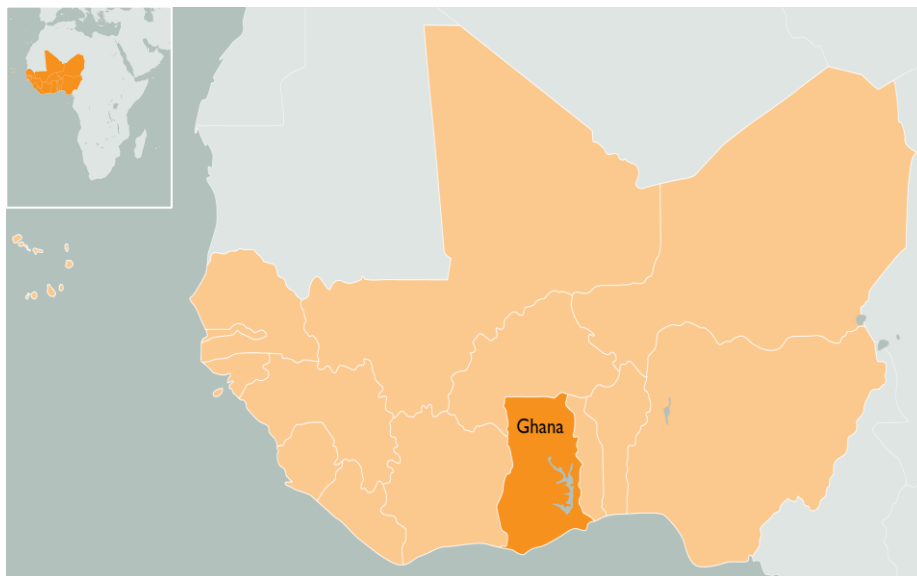


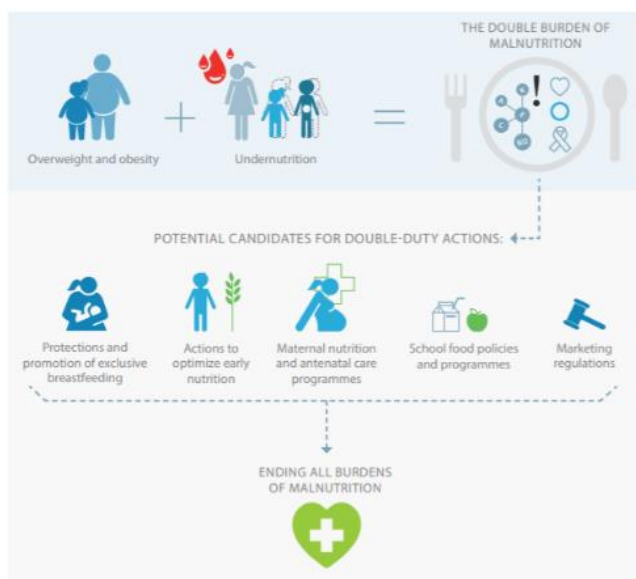
## Double burden of malnutrition in Ghana: a holistic perspective



### Why is this policy note important?

In the context of a mounting burden of overweight and obesity and a persisting burden of undernutrition, double-duty actions (DDAs) (Figure 1) [1] are needed to tackle multiple forms of malnutrition simultaneously [2]. These include “interventions, programs and policies that have the potential to simultaneously reduce the risk or burden of both undernutrition (including wasting, stunting and micronutrient deficiency or insufficiency) and overweight, obesity or diet-related NCDs”. The World Health Organization has characterized the double burden of malnutrition (DBM) as “the coexistence of undernutrition (i.e. micronutrient deficiencies, underweight, and childhood stunting and wasting), along with overweight and obesity, or diet-related noncommunicable diseases, within individuals, households and populations, and across the life course” [3]. Coordinated policy action is, therefore, needed to ensure that a focus on the double burden is integrated into the design, implementation, monitoring and evaluation of policies and programs with potential double-duty effects across the life course, with intra- and inter-generational implications [1,3,4,5].

**Figure 1. Double Duty Actions**



SOURCE: WHO 2017 [1]

## Objective

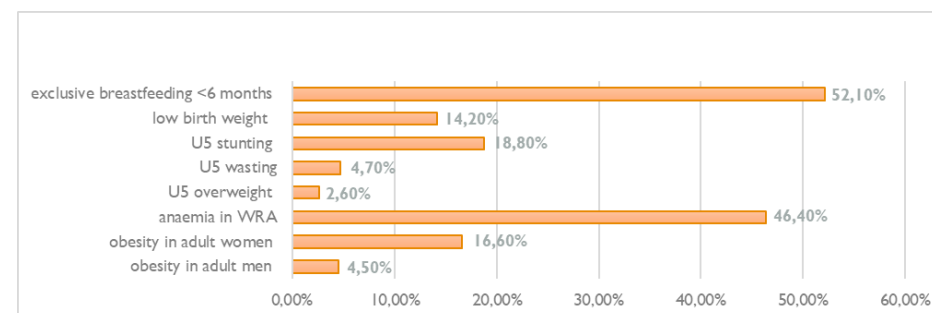
The aim of this evidence note is to summarize the current status of nutrition-relevant data in Ghana with relation to the double burden of malnutrition. To achieve this, we examined whether and to what extent national policies focus on the double burden of malnutrition. We highlighted strengths, weaknesses, gaps and opportunities in DBM-relevant policy at national level. The broader research question underpinning this analysis was: What is the current political commitment and capacity for interventions that address the DBM within Ghana?

## The DBM in the context of Ghana

Over the past decade Ghana has seen significant reductions in hunger. Undernutrition, however, remains prevalent and is now coexisting with overweight and obesity. This urgently needs to be addressed as it aggravates the country's malnutrition and health burdens, placing additional strain on

available resources [6]. Notwithstanding the pressing issue of the DBM, there is a paucity of studies examining the extent of political commitment and capacity for interventions instrumental to address the DBM within Ghana [6,7].

**Figure 2. Malnutrition burdens in Ghana for key nutrition outcomes**



SOURCE: Development Initiatives 2020 [6]

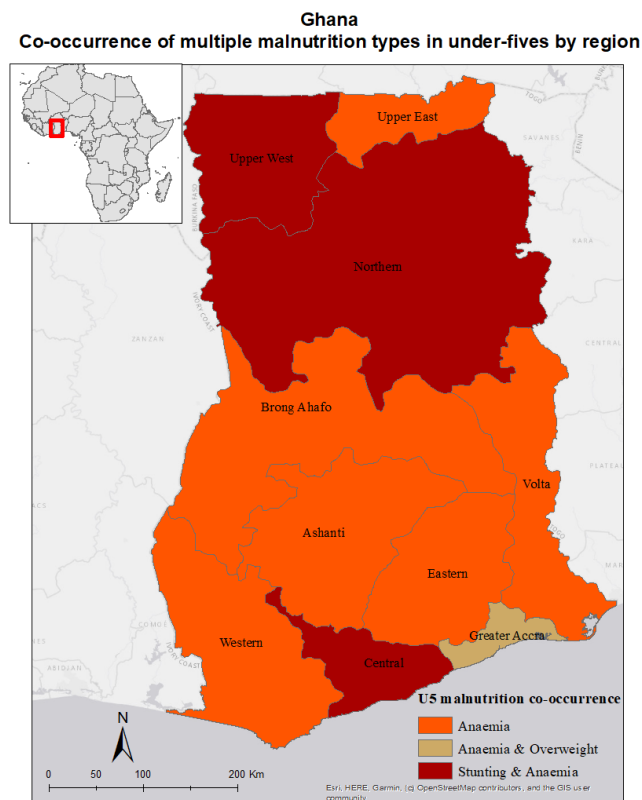
Note: U5 = children under five years of age; WRA = women of reproductive age

## Spatial patterns of (multiple) malnutrition types (analysis based on DHS 2014)

A study by [Transform Nutrition West Africa](#) assessed the spatial patterns of single and multiple malnutrition types in Ghana based on 2014 DHS data. This consisted of mapping prevalence levels by region, conducting “hotspot analyses” to identify areas with statistically significantly high (hotspot) or low (coldspot) (multiple) malnutrition burdens, and spatial regression analyses to identify factors associated with single or multiple malnutrition burdens among U5 and WRA. For patterns of single malnutrition types, its results showed that all regions faced a severe public health problem for U5 anaemia (prevalence over 40%) (De Benoist and Mclean 2008) (**Figure 3a**). The Central, Upper-West, and Northern regions faced, in addition to high U5 anaemia, high U5 stunting prevalence levels of over 20% [8]. The Greater Accra Region, where the capital city of Accra is located, experienced high levels of both anaemia (58%) and overweight (3%) among U5 [9]. Among WRA in all regions of Ghana, the prevalence of underweight/thinness, anaemia, and overweight/obesity were below the threshold levels that indicate severe public

health problems. Although, the overweight/obesity was the highest in Greater Accra Region and the prevalence of WRA anemia was highest in the Northern and Volta regions (maps available online) [10].

**Figure 3a. Map showing the malnutrition faced by each region in Ghana among children under five**



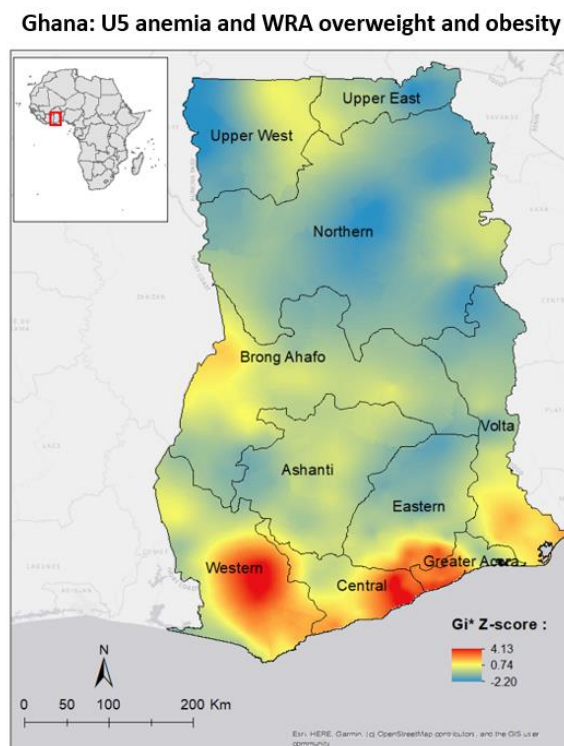
SOURCE: Demographic and Health survey for Ghana (2014)

Note: U5 = children under five years of age

Thresholds used: U5 anemia > 40%, U5 stunting > 20%, U5 overweight/obesity > 3%

There were higher proportions of mother–child pairs in the Volta, Greater Accra, Central, and Western regions in which the child was anemic and the mother was overweight/obese (**Figure 3b**). Coldspots of this double burden were found in the Northern part of Ghana, where underweight/thinness was more prevalent among WRA [10]. The risk factors of hotspots of this double burden included a higher proportion of wealthy households living in a rural area in which the children had achieved minimum dietary diversity. The anemia from which the children in these mother–child pairs suffered was not associated with malaria

**Figure 3b. Spatial interpolation map showing hotspots (in red) and coldspots (in blue) of mother–child pairs with an anemic child and an overweight/obese mother in Ghana**



SOURCE: Demographic and Health survey for Ghana (2014)

Note: U5 = children under five years; WRA = women of reproductive age; Gi\* = Getis-Ord Gi\*.

### The 5PD cycle: from knowledge to action



## APPROACH

We apply the 5PD Cycle (Problem, Policy, Program, People, Priorities, and Data and knowledge), which is a holistic approach to translate knowledge into action across the spectrum of malnutrition, for the analysis. This approach assumes that nutrition issues are the product of a cycle of interacting domains, including the nutrition problem, the related policies and programs that exist to address this problem, the key people and organizations responsible for these policies and programs, their priorities, and the data and knowledge available to inform implementation of nutrition policies and programs. TNWA applied various methods including secondary data analysis, evidence synthesis approaches such as rapid reviews, a mixed-methods approach at the country level, qualitative analysis, and policy/program reviews for Ghana. This analysis uses a DBM-lens to examine the nutrition data that TNWA gathered along the 5PD Cycle in Ghana (between 2019 and 2021). **Table I** illustrates how TNWA's sources were used for mapping information onto the 5PD Cycle.

Our analysis is anchored on the Nutrition-Relevant Policy Landscape Review (TNWA-ACF 2020-2021). This includes nutrition-relevant policies, strategies (including strategic plans), and action plans (hereafter referred to as "policies")<sup>1</sup>. These cover all nutrition-relevant sectors and are either currently in use or in the advanced drafting stage as of September 2020. Data extraction for this policy review was based on the 5PD Cycle (Transform Nutrition West Africa inception report 2018). The additional sources as listed in **Table I** complement and support this analysis to convey information on *Problem, Policy & Program, People, Priorities* and *Data*. On the basis of the results we aim to assess the degree of political commitment encapsulated by nutrition-relevant policies, currently exploited pathways, as well as any gaps and opportunities, for double-duty action.

SOURCE: Transform Nutrition West Africa

**Table I.**

SPD	DATA SOURCE <sup>1</sup>	Study design	YEAR
<b>PROBLEM</b>	-Nutrition-relevant policy landscape review	Desk review	2020-2021
	-Spatial analysis of malnutrition burden for Ghana	Secondary data analysis	2020-2021
<b>POLICY</b>	-Nutrition-relevant policy landscape review	Desk review	2020-2021
<b>PROGRAM</b>	-Research on WHA targets (systematic map database) Stories of Change- Review of programs/interventions	Systematic mapping review	2019-2021
<b>PEOPLE</b>	-Nutrition-relevant policy landscape review	Desk review	2020-2021
	-Stories of Challenge Ghana	Mixed methods	2019-2021
	-Social Network Analysis (highlights key people/institutes working on nutrition in West Africa)	Social network analysis	2020
<b>PRIORITIES</b>	-Nutrition-relevant policy landscape review	Desk review	2019-2021
	-Stories of Challenge - Nutrition Prioritisation review	Mixed methods	2019-2020
<b>DATA</b>	-Data Country Profiles on nutrition outcomes and coverage indicators	Desk review	2019-2021
	-Spatial analysis of malnutrition burden for Ghana	Secondary data analysis	2021

## Results

The nutrition-relevant policy landscape review retrieved a total of 17 policy documents (**Table 2**). Of these, 9 explicitly mention multiple forms of malnutrition and related comorbidities which are characterised as ‘double burden of malnutrition’. Alongside those with an identifiable focus on the DBM, namely those which explicitly address multiple forms of malnutrition, we included policies which inherently promote double-duty actions (i.e., policies which address newborn and child health, breastfeeding, complementary feeding and school feeding), even where the policies are not explicitly framed as addressing the double burden of malnutrition. Others have a more generic focus on malnutrition or micronutrient deficiencies, and on improving the nutrition and health status of the Ghanaian population. The 17 policies included in this brief span across the areas of nutrition (n = 2), health (n = 13), and economic/social policy (n = 2). The 9 policies with an explicit focus on the DBM, are in the areas of nutrition (n = 1; add acronym of the policy), health (n = 7 add acronym of the policy) and social/economic (n = 1; add acronym of the policy) policy.

### SPD Cycle findings

Data extrapolated from nutrition-relevant policy documents was analysed to assess whether information on the DBM is present. Where a double burden is acknowledged, we assessed whether this is limited to background data (e.g. mentioned as part of the policies’ contextual analysis and framed in terms of prevalence,

drivers, consequences, distribution), to what extent it features in policy objectives, planned activities and indicators (e.g. input, output, outcome, coverage indicators), and whether this is backed by financial commitment through budget allocation. Additional information from a review of prioritisation processes in Ghana was examined to provide an insight into the extent to which the DBM might be a nominal or factual priority in nutrition-relevant policy in Ghana. The gaps and opportunities that arise from these different layers of analysis guide the identification of pathways conducive to double-duty action.

### Problem, Policy, and Program

**Focus on DBM:** Of the total of 17 policies analysed, 9 are characterised by a focus on the DBM. Of these, most (n = 7) are situated in the health policy area, one from nutrition and one from economic/social policy areas (**Table 1**).

**Outcomes:** Across all DBM-relevant policies, the form of malnutrition which features most often is micronutrient deficiency, followed by overweight/obesity and diet-related NCDs. This is consistent across sections, namely situational analysis, drivers and consequences of malnutrition, as well as across policy objectives, indicators and planned activities (**Table 2**).

**Internal coherence:** The two most comprehensive policies in terms of outcomes of interest to the DBM cover all outcomes presented in the policies’ situational analysis in the objectives and planned activities, while they cover all outcomes except diet-related NCDs under indicators. **Disparities:** The least comprehensive policies in terms of outcomes

covered across those relevant to the double burden of malnutrition, are also the policies that do not report on disparities between and within population groups. **Budget for nutrition:** Looking at consistency between objectives, indicators and planned activities there is some degree of coherence within policies. However, closer examination of commitment to targets through budget allocation, shows that only one of the included policies has a budget for nutrition.

### People

**Beneficiaries:** Most policies address malnutrition across the life cycle, including infants, children, adolescents, women of reproductive age (WRA), pregnant and lactating women (PLW), adult men and women, and the elderly as target groups.

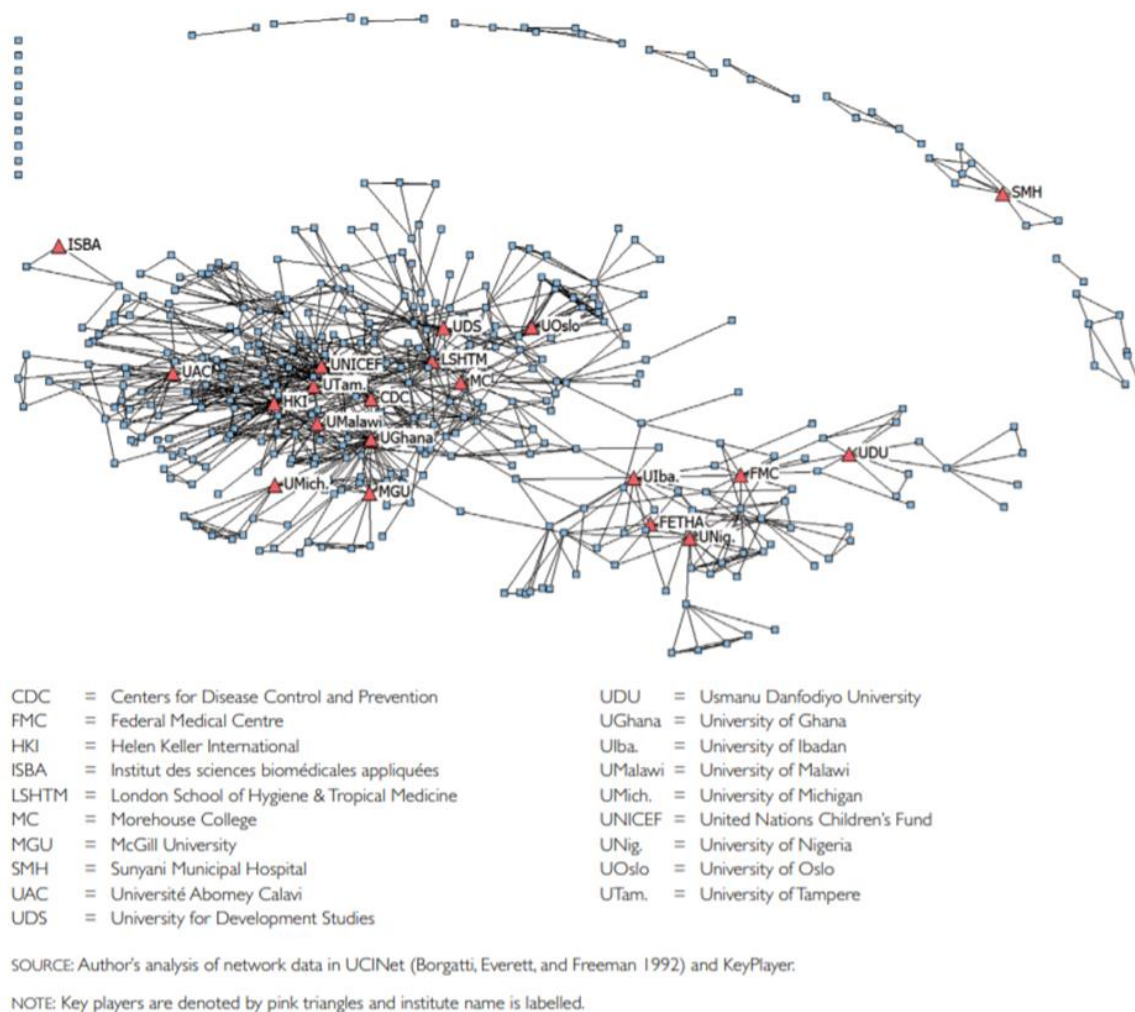
**Actors:** All policies included mention actors’ responsibilities and multisectoral coordination mechanisms. The main actors involved in policy development, management and coordination, financing, implementation, monitoring and evaluation, are national and local government actors. Only one policy features actors from the community, civil society and private sector, pointing at a need to widen the spectrum of actors involved in decision-making and implementation of nutrition-relevant policies (**Table 2**). Explicit prioritisation processes (**Table 3**) show broader scope for multisectoral involvement in agenda setting, but these are non-routine practices. **Shared platforms for double-duty action:** The delivery platforms cited across policies are health systems, national breastfeeding and dietary guidelines, social policies and national-level policies for overweight/obesity,

NCDs, and nutrition more generally (Table 2). Reflecting findings from the policy review, effective targeting through shared platforms common to multiple forms of malnutrition is prominent in recommendations from prioritization processes (**Table 3**), which stands out as a key approach conducive to double-duty action. These platforms are: community-level health services, agricultural extension platforms, social protection, schools and school-feeding programs, markets and the private sector.

#### Research institutes :

[Our analysis of research institutes](#) considers who in the network is able to control the research and evidence narrative and drive collaborative relationships. We utilized social network analysis to examine these relationships and find that more than a third of research institutes with high betweenness centrality are based in West Africa, suggesting regional control and ownership. However, looking more deeply at the countries represented, we find that anglophone institutes based in Ghana and Nigeria make up most of these high-betweenness actors (**Figure 4**).

**Figure 4: Network of institutions, showing key players in the region**



SOURCE: Aberman NL, Diop L, and Verstraeten R. 2021. Analysis of nutrition research networks in West Africa. Transform Nutrition West Africa, Evidence Note no.19 (June) Dakar: IFPRI.

## Priorities

Whilst the *Problem, Policy and Program* sections have provided an overview of the **priorities already set**, represented by the policy documents which make up the nutrition-relevant landscape in Ghana (**Table 1** and **Table 2**), further insights on priorities were gathered through a review of **processes of prioritisation** within nutrition at national level (**Table 3**). These combined sources enable assessment of the positioning of current policies with relation to the double burden of malnutrition. Prioritisation processes in Ghana have focused on **shared drivers** of malnutrition which are conducive to double-duty (such as breastfeeding and micronutrient intake) to address stunting, wasting, micronutrient deficiencies, overweight and obesity of key target groups and across the life course. The priorities reported by categories are: implementation (targeting, addressing demand, promotion, ensuring availability and access to nutritious foods and supplements for key target groups, scaling-up, etc.), governance (coordination, M&E, strengthening capacity, improving infrastructure, etc.), and political (e.g., legislation and policy, strong political will, funding, etc.).

## Data

An overview of the primary and secondary data sources on the DBM available for Ghana is reported in **Table 4**. These report on 17 indicators that are relevant to the double burden of malnutrition, which are divided by target age group. The source found to be most

comprehensive in terms of the number of indicators covered was the Ghana Demographic and Health Survey (GDHS) (2014). The GDHS, as was the case for most secondary sources, did not report on Minimum Dietary Diversity for children. Whilst Minimum Acceptable Diet is reported by all primary data sources, it is underreported by most secondary data sources, potentially denoting a stronger focus on exclusive breastfeeding/complementary feeding for infants/U2 children, than on U5 children's diet beyond breastfeeding. Similarly, Minimum Dietary Diversity for women of reproductive age is also underreported across data sources. U5 overweight is reported more often than adult overweight and obesity, alongside stunting and wasting, which are the two most commonly covered indicators across sources. Whilst a few sources report on indicators for a single specific age group, most data sources report on indicators for all age groups, allowing for a focus on the DBM across the lifespan. However, data are lacking on key indicators of diet-related NCDs in Ghana. Importantly in the context of synergistic epidemics, the lack of data on the coexistence of diet-related NCDs with other comorbidities within communities, households and individuals does not allow for reporting on nutrition-relevant disease burdens and NCD targets, informatively.

## Conclusions

The current nutrition in Ghana landscape demands that institutions designed to address and prevent malnutrition implement integrated approaches which address the double burden of

malnutrition. Against the backdrop of a mounting burden of overweight and obesity and a persisting burden of undernutrition, addressing shared determinants with integrated approaches that create and sustain synergistic, mutually-reinforcing mechanisms, is crucial to amplify progress on multiple forms of malnutrition, simultaneously.

## Currently exploited pathways for double duty action (DDA)

Some of the nutrition-relevant mechanisms that are conducive to double-duty action already exist, to varying degrees, in the Ghanaian policy landscape. Key patterns of relevance to double-duty actions identified through the cross-analysis of data sources are:

- Life cycle approach
- Attention to disparities/inequality
- Focus on shared drivers
- Focus on shared delivery platforms
- Multisectoral coordination
- Monitoring & Evaluation
- Accountability mechanisms
- Evidence-based scaling-up
- Multi-stakeholder agenda setting/prioritisation processes

## Gaps and opportunities for DDAs

Excluded policies, namely those that do not refer to multiple forms of malnutrition, include policies

which have a general focus on malnutrition (n=2), as well as policies that do not acknowledge the DBM but which are considered to be inherently double-duty actions (n=5) as characterized by the World Health Organization (WHO 2017b). The latter include policies which address: newborn and child health, breastfeeding, complementary feeding, school feeding, and adolescent/WRA health. The lack of an explicit framing of these policies as conducive to double-duty does not allow for a more thorough analysis of individual policy components, objectives, indicators and planned activities. Nevertheless, they are crucial to addressing shared drivers of multiple forms of malnutrition simultaneously. Moreover, these are implemented in shared delivery platforms that enable large-scale coverage of target populations across age groups. The exclusion of relevant policies, dictated by a lack of data on multiple forms of malnutrition within the policy documents, indicates some important shortcomings:

- In the worst-case scenario, there are potential missed opportunities, in Ghana's policy landscape, for acting to tackle the double burden of malnutrition.
- In the best-case scenario, double-duty benefits are already being gained through policy and program implementation, but these are overlooked.

### Implications of gaps and missed opportunities

The identified gaps have further implications for evidence-based policy, in that:

- Common platforms for delivering double-duty actions are not exploited to their full potential to deliver on objectives to tackle multiple forms of malnutrition.
- The lack of framing of policy interventions through a DBM/DDA lens results in limited return on investment of resources allocated to shared delivery platforms, in response to shared drivers
- The scope of capacities, knowledge and skills that are conducive to double-duty action is limited by a focus on single rather than multiple forms of malnutrition for policies that are inherently double-duty.
- Opportunities for Social and Behaviour Change Communication (SBCC) activities conducive to double duty at delivery platform level (e.g. community, health facility, training hospital, school) are missed by DBM-sensitive policies that are framed as single-issue policies.
- Existing data monitoring systems are not used to their full potential.
- Gaps in accountability with relation to multiple forms of malnutrition result in a failure to incorporate due credit on potential progress on the DBM in Ghana, as the effects of existing policies are not being appropriately measured with attention to multiple forms of malnutrition and related comorbidities.

## Recommendations

1. Reinforce and optimise currently exploited pathways for DDA;
2. Strengthen internal coherence between policy objectives, planned activities, indicators, targets and budget;
3. Design nutrition actions which factor in disparities within the Ghanaian setting for maximising double-duty effects;
4. Frame de-novo actions to tackle multiple forms of malnutrition as DDAs, based on national, subnational and international evidence, and integrate the DBM-lens into existing and future policy to tackle single forms of malnutrition that are inherently DDAs;
5. Engage with multiple stakeholders for extending double-duty effects across unexplored delivery platforms of relevance to the DBM (e.g. agricultural extension platforms, food systems, community-level health services, social protection, schools, markets and the private sector)
6. Explore (through research) the situation regarding DBM integration in program implementation at the sub-national levels

**Table 2: List of DBM-relevant policies in Ghana**

Nr	Area	Policy Name	Acronym	Start	End	DBM focus
1	Nutrition	National Nutrition Policy 2016	NNP	2016	2021	Yes
2		Integrated Strategy for the Control of Anaemia in Ghana	IACS	2003	n/a	No
3	Health	National Breastfeeding Policy	NBP	1995	n/a	No
4		Ghana National Newborn and Child Health Advocacy and Communication Strategy and Year One Work Plan	NNCHACS	2015	2019	No
5		Ghana National Healthcare Quality Strategy	GNHQS	2016	2021	Yes
6		Health Sector Gender Policy	HSGP	2009	2014	Yes
7		National Community-Based Health Planning Services Policy	CHPS	2016	2021	No
8		Revised National Health Promotion Policy	NHPP	2016	2020	Yes
9		National Food Safety Policy	NFSP	2019	2024	Yes
10		National Health Policy: Ensuring healthy lives for all	NHP	2020	n/a	Yes
11		Ghana National Newborn Health Strategy and Action Plan	GNNHSAP	2019	2023	No
12		National Tuberculosis Health Sector Strategic Plan for Ghana	NTHSSP	2015	2020	Yes
13		National Acceleration Plan for Paediatric HIV Service Ghana	NAPPHIVS	2016	2020	No
14		Reproductive Health Strategic Plan	RHSP	2007	2011	No
15		Ghana Health Service Quality Assurance Strategic Plan	QASP	2007	2011	Yes
16	Economic/Social	National School Feeding Policy	NSFP	2015	2020	No
17		Medium-Term National Development Policy Framework: An Agenda for Jobs: Creating Prosperity and Equal Opportunity for all 2018-2021	NMTDPF	2018	2021	Yes

**Table 3: Inclusion of DBM-focus in nutrition-relevant policies**

Nr	Area	Acronym	PROBLEM				POLICIES AND PRIORITIES				PEOPLE			DATA	
			DBM forms of malnutrition	DBM drivers	DBM consequences	Disparities	Budget for nutrition	DBM objectives	DBM indicators	DBM activities	Primary beneficiaries	Primary actors	Multisectoral coordination	M&E	Accountability
1	Nutrition	NNP	1,2,3,4,5,6	✓	✓	✓	×	✓ 1,2,3,4,5,6	✓ 1,2,3,4,5	✓ 1,2,3,4,5,6	children, adolescents, WRA, elderly, adults	NG; LG	✓	✓	✓
5	Health	GNHQS	1,2,4,6	✓	✓	×	×	×	✓ 0,2,4,6	×	WRA, elderly, U5 children, adults	NG; LG	✓	✓	✓
6	Health	HSGP	1,4,5	×	×	✓	×	✓ 0	×	×	general population, adults, children, adolescents	NG; LG	✓	✓	×
8	Health	NHPP	1,2,4,5,6	✓	✓	✓	×	✓ 4,5,6	✓ 4,5,6	✓ 4,5,6	adults, children, adolescents, infants	NG; LG	✓	✓	✓
9	Health	NFSP	4,5	✓	×	×	×	×	✓ 5	×	children, adults, women, general population	NG	✓	✓	×
10	Health	NHP	4,5,6	✓	✓	✓	×	✓ 4,5,6	✓ 6	✓ 0 (4,5,6)	children, adolescents, WRA, U5 children, elderly, neonates, adults	NG; LG	✓	✓	✓
12	Health	NTHSSP	4,6	×	×	×	✓	×	✓ 6	✓ 6	community medical risk groups: TB, diabetes, PLW, PLHIV, Children	NG; LG; C; P; CSO	✓	✓	✓
15	Health	QASP	1,6	✓	✓ 0	×	×	✓ 0,1,6	✓ 1,6	✓ 1,6	health staff, U5 children, WRA	NG; LG	✓	✓	✓
17	Economic/Social	NMTDPF	1,2,3,4,5,6	×	✓	✓	×	✓ 1,2,3,4,5,6	✓ 1,2,3,4,5	✓ 1,2,3,4,5,6	U5 children, WRA	NG; LG	✓	✓	✓

Nutrition outcomes:

1. Underweight; 2. Stunting; 3. Wasting; 4. Micronutrient deficiencies; 5. Overweight/Obesity; 6. Diet-related NCDs

0. present and DBM-sensitive but generic/non-DBM-specific (e.g. malnutrition)

Primary actors: NG= national government; LG=local government; NGO/CSO=non-governmental/civil society organisations; C=communities; P=private sector.

**Table 4: DBM-relevant processes of prioritisation within nutrition policy in Ghana**

DBM-RELEVANT PRIORITISATION WITHIN NUTRITION POLICY				
Prioritisation process		Fill the Nutrient Gap (FNG)	Becoming Breastfeeding Friendly (BFF) toolbox	PROFILES
Year(s)		2015-2016 (6 months)	2016-2017 (11 months) and 2018-2019	1997 (n/a: 2 weeks + time for modelling)
PROBLEM	Objective	To identify context-specific strategies for improving nutritional intake of vulnerable populations, especially during the first 1000 days.	To improve nutrition status (through breastfeeding friendly environment) Available documents, expert opinion and case studies of best practices to assess the status of the breastfeeding scale-up environment.	To increase awareness among decision-makers of the need for greater investment in nutrition, to facilitate the design and selection of programmes, and to promote particular interventions that are already being designed.
	Outcomes	Micronutrient deficiencies (iron, vitamin A, zinc); stunting, wasting, overweight/obesity	improved environment for breastfeeding	Nutritional deficiencies
	Situational analysis	Current malnutrition characteristics across key target groups: Children 6-23 months: prevalence of stunting, anaemia, micronutrient deficiencies (Vitamin A, Zinc), and overweight; PLW: prevalence of ow/obesity and anaemia; Adolescent girls: early pregnancy and high nutrient needs make adolescents a key subgroup of WRA.	Breastfeeding environment in Ghana, contextual data on study site, breastfeeding services structure and distribution, leading agencies for developing policies, legislation and strategies for breastfeeding in Ghana and other government & non-governmental agencies.	Computer modelling based on 3 types of model (1. demographic; 2. intervention; 3. consequence). 1. projects population and numbers of births and deaths by age and sex from trends in fertility, mortality and migration. 2. computes the effect of proposed programmes on various indicators of the nutritional condition of populations. 3. estimates various developmental outcomes as a function of the size and nutritional condition of populations.
PEOPLE	Initiators	Led by World Food Programme & Ghana Health Service. The FNG is a situation analysis and decision-making tool developed by WFP, in collaboration with UC Davis, IFPRI, EPICENTRE and UNICEF.	Multisector collaborative process: BBF toolbox was pilot tested in Ghana as a partnership between University of Ghana, Yale University, and the Ghana Health Service (GHS) and its partner United Nations and Donor agencies.	The United States Agency for International Development (USAID) provided the funding for the original development of PROFILES through the Nutrition Communication Project (NCP) managed by the Academy for Educational Development, Washington, DC, USA.
	Stakeholders involved in prioritisation	WFP; National Government (Ghana Health Service, Agriculture, Social Protection); UN Agencies (UNICEF, WHO, FAO); Other partners (USAID, GIZ, University of Ghana, University of Development Studies).	UNICEF; University of Ghana; WHO; Ghana Health Service; USAID; Food and Drugs Authority; Korle-bu Teaching Hospital; Komfo Anokye Teaching Hospital; World Food Program.	BASICS, Linkages, UNICEF/Ghana, the Ghana Ministry of Health's Nutrition Unit, and the University of Ghana's Centre for Social Policy Studies.
	Beneficiaries	Children 6-23 months; Pregnant and lactating women (PLW); Adolescent girls	U5 Children	Nationwide population
DATA	Tools and evidence	The FNG tool primarily uses secondary data in combination with results from linear programming tools such as Cost of the Diet (CoD) and Optifood to better understand the barriers to adequate nutrient intake in the context and model potential interventions to improve access to nutrients.	Builds on evidence-based Breastfeeding Gear Model (BFGM), which stipulates that 8 gears must work harmoniously to achieve a country level scale-up of breastfeeding: advocacy; political will; legislation and policy; funding and resources; training and program delivery; promotion; research and evaluation; and coordination, goals and monitoring. Available evidence (document reviews and key informant interviews) is used to arrive at consensus-scoring of benchmarks.	Data-based approach to nutrition policy development and advocacy which uses a set of computer models estimating the consequences of nutritional deficiencies and the cost-effectiveness of programmes that alleviate them.
PRIORITIES	Results of prioritisation process	Recommendations organised by entry point: community-level health services; schools and school feeding programmes, markets and the private sector, social protection, agricultural extension, community mobilisation and organisations and infrastructure. Recommendations include programme and policy measures to address: 1. access; 2. availability; and 3. demand for nutrients and nutritious foods. Key recommendations: 1. Approve and implement the National Nutrition Policy; 2. Address demand, availability and access for nutritious foods and products for key target groups.	Implementation gaps identified with relation to the various model gears. Identification of gaps produced 46 recommendations from which key priority recommendations were derived. 4 priority recommendations emerged from the country committee from a total list of 46 recommendations: 1. need to enlist and build capacity of breastfeeding champions to enhance breastfeeding advocacy as well as increase promotion of breastfeeding as an effective child feeding strategy; 2. strengthen breastfeeding regulations; 3. strengthening capacity for delivering breastfeeding services; 4. scaling-up breastfeeding promotion activities using diverse channels.	The demographic and consequence models estimated costs and potential benefits of reaching targets for reduced malnutrition in 2001 as specified in the Ghana National Plan of Action for Nutrition or, where no target was specified there, as established by the combined core and advisory group. The models focused on mortality, lost productivity and the health and fertility benefits of breastfeeding. The advocacy event on the final day of the workshop was attended by about 40 decision-makers from a broad cross-section of government and donor agencies, many of whom committed their agencies to support specific activities.

Follow-up	Pilot testing of the FNG tool ongoing in Ghana, Madagascar and El Salvador (at time of data source publication).	Ongoing research assessing the degree of adoption and implementation of the recommendations for scaling-up coverage for breastfeeding protection, promotion and support in Ghana (a sample of resulting publications can be found online: <a href="https://pubmed.ncbi.nlm.nih.gov/31867865/">https://pubmed.ncbi.nlm.nih.gov/31867865/</a> ; <a href="https://pubmed.ncbi.nlm.nih.gov/30665255/">https://pubmed.ncbi.nlm.nih.gov/30665255/</a> ; <a href="https://pubmed.ncbi.nlm.nih.gov/32831116/">https://pubmed.ncbi.nlm.nih.gov/32831116/</a> ; <a href="https://pubmed.ncbi.nlm.nih.gov/32206330/">https://pubmed.ncbi.nlm.nih.gov/32206330/</a> )	The core group has remained active, modifying and then using the presentation with different audiences. An immediate result, at least partly attributable to the PROFILES advocacy, is that the new child survival strategy developed by the Ministry of Health made improved child nutrition its top priority.
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\* Data from “Prioritising nutrition policies and nutrition research in low- and middle-income settings: a systematic cross-country review” (IFPRI Stories of Challenge 2019-2021)

**Table 5: Data sources reporting on DBM indicators**

DATA																	
INDICATORS	U5 stunting	U5 wasting	U5 overweight	Low birthweight	Exclusive breastfeeding	Early initiation of breastfeeding	U5 anaemia	Minimum acceptable diet	Minimum dietary diversity	Anaemia	Wasting	Obesity	Minimum dietary diversity	Sodium intake	Hypertension	Diabetes	Overweight and obesity
POPULATION	Children									Women of reproductive age				Adults			
PRIMARY DATA SOURCES																	
Demographic and Health Survey (GDHS) (2014)																	
Multiple Indicator Cluster Survey (MICS) (2011)																	
Ghana micronutrient survey (GMS) (2017)																	
SECONDARY DATA PLATFORMS																	
UNICEF/WHO/World Bank Group Joint Child Malnutrition estimates																	
WHO data																	
Scaling Up Nutrition																	
World Bank Development Indicators																	
Our World in Data																	
Index Mundi																	
Global Nutrition Report																	
Countdown to 2030																	
Nutrition in WHO African Region Atlas of the African Health Statistics																	
NCD Risk Factor Collaboration																	

SOURCE: Transform Nutrition West Africa: Country Data profiles

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