analysis of the factors driving health expenditure and outcomes in Mozambique revealed that the rise in per capita health expenditure, especially since 2010, was due to an increase in health financing under the vertical fund component (off-budget donor financing), which was fueled by the United States' President's Emergency Plan for AIDS Relief (PEPFAR). The relative flattening of vaccination and assisted delivery trends in this period, despite a rise in per capita health spending, is not surprising because most of the rise in spending was ear-marked for HIV/AIDS. In fact, there was a marked improvement in antiretroviral coverage between 2011 and 2013, from 49 to 84 percent among pregnant women, and from 18 to 32 percent among the general population. More balanced spending would serve to improve other key indicators, thereby increasing the overall effectiveness of health spending.

Source: World Bank 2016.

4.5.5. EFFICIENCY

78. Indicative questions that NPERs could address:

- [Allocative efficiency] Can the distribution of spending be improved to increase the output?
- [Technical efficiency] Are major nutrition programs executed in a cost-effective manner?
- [Administrative efficiency] What is the status of spending relative to plans/ commitments? How much of the budget has been executed?

79. One of the important objectives of a PER is to examine how efficient public resources are utilized in the country. The most common types of efficiency that are examined are:

- **Allocative efficiency,** which measures the extent to which resources are distributed to the most appropriate interventions to maximize impact. It examines whether and how much resources should be allocated to one activity/program instead of another to achieve the least costly intervention mix that will yield the highest impact.
- **Technical efficiency,**[34] which measures the extent to which resources are spent efficiently (within an intervention) given allocated funds and assesses whether an intervention yields a given set of outputs at least cost.

34. This is sometimes also referred to as "cost efficiency" and measures efficiency in translating inputs to outputs for a given intervention.

- **Administrative efficiency,** which measures the difference between budget allocations and actual expenditure, which can provide insights into areas in need of process improvements to improve performance and, ultimately, final outcomes.

4.5.5.1. ALLOCATIVE EFFICIENCY

80. **An allocative efficiency analysis often starts with a description of the distribution of expenditure across interventions, activities, and programs.** It examines whether expenditures are directed to proven cost-effective interventions and provides insights into the efficiency of nutrition expenditure. For example, global evidence suggests that antenatal micronutrient supplementation, balanced energy-protein supplementation during pregnancy, vitamin A supplementation for children, and the promotion of infant and young child feeding (IYCF) practices are some of the most cost-effective interventions to reduce under five stunting (Shekar et al. 2017). Therefore, it will be important for the NPER to assess the types of expenditure and the coverage of interventions and suggest whether there is room for improvement in resource allocation considering the country's specific nutrition situation.

81. **There are several exercises (including NPERs and other nutrition-related case studies) that highlight potential inefficiencies in nutrition services by identifying least-cost effective interventions.** For example, the Sri Lanka NPER identified the high cost of its fortified food supplementation program, *Thriposha*, and revealed it was ineffective in addressing acute undernutrition. It proposed a shift in strategy to targeted measures that ensure supplements are only used by those in need. Moreover, the Bhutan NPER found that the country's largest nutrition expenditures were related to the national school feeding program, which does not directly address childhood stunting among children under the age of five.

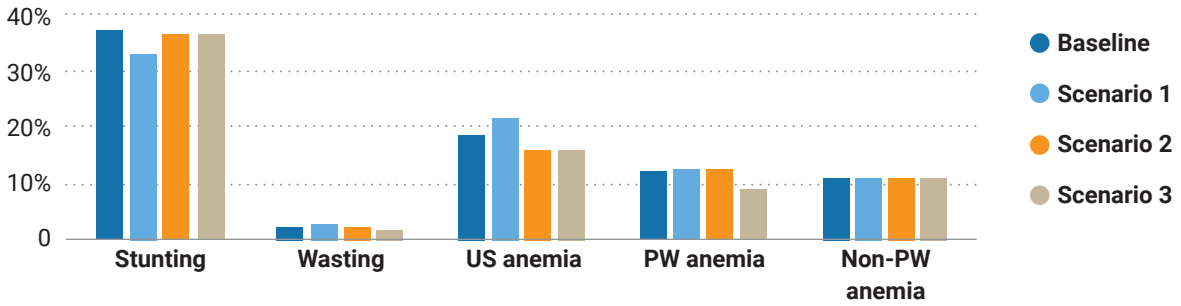
82. **Optima Nutrition[35] —a resource optimization tool—can provide policymakers with important guidance for targeting nutrition investments to maximize their impact.** This tool can be used as part of a wider NPER exercise to estimate how to target resources to improve nutrition outcomes and overall allocative efficiency. Optima Nutrition focuses on the current expenditure distribution and intervention coverage and analyzes the marginal benefits of allocating funds to a mix of interventions and/or geographical areas. It then suggests optimized allocation scenarios (either within the same financing envelope or a given amount of additional funding) that can maximize outcomes.

35. Optima is an open-source software developed by a network of academic partners such as the Burnet Institute, the University College London, University of Bern, and the University of New South Wales. Optima maintains disease-specific software for disease such as HIV, TB, Malaria, as well as nutrition (http://optimamodel.com/nutrition/).

83. **Optima Nutrition is a quantitative tool that governments can use to allocate budgets across nutrition programs.** For example, it was used in the Bangladesh NPER to simulate an optimal mix of interventions to minimize child mortality and stunting. The study found that investments in priority interventions such as the promotion of improved infant and young child feeding (IYCF) and vitamin A supplementation in Dhaka and Chittagong—regions with the greatest number of stunted children—could increase the cumulative number of children without stunting by 1.3 million (5 percent). This could be achieved without any extra resources (US$0.75 per person in need per year). The Rwanda NPER also used the Optima Nutrition tool to evaluate alternative strategies for allocating spending to improve outcomes. Three scenarios[36] were tested to identify how nutrition outcomes would vary depending on a choice of high-impact interventions. The analysis found that scenario 3 was the optimal because since it achieves the best outcomes on all indicators except for the stunting effect in scenario 1, which only optimized on stunting figures but not any of the other nutrition outcomes (Figure 9).

84. **Using quality data collected through an NPER in the Optima Nutrition analysis can provide vital information to influence spending decisions.** While the Optima Nutrition analysis can inform improved resource allocation for nutrition interventions through a modelling approach, it can also influence a country's budgetary process if it builds on costing data that are generated through a robust analysis of actual budgets. If the NPER is designed to generate or identify granular expenditure data for high-impact nutrition interventions that can be incorporated into the Optima Nutrition analysis, insights from both analyses using the same costing data could be used to identify gaps and determine an optimal allocation of public resources.

FIGURE 9. EXAMPLE FROM THE RWANDA NPER: OPTIMA SIMULATION RESULT



36. Scenario 1: Increasing the number of alive, non-stunted children, Scenario 2: Increasing the number of alive, non-stunted, and non-anemic children; and Scenario 3: Increasing the number of alive, non-stunted children and non-anemic children and minimizing anemia and mortality among pregnant women.

4.5.5.2. TECHNICAL EFFICIENCY[37]

85. **Nutrition interventions are often bundled with other health and non-health interventions.** Even within the health sector, malnutrition, for example, is addressed in conjunction with interventions aimed at improving maternal and child health more broadly (e.g., nutrition messaging and supplementation provided during antenatal care visits). Thus, this section presents relevant examples from health sector PERs.[38]

86. **Technical efficiency measures the appropriateness of the level of inputs used within a given intervention.** An intervention is technically inefficient if the same (or greater) outcome can be produced with less of one type of input (Shiell et al. 2002). Some leading sources of technical inefficiency related to health system inputs include inappropriate or costly staff mix; underuse and overpricing of generic drugs; overuse of procedures, investigations, and equipment; inappropriate hospital admissions or length of stay; number of patients seen by a doctor/health provider; and inappropriate size of hospital. Understanding the causes of inefficiencies can help countries correct operational inefficiencies. For example, the Ethiopian health sector PER showed that the country's health facilities were operating at low efficiency, with one health worker seeing two to nine outpatients and just one inpatient per day. Moreover, the review found that low productivity of health workers was associated with a host of factors including a lack of equipment at health facilities.

Understanding the causes of inefficiencies can help countries correct operational inefficiencies.

87. **The non-parametric Data Envelopment Analysis (DEA) is a tool that can also be used to measure technical efficiency.** The DEA produces an efficiency score ranging from 0 percent (inefficient) to 100 percent (efficient). For instance, a Zambian study using the DEA found that Zambian hospitals were operating at 67 percent level of efficiency, which meant that significant resources were being wasted. The study found that merging or downgrading hospitals could help to improve the overall efficiency of the country's hospitals (Masiye 2007). In the health sector, there are some commonly used indicators such as number of

37. None of the existing NPERs have properly assessed technical efficiency, mainly due to lack of detailed within-program data. In fact, several NPERs (i.e., Nepal and Tanzania) specifically recommend the development of a data system with sufficient detailed categorization that would allow teams to carry out this analysis.
38. The forthcoming Health Public Expenditure Review Guidelines is developing a crosscutting note on technical efficiency analysis (Guidance on Assessing Spending Efficiency in the Health PER Guidelines).

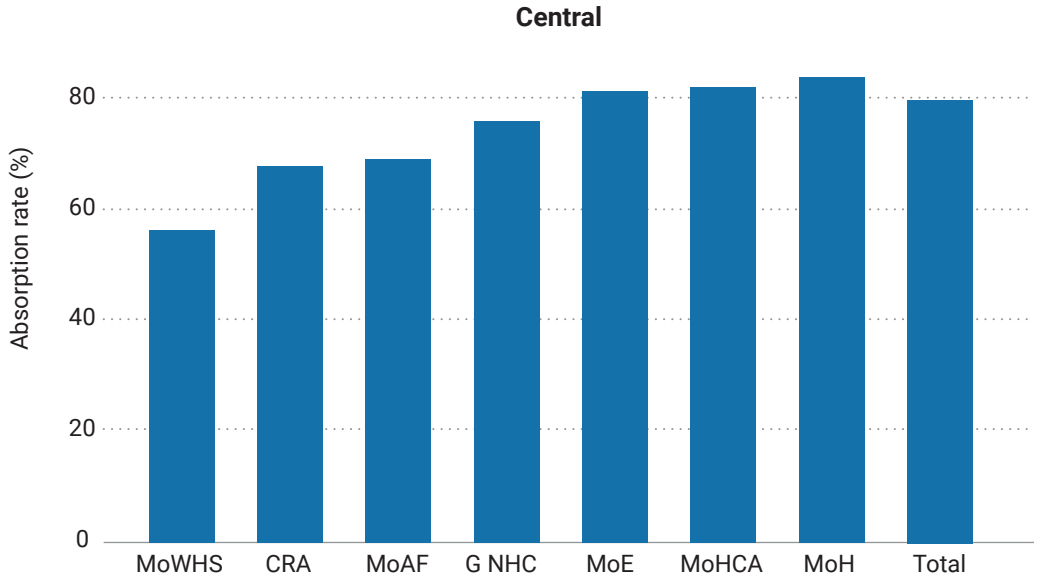
consultations per physician or hospital bed occupancy rate that are often used to measure technical efficiency. In agriculture, crop yield, or the amount of crop that can be harvested from a plot of land (tons per hectare), is a commonly measured metric of technical efficiency. However, such indicators have not yet been established for nutrition. Also, even for situations where data is available, detailed data on program implementation is typically required (e.g., for a DEA on antenatal care, data on inputs [staff, capital, recurring expenses] and outputs [number of antenatal consultations offered] is required), which may require survey work at primary care facilities, in addition to health facility records, making this a data-intensive exercise.

4.5.5.3. ADMINISTRATIVE EFFICIENCY

88. **Administrative efficiency measures deviations in the budget process between financial commitments and their execution (either at the sector or program level), which reflects the quality of budgetary planning as well as implementation efficiency.** It is often measured in terms of the budget execution rate, which is the ratio of actual expenditure to the allocated budget. If DP financing accounts for a significant share of nutrition financing, the NPER would ideally present the absorption rate of both the government budget as well as off-budget DP financing. For the government budget, the execution rate is often used to measure the deviation of spending from the budget, while for DP financing, the disbursement rate measures the deviation of actual disbursement from commitment. Given the multisectoral nature of nutrition financing, execution rates should be examined across ministries and between different levels of government, depending on data availability. Equipped with an understanding of the differences between budget allocations and actual expenditure, policymakers are in a better position to revise spending commitments and improve administrative capacity during the next planning cycle.

89. **For example, the Bhutan NPER includes a comparison of budget execution rates between different levels of government and across ministries.** It reveals that the budget execution capacity of the Ministry of Health is 30 percentage points higher than that of the Ministry of Works and Human Settlements (Figure 10). Failure to spend available funds may be due to limited capacity at the spending agency or delayed or insufficient budget release (from the Ministry of Finance to the line ministry, or from the ministry to local agencies) that prevent the implementation of planned expenditure. The NPER analyzed the differences in execution rates and found that the relatively low absorptive capacity of the Ministry of Works and Human Settlements was due to procurement delays for large infrastructure investments, highlighting an important area of administrative inefficiency.

FIGURE 10. EXAMPLE FROM THE BHUTAN NPER: ABSORPTION RATES FOR NUTRITION-RELATED INTERVENTIONS BY MINISTRY



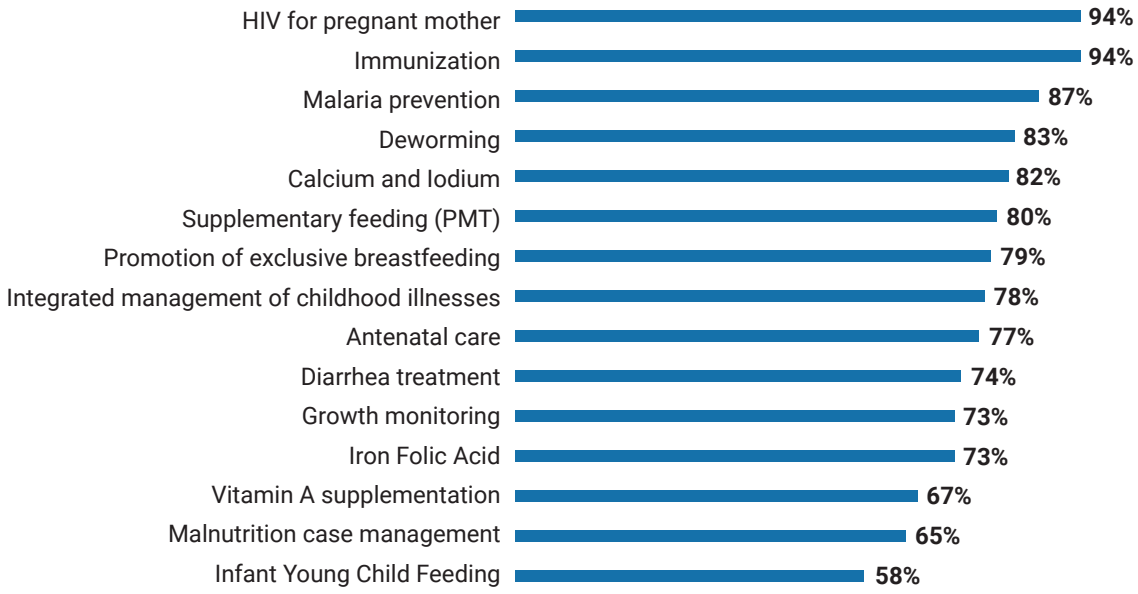
Source: Bhutan NPER.

Note: MoWHS = Ministry of Works and Human Settlement; CRA = Council for Religious Affairs; MoAF = Ministry of Agriculture and Forests; GNHC = Gross National Happiness Commission; MoE = Ministry of Education; MoHCA = Ministry of Home and Cultural Affairs; MoH = Ministry of Health.

90. **Budget execution rates can also be estimated for different interventions to reveal administrative inefficiencies related to specific programs.** The Indonesia NPER shows varying execution rates across different interventions, ranging from immunization programs, which had the highest execution rates, to IYCF programs, which had the lowest execution rates (Figure 11). It also shows that actual public expenditure in Indonesia is, on average, 22 percentage points lower than planned expenditure. In addition to the absorption rate analysis, the team performed a qualitative analysis to explain the differences in absorption rates (Box 10).

FIGURE 11. EXAMPLE FROM THE INDONESIA NPER: BUDGET EXECUTION BY INTERVENTION

(%, 3-Year Average, 2015–17)



Source: MOF 2015-2017 in World Bank 2020a

BOX 10. POTENTIAL BOTTLENECKS IN THE FLOW OF FUNDS IN INDONESIA

In Indonesia, more than five ministries and 20 laws govern the management and operation of village-level institutions, which are responsible for stunting-related interventions. At the central level, ministries provide policy, regulatory, and infrastructure investment support as well as guidance related to capacity building and technical assistance. Fiscal transfers flow from the central to the district level, the latter of which is responsible for funding operational activities such as health service delivery and water supply and sewage management. Prior to 2014, districts were responsible for supporting village-level activities. However, districts did not always carry out the transfers to the village level, resulting in bottlenecks in accessing funding. To resolve these bottlenecks, the national government implemented two new direct transfers from the central to the village level.

BOX 10. CONT.

Despite the two new direct transfers, the NPER identified additional bottlenecks in the flow of funds that were due to the proliferation of channels through which money was transferred. These myriads of ways to transfer funds made it difficult to track the transfers and evaluate potential inefficiencies in the disbursement of funds.

In addition, the national health insurance agency reimburses providers such as village midwives directly for their services. However, midwives, who fall under district health centers that have financial autonomy, receive payments through the health centers and not directly from the national health insurance agency. Most district health centers do not, however, have financial autonomy, and these centers do not receive direct transfers from the national health insurance agency. Instead, they pay the midwives through transfers made to district health offices, which transfer the funds to district health centers. These payment mechanisms vary across districts. This convoluted payment structure results in many village midwives not receiving their payments.

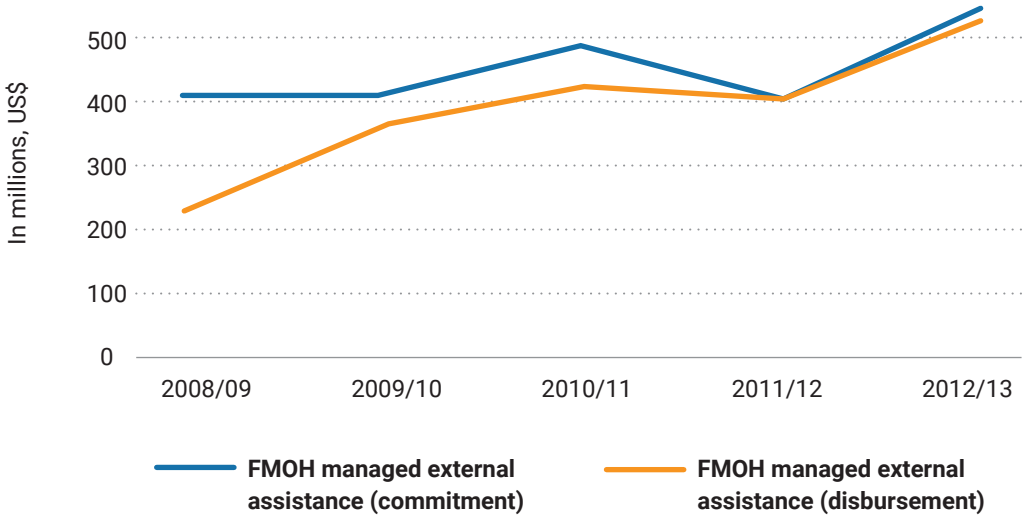
Source: World Bank 2020a

91. **A majority of low- and middle-income countries rely on external financing to implement their public programs.** In these countries, the execution of planned interventions depends in some cases on the timely disbursement of financing from DPs. Depending on the availability of data on committed and disbursed funds from DPs, the NPER could also present information on actual disbursement. Understanding the actual disbursement rate can inform the design and implementation of corrective policies.

Understanding the actual disbursement rate can inform the design and implementation of corrective policies.

92. **The Ethiopia health sector PER examined trends in committed and disbursed funds from DPs managed by the Federal Ministry of Health over a period of five years.** To harmonize on-budget financial assistance from DPs, policymakers in Ethiopia implemented a range of measures including the establishment of the Grant Management Unit within the Federal Ministry of Health in 2008/09. As a result, committed and disbursed funds from DPs have converged over time, reflecting an improvement in the disbursement rate from 55 percent in 2008/09 to 96 percent in 2012/13. (Figure 12).

FIGURE 12. EXAMPLE FROM THE ETHIOPIA HEALTH SECTOR PER: MINISTRY OF HEALTH-MANAGED EXTERNAL ASSISTANCE



Source: World Bank 2016a.

Note: FMOH: Federal Ministry of Health.

93. **The Rwanda NPER used self-reported data from the country's key DPs to examine trends in off-budget financing.** It found significant complementarity between government and DP funding for nutrition activities. For example, DPs focused on sectors such as agriculture and food security and areas such as micronutrient supplementation, while the government focused on water and sanitation as well as malaria interventions. For nutrition-enhancing activities, DPs focused mainly on capacity building, while the government focused on accountability incentives, regulation, and legislation (Box 11).

BOX 11. COLLECTING DATA ON OFF-BUDGET EXTERNAL NUTRITION FINANCING IN RWANDA

Rwanda first conducted a mapping of its DPs working on nutrition in its Joint Action Plan to Eliminate Malnutrition 2016–2020. To gather more data on off-budget nutrition spending, the NPER team requested all 23 key DPs in the country to fill out a spreadsheet with self-reported information on their nutrition-related expenditure. They needed to specify the time period and categorize nutrition-related spending into nutrition-specific, nutrition-sensitive, and nutrition-enabling interventions. Information received from the DPs was later cross-checked to ensure accuracy and consistency.

Source: World Bank 2020b

4.5.6. EQUITY

94. Indicative questions that NPERs could address:

- Has expenditure focused on areas most in needed?
- Has spending benefited the most vulnerable?
- Is spending targeting geographical areas or sub-populations that are lagging in certain outcomes?

95. An equity analysis of nutrition spending assumes that populations/geographical areas with higher levels of malnutrition should have a correspondingly higher level of spending. This type of analysis needs access to data on: (i) the most deprived groups/areas (i.e., groups/areas where the burden of malnutrition is the greatest); and (ii) the nature and scale of investments directed to different groups/geographical regions. For example, Bhutan's nutrition spending is considered fairly equitable, as the Eastern region, which is the area with highest stunting rate, also has highest level of per capita nutrition-related spending (Table 8).[39]

TABLE 8. EXAMPLE FROM THE BHUTAN NPER: SUBNATIONAL NUTRITION-RELATED EXPENDITURES, 2016-17

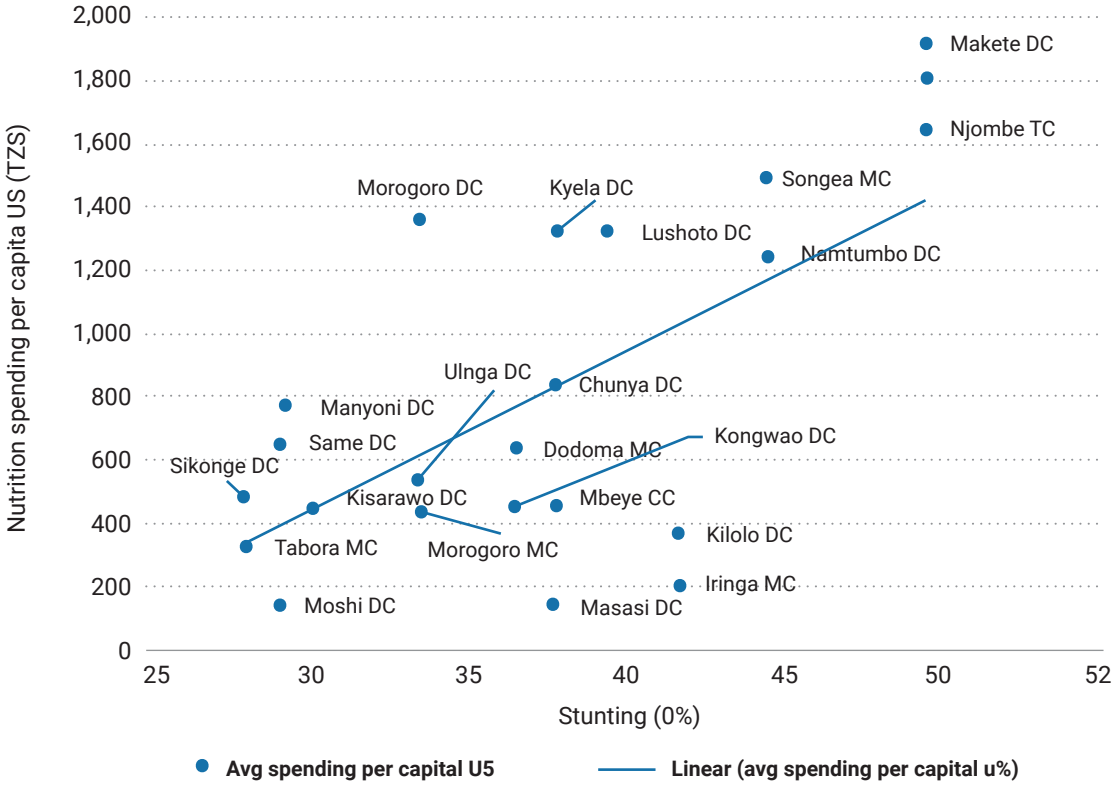
Region	Per capita nutrition-related expenditure (Nu.)	Stunting rate
Western	1,124	16.2
Central	1,793	18.5
Eastern	2,118	29.1

Source: World Bank 2019b.
Note: 1 Nu. (Bhutan Ngultrum) = approximately US$0.014.

96. Graphical representation of subnational expenditure and nutrition outcomes is illustrative to highlight geographical equity. The Tanzania NPER presents a plot of district-level nutrition spending per child under the age of 5 against the stunting rate for 22 representative sample districts (Figure 13). The figure shows that, spending appears to increase broadly with stunting levels. However, the NPER notes that most values are clustered in the lower half of the graph regardless of the stunting level, and that a full benefit incidence analysis (BIA) is necessary to draw any conclusions.

39. Some central-level allocations may be directed to regions to increase their share in spending. Since this information was not available, the data do not represent the full scope of subnational spending on malnutrition

FIGURE 13. EXAMPLE FROM THE TANZANIA NPER: DISTRICT-LEVEL NUTRITION SPENDING PER CHILD UNDER 5 PLOTTED AGAINST THE STUNTING RATE



Source: Tanzania MoFP and UNICEF 2018.

97. Ideally, a BIA can be performed as part of the PER to reveal inequity in the allocation and use of health resources.[40] The BIA combines the cost of providing public services with information on their use to generate distributions of the benefit of government spending. It is used to provide insights into what extent governments spend on services that improve the lives of the poor. The basic premise of a BIA is that the poor are disadvantaged in gaining access to important basic services (e.g., nutrition) that would help them escape poverty. It suggests an active role for the government to provide these services to poor and vulnerable groups (Demery 2000).

40. None of the NPERs examined for this Guiding Framework have carried out BIAs, mainly due to lack of service delivery and expenditure data broken down by different income groups, as well as lack of precedence to follow in terms of an established methodology.

98. A BIA requires data on: (i) government spending on a service; (ii) public utilization of the service; and (iii) the socioeconomic characteristics of the population using the service. Government spending data are typically obtained either from the Ministry of Finance (FMIS/IFMIS) or the relevant line ministry. It can be challenging to access disaggregated spending data by administrative level, as not all countries have comprehensive spending data on nutrition services. The second and third types of data—the utilization of the service and socioeconomic characteristics of the population using the service—can be obtained from household surveys. For instance, a BIA of health services could use surveys such as Demographic and Health Surveys and Living Standards Surveys that include health-related indicators, although there are some data limitations[41] to compute service utilization rates and rank service users by socioeconomic quintile.

It can be challenging to access disaggregated spending data by administrative level, as not all countries have comprehensive spending data on nutrition services.

99. The BIA is largely applied in the health sector to assess the appropriateness of the distribution of benefits from using health services relative to the need for care. The BIA can be presented in several different ways, including through a concentration index (CI) or a dominance test (DT).[42] For example, as part of the Zambia health sector PER, a BIA study was commissioned to assess the distributional impact of health reforms on public spending and equity using the Zambia Household Expenditure and Utilization Survey. The benefit incidence test results show that the distribution of benefits for both inpatient and outpatient services at all public health facilities (all types of hospitals and health centers) and private health facilities is generally pro-rich (Table 9). However, the distribution of inpatient services for public district hospitals, public health centers, and mission health facilities is pro-poor.

41. Living Standards Surveys are primarily designed to measure household income and expenditure rather than collect health-related data. Health service utilization information in these surveys is dependent on self-reported recent illness. This means that utilization information is only collected if respondents indicate that they or another household member have been ill or injured within a specified recall period, and service utilization information is only collected in relation to that self-reported illness episode. Therefore, health service utilization for other services beyond the recall period is not recorded, which leads to an incomplete picture of service utilization (McIntyre and Ataguba 2011).
42. Refer to O'Donnell O, et al. (2008) for details on the BIA methods and analysis.

TABLE 9. EXAMPLE FROM THE ZAMBIA HEALTH SECTOR PER: BIA RESULTS ON THE DISTRIBUTION OF OUTPATIENT AND INPATIENT SERVICES

	Outpatient			Inpatient		
Provider/facility type	**CI**	**SE**	**DT**	**CI**	**SE**	**DT**
Public						
Tertiary (3rd level) hospitals	0.523***	0.065	-	0.528***	0.044	-
General (2nd level) hospitals	0.385***	0.032	-	0.222***	0.033	-
District (1st level) hospitals	0.091**	0.037	-	-0.090*	0.052	+
Health Centers	0.013	0.018	n-Dom	-0.179***	0.022	+
All hospitals (3rd+2nd+1st)	0.214***	0.024	-	0.243***	0.015	-
All health facilities (hospitals & health centers)	0.046***	0.018	-	0.160***	0.017	-
All health facilities (inpatient & outpatient)	0.059***	0.018	-			
Mission health facilities	-0.106	0.068	+	-0.158*	0.091	+
Private health facilities	0.686***	0.027	-	0.804***	0.071	-

***p<0.01; **p<0.05; *p<0.1

Note: CI = Concentration Index; SE = Standard Error; DT = Dominance Test; - means that the 45 degree line dominates (pro-rich); + means that the concentration curve dominated (pro-poor); n-Dom means non-dominance

Source: World Bank 2019d

5

USING THE NPER FOR GREATER IMPACT

100. **Recommendations should directly follow the analysis.** An NPER, regardless of its scope, should offer useful inputs into current and future decisions related to planning and budgetary management, with the objective to improve the quality and impact of public spending on nutrition. Recommendations that were derived from the results of NPER analysis should: (i) reflect country conditions and be consistent with national nutrition goals and objectives; (ii) build upon ongoing initiatives; (iii) identify cost implications or any clear trade-offs based on an evidence-based analysis; (iv) separate short- and long-term recommendations; (v) separate recommendations by institution or audience; and (vi) ensure appropriate time-sequencing. Recommendations should be presented in a format that will most likely encourage uptake and implementation of the recommendations.

5.1. WAY FORWARD ON POLICY DIALOGUE AND INSTITUTIONAL STRENGTHENING

101. **The fundamental benefit of an NPER is to provide an opportunity to extend the policy dialogue on nutrition to improve the implementation performance and impact of nutrition expenditure.** The completion of a sound NPER is only the beginning of this process. If the NPER process ends at the final meeting or consultation workshop, the result is an informative report (obtained at a relatively high cost) of underused operational value. Thus, the NPER team must consider how the NPER will be disseminated and support the transition into tangible policy actions based on NPER recommendations.

102. **While NPERs build on the work of PERs, they are new tools that have only a limited portfolio of work to date.** Therefore, this Guiding Framework document should be

considered a starting point to outlining an approach to carry out NPERs. It will undoubtedly undergo revision as NPER standard methodology is concretized and more NPER examples become available.

103. To improve the PFM of nutrition expenditure at the country level once the NPER is completed (or concurrently), countries should consider:

- **Developing an action plan and budget to implement reforms identified in the NPER.** For example, evidence generated in NPERs could help policy makers identify programs or geographical areas that are underfunded, inefficient spending patterns (e.g., large legacy programs such as food subsidies), and plans to reallocate spending to course correct.
- **Creating country-specific guidelines for tracking nutrition expenditure.** Definitions of nutrition spending at the country level may evolve over time as countries develop or data availability changes. It is important to document exactly what is included in the analysis to ensure that comparisons (over time) can be made. Countries need to recognize that tracking and evaluating nutrition-related expenditure will be an ongoing exercise, and new expenditure items will need to be tagged as they are included in the budget.
- **Strengthening/developing a tracking methodology for DP financing that generates sufficiently disaggregated data for NPERs.** Collecting data on DP financing can be done manually through manual surveys, as done in several countries. However, it would be useful if countries could improve DP financing tracking and monitoring mechanisms by, for example, creating an integrated DP financing module in the FMIS/IFMIS. Integrating the collection of off-budget data into the country's financial management practices would make it easier to monitor DP financing flows and make corrective allocations.
- **Improving the visibility of nutrition-related expenditure in FMIS/IFMIS.** Potential measures to improve FMIS/IFMIS include: (i) ensuring the proper budgetary tagging of nutrition-related expenditure, which can be done using relevant budgetary tracer line items that are routinely tracked; (ii) unbundling nutrition interventions; (iii) breaking down salaries and operating costs; and (iv) providing insights into subnational allocations of central expenditures. This would help to institutionalize the estimation of public financing for nutrition as part of the routine to track public spending and implement programs. In addition, if nutrition tagging is adequately mainstreamed into the budget cycle, this will eliminate the need for assigning subjective disaggregation weights.
- **Strengthening the monitoring and evaluation function of nutrition-related programs and nutrition information collection within service delivery platforms.** The objective would be to ensure that nutrition programs consistently generate high quality administrative data (to capture outputs and some outcomes), and that they periodically

undergo impact evaluations to assess outcomes and impacts. This would enable future NPERs to analyze the effectiveness and technical efficiency of nutrition interventions.

5.2. IMPROVING THE QUALITY OF FUTURE NPERS

104. To improve the quality of NPERs, policy makers and stakeholders of the globe nutrition community should consider:

- **Developing consensus on a common approach to deal with the issue of high-cost nutrition-sensitive interventions.** SUN's guidance on whether to use weights on nutrition spending deals exclusively with the "bundled budget" problem—when nutrition-related activities are bundled with other non-nutrition activities. However, the existing portfolio of NPERS shows that many have used weights for a different purpose (i.e., to discount for perceived low contribution to nutrition of some high-cost nutrition-sensitive interventions). Global consensus is urgently needed to address the real problem that NPER teams face in assessing high-cost nutrition-sensitive interventions (e.g., infrastructure costs like water pipes, school toilets, and irrigation). To move this agenda forward, more work is needed to: (i) improve the inclusion criteria (Step 5 in Section 4.4) and (ii) conduct more research on the impact of high-cost nutrition-sensitive interventions for possible use in future NPERs (i.e., alternative methodology piloted in Burkina Faso, as presented in Step 5 in Section 4.4).
- **Generating more cross-country data to allow for international/regional comparisons, benchmark progress, and identify gaps in nutrition financing.** To do this, more work is needed to assess available data and refine/standardize methodologies,[43] including developing: (i) a common classification system for nutrition-specific and -sensitive activities that can be accepted and consistently used by a diverse set of countries; and (iii) inclusion criteria to screen high-cost nutrition-sensitive interventions (related to the challenges around weighting). As standardization needs to be based on evidence of what does and does not work, which is currently limited, there is a great need for generating more data from robust NPERs and assessing them for methodological consolidation.

43. A standardized methodology must always be evaluated to ensure it fits in the context of the country's specific nutrition priorities. This means that country-specific adjustments to standard tools (e.g., classification systems for nutrition-specific and -sensitive activities) or inclusion criteria may be needed. While this may limit the scope of international comparability of the identified nutrition expenditure, basing the NPER in the country's own nutrition priorities and strategies is a fundamentally important principle to ensure that the outcome is relevant, and any resulting recommendations are actionable.

- **Using data in an innovative way as the NPER portfolio grows to achieve more detailed analysis and develop standard methodologies.** The current set of existing NPERs do not include the type of analysis that is commonly seen in sector-specific PERs, such as effectiveness analysis and technical efficiency analysis. As work continues on increasing the visibility of nutrition-related expenditure and evaluating the performance of nutrition programs, guidance on best practices for NPERs should also be continuously re-visited to build up the knowledge base.

6

REFERENCES

ACF International, Save the Children, SUN CS Platform from Senegal. 2017. Nutrition Budget Advocacy: Handbook for Civil Society. Paris: Action Contre la Faim. Available from: https://www.actioncontrelafaim.org/wp-content/uploads/2018/01/exe_2_bdef_handbook_nba.pdf. Accessed September 25, 2021.

Begum, T., Chowdhury, R., Harnett, P., Khaled, A., Picanyol, C., Robinson, M., and Tak, M. 2018. 'Bangladesh Public Expenditure Review on Nutrition.' Oxford: Oxford Policy Management.

Bhutta, Z., Das, J., Rizvi, A., Gaffey, M., Walker, N. et al. 2013. 'Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?' *The Lancet*, 382(9890), 452-477.

Black, R., Victora, C., Walker, S., Bhutta, Z., Christian, P., De Onis, M., Uauy, R. et al. 2013. 'Maternal and child undernutrition and overweight in low-income and middle-income countries.' *The Lancet*, 382(9890), 427-451.

Demery, L. 2000. Benefit incidence: a practitioner's guide. Washington, D.C.: World Bank Group. Available from https://documents.worldbank.org/en/publication/documents-reports/documentdetail/574221468135940764/benefit-incidence-a-practitioners-guide. Accessed June 22, 2021.

Development Initiatives 2017. Global Nutrition Report 2017: Nourishing the SDGs. Bristol, UK. Available from https://globalnutritionreport.org/reports/2017-global-nutrition-report/. Accesses Nov. 22, 2021.

Development Initiatives 2020. Global Nutrition Report: Action on equity to end malnutrition. Bristol, UK. Available from https://globalnutritionreport.org/reports/2020-global-nutrition-report/. Accesses Nov. 22, 2021.

DHIS2 (District Health Information Software) 2020. DHIS2 Documentation. https://docs.dhis2.org/2.34/en/index.html. Accessed June 19, 2020.

Fracassi P., Picanyol C., Knechtel W., D'Alimonte M., Gary A., Pomeroy-Stevens A., and Watts R. 2020. Budget Analysis for Nutrition: guidance note for countries (update 2020)

Galasso, E. and Wagstaff, A. 2017. 'The Economic Costs of Stunting and How to Reduce Them' World Bank Policy Researh Note. https://pubdocs.worldbank.org/en/536661487971403516/PRN05-March2017-Economic-Costs-of-Stunting.pdf Accessed May 19, 2021.

Global Nutrition Report 2020. *Global Nutrition Report: Action on equity to end malnutrition.* Bristol: Development Initiatives Poverty Research Ltd.

Horton, S., Steckel, R. 2013. 'Malnutrition: global economic losses attributable to malnutrition 1900–2000 and projections to 2050'. In: Lomborg Bjørn., editor. *How Much Have Global Problems Cost the World.* Cambridge: Cambridge University Press; 2013. pp. 247–272.

Horton, S., Shekar, M., McDonald, C., Mahal, A., Krystene Brooks, J. 2010. 'Scaling Up Nutrition: What Will it Cost?' Directions in Development Washington, DC: World Bank. The World Bank. Available from: https://openknowledge.worldbank.org/handle/10986/2685 License: CC BY 3.0 IGO.

Horton, S., Alderman, H. and Rivera, J. 2008. Malnutrition and hunger. Copenhagen Consensus 2008 Challenge Paper.

IEG (Independent Evaluation Group) 2012. 'Designing a results framework for achieving results: a how-to guide.' Washington DC: The World Bank, Available from: https://www.oecd.org/dac/peer-reviews/WB%202012%20designing%20results%20framework.pdf. Accessed June 4, 2020.

Indonesia Ministry of National Development Planning/National Development Planning Agency and Indonesia Ministry of Finance. 2018 (unpublished). Guidelines for tagging, tracking and evaluating development and budget performance to prevent stunting- for line ministries/agencies

Levinson, J. Rogers, B., Hicks, K., Schaetzel, T. et al. 1999. 'Monitoring and Evaluation of Nutrition Programs in Developing Countries', *Nutrition Science* Policy, May 1999: (1)157-164.

Masiye, F. Investigating health system performance: An application of data envelopment analysis to Zambian hospitals. *BMC Health Serv Res 7,* 58 (2007). https://doi.org/10.1186/1472-6963-7-58. Accessed October 5, 2020.

McIntyre, D. and Ataguba, J. 2011. 'How to do (or not to do) ... a benefit incidence analysis' Health Policy Plan. 2011 Mar;26(2):174-82. Available from: https://pubmed.ncbi.nlm.nih.gov/20688764/. Accessed June 18, 2021.

MQSUN+ 2020. Supplemental guidance for the SUN budget analysis: An update for countries (Feb. 2020). Available from: https://mqsunplus.path.org/resources/supplemental-guidance-for-the-sun-budget-analysis/. Accessed June 3, 2021.

National Planning Commission. 2017. Multi-Sector Nutrition Plan: 2018–2022. Kathmandu: National Planning Commission. Available from: http://nnfsp.gov.np/PublicationFiles/b8aae359-15ea-40c4-aa13-b1076efb251b.pdf. Accessed Sept. 20, 2021.

Nutrition for Growth (N4G) 2020. 'Nutrition for Growth in 2017 – Where do we go from here?' Nutrition for Growth. Food, Health, & Prosperity for All. Available from: https://nutritionforgrowth.org/nutrition-growth-2017-go/. Accessed June 4, 2020.

O'Donnell O, van Doorslaer E, Wagstaff A, Lindelow M. 2008. Analyzing Health Equity Using Household Survey Data: A Guide to Techniques and their Implementation. Washington, DC: World Bank.

Optima 2020. 'Optima Nutrition: Improving maternal and child nutrition and health through multi-sectoral resource optimisation.' Available from: http://optimamodel.com/nutrition/. Accessed June 4, 2020.

Pearson, R., Killedar, M., Petravic, J. et al. Optima Nutrition: an allocative efficiency tool to reduce childhood stunting by better targeting of nutrition-related interventions. *BMC Public Health 18,* 384 (2018). https://doi.org/10.1186/s12889-018-5294-z. Accessed October 5, 2020.

Pradhan, S. 1996. 'Evaluating public spending: A framework for Public Expenditure Reviews', World Bank Discussion Paper 323. Washington DC: The World Bank.

Price, J., Guinness, L., Irava, W., Khan, I., Asante, A., and Wiseman, V. 2016. 'How to do (or not to do) . . . translation of national health accounts data to evidence for policy making in a low resourced setting.' *Health Policy and Planning,* 31, 2016, 472–481.

Shekar, M., Kakietek, J., Eberwein, J., and Walters, D. 2017. *An Investment Framework for Nutrition: Reaching the Global Targets for Stunting, Anemia, Breastfeeding and Wasting.* Washington DC: The World Bank Group

Shekar, M. and Popkin, B. 2020. Obesity: Health and Economic Consequences of an Impending Global Challenge. Human Development Perspectives;. Washington, DC: World Bank. Available from: https://openknowledge.worldbank.org/handle/10986/32383%20Accessed%20on%20October%2026 Accessed October 26, 2021.

Tanzania Ministry of Finance and Planning (MoFP) and UNICEF. 2018. Nutrition Public Expenditure Review 2014–2016: Mainland Tanzania: October 2018. Dar es Salaam: MoFP and UNICEF.

UNICEF 2017. 'UNICEF's Engagements in Influencing Domestic Public Finance for Children (PF4C). A Global Programme Framework.' New York: United Nations Children's Fund.

UNICEF and World Bank 2017. Lesotho Public Health Sector Expenditure Review. World Bank, Washington, DC. World Bank. https://openknowledge.worldbank.org/handle/10986/29344

USAID Advancing Nutrition 2021 (forthcoming). Strengthening Donor Resource Tracking for Nutrition Across Sectors: Recommendations to the SDN on the Application and Interpretation of the OECD Nutrition Policy Marker. Arlington, VA: USAID Advancing Nutrition.

WHO 2014. Indicators for the Global Monitoring Framework on Maternal, Infant, and Young Child Nutrition (24 November 2014). Available form: https://www.who.int/nutrition/topics/indicators_monitoringframework_miycn_background.pdf. Accessed May 25, 2021.

https://www.who.int/publications/i/item/9789241513609

WHO 2020. 'Global Targets 2025 to improve maternal, infant and young child nutrition.' Available from https://www.who.int/nutrition/global-target-2025/en. Accessed June 4, 2020.

World Bank 2010. 'What Can We Learn from Nutrition Impact Evaluations? Lessons from a review of interventions to reduce child malnutrition in developing countries' Washington, DC: World Bank Independent Evaluation Group

World Bank 2014. 'A Handbook on Financial Management Information Systems for Government A Practitioners Guide for Setting Reform Priorities, Systems Design and Implementation.' Available from: https://documents1.worldbank.org/curated/en/147241467987856662/pdf/A-handbook-on-financial-management-information-systems-for-government-a-practitioners-guide-for-setting-reform-priorities-systems-design-and-implementation.pdf. Accessed June 14, 2021.

World Bank 2016a. Ethiopia Public Expenditure Review. Washington, DC: The World Bank. Available from: https://openknowledge.worldbank.org/handle/10986/24370. Accessed June 18, 2021.

World Bank 2016b. 'Mozambique Health Public Expenditure Review: 2009-2013' Maputo: The World Bank Mozambique Office.

World Bank 2016c. 'Rwanda Agriculture Public Expenditure Review (AGPER) 2016: Volume II:

Expenditure Analysis of Selected Strategic Topics Using the AgPER Lite Methodology '

World Bank 2019a. 'Indonesia: Strengthening Planning and Budgeting for Thematic Programs by Using Performance Information to Inform Budget Decisions' Governance Global Practice. Jakarta: The World Bank Indonesia Office.

World Bank 2019b. 'Assessing public financing for improving nutrition outcomes and human capital in Bhutan: *'what gets measured, gets managed"*, Washington DC: The World Bank.

World Bank 2019c. 'Nutrition expenditure tracking in Pakistan: Guidelines.' Washington DC: The World Bank.

World Bank 2019d. 'Zambia Health Sector Public Expenditure Review: 2006-2016.' Washington, DC: World Bank.

World Bank 2019e. 'Kingdom of Lesotho: Agriculture Public Expenditure Review.' Washington, DC: World Bank. Available from: https://openknowledge.worldbank.org/handle/10986/33140. Accessed June 18, 2021.

World Bank 2020a. 'Spending better to reduce stunting in Indonesia: Findings from a public expenditure review.' Jakarta: The World Bank Indonesia Office.

World Bank 2020b. 'Rwanda Nutrition Expenditure and Institutional Review, Washington DC: The World Bank.' Washington DC: The World Bank.

World Bank 2020c. 'Sri Lanka PER for Nutrition in Sri Lanka: Assessing Public Financing for Nutrition in Sri Lanka (2014–2018).' Washington DC: The World Bank.

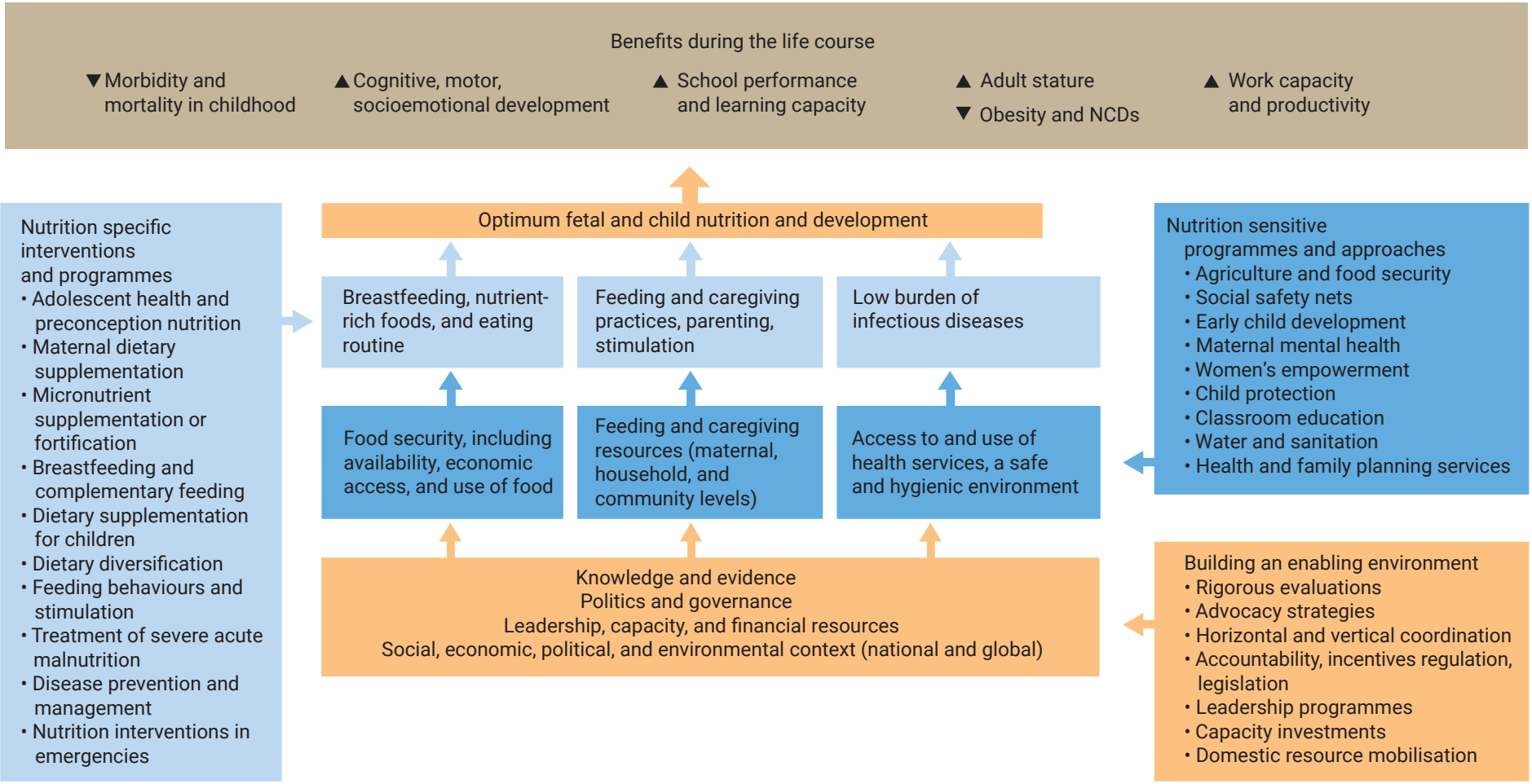
World Bank (forthcoming). Strengthening Accountability for Nutrition Results through Improved Public Financial Management.

World Health Organization (WHO) 2012. *National Nutrition Strategy for 2011-2020, with a vision toward 2030.* WHO global database on the implementation of nutrition action. WHO 2nd Global Nutrition Policy Review 2016-2017. Available from: https://extranet.who.int/nutrition/gina/en/node/11519#:~:text=By%20the%20year%202020%2C%20the,and%20obesity%2Foverweight%20will%20be. Accessed June 4, 2020.

World Health Organization (WHO) 2014. Indicators for the Global Monitoring Framework on Maternal, Infant, and Young Child Nutrition (24 November 2014). Available form: https://www.who.int/nutrition/topics/indicators_monitoringframework_miycn_background.pdf. Accessed May 25, 2021.

World Health Organization 2020. 'Global Targets 2025 to improve maternal, infant and young child nutrition.' Available from https://www.who.int/nutrition/global-target-2025/en. Accessed June 4, 2020.

ANNEX 1: LANCET FRAMEWORK OF NUTRITION



Source: Black et al. 2013

ANNEX 2: NEPAL MULTI-SECTOR NUTRITION PLAN-II RESULTS STRUCTURE

GOAL (Impact): Improved maternal, adolescent & child nutrition by scaling up essential nutrition-specific & sensitive interventions and creating an enabling environment for nutrition

- Stunting prevalence
- Wasting prevalence
- Low birth weight prevalence
- % reduction in child overweight/ obesity
- % reduction in overweight/obesity in reproductive age women
- % women with chronic energy deficiency

Outcome 1: Improved access to and equitable use of nutrition-specific services

Indicators with targets:
- Increased % of children 6-23 months having minimum acceptable diet
- Increased % of children under 6 months with exclusive breastfeeding
- Reduced % of anemia among children 6-59 months
- Reduced % of anemia among adolescent girls (10-19 years)
- Reduced % of anemia among WRA (15-49 years)
- Reduced prevalence of under 5-years old children with diarrhea in last two weeks
- Mean dietary diversity score among WRA (15-49 years)

[example of a nutrition-specific output]

Output 1.X: Improved nutrition and care practices

Indicators with targets:
- % newborns initiating breastfeeding within 1 hour of birth
- Proportion of infants 6-8 months receiving solid/semi-solid/soft foods
- % children 0-59 months who received more frequent feeding during episodes of diarrhea

Key Activities with targets:
- Conduct maternal, infant & young child nutrition counselling on all health sector platforms viz. health mother's group meetings, immunization, ANC, PNC, growth monitoring, PHC-ORC, IMNCI and OPD
- Conduct regular growth monitoring counselling at PHC-ORCs and health facilities
- Disseminate IEC/BCC materials in line with Food Based Dietary Guidelines through health facilities, FCHVs to communities and household regularly
- Engage media for documentation/ dissemination of MIYCN programv

Outcome 2: Improved access to and equitable use of nutrition-sensitive services and improved healthy habits and practices

Indicators with targets:
- Reduced proportion of population below minimum level of dietary energy consumption
- Increased % people using safe drinking water
- Increased % people using improved sanitation facilities that are not shared
- Increased % of people practicing hand washing with soap and water before feeding baby (0-2 yrs) and after cleaning babies' bottoms
- Percentage of women aged 20-24 years who were married or in union before age 18
- Increased gross enrolment rate (boys and girls) in early child education and development/pre-primary education
- Decreased % of out-of-school children (boys/girls) in basic education
- Increased basic education cycle completion rate (boys/girls)

[example of a nutrition-sensitive output]

Output 2.X: Increased physical & economic access to diversified food

Indicators with targets:
- Improved access to updated agriculture marketing information
- Publish agriculture marketing information bulleting (once a year)
- Updated website and app related to agriculture marketing information system
- Households raising livestock

Key Activities with targets:
- Enhance access and utilization of animal source foods
  - Open market establishments (#)
  - Chilling vat distribution (#)
  - Awareness programs to use safe animal products (events)
- Promote and support production and consumption of fish including support to establish community ponds for production and local consumption (tons)

Outcome 3: Improved policies, plans & multi-sectoral coordination at federal, provincial and local government levels to enhance the nutrition status of all population groups

Indicators with targets:
- % of farm land owned by women or in joint ownership
- No. of local, provincial and federal government plans that include nutrition and food security programs in line with MSNP-II
- Availability of national MSNP-II document
- Availability of national budget code for nutrition and food security
- National Capacity Development Master Plan for implementation of MSNP-II Produced
- Multi-sector commitment and resources for nutrition increase to at least 3.5% of total government budget
- Financial resource tracking in place

[example of an enabling environment output]

Output 3.X: Functional updated information system across the sectors

Indicators with targets:
- MSNP-II M&E framework developed or updated for all sectors and implemented at federal, provincial and local levels
- Web-based reporting system linked with MSNP-II M&E plan at all levels (7 sectors)
- NNFSS portal updated each quarter
- No. of sectoral reports updated on NNFSS portal as per M&E plan each quarter

Key Activities with targets:
- Update MSNP information portal and make it functional
- Link and update nutrition information at central level (HMIS, EMIS, WASH, agriculture, livestock and local governance)
- Provide training on web-based MSNP reporting system at federal and province level
- Develop/review M&E framework for all MSNP sectors at federal level
- Develop/review M&E framework for all MSNP sectors at province level
- Develop M&E framework for all MSNP sectors at local level

ANNEX 3: LIST OF NPERS AND OTHER RELATED DOCUMENTS STRUCTURE[44]

NPERS

Country	Year	Organization	Title
Bangladesh	2019	UNICEF	Bangladesh Public Expenditure Review on Nutrition
Bhutan	2020	WB	What Gets Measured Gets Managed: Assessing Public Financing for Improving Nutrition Outcomes and Human Capital in Bhutan
Indonesia	2020	WB	Spending Better to Reduce Stunting in Indonesia: Findings from a Public Expenditure Review
Nepal	2019	WB	Assessing Public Financing for Nutrition in Nepal 2011-17 (un-published)
Rwanda	2020	WB	Rwanda Nutrition Expenditure and Institutional Review 2020
Sri Lanka	2020	WB/UNICEF	Assessing Public Financing for Nutrition in Sri Lanka 2014-18
Tanzania	2018	UNICEF	Nutrition Public Expenditure Review 2014-16 mainland Tanzania

Other documents (Nutrition financing tracking, sector PERs with nutrition coverage)

Country	Year	Organization	Title
Ethiopia	?	Results for Development (R4D)	Tracking Funding for Nutrition in Ethiopia Across Sectors
Ethiopia	2021	WB	Assessment of woreda-level budget, planning process, and flow of funding in human capital sectors (to be published)
Lesotho	2019	WB	Agriculture Public Expenditure Review
Mozambique	2016	WB	Mozambique Health Public Expenditure Review: 2009-2013 (unpublished)
Pakistan*	2019	WB	Nutrition Expenditure Tracking in Pakistan Guidelines (unpublished)
Paraguay	?	WB	Una revisión del gasto público en primera infancia en Paraguay (in Spanish, unpublished)
Rwanda	2016	WB	Volume II: Expenditure Analysis of Selected Strategic Topics Using the AgPER Lite Methodology (unpublished)
Zambia	2018	WB	Zambia Health Sector Public Expenditure Review

Note (*): Guidance document only

44. This annex contains NPERs and related documents known to the authors of the NPER Guiding Framework. There could be other documents, especially by non-World Bank entities, that are not listed here.

WORLD BANK GROUP