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Review Article

Nutrition Sensitive Agriculture in Ethiopia: Political Economy Analysis

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Abstract

Governments globally are stressing on nutrition interventions combined with nutrition sensitive policies and programs to combat malnutrition. Governance at all levels has been identified as a critical element in ensuring success of national nutrition plan. Ethiopia has an integrated approach to addressing food insecurity and malnutrition; however, there is little clarity about the wider impact of government policy on food and nutrition. Overall, there have been notable successes in nutrition policy in Ethiopia, but significant challenges remain unsolved. Multi-sectoral nutrition governance has been hailed as an effective mechanism to reduce undernutrition. Ethiopia has adopted many approaches and has been implementing nutrition programs with some success, but undernutrition remains high for a range of reasons. This political economy analysis of nutrition sensitive agriculture of Ethiopia will address challenges of nutrition program design, coordination, and implementation, and looks at root causes that remain less understood. If these challenges are to be met successfully, greater consideration of how to address rapidly changing food systems in Ethiopia is needed at national policy level. The focus of government policy needs to shift from food availability to broader issues of food acquisition and particularly food affordability, which is mediated through food prices and waged employment. Ethiopia as country tried to combat food insecurity and malnutrition through different approaches.

The country developed National Nutrition program, National food and Nutrition policy, National Nutrition sensitive agriculture strategy and the Seqota Declaration, which all are intended to eradicate poverty and reduce malnutrition. To attain the highest possible food security and nutritional benefits for the people of Ethiopia, it is essential that agriculture, nutrition, and health (ANH) sciences and their related research activities work together in an integrated manner.

Keywords: Ethiopia; National Nutrition Program; Food and Nutrition Policy

Abbreviations

ADLI: Agricultural Development Led to Industrialization; AEW: Agricultural Extension Workers; AGP: Agricultural Growth Project; ANH: Agriculture, Nutrition and Health; BMI: Body Mass Index; EDHS: Ethiopian Demographic and Health Survey; ELMP: Ethiopian Livelihood Master Plan; FNP: Food and Nutrition Policy; GDP: Gross Domestic Product; GTP: Growth and Transformation Plan; HEW: Health Extension Workers; HH: Household; MOF: Ministry of Finance; MOH: Ministry of Health; NGO: Non-Governmental Organizations; NNCB: National Nutrition Coordination Body; NNCT: National Nutrition Technical Committee; NNP: National Nutrition Program; NSA: Nutrition Sensitive Agriculture; PASDEP: Plan for Accelerated and Sustainable Development to End Poverty; PIF: Policy Investment Frame; PNSP: Productive Safety Net Program; RRC: Relief and Rehabilitation Commission; SBC: Social and Behavioral Change; SDG: Sustainable Development goals; SUN: Scale-Up Nutrition; WASH: Water, Sanitation, and Hygiene

Introduction

Ethiopia has made a high-level commitment in the past decade to reduce undernutrition1 and its associated socioeconomic costs. This commitment has been manifested in many ways, including the design of a national nutrition strategy and programs as well as National Nutrition sensitive agriculture strategy. A significant component of Ethiopia's nutrition program is what has become known as the Seqota Declaration, which was launched in 2015 to eradicate poverty by 2030. In the past decades, the institutional landscape for nutrition policy and practice has also been changing. The adoption of the national Food and Nutrition Policy in 2018 and the formation of a multi-sectoral nutrition governance structure to coordinate program design and implementation could be manifestations of government focus on nutrition [1-4].

The national Food and Nutrition Policy (FNP), endorsed in November 2018, has comprehensively addressed food security, food safety, food quality and post-harvest management, as well as other system-level issues including multi-sectoral approaches and institutional arrangements for food and nutrition governance.

Ethiopia's agriculture sector accounts significant contribution of the country's Gross Domestic Product (GDP) and export earnings each year. Nutrition-sensitive interventions in key sectors such as agriculture can advance progress in nutrition by addressing the underlying determinants of malnutrition and enhancing the coverage

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of nutrition-specific interventions. Agriculture can impact nutrition through multiple pathways, including increased availability of food through household production; increased household incomes through agriculture- related activities; changes in women's time use, empowerment, or status within the household; and environmental exposures because of agricultural activities [3,5,6].

To attain the highest possible food security and nutritional benefits for the people of Ethiopia, it is essential that agriculture, nutrition, and health (ANH) sciences and their related research activities work together in an integrated manner [6].

The main objective of Ethiopian National Food and Nutrition Policy is Ensuring the availability, accessibility, safety and quality consumption of nutritious foods at all times to all citizens is a prerequisite for the creation of a productive workforce, longevity of life, improved livelihood and innovative capacity that would lead to fast economic, social and sustainable development of a nation [7]. This can be realized when citizens across all ages of the life cycle enjoy a healthy life, have better knowledge of nutrient rich foods, practice improved utilization of foods, ensure food safety and quality along the food value chain, avoid food and nutrient losses, develop food and nutrition emergency preparedness and increase resilience capacity. Thus, the development of Food and Nutrition Policy can be taken as a key input towards ensuring food and nutrition security in the country.

Agriculture and nutrition are intrinsically interlinked. The government of Ethiopia is determined to build a nutritionally secure country. Nutrition security is expected to be attained through efforts made in the areas of household food security, child and maternal care, and healthy environment creation. Agricultural production is one of the most important means of achieving food and nutrition security. Increasing agricultural productivity has the potential to improve household food security and nutrition of the population. A healthier and well- nourished agricultural labor force is more productive, earns more income, and contributes to further economic growth and development. The contribution of nutrition to the increase of agricultural labor force productivity is enormous. Therefore, Ethiopia's Nutrition Sensitive Agriculture (NSA) strategy focuses, among others, on the UNICEF 1990 causal relationship between household (HH) food security and malnutrition and death through inadequate dietary effect. This strategy, in addition to the dietary effect, also focuses on the low productivity of labor due to undernourishment on HH food security [8].

The government of Ethiopia is committed to accelerating the implementation of a multisectoral, harmonized National Nutrition Program to make a strong impact on nutrition and on the overall wellbeing of the nation. The national nutrition program (NNP) is designed to address both long-term and short-term nutrition goals in Ethiopia. The strategic plan outlines a package of proven, cost-effective nutrition interventions that will break the cycle of malnutrition and ensure child survival. Inadequate budget allocation, resource shortages, weak financial mobilization and low utilization have been the main challenges to implementing the National Nutrition Program through nutrition sensitive agriculture [9].

Ethiopia's agriculture sector covers for approximately more than 35 percent of the country's Gross Domestic Product (GDP) and around 75 percent of export earnings each year. Crop and livestock subsectors contributed a lot for the country economy in addition to the role of forestry and fishery. The agriculture sector is the major employer of more than 80 percent of the country's labor force. Major crop production and productivity have reached more than 270 million quintal and 22 quintal per hectare respectively. The areas of land developed with modern small-scale irrigation schemes have increased a little bit. The productivity of smallholder farmers has improved by introducing and disseminating of modern agricultural technologies [8].

Many achievements have been achieved in agricultural sector because of government's national policies, strategies, programs, and investments. Agricultural Development Led Industrialization (ADLI) has been the central strategy of the government since the early 1900s when it gave the highest priority to the transformation of agriculture from subsistence livelihood to a market-oriented economic sector. This strategy has been the driving force for accelerating the country's economic growth and development. This strategy has been further elaborated through sector specific policies and strategies such as Rural Development Policy and Strategy, Strategies for Pastoral Areas, Ethiopia Livestock Master Plan (ELMP), Policy Investment Framework (PIF), Agricultural Growth Project (AGP) I and II, the Food Security Strategy and its major programs such as livelihood, safety net, resettlement and community investment. These policies and strategies were also further refined by successive five -year development plans such as the Sustainable Development and Poverty Reduction Program, A Plan for Accelerated and Sustained Development to End Poverty (PASDEP), and the Growth and Transformation Plans 1 and 2 [3,8].

In line with the policies, the agricultural objectives were set to increase productivity through increasing the capacity and extensive use of labor, proper utilization of agricultural land, linking specialization with diversification, integrating agricultural and rural development, and strengthening the agricultural marketing system. The AGP is another large initiative, focused on high agriculture potential areas, designed to support agricultural productivity and commercialization to further accelerate the economic growth and transformation of the country by addressing key bottlenecks for agricultural growth [8].

The Nutrition Situation in Ethiopia

Despite the tremendous achievements in food security and nutrition, the problem of food and nutrition security remains a key main health and development issue for the country. The prevalence of stunting among children 6 to 59 months old is 38 percent and the prevalence of wasting and underweight in children is 24 and 10 percent respectively. Undernutrition of women aged 15-49 year is measured by body mass-index (BMI) less than 18.5. Based on this criterion, though the proportion decreased, 22 per cent remained thin. Micronutrient deficiency is also pervasive and severe across the country. The household dietary diversity is also shown to be affected by the diversity of agricultural production. Though consumption of food from different food groups is good for optimum nutrition, the consumption of diverse diet is low in Ethiopia. For instance, consumption of minimum acceptable diet by children in Ethiopia is only less than 5 percent, which is very low compared to other sub-

Saharan countries (EDHS- 2016).

Dependency on rain-fed agriculture and subsistent farming system, low genetic potential of indigenous animals and poor animal husbandry practices, limited access to water and animal feed, the widespread influence of disease and parasites, low coverage, and quality of implementation of the agricultural extension system, low educational status of most farming households and pastoralists, land degradation, soil infertility, lack of gender sensitivity which is explained by low participation and benefit of women from agricultural technologies and interventions are among other factors contributing to the problem of under-nutrition [1,3,8,10,11]. Ethiopia's undernutrition records are unacceptable and among the highest in sub-Saharan Africa and the world. Recognizing the magnitude of the challenge, nutrition-specific and nutrition-sensitive interventions are being practiced. Nutrition-specific interventions, such as those that enhance access to micronutrients, are set to be delivered within existing health service delivery platforms and health tiers, namely community health extension programs and health facilities; whereas nutrition-sensitive interventions are meant to deal with the different underlying determinants and causes of undernutrition, such as access to adequate food and sufficient health services [1,3,5,11].

Undernutrition manifests itself in different multi-sector arenas, and multi-stakeholder interventions are required to address them. Nutrition-sensitive agricultural interventions are now said to be essential components of the Productive Safety Net Program and the Agriculture Growth Program in Ethiopia [1,3,6,11].

The following are nutrition sensitive agriculture interventions:

- Mainstreaming Nutrition into Agriculture (nutrition-sensitive agriculture initiatives)
- School Feeding Program
- Food safety and food processing; and Food Fortification
- Family planning: healthy timing and spacing of pregnancy
- Water, sanitation, and hygiene (WASH)
- Early childhood care and development
- Girls' and women's education, economic strengthening
- Livelihoods and social protection

Acceleration of progress in nutrition will require nutrition-sensitive programming effectiveness, large-scale programs that address key underlying determinants of nutrition and enhance the coverage and effectiveness of nutrition-specific interventions. For nutrition- sensitive agriculture, the Ministry of Agriculture and Natural Resources has taken the initiative to mainstream nutrition into its overall sectoral plans and has established nutrition implementing structures [8,11].

The government of Ethiopia has also been implementing the Productive Safety Net Program (PSNP) since 2005. The PSNP began as a food "safety net" that would provide food or cash for food insecure households during the "hungry" seasons of the year in exchange for public works through the Ministry of Agriculture. Although it began as a household food security program it has, for all practical purposes, evolved into a broader package of social protection, now comprising four components: social protection, livelihoods, disaster risk management, nutrition and climate resilience/green economy [7,8,11].

Nutrition and Agriculture Pathways

Over the last few decades, the Government of Ethiopia, through its national policies, plans and programs, accorded high priority to the agricultural and rural development sector. Agricultural Development Led Industrialization (ADLI) has been the overarching policy and strategy of the government since the early 1900s and assigned the highest priority to the transformation of agriculture from a subsistence source of livelihood to market-oriented economic sector, so as to enable it to become a driving force for accelerating the country's economic development.

There has been increased political commitment at the national level towards nutrition sensitive agriculture in Ethiopia over the past few years as evidenced by the existence of the National Nutrition Strategy, as well as the inclusion of nutrition in various government policy documents. There are numerous strategy documents and programs aimed at improving nutrition in Ethiopia, such as GTP, PASDEP, Agricultural Development Led Industrialization (ADLI), HSDP, National Nutrition Strategy and national nutrition program (NNP).

Food production

Household food production can be critically important to the diets and nutrition of individuals in smallholder farmer households. In general, however, it is not the primary objective of an agricultural livelihood to produce all the food a family needs; most poor rural families are net purchasers of food. However, for those with access to arable land, it is a combination of food produced for consumption, income, and local food availability and prices that determines the family's food security. Food production can affect the type, quantity, and seasonality of food available in the household for consumption. At the same time, production may also influence the availability and prices of diverse food in local markets [3,6,12].

The decisions farmers make about crop and livestock production are affected by many factors, including potential market prices, relative costs and risks associated with each product, the assets, and endowments of land the household possesses, and family needs and preferences. If preferred foods or varieties are not consistently available, affordable, or conveniently accessible in markets, raising or growing them on the farm may be the most efficient way to obtain them. Substituting a more nutritious variety of a crop already grown for consumption may be an easy way to improve nutrition as part of the overall set of livelihood decisions. Nutrition knowledge and SBC are therefore essential to informing the range of decisions that farmers make about what they grow to consume, what they grow to sell, and what they decide to purchase with their income.

Agricultural income

The agriculture income pathway assumes that nutritious, diverse foods are available and affordable in local markets. Appropriate inputs to grow these diverse foods must also be available so local production can meet demand. Additionally, market and transportation systems

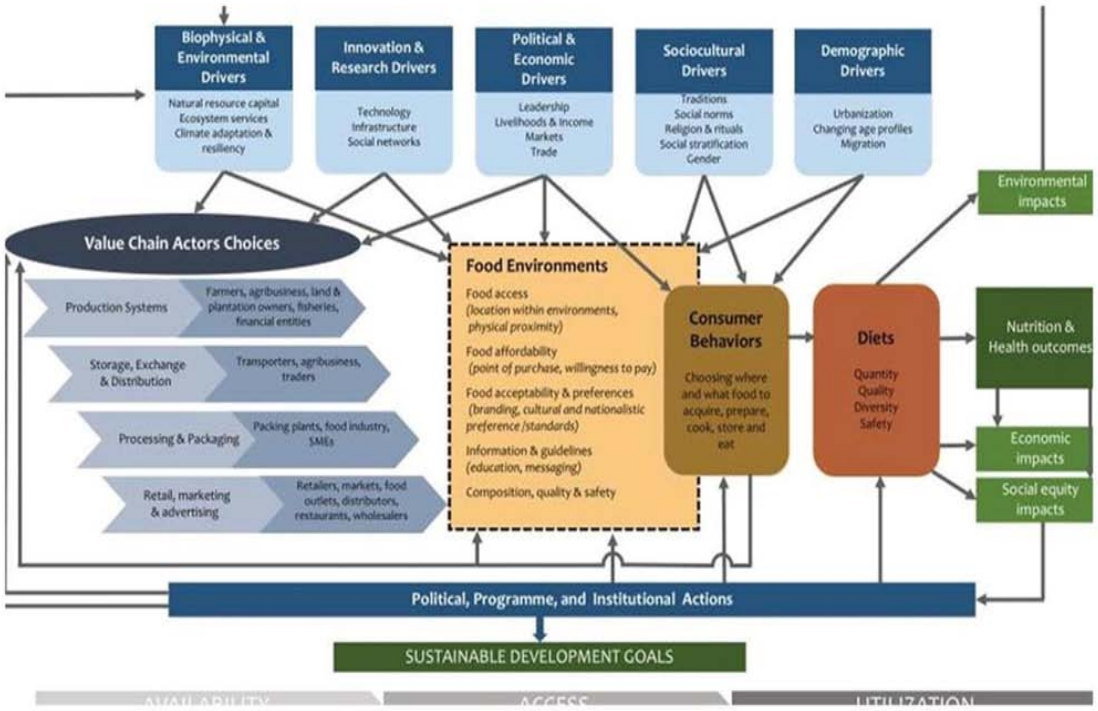

Figure 1: Conceptual pathway between agriculture and nutrition.
Source: UNHPLE-2017, provided by Fanzo.

must enable year-round and/or seasonal supplies based on consumer preferences and purchasing power. Local supply and demand may also be influenced not only by market prices but also by SBC, nutrition knowledge, and social marketing, which may help drive consumer preferences [1,3,12].

Household investments in health, including potable water sources and toilets, preventive care, and other necessities, are crucial to supporting good nutrition, especially for women and young children. All rural farm households must balance their spending decisions between farm production and marketing investments and the immediate purchases of food, health, and care necessities. The effect of income on nutrition is not direct or easily predictable; it is always modified by what is available, affordable, and convenient to purchase; who decides what is purchased; and the many other factors that drive that decision [1,3,7,12].

Women's empowerment

Increasing the agricultural income that women can control strengthens the income pathway to nutrition. Women's income enables expenditures on food and health care, affecting diet and health status. Research shows that in many places around the world, income controlled by women is more frequently used on food and health care for the family, particularly for children. Often, the best way for women to influence how household income is spent is by earning their own income. For women in rural areas, an agriculture-related livelihood is the most common way a family makes a living. Women's decision-making also affects what is produced on the farm and women's control of income and assets can affect productivity based on their spending decisions and on the social networks and cultural norms that influence those decisions. Training female and male farmers in farm management and business skills can optimize the income earned with the available time, labor, assets, and capital [3,7,12].

Food market environment

Agriculture and food systems contribute greatly to the food market environment in how nutrition messages are conveyed to consumers. Labeling and social marketing, for example, are tools that have been used by the food marketing industry and other value chain actors to influence food purchase decisions and consumption habits. This type of marketing may influence what people eat more extensively than nutrition education. Purchase decisions are affected not only by the relative price of different foods, but also factors such as convenience of purchase and preparation, available information about foods, and related perceptions of quality and safety. The food environment therefore interacts with household decision-making and food purchases in many ways and has a significant influence on household and individual nutrition [1,12].

Natural resources environment

All pathways between agriculture and nutrition are affected by natural resources: water, soil, climate, and biodiversity Natural resource endowment affects agricultural production potential and, therefore, management strategies for income generation and food availability. Appropriate management of often scarce natural resources, such as sustainable harvesting, use and drainage of water, soil fertility management, and managing access to productive land, is critical to a successful farming business. Rainfall patterns directly impact production cycles of farms without access to irrigation; and water availability, often a cause of human conflict, determines the type of viable farming systems. Access to potable water is essential

for human health and nutrition. Irrigation for agriculture can impact human health, especially in areas of intensive cultivation that use chemical inputs [6,12].

Health, water, and sanitation environment

Nutritional status is strongly influenced by the health, water, and sanitation environment and access to health services. Agricultural production interacts with the health, water, and sanitation environment. For instance, some agricultural practices may contaminate water available for household use and water management may contribute to waterborne diseases as well as exposure to zoonotic disease or agrochemicals poses risks to human health, particularly during pregnancy. Infants and young children may be at risk of illness when livestock or agricultural production diminishes household sanitary conditions. With compromised systems, children are unable to properly absorb the nutrients they are consuming, thus negating any potential positive nutrition outcomes from increases in agriculture production or income. A key component of nutrition-sensitive agriculture therefore includes consideration of the activities' potential effects on the health, water, and sanitation environment [1,6,12] (Figure 1).

Institutional Capabilities

First, nutrition sensitive agriculture is not a one-sector job and should not be. Nutrition sensitive agriculture needs multi-sectoral nutrition approach and should be horizontally and vertically coordinated from different ministries. Mainly it is the responsibility of Ministry of Agriculture and Ministry of Health with the collaboration and coordination to other concerned sectors. There no doubt, there is a commitment to nutrition verbally and on paper, but something always drops off at the end of that commitment, in terms of leadership, accountability and planning for the eventual implementation and carrying out those responsibilities by stakeholders. It needs strong leadership, putting in place mechanisms to achieve the outcomes related to the commitment and organizational development and coordination.

National and regional bodies have been created for the coordination of nutrition; however, multi-sectoral coordination of nutrition has largely been ineffective. Nutrition leaders, core actors and implementers jointly develop programs and action plans at federal and regional levels, but there was no legal mechanism to make implementers accountable. To enhance accountability, members of the national and regional nutrition coordination bodies at federal and regional levels are headed by the deputy prime minister at the federal level and regional presidents. But this has not worked either, as those who in effect lead the coordination bodies are the minister for health and heads of health bureaus who, in terms of political hierarchy, are at the same level as the other committee members. On the other hand, many, including powerful members of the National Nutrition Coordination Body (NNCB) and National Nutrition Technical Committee (NNTC) still only regard nutrition as a supplementary activity, and hence do not fully engage in program design, mainstreaming and implementation.

There are number of flagship programs and strategies like NNP-II and Seqota Declaration to fight hunger and undernutrition through agriculture but, at the implementation level, we are lost; there is no or little priority accorded to implementation of nutrition sensitive agriculture.

The very nature of multisectoral coordination of nutrition sensitive agriculture make challenges to mainstreaming of nutrition within sector ministries. It takes time to negotiate and agree on programs, and the problem is fundamentally to do with lack of leadership.

In general, nutrition program implementation has not been backed up by sufficient numbers or quality of personnel and financial resources. More than half of the implementing ministries – and bureaus do not have strong and responsible case teams or directorates to lead nutrition programs. While growing marginally, the amount of budget allocated to nutrition is limited and mainly dependent on donor funding. This suggests that without adequate and sustained investment in nutrition, Ethiopia's commitment to targets, including the SDGs, will not be realized.

Despite the adverse effect of hunger on Ethiopia's gross domestic product, the government's investment in nutrition is low and heavily dependent on donors. The country's apex institutions, including the Ministry of Finance (MOF), barely monitor or incentivize investment in nutrition. Consequently, with a few exceptions such as the ministries of health and agriculture, which tried to mainstreaming nutrition among all implementing ministries has not been completed.

Nutrition Governance and Coordination

To better understand how narratives, policy, and practice around undernutrition have evolved and shaped current politics, policy, and practice, it is better to review the literatures and documents on the evolution of nutrition policy, strategy, governance, and multi-sectoral coordination.

Evolution of nutrition politics, policy, and practice

Ethiopia's political administrative structures to address nutrition policy have been shaped by the cycle of drought and famines that the country has historically experienced. There were different eras of nutrition politics and policy and practice for the past fifty years in Ethiopia. First, the history of modern nutrition politics and policy and practice goes back to the early 1960s. The Ethiopian Nutrition Institute was established in 1962. The 1960s and 1970s were characterized by events-led, ad hoc, and reactive responses to recurrent droughts and famines, which were caused by the droughts and political conflicts, leading to the establishment in 1974 of the Relief and Rehabilitation Commission (RRC). In particular, the 1984–85 famine resulted in the loss of over a million lives and triggered the creation of the Early Warning System. The government (through the RRC), the Ethiopian Red Cross Society and donors were the primary agents in planning and implementing food and nutrition programs [1,2].

In the 1980s and 1990s, which featured the emergence of community projects, one of which was the Sidama community project, which ran over 1984-92 was established. An important development during this period was a conscious move towards multi-sectoral governance of nutrition, which in 1987 led the Derg regime to establish the Nutrition Unit within the Ministry of Planning and Economic Development [1].

In the era, which started from 2000 and has continued up to

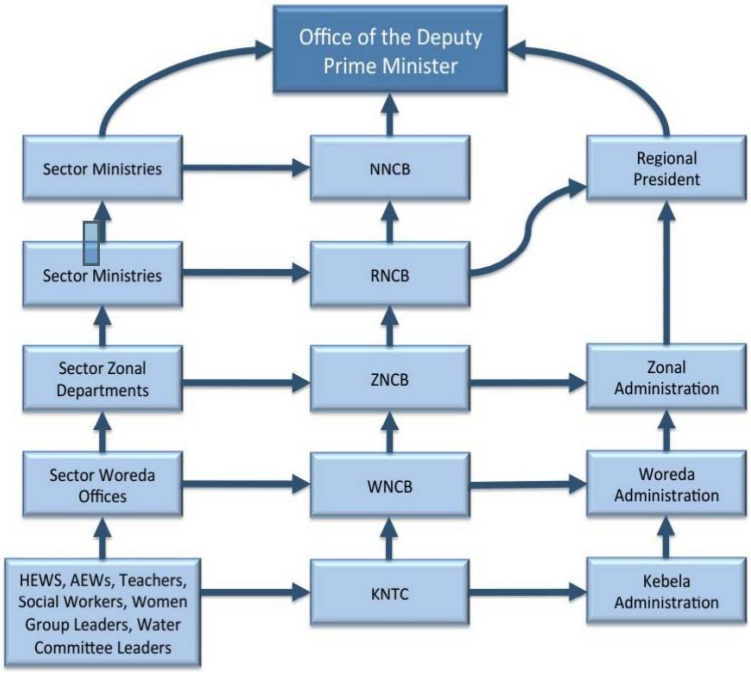

Figure 2: Nutrition coordination, reporting line and feedback mechanism.
Source: National Nutrition Program-II-2016.

Table 1: Summary of forms of political commitment.

Form of commitment	Description and evaluation of commitment
Rhetorical commitment	Medium-high level of commitment: high-level government and non-governmental officials declared commitment to reduce undernutrition
Institutional commitment	Medium level of commitment: rhetorical commitments [1] above were turned into a series of actions, including launching the Nutrition Strategy in 2008 and formation of NNCB and NNTC. However, institutional commitments did not lead to effective multi-sectoral nutrition coordination and implementation
Operational commitment	Low level of commitment: program implementers were not sufficiently provided with required human, technical and financial resources, leading to poor program coordination and implementation on the ground.
Embedded commitment	Low-medium level of commitment - nutrition agenda entered Ethiopia's wider social and economic development plans, but with limited finance going into such nutrition program.
System-wide commitment	Low level of commitment - a few interventions reached the grass roots, but many have yet to be scaled up.

Source: Author's own from different literatures.

the present day, is characterized by efforts to set up multi-sectoral governance for nutrition policy design and implementation. Official documents such as NNP-I indicate that several developments influenced this move towards multi-sectoral coordination of nutrition, including EDHS findings, international commitments to Millennium Development Goals and SDGs, and the emergence of global actors, notably the SUN Movement.

The following are some key observations from policy trends of nutrition in Ethiopia:

- Despite the prevalence of high levels of chronic malnutrition in food deficit and food surplus regions, historically, Ethiopia's nutrition policy has been around food production and food security.
- The narrative and framing of nutrition changed, particularly in the 2000s, leading Ethiopia to increasingly take steps to shift towards a more proactive approach to reducing undernutrition.
- The institutional landscape also changed; many players have become major players in fighting undernutrition.

Ethiopia's multi-sectoral nutrition governance and coordination

Ethiopia set up its multi-sectoral nutrition governance and coordination in 2008. The governance structure clearly recognizes that nutrition affects and is affected by many factors, including food production and access, health and education impact on individuals, families, and communities. Core sectors and actors like donor organizations, CSOs, and the private sectors are thus represented in the governance structure [1,4,9,11]. The structure endorses evidence-based global practices. The Ethiopian nutrition governance structure and its programs mirror international movements such as SUN and priorities advocated by such agencies.

Until 2016, the National Nutrition Coordination Body (NNCB) was led-by a senior minister of health; but since then, to enhance leadership and multi-sectoral coordination, it has been chaired by the deputy prime minister. The NNCB convenes 13 signatories: 12 ministries from relevant sectors13 and representatives from UN agencies, donors, and academia. The national nutrition governance structure is supported by the National Nutrition Technical Committee

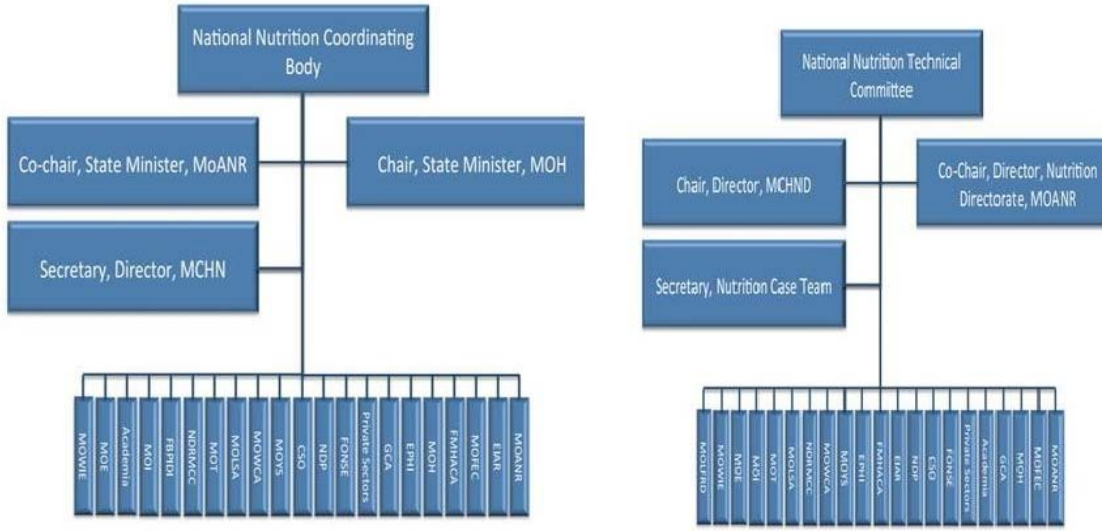

Figure 3: National nutrition coordination body and Technical committee.
Source: National Nutrition Program-II-2016.

Table 2: Factors driving for political commitment of nutrition.

Factor area	Factor description
Actors	Networks of nutrition actors are involved but lack consensus on internal and external framing of food and nutrition security; consequently, actors' contribution to reduce undernutrition has been impeded
Institutions	National and regional coordination bodies were set up, but have no effective power to coordinate and hold nutrition program implementers accountable for their actions
Political and societal context	There exists supportive leadership from the top, but the rhetoric has not translated into action, undermining commitments to nutrition.
Knowledge, evidence, and framing	Strong use of national and global evidence in policy and program design, and good understanding of causes and consequences of undernutrition among core nutrition actors. However, consensus is lacking among major actors on internal and external framing of food and nutrition security.
Capacities and resources	Nutrition program implementers (ministers and bureaus) have insufficient skilled personnel and financial resources.

Source: Author's own from different literatures.

(NNTC). Even though, limited studies were conducted on Ethiopia's multi-sectoral nutrition program coordination and implementation; some key challenges are identified:

- Multiple nutrition challenges such as undernutrition, food security and deficiencies in micronutrients.
- Low awareness levels, and issues of leadership, coordination, collaboration, advocacy, and the lack of dedicated budget lines.
- How nutrition-sensitive program implementation is affected at the subregional level by mid- level implementing actors.
- Top-down approach means that those at grass-roots level have no input and struggle with a top-down approach to information flow, often finding that higher-level decisions are not communicated until the last minute.
- Unplanned assignments of tasks add to workloads and budgetary burdens.
- Turnover of midlevel staff was high due to low pay, poor working conditions, and, in some cases, an inability to take technical decisions.
- The party system dominates both the technical and administrative aspects of interventions, making it challenging for professionals to take decisions even on implementation (Figure 2).

Drivers of Political Commitments for Nutrition Sensitive Agriculture

Nutrition has a multidimensional and multi-sectoral nature in terms of both effect and outcomes. Timely and effective implementation of the policy requires multi-sectoral integration, coordination and linkage, an efficient operational framework as well as appropriate leadership and implementation capacity. To facilitate the multi-sectoral food and nutrition coordination and integration, the Government of Ethiopia should create a supportive environment and feedback mechanism [7]. The Government of Ethiopia should promote incorporation of nutrition goals and actions in a wide range of sectors' programs to implement nutrition sensitive interventions that can address the causes of malnutrition (Table 1).

In Ethiopia, a range of state and non-state actors with common interests, working in loose networks such as the Donors' Working Group on Nutrition and the Ethiopian Civil Society Coalition making diverse contributions to reduce undernutrition. There is also Non-state actors' wider participation in nutrition policy and program design, which took different forms; some contributing to proceedings in working groups on program development, others involved in consultation meetings.

It is critical that all sectors develop and implement nutrition specific and sensitive programs using the concept of "nutrition lens".

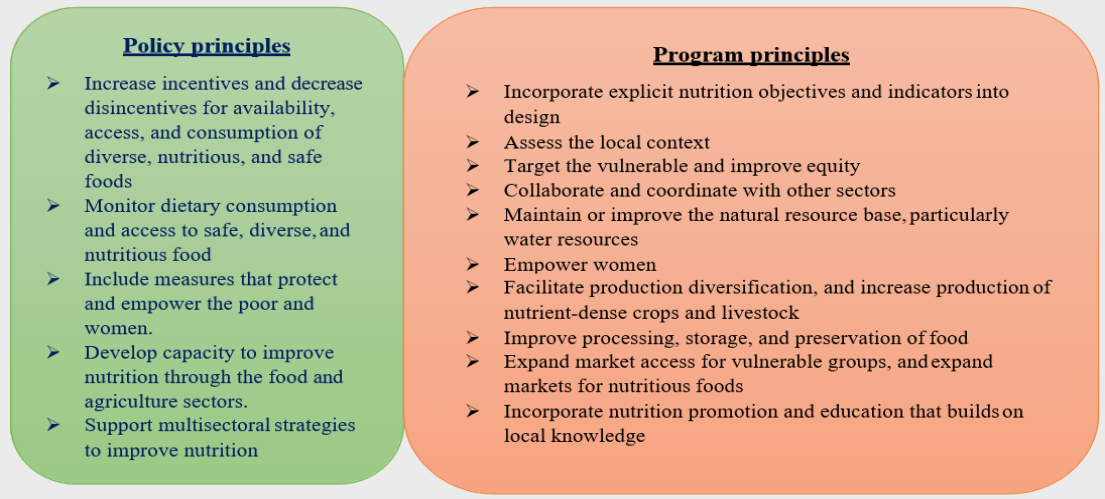

Figure 4: Policy and program principles of nutrition sensitive agriculture.
Source: Adapted by the author from different literatures.

The Food and Nutrition Policy of Ethiopia shall provide the necessary legal and institutional framework for national nutrition planning, implementation, monitoring and evaluation, and coordination in the country. Key Ethiopian nutrition drivers constitute actors, institutions, the political and societal context, knowledge, evidence and framing, and capacities and resources (Table 2).

Institutions for Multi-Sectoral Nutrition Coordination

The government had made a high-level policy commitment to reduce undernutrition. High- level political commitment has translated into a series of institutional commitments and nutrition programs, including designing, launching and implementing successive NNPs; setting up the NNCB, NNTC and several steering committees, including a steering committee for food fortification; and designating the MOH to 'house' and manage the organization and management of the NNCB and NNTC.

There is critical issue of the status of multi-sectoral nutrition coordination. It could not be said there is no multi-sectoral nutrition coordination to speak of, but, while acknowledging the problems, emphasized that Ethiopia is still learning how to coordinate multi-sectoral nutrition [1,6,7,11]. The national coordination body, and technical committee members, act like volunteers who move in and out of the committees at will. Many members of the NNCB and NNTC hardly meet, so cannot proactively provide leadership (Figure 3).

Key Principles for Improving Nutrition through Agriculture

The current global consensus of Key Recommendations for Improving Nutrition through Agriculture reflects the agriculture-nutrition pathways identified in this brief. The programming principles include broadly supported priorities for nutrition-sensitive agriculture that seem to be common among activities that have shown a positive impact on nutrition.

The following are policy and Program principles (Figure 4).

Application of the Agriculture to Nutrition Pathways and Principles

The pathways framework is envisioned as a conceptual tool for activity planners to explore ways in which interventions may impact human nutrition. The framework outlines key theoretical steps needed to reach outcomes on dietary consumption or women's income or to have an impact on nutritional status. While these pathways are not linear, and the interactions in some contexts are quite complex, the framework can be a useful tool in activity design. It is also useful for making decisions about how best to measure the success of an approach on its intended outcomes. The key principles can be used as a broad checklist in the design of nutrition-sensitive activities. The contribution of agriculture to nutrition goals will be different depending on the context and the type of activities undertaken. The first two principles, however; having a nutrition objective and context assessment will be critical in all cases. Assessing the local context is essential to understanding constraints and opportunities in agriculture and nutrition from all points of view, including the viewpoint of beneficiaries.

- Identify causes of undernutrition and which pathways are primarily implicated.
- Assist in defining target groups for activities.
- Help identify activities of government and nongovernmental organizations in the same areas and other donors' investments to identify synergies and avoid duplicating efforts.

The pathways can also inform the choice of activity-specific indicators for measuring positive impact on nutrition. Appropriate indicators will vary according to which pathways are relevant to the activity design. However, indicators of food access and diet quality and diversity are key to linking agriculture investment to nutrition outcomes for vulnerable groups.

Conclusion

Nutrition, health, and agriculture are mutually interdependent.

Hence, there should be a fertile ground in Ethiopia that facilitates synergetic linkage of nutrition with health and agriculture. Reductions in undernutrition can be achieved through simultaneous cross-sectoral attention to food, care, and health determinants of nutrition. Interventions in the food system can support farm systems and agricultural livelihoods while also improving diets. This is especially true if the interventions do no harm to health or care practices and support integrated and multisectoral programming. The pathways and principles of nutrition sensitive agriculture can guide agriculture activity planning to improve nutrition.

International experience concerning integration of nutrition into health and agriculture has shown that implementation is a complex and lengthy process that requires thorough and careful preparations for the negotiations with stakeholders and sectors. The concerted efforts of the professionals of different principle, donor agencies and NGOs are crucial for the success of the integration.

Malnutrition and food insecurity are still major problems of the country that need multi- sectoral responses wherein the role and contributions of agriculture are critical. Thus, more attention and support should be given to the agricultural sector to enable it to contribute to the enhancement of the nutritional status of vulnerable groups [7,8,12].

The fight against hunger and malnutrition through agriculture require a high- level political commitment and high level 'champions' to work towards positive nutrition outcomes. The serious engagement and perseverance of major actors such as parliamentarians, ministers, and civil society leaders in the fight against hunger and malnutrition are essential. There should be standardized and persistent advocacy tools and activities to be made available to these 'champions [8,11,12-15].

Recommendations

1. Create and empower an independent multi-sectoral nutrition coordination council:

- Implementing the new national nutrition policy as of urgency and creating an independent multi-sectoral nutrition coordination agency at all levels, whose activities shall be legally bound for signatory ministries and regions.

- Assessing and equipping the coordination bodies for nutrition sensitive agriculture at all levels, employing staff with multi-disciplinary perspectives and increasing the budget for coordination.

- Establishing legal and information frameworks to monitor and ensure accountability.

2. Enhance implementation priority:

- Create and strengthen well-functioning nutrition case teams and allocate requisite budgets, office premises, etc. at all levels including the grass-roots levels.

- The government should train enough personnel at higher education institutions to sustainably plan and implement nutrition sensitive agriculture program.

3. Increase investment and funding for nutrition sensitive agriculture program implementation and capacity development.

4. Enable the private sector to contribute to nutrition sensitive agriculture programs

5. Increase funding and research on the social, political, and financial constraints to, and opportunities for, reducing undernutrition and sustaining nutrition sensitive agriculture in the country.

6. Align different perspectives on nutrition and priorities to reduce undernutrition through nutrition sensitive agriculture.

7. Ensure nutrition sensitive agriculture programs and projects start and finish on time

8. It is still better to focus on nutrition knowledge and SBC to informing the range of decisions that farmers make about what they grow to consume, what they grow to sell, and what they decide to purchase with their income.

9. Women are typically responsible for a wide range of household and agricultural tasks, including child and infant care and feeding and their own self-care. Activities that influence the amount of time or labor women spend on agriculture-related tasks can affect their own health and energy expenditure, and in turn their capacity to feed and care for infants, young children, and themselves. Therefore, a vital step in improving nutrition in a household with an agricultural livelihood requires that farming business decisions give attention to how women are involved in agriculture activities and should be empowered for household resource management and control.

10. Efforts must be exerted to exploit the potentials of the Agricultural Development Agents (DAs) and the Health Extension Workers (HEWs) for the production and utilization of high nutrient products to promote dietary diversification among rural households and the youth. Integrated and collaborative activities among these frontline workers are essential for promoting appropriate nutritious diet for households, especially for children, women, and other vulnerable groups.

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