

Evaluation of Local Government Policy Frameworks for Stunting Reduction in Uganda: A Case  
Study of Ntungamo, Sheema and Kabale Districts

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**Abstract**

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**Background:** Stunting continues to be the most prevalent form of under nutrition affecting over 149 million children under five year globally. The largest burden is faced by low and middle income countries (LMIC) where more than half of these children live.<sup>1,2</sup> In Uganda, every 3 in 10 children is stunted with over 2 million children affected.<sup>3</sup> The effects of stunting bare consequences beyond an individual to community and national level.<sup>4</sup> The government of Uganda has now recognized nutrition as a cross-cutting issue that must be addressed through all government planning and implementation policy frameworks at both national and local government level.<sup>5,6</sup> The aim of this thesis to evaluate the level to which nutrition has been integrated within local government policy frameworks so as to identify the nutrition policy environment that would influence efforts toward reducing stunting.

**Methods:** This was a qualitative policy content evaluation policy documents from three (3) case study districts in south western Uganda. A “5C” framework adapted from the stories of change “meta-protocol” developed by Gillespie and van den Bold in 2015 was used to evaluate the sample policy documents. “3C’s” of commitment, coherence and community were used to develop a coding framework. Data were analyzed using *Atlas ti.* software and interpreted using an evaluation scale.

**Results:** Findings from the study showed an overall high political commitment for nutrition programs across all districts. There was a low commitment of financial and human resources for nutrition and weak coordination structures for implementation of nutrition programs across all the districts.

**Conclusions:** For local government to achieve sustainable positive outcomes in stunting reduction, there is need to translate political efforts to actions through commitment of resources, coordinate, and regulate stakeholder efforts for planning and implementation of programs.

## Introduction

Globally, malnutrition is the largest contributor to deaths among children under five making up over 45% of all deaths among this age group.<sup>2,7</sup> Malnutrition refers to a state of disordered nutrition presenting as either overnutrition, undernutrition or both.<sup>8,9</sup> Undernutrition manifests itself as stunted growth, wasting, and underweight due to frequent infections alongside deficiencies in calories, protein and micronutrients.<sup>10</sup> A child is classified as stunted if their length/height for age falls below  $-2$  Standard deviation (SD) when compared to the World Health Organization (WHO) growth standards median for a child of the same age and sex.<sup>11,12</sup> Stunted growth is used as an indicator of chronic undernutrition<sup>2,13,14</sup> and has been used as the best proxy indicator for child health and social inequalities.<sup>13,15,16</sup> It is the most pervasive irreversible form of undernutrition due to its adverse long term effects on the quality of life, social and economic development.<sup>13,17,18</sup> Children in less developed countries are the most affected by undernutrition and particularly stunting.<sup>2</sup>

Studies show that stunted children are likely to earn 20% less as adults than their non-stunted counterparts.<sup>19</sup> Furthermore, as adults, mothers affected by undernutrition are more likely to have children who suffer from stunting or wasting, perpetuating the cycle of poverty and undernutrition in societies. This phenomenon is also known as “the stunting syndrome.”<sup>16,20,21</sup> On the contrary, children who are not affected by stunting in their early years have been found to have higher test scores on cognitive assessments and activity level as well as increased outcomes in production.<sup>22,23</sup> The causes of child undernutrition, particularly stunting, are multidimensional and cannot be addressed by a single target action.<sup>21</sup> It requires multiple efforts through multisectoral and collaborative approaches that involve a variety of relevant stakeholders to better inform a diversity of policy and programming actions for sustained impact on nutritional outcomes.<sup>21,24–27</sup> Stunting is a major threat to human and national development due to its severe irreversible physical and neurocognitive damage that undermine one’s capacity to attain their utmost physical and cognitive potential.<sup>13,15</sup> Furthermore, this form of under nutrition often occurs in combination with wasting and other nutritional deficiencies which increases the risk of opportunistic infections and/or death due overall compromised immunity.<sup>15,21,28,29</sup> Studies on association between stunting and undernutrition in childhood and economic outcomes in adulthood revealed that countries with high rates of stunting have worse adult economic outcomes. These outcomes are further aggravated by spillover effects such as increased health expenditures due to increased risk of morbidity, increased education expenditures due to school grade repetitions.<sup>18,30</sup>

There has been a decrease in the estimated stunting levels in Africa over the last two decades (2000 - 2020) from 38% to 30 %.<sup>1,7</sup> Even though prevalence of stunting has decreased during this time period, the total number of children suffering from stunting in Africa has grown due to population growth. The total number of stunted children has increased from 50.6 million in 2000

to 58.7 million in 2017.<sup>7,31</sup> In 2019, over 29% of children under five in Africa were reported to be stunted with the highest regional percentage of 36% reported in Eastern Africa.<sup>32</sup>

In Uganda, stunting is the most prevalent form of undernutrition. The 2016 Uganda Demographic Health survey (UDHS) results showed that 3 in every 10 children under five years is affected by stunting with over 2.2 million children stunted in the country in 2016. The survey also found that rural areas have higher levels of stunting at 30% compared to urban areas at 24%.<sup>3,33,34</sup> Results from Cost of Hunger in Africa study (COHA) conducted in Uganda in 2009 estimated economic losses amounting to over \$1.8 trillion, approximately 5.6% of the national Gross Domestic Product (GDP).<sup>23</sup> A similar study conducted in 2013 also revealed that the country had lost an estimated \$7.7 billion in economic losses for the country due to stunting.<sup>35</sup>

With attention to nutrition growing globally, the government of Uganda has recognized nutrition as an all-encompassing issue within its national, sectoral and local government policies.<sup>5,6,36</sup> In 2011, the government launched the Uganda Nutrition Action Plan (UNAP 2011-2016), a nutrition policy that provides a comprehensive framework of strategies and interventions for addressing nutrition issues. The policy particularly focuses on reducing the levels of undernutrition among women of reproductive age, infants and young children using a multi-sectoral approach.<sup>37</sup> The government has continued to make substantial political and financial investments through a number of nutrition-related policies and action plans at both national and local government levels. These focus on reducing undernutrition, particularly stunting, and its consequences.<sup>6</sup> Nutritional needs are now reflected in five year national, sectoral and local government development plans.<sup>18</sup> Despite the increase in political investment for nutrition in Uganda over the last decade, stunting levels still remain relatively high with marked disparities across regions.<sup>3,38</sup> A recent analysis of the multi-sectoral approach towards reducing malnutrition in Uganda found disparities in integration of nutrition policies across all sectors; citing variations in actor networks, goals, and instruments.<sup>18,39</sup>

Local government development plans are the main platform in Uganda through which government strategies and activities are introduced to the levels where citizens can participate and benefit. The local government structure is decentralized and has the authority to develop and implement its own plans and budgets. These plans provide a framework for implementation of decentralized development programs and services by government and non-government actors. The national development planning framework requires that all intersectional issues including nutrition are adequately integrated into national and sub-national plans and be addressed in all political and technical discourse on development.<sup>6,36</sup>

This study aimed to evaluate the extent to which nutrition policies have been integrated into local government policy and implementation frameworks to reduce stunting in Uganda using case studies of Ntungamo, Sheema and Kabale districts in South-western Uganda.

## Design and Methods of Study

This was a qualitative policy content evaluation using three case study districts of Kabale, Ntungamo and Sheema in South-western Uganda. Despite being considered the food basket of the country, the south western region is faced with food and nutrition insecurity in all districts depicted with high stunting levels compared to other regions in the country.<sup>3,40,41</sup> Kabale, Ntungamo and Sheema districts were purposively selected based on the accessibility of policy documents and the comprehensiveness of the reports, variations in stunting levels, governance structures, and nutrition investment across the districts.

Ntungamo district has a relatively stable governance structure compared to Kabale and Sheema districts. Kabale and Sheema districts have experienced shifts in their governance structures over the last five years. Kabale district underwent shifts in its governance structure in 2015, which saw the district divided into a total of 3 districts. Sheema district was created out of “Greater” Bushenyi district and had its governance structure operationalized in 2010. Ntungamo district has also received relatively high investment for nutrition from both government and implementing partners over the last decade compared to Kabale and Sheema. Stunting levels in the three districts are reported at 32% for Ntungamo<sup>42,43</sup>, 33% for Kabale<sup>44</sup> and 47% for Sheema,<sup>45</sup> compared to an average of 29.3% for the region.<sup>3</sup> These variations across the three districts provide a good case study for the purpose of evaluating the extent to which nutrition policies have been integrated into their local government policy and implementation frameworks to reduce stunting over the last 5 years.

An online search was conducted from the national and district websites to identify policy and policy related documents that illustrate the implementation of stunting focused programs and policies at the district level. Identified documents included; the five year District Development Plan (DDP) for the period 2015/16-2019/2020 for each district, approved annual workplans for the years 2015 to 2020, annual reports for each district for the years 2015 to 2020, and the five year District Nutrition Action Plans (DNAP) also known as the Multi-Sectoral Nutrition Action Plans (MSNAP) for the period 2015/16-2019/2020. Policy documents not available online were requested from the district’s planning departments, which they provided.

We used aspects of the stories of change “meta-protocol” developed by Gillespie and van den Bold in 2015 that we referred to as the “5Cs” framework that we used to evaluate twenty one (21) of our sample policies. This framework was developed to support governments, local and international institutions and communities to understand the drivers, pathways, and challenges that influence planning and implementation of nutrition programs.<sup>46</sup> The approach has been used in other studies to identify changes and challenges at various levels where change can be assessed.<sup>47,48</sup> The framework levels used consisted of: (1) commitment which encompasses political commitment, system/institutional commitment, and budgetary commitment; (2) inter

and intra sectoral policy and program coherence, and (3) community which included consensus on nutrition and local perceptions of changes and challenges.<sup>46</sup>

Using the framework descriptions, sub themes were defined *a priori* for each level and the sample policies were reviewed deductively. Commitment subthemes included political commitment, system/institutional commitment (actor network), financial (budgetary) commitment and human resources for nutrition. Coherence sub themes included multi-stakeholder nutrition coordination, alignment to global and national nutrition frameworks and integrated nutrition indicators. Community subthemes included community involvement and community nutrition information sharing platforms. We then used the sub-themes as the coding framework to review the sample policies. Using the codes developed, the lead author (RN) reviewed all twenty-one sample policy documents to identify sections relevant to the three levels that we used to tagged relevant sections in *Atlas.ti*. We did not focus on “Change” and “Challenges” because of the relatively short time frame (five years) of selected policy documents we reviewed. We also used the sub-themes to develop an evaluation scale for each level. The definitions for the evaluation scales are included in in Table 10 in the appendix. Districts were scored “high”, “medium”, “low” or “no evidence” based on the findings.

## Results

### Commitment

District policies and reports were analyzed to assess the level of political, system/institutional (actor network) and budgetary commitment to planning and implementation of nutrition services.

#### *i. Political (system/ institutional) commitment*

All districts acknowledge that malnutrition, specifically stunting, is a major hinderance to human and nation development both socially and economically and called for its integration across all departments as a cross cutting issue within their policy documents. The documents lay out causes and consequences of malnutrition and the role each sector must play to address it. Furthermore, there are specific goals and objectives across all policy documents that are broadly focused on addressing stunting among the most vulnerable populations; infants, young children and pregnant mothers. For example, the Kabale DDP provides a detailed analysis of the district’s nutrition situation indicating nutrition issues faced by each sector and strategies that can be applied to address it. Ntungamo DNAP’s overall goal is “to reduce the levels of stunting from 33% to 20% by 2020.” Within their DDP, the district lays out objectives, strategies, and activities to address nutrition issues related to maternal, infant, and young child nutrition.

Based on the evaluation scale, there was a high political commitment across all three districts evidenced by documented specific nutrition endorsements through set goals, objectives and strategies within their policy frameworks that aim to reduce stunting as shown in Table 1.

**Table 1: Level of political commitment for stunting reduction within districts**

<b>Evaluation level</b>	<b>Kabale</b>	<b>Ntungamo</b>	<b>Sheema</b>	<b>Score explanation</b>
Political commitment	High	High	High	All Policy frameworks have an overall nutrition goal, objectives and planned activities focused on reducing stunting

#### *ii. Stakeholder and institutional analysis (Actor network)*

The policies from each district in our sample showed some level of stakeholder engagement in planning for nutrition programs within the districts. Stakeholders mentioned included both government and non-government actors. Government actors mentioned across all the districts included Office of the Prime Minister (OPM) and Ministry of Local Government (MoLG). Non-government actors mentioned included bi-lateral and multilateral organizations including UN agencies, USAID funded projects and Faith based Organizations (FBOs). For example, Ntungamo district acknowledged support from the district executive, district council, technical

staff, development partners, donors, academia, private sector, and community beneficiaries in the development of their DNAP.

DDPs and DNAPs document broad stakeholder engagement of government and non-government actors, but there are no references to stakeholder engagement in work plans or annual reports, indicating a potential lack of stakeholder involvement in implementation. Based on the evaluation scale, Ntungamo and Sheema districts exhibited low levels of actor network engagements while Kabale showed medium actor network engagement levels as shown in Table 2.

**Table 2: Level of Stakeholder and institutional analysis (Actor network) engagement**

<b>Evaluation level</b>	<b>Kabale</b>	<b>Ntungamo</b>	<b>Sheema</b>	<b>Score explanation</b>
Stakeholder and institutional analysis (Actor network)	Medium	Low	Low	Medium - Evidence of partnerships and collaborations with all actors in planning and implementation but no reports Low - Actors mentioned but no evidence of partnerships and collaborations in implementation

**iii. Financial (budgetary) commitment**

All reviewed policy documents called for the need to allocate resources for implementation of nutrition programs across all departments. Within each DNAP, districts had comprehensive implementation cost matrices for activities planned for each nutrition strategic objective with attached costs projected for five years. The two selected annual approved budgets reviewed for each district, however, do not indicate any budget line or resource allocations for implementation of these activities. In some workplans where nutrition activities were reported, they were supported with funding from donors. Where no donor funding was mentioned, there are no nutrition activities reported on as either funded or implemented as per the district annual workplans and reports.

For example, nutrition programs planned and implemented in Ntungamo district were largely dependent on donor funding. In their 2017/18 workplan, the district expected over UGX 4.7 billion (USD1,262,126) in donor funds from UNICEF, WHO, SDS, World Bank Global Fund/GAVI to support Nutrition activities in the district. The policies and reports in our sample showed no evidence of local government financial commitment for implementation of planned nutrition programs as shown in Table 3.

**Table 3: Levels of financial (budgetary) commitment for nutrition**

<b>Evaluation level</b>	<b>Kabale</b>	<b>Ntungamo</b>	<b>Sheema</b>	<b>Score explanation</b>
Financial (budgetary) commitment	No evidence	No evidence	No evidence	Policies, reports and budgets have no budget line or resources allocated for planned nutrition activities

**iv. Human resources for nutrition**

None of the districts appear to have an approved post for a nutritionist at the district level but each district has a nutritionist stationed at the highest health facility level. Policies from all three districts provided detailed plans for building capacity of different non-nutrition technical service providers in nutrition programming. For example, Ntungamo DNAP lays out plans to orient various nutrition stakeholders on roles they can play to reduce malnutrition in the district. Stakeholders mentioned included sector representatives at district and lower local government levels, parent and teacher associations, Village Health Teams (VHTs), health workers, and farmer groups. Out of the five district annual work plans and five annual reports reviewed, only one nutrition training was conducted with farmer groups.

In their 2018/19 annual report, Sheema district reported to have trained all its district and lower local government staff on how to mainstream nutrition among other crosscutting issues. The district also reported to have trained eleven (11) SNCCs on nutrition planning, budgeting, and implementation skills as they had planned in their DNAP, but the report does not mention the specific nutrition topics covered in the training. Based on the evaluation scale, there was a low level of technical human resources for nutrition across all districts as shown in Table 4.

**Table 4: Levels of human resources for nutrition**

<b>Evaluation level</b>	<b>Kabale</b>	<b>Ntungamo</b>	<b>Sheema</b>	<b>Score explanation</b>
Human resources for nutrition	Low	Low	Low	Only non-technical nutrition human resources available at district level

## Coherence

Under the coherence level, we analyzed all district policy documents to identify the strength of links across sectors at district level (horizontal coherence) and strengths of links between district and national-level (vertical coherence) in planning and implementation of nutrition programs aimed at stunting reduction.

### *i. Multi-stakeholder nutrition coordination*

All policy documents reviewed mentioned that they had been developed through a participatory bottom-up approach, involving both government and non- government stakeholders across all districts. For example, all DNAPs provided a matrix of roles and responsibilities of different sectors and stakeholders in tackling malnutrition. The Sheema DNAP lays out the roles each department must play towards achieving described nutrition goals, objectives, strategies, interventions & activities.

The districts also have established coordination structures at district and lower local government levels that are trained in planning, budgeting, and implementation of nutrition programs. At the district level, coordination structures also known as the DNCCs are composed of representatives from all sectors. Based on our review, policy documents reveal multi stakeholder coordination in planning but limited coordination for implementation, monitoring and evaluation of nutrition programs to reduce malnutrition. One of the limitations identified across all districts is the lack of effective coordination measures and incentives to enforce coordination at all levels.

Multi-stakeholder coordination for planning and implementation of nutrition interventions across all the three districts was medium based on the evaluation scale as shown in Table 5. This level is demonstrated through established DNCCs and SNCCs which are institutional platforms that coordinate representatives from all sectors in planning and implementation of nutrition activities within the district. However, findings showed a missing linkage between the DNCCs and national platforms as guided by the UNAP and limited capacity of the committees to monitor and evaluate nutrition activities within the districts.

**Table 5: Level of multi-stakeholder nutrition coordination for nutrition**

<b>Evaluation level</b>	<b>Kabale</b>	<b>Ntungamo</b>	<b>Sheema</b>	<b>Score explanation</b>
Multi-stakeholder nutrition coordination for nutrition	Medium	Medium	Medium	All districts have established multi-stakeholder nutrition coordination platforms at all LG levels with evidence in planning but not in implementation of nutrition programs

*ii. Alignment to global and national nutrition frameworks*

All reviewed policy documents emphasize the need for integration of nutrition in every sector as stated and guided by global and national frameworks. Nutrition is recognized as a cross cutting issue across all districts as called for in the national and ministry policy frameworks. Sheema and Ntungamo DNAPs make reference to various global and national policy frameworks that support nutrition planning and implementation including the United Nations Sustainable Development Goals (SDGs), the 1995 Constitution of the Republic of Uganda, the Uganda Vision 2040, the second National Development Plan (NDPII), the UNAP, and the Uganda UFPN) of 2003.

Kabale DNAP states that the district is committed to fulfilling the constitutional obligation of ensuring food and nutrition security for all people. It acknowledges that the action plan was developed within the context of UNAP, which is the overall goal for “scaling up multi- sectoral efforts to establish a strong nutrition foundation for Uganda’s development”. The district further identifies a total of thirteen nutrition specific interventions based on the ten high impact nutrition interventions as outlined in the Lancet nutrition series which are all recognized and recommended by World Health Organization (WHO).

Interventions to tackle malnutrition are largely depicted to focus on the general population. Only Sheema and Kabale district acknowledge that poor nutrition during the first 1,000 days causes life-long and irreversible damages with consequences at individual, community, and national levels. Kabale DNAP further includes specific guiding implementation strategies on nutrition focused on the first 1000 days. However, aligned strategies, objectives and activities are seen within planning and not reflected as implemented based on the annual workplans and reports reviewed. Based on the findings from this evaluation, there is low alignment or coherence of district policy frameworks to global and national nutrition frameworks in planning and implementation of nutrition interventions in Ntungamo and Sheema districts and medium in Kabale district as shown in table 6.

**Table 6: Level of alignment to global and national nutrition frameworks**

<b>Evaluation level</b>	<b>Kabale</b>	<b>Ntungamo</b>	<b>Sheema</b>	<b>Score explanation</b>
Alignment to global and national nutrition frameworks	Medium	Low	Low	<p>Medium – Some nutrition programs planned and implemented align national recommended programmatic and implementation approaches</p> <p>Low - Some nutrition programs planned align to national recommended programmatic and implementation approaches but are not implemented</p>

**iii. Integrated nutrition indicators**

All policy documents revealed that districts are aware of their nutrition status trends particularly stunting levels and have used these for agenda setting nutrition targets to achieve within specified periods. For example, all DNAPs have a detailed multisectoral monitoring and evaluation plan with nutrition indicators that are time bound with baseline and target figures. For example, Kabale district developed nutrition indicators to monitor and evaluate a series of programs focused on children under five years that align with national nutrition indicators for activities focused on stunting reduction. These include; percentage of new born children breastfed within the first hour of birth, percentage of children exclusively breastfed for six completed months, percentage of children 0-23 months participating in monthly growth promotion and monitoring sessions; percentage of stunting among 0-5 years children, and percentage of pregnant and lactating women counseled on infant and young child feeding. However, none of the annual work plans and reports from our case study districts reported on progress of nutrition indicators. Based on the evaluation scale, all districts scored low as shown in Table 7.

**Table 7: Level of integration of nutrition indicators**

<b>Evaluation level</b>	<b>Kabale</b>	<b>Ntungamo</b>	<b>Sheema</b>	<b>Score explanation</b>
Integrated nutrition indicators	Low	Low	Low	Stunting indicators are used for agenda setting of nutrition goals, objectives, and activities and are also aligned to nationally tracked nutrition indicators but no evidence on reporting

## Community

Under the community level, we analyzed all district policies and reports to assess the level of community engagement in planning and implementation of nutrition programs for stunting reduction.

### *i. Community involvement in nutrition*

All reviewed policy documents showed that districts acknowledge the need for and importance of community involvement in planning and implementation of nutrition programs. Ntungamo DDP states that their 5-year development plan was prepared using bottom up approach where views from all stakeholders were obtained through consultative meetings. The same approach is mentioned to have been applied for lower local governments.

To further address the needs of communities the policy documents identified major causes of malnutrition within each department in each district at household level that should be addressed. For example, Sheema DPP breaks down the causes of under nutrition within each sector, consequences, people at most risk and prevention interventions that should be applied. The district further lays out priority interventions for each at risk population in line with their nutritional needs. One of Ntungamo's DNAP objectives is "to improve access and utilization of services related to maternal infant and young child nutrition." Under this objective, the district lists community and household strategies, and interventions that will be implemented along with line indicators that will be monitored and evaluated.

Despite inclusion of community-based nutrition interventions within the policy frameworks, there is no evidence of their implementation at community and household level based on our review of annual workplans and reports. Policy evaluation findings from all the three districts showed low household and individual focused nutrition interventions within the policy frameworks as shown in Table 8.

**Table 8: Level of community involvement in nutrition planning and implementation**

<b>Evaluation level</b>	<b>Kabale</b>	<b>Ntungamo</b>	<b>Sheema</b>	<b>Score explanation</b>
Community involvement in nutrition planning and implementation	Low	Low	Low	Some planned nutrition programs target individuals and households to reduce stunting but are not implemented or reported on

*ii. Community nutrition information sharing platforms*

All policy documents utilize a behavior change approach to plan for nutrition programs. The approach utilizes community dialogues, sensitization, and awareness programs in an integrated manner to deliver nutrition services. For example, one of the interventions in the Sheema DDP aimed at strengthening integration of nutrition interventions within the community-based services department was nutrition awareness creation. This was planned to be realized through community dialogues using various leaders in the community. An indicator on increase in the level of awareness of communities on availability of nutritional services was linked to this intervention to measure success. To integrate nutrition into the health department, the Sheema DDP also included conducting bi-annual child health days, and community outreach for nutrition as one of the interventions. Based on the policy review, annual workplans and reports do not mention any specific community nutrition related dialogues implemented to address stunting or undernutrition leading to a medium score across all the district as shown in Table 9.

***Table 9: Level of Community engagement through community nutrition information sharing platforms***

<b>Evaluation level</b>	<b>Kabale</b>	<b>Ntungamo</b>	<b>Sheema</b>	<b>Score explanation</b>
Community nutrition information sharing platforms	Medium	Medium	Medium	Planned nutrition programs utilize a behavior change approach through community dialogues, sensitization, and awareness programs in an integrated manner but are not implemented or reported on

## Discussion

Commitment towards addressing malnutrition particularly stunting in Uganda is seen to have increased over the last decade at both national and local government levels.<sup>18,39</sup> However, political commitment is just more than achieving recognition of the problem to inform agenda setting. To achieve set goals and objectives for stunting reduction, studies have shown that there is a need to translate political commitment to actions through committing human, technical and financial resources and, coordinating actor efforts in a sustainable manner to achieve results.<sup>49–51</sup> Implementation of nutrition programs has been shown to be solely dependent on donor funding across all the districts. This has been claimed to be a limiting factor to system wide commitment from governments to commit resources to nutrition since this gap has been filled by donors.<sup>52</sup> Studies have shown that lack of financial commitment is a major challenge to successful implementation of nutrition policies in low- and middle-income settings. This not only underplays nutrition visibility, undermines the ability of existing capacities but also creates increased donor dependency which reduces government incentives to mobilize resources for sustainable outcomes.<sup>50,51,53</sup>

Despite increased political commitment for nutrition, the general lack of technical human resources for nutrition across all districts further depicts its limited translation to action. Local governments often rely of technical guidance from national level with support from Implementing Partners (IPs) to plan for nutrition within their policy frameworks. However, national officers and IPs often rely on information from written reports that is often devoid of context.<sup>54</sup> Investing in human resource for nutrition services would provide districts with more informed technical support through provision of timely data on the nutrition needs of the communities and how these can be addressed. Studies have shown that the lack of human resources and capacity for nutrition programming is a major constraint in implementation of even the most strategic and well-resourced programs.<sup>55</sup>

For successful implementation on nutrition policies, a strong actor network engagement has been shown to play a core part in successful planning and implementation of nutrition programs through providing a platform for leveraging resources and forming effective and sustainable collective actions.<sup>53,56</sup> Limited actor network engagement together with lack of financial commitment could be argued as the reason to why there is no evidence of nutrition plans and reporting on nutrition activities within the annual workplan and reports. This is consistent with findings from Hill et al. , Hoey and Pelletier studies in Guatemala and Bolivia that suggested the importance of building and sustaining commitment of actors for policy sustainability of nutrition programs.<sup>56,57</sup> Weak cohesion among actor networks increases implementation of parallel and uncoordinated programs, duplication of efforts, misuse of resources which leads to failure to achieve sustainable policy outcomes.<sup>53,56</sup>

Successful nutrition policies have also been shown to depend on coherent structures within the systems in which they are implemented. Three main factors have been identified as major building blocks for successful policy coherence that results in achieving desired policy outcomes. These include setting and prioritizing objectives through political commitments and policy statements, coordinating policy and its implementation through establishing coordination mechanisms and monitoring, evaluation and reporting through establishing functional systems in place.<sup>58-60</sup> Despite nutrition being recognized as a cross cutting issue within the district policy frameworks as guided by global<sup>61,62</sup> and national nutrition frameworks<sup>6,37</sup>, there were discrepancies in alignment to recommended implementation approaches. To achieve the global target of reducing the number of stunted children by 40% by 2025, at national level, districts need to adapt and implement recommended comprehensive nutrition programs focusing on the first 1,000 days from conception to the child's second birthday.<sup>63</sup> The UNAP calls for investment in nutrition programs targeting this 'window of opportunity', in order to achieve greater returns in stunting reduction.<sup>37</sup>

The underutilization of integrated implementation approaches is also another challenge that has limited successful nutrition policies. Integrated approaches for nutrition interventions provide greater impact on nutritional and developmental outcomes compared to when implemented alone.<sup>64</sup> They are also more efficient since services for same population groups can be delivered at the same time, and also increase access to services for most vulnerable populations.<sup>64</sup> However, the success of integrated approaches relies on availability of adequate and skilled human resource, strong coordination mechanisms among all stakeholder and streamlined nutrition indicators across the sectors all of which are inadequate or lacking across all districts. The lack of measures to enforce effective coordination of stakeholders, coupled with insufficient resources and constrained leadership within coordination structures has also been found to be a major limiting structural factor to effective implementation of nutrition interventions.<sup>65-68</sup> When coordination structures are well equipped with the right tools and resources to carry out their roles and responsibilities, they bear a positive influence on the planning and implementation of the nutrition agenda and manage conflicts and power relations among various actors involved in the policy process.<sup>66</sup> However, this is made possible when political commitment translates commitment of financial resources and building of institutional capacities to plan, implement and regulate delivery of nutrition services.<sup>69</sup> Coordination must not only be established intersectorally, but also intersectorally linking to national coordination frameworks. Linkages to national level foster transfer of technical skills and guidance that can be used to create synergies and build dialogue among actors, offer channels to advocate for increased commitment of resources to nutrition and establish regulatory mechanisms for effective and sustainable outcomes.<sup>65</sup> The UNAP calls for establishment of coordination structures at local government and lower local government levels to strengthen capacity of districts to effectively plan and implement nutrition interventions.<sup>37</sup> These structures are meant to provide technical guidance for effective and sustainable planning and implementation of nutrition programs and also monitor and evaluate the programs in line with changing policy environments.<sup>37</sup> Tangible impacts as a

result of effective commitment and coherence of nutrition programs aimed at stunting reduction within policy framework can only be measured at community level through beneficiaries of nutrition services. Household and individual focused interventions require community consensus on nutrition and local perceptions on stunting, its causes, signs, and solutions. Policy frameworks must take this into consideration when developing nutrition interventions and identify the most suitable implementation approaches for effective and sustainable delivery of nutrition services aimed at stunting reduction.<sup>70</sup>

Apart from the level of political commitment, the levels of commitment of financial and human resources for nutrition, actor network engagement, multi-stakeholder coordination, alignment with global and national nutrition frameworks, and community involvement and engagement in nutrition programs was consistently low across all the districts despite the different level in stunting. Our findings therefore provide an avenue for future research to explore factors that affect successful nutrition policy implementation.

### **Limitations**

Findings from this study may not be generalizable to other districts in Uganda, or other countries due to the varying regional contexts and small sample size of reviewed documents. There is need to conduct other forms of research to verify these findings and assess implementation more directly.

### **Summary and Conclusions**

Addressing stunting has been described as a complex dynamic that requires consolidated efforts. For districts to achieve their stunting reduction goals, there is need to continue building on the existing momentum. Districts need to carefully address the identified limiting factors in a sustainable manner for sustainable outcomes. There is need for districts to advocate for an independent budget line for nutrition to ensure sustained positive change. Districts need to also explore alternative mechanisms of raising revenue to support nutrition activities such as local taxation schemes, matched government-donor funding and or public-private partnerships. Furthermore, districts need to harmonize efforts between local government and non-government nutrition actors to coordinate the use of available resources towards district nutrition plans. Without commitment of resources, nutrition interventions will only remain on paper. There is need to consider expansion and strengthening multi-stakeholder coordination mechanisms to monitor, evaluate and report on planned and implemented nutrition activities.

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## Appendix

*Table 10: Thematic Evaluation scale*

<b>Sub-theme</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>	<b>No evidence</b>
Political (system/ institutional) commitment	All Policy frameworks have an overall nutrition goal, objectives and planned activities focused on reducing stunting	Some policy frameworks have an overall nutrition goal, objectives and planned activities focused on reducing stunting	All policy frameworks have no overall nutrition goal but include objectives and planned activities focused on reducing stunting	Nutrition goals, objectives and activities focused on reducing stunting absent
Stakeholder and institutional analysis (Actor network)	Evidence of partnerships and collaborations with all actors in planning and implementation of nutrition activities reported on	Evidence of partnerships and collaborations with all actors in planning and implementation but no reports	Actors mentioned but no evidence of partnerships and collaborations	No evidence of nutrition actors mentioned within all policy frameworks
Financial (budgetary) commitment	All policy frameworks have a cost matrix for all planned nutrition activities with an approved budget line for all activities	All policy frameworks have a cost matrix for all planned nutrition activities with no budget line but have approved resources for some activities	Some policy frameworks have a cost matrix for some planned nutrition activities but no budget line	No evidence of a budget line or resources allocated for all planned nutrition activities
Human resources for nutrition	Technical nutrition human resources recruited and functional at district level and within health facilities	Non-technical nutrition human resources recruited and functional at district level and within health facilities	Non-technical nutrition human resources only available at district level	No evidence of technical and non-technical human resources for nutrition at all

				levels
Multi-stakeholder coordination for planning and implementation of nutrition interventions	Established multi-stakeholder nutrition coordination platforms at all LG levels with evidenced engagement in planning and implementation of nutrition programs	Established multi-stakeholder nutrition coordination platforms at all LG levels with evidence in planning but not in implementation of nutrition programs	Established multi-stakeholder nutrition coordination platforms at some LG levels but no evidence of engagement in planning and implementation of nutrition programs	No evidence of established multi-stakeholder platform at all levels
Alignment to global and national frameworks	All nutrition programs planned and implemented are aligned national recommended programmatic and implementation approaches	Some nutrition programs planned and implemented align national recommended programmatic and implementation approaches	Some nutrition programs planned align to national recommended programmatic and implementation approaches but are not implemented	No evidence of alignment or implementation of all planned nutrition activities to global and national nutrition frameworks
Integrated nutrition indicators	Stunting indicators are used for agenda setting of nutrition goals, objectives and activities and are also aligned to nationally tracked nutrition indicators with routine reporting	Stunting indicators are used for agenda setting of nutrition goals, objectives, and activities and are also aligned to nationally tracked nutrition indicators but no evidence on reporting	Stunting indicators are not used for agenda setting of nutrition goals, objectives and activities and are not aligned to nationally tracked nutrition indicators with no evidence on reporting	No evidence nutrition indicators tracked and reported on
Community	All planned and	All planned and	Some planned nutrition	No evidence of

involvement	implemented nutrition programs target individuals and households to reduce stunting and are reported on	implemented nutrition programs target individuals and households to reduce stunting but are not reported on	programs target individuals and households to reduce stunting but are implemented or reported on	planned nutrition interventions targeting individuals and households
Community nutrition information sharing platforms	Planned nutrition programs utilize a behavior change approach through community dialogues, sensitization, and awareness programs in an integrated manner, are implemented and reported on	Planned nutrition programs utilize a behavior change approach through community dialogues, sensitization, and awareness programs in an integrated manner but are not implemented or reported on	Planned nutrition programs utilize a behavior change approach through community dialogues, sensitization, and awareness programs but are not integrated, implemented and report on	No evidence of community engagement platforms for nutrition information sharing

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