Review of the Nutrition Policy Landscape in Ethiopia 2010 – 2020

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Definitions

Policy outputs are direct results of decision-making. This policy review included policy outputs such as policies, strategies, plans and programs(62) endorsed by at least one of the ministries (or related sectors) that were signatories of the National Nutrition Program II and therefore linked to nutrition.

Policy instruments are tools for the government to enforce or to implement policy outputs. Policy instruments in this review were categorized using Hood's definition of instruments based on the different resources used (information, authority, financial or organizational capacity).(66,67) Policy instruments or tools could therefore entail educational guidelines, legislations, taxation, subsidies or provision of services to name a few.

Policy integration refers to the extent to which a governance system addresses a crosscutting concern in a holistic manner across sectors. Candel and Biesbroek developed a framework for policy integration, which has been used for this review. The framework consists of four dimensions: policy frame, sector involvement, policy goals, and policy instruments.(61) For each dimension, the level of integration is defined in the report.

Abbreviations

ADLI	Agricultural Development-led Industrialization Strategy
AGP	Agricultural Growth Program
ATVET	Agriculture Technical Vocational Education and Training
CINuS	Comprehensive Integrated Nutrition Services
CSA	Central Statistics Agency
DRMC	Disaster Risk Management Commission
EDHS	Ethiopia Demographic and Health Survey
EFDA	Ethiopian Food and Drug Administration
EPHI	Ethiopian Public Health Institute
FAO	Food and Agriculture Organization
FDRE	Federal Democratic Republic of Ethiopia
GTP	Growth and Transformation Plan
HEP	Health Extension Program
HSDP	Health Sector Development Program
IFPRI	International Food Policy Research Institute
MoA	Ministry of Agriculture (also including Livestock and Fisheries)
MoE	Ministry of Education
MoH	Ministry of Health
MoLSA	Ministry of Labor and Social Affairs
MoWCA	Ministry of Women's and Children Affairs
MoWIE	Ministry of Water, Irrigation and Energy
MoTI	Ministry of Trade and Industry
NCD	Noncommunicable Diseases
NDRMC	National Disaster Risk Management Commission
NFNP	National Food and Nutrition Policy
NGO	Nongovernmental Organization
NIPN	National Information Platform for Nutrition
NNP	National Nutrition Program
NSA	Nutrition-Sensitive Agriculture
PSNP	Productive Safety Net Program
SBCC	Social and Behavior Change Communication
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

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1. Summary

Ethiopia's greatest nutrition challenge in recent years has been a high burden of undernutrition, but overweight and obesity rates are increasing, particularly in urban areas. Ethiopia has a rich nutrition policy landscape, with the second National Nutrition Program 2016–2020 (NNP II) and the National Food and Nutrition Policy 2018 (NFNP), playing a central role in addressing multiple nutrition issues. However, despite a broadened focus and multisectoral involvement, policy outputs still seem to focus more on undernutrition than on all forms of malnutrition.

This review aimed to assess the integration of nutrition in Ethiopian policy outputs (i.e., policies, strategies, action plans, programs, legal documents) using four dimensions of policy integration: framing, sector involvement, goal setting, and policy instruments. It also documented the use of evidence in policymaking to help researchers better intervene and influence the policy processes. Policy outputs were searched online using Google Scholar and Scopus, websites of government ministries and institutions, development partners and nongovernmental organizations (NGOs).

The search resulted in 131 policy documents of which 73 met the inclusion criteria (i.e., publication date from 2010, endorsed by at least one NNP signatory ministry, food or nutrition as part of objectives, actions or recommendations). A content analysis was conducted of all the documents. Using an *a priori* code list and an inductive approach, goals, instruments and evidence were coded, and policy instruments categorized as informational, legal, financial or organizational.

The analysis of these documents revealed that framing of nutrition in policy documents emphasized undernutrition and infants or children. Most of the objectives were specifically related to undernutrition or diets. Only a few sectors framed nutrition in terms of all forms of malnutrition.

All relevant sectors were involved in the development of nutrition policies in Ethiopia, but only health, agriculture, and education formulated nutrition objectives in their sector-specific policies. Objectives related to determinants of malnutrition such as food production primarily aimed to increase productivity and commercialization. While improving food safety was a common objective in documents issued by the health sector, food processing, labeling, and marketing were mentioned only in a few objectives. In addition, gender-related objectives were rare in the reviewed policy documents, with only a few documents referring to women or adolescents as part of the problem formulation or the objectives.

Most educational instruments suggested in the policy documents were related to provision of information in the form of nutrition education and social and behavior change communication

(SBCC) to the general population as well as trainings and capacity building for health or agriculture extension workers or teachers. Endorsed legal instruments primarily aimed to protect breastfeeding, ensure food safety, and promote food fortification. The reviewed policy documents called for the enforcement of these instruments and proposed potential new regulations to encourage consumption of healthy food and discourage consumption of unhealthy food. Organizational instruments were mostly proposed in terms of improving existing institutions, mechanisms, and services, but the establishment of new coordination structures for multisectoral as well as vertical coordination across administrative levels was also suggested. Financial instruments ranged from providing access to financial support, direct support with cash through social protection programs, feeding programs through schools or humanitarian interventions, micronutrient supplements, and agricultural inputs. Taxes on unhealthy foods and drinks have already been partially put in place.

Overall, there seems to be a good mix of policy instruments in Ethiopia. However, most legal documents are only addressing food safety, fortification, and infant feeding. Educational instruments predominate and while they address different forms of malnutrition, it often is proposed in isolation and not as part of joint interventions.

Evidence seems to have played an important role in informing and developing the policies. As the example of nutrition-sensitive agriculture showed, new global and Ethiopia-specific evidence created a momentum that might have led to the development of more nutrition-sensitive programs and strategies. The generation of new evidence or the synthesis of existing evidence in areas that have not been fully addressed in policies, could therefore help get these issues on the policy agenda.

2. Introduction

2.1 Nutrition Situation in Ethiopia

Ethiopia has seen considerable improvements in maternal and child health and nutrition over the last 20 years. Mortality related to communicable diseases, maternal conditions, malnutrition, and injuries dropped by 65%, but maternal and neonatal mortality rates remain very high.[(1)] Deaths of children under 5 years of age resulting from malnutrition account for about 57% of all child deaths.[(2)] Stunting and underweight rates in children under 5 years have also been declining over the last 20 years. Stunting dropped from 57% in 2000 to 37% in 2019, while wasting in children under 5 years fell from 12% in 2000 to 7% in 2019.[(3,4)]

At the same time, an epidemiological transition has been taking place. Noncommunicable diseases (NCDs) are the leading cause of death among adults in Addis Ababa[(5)] and were responsible for 39%

of deaths in the country in 2015.[2] NCDs have been increasing, particularly in urban women of higher socioeconomic groups.[6,7] Obesity is a recognized determinant for a number of NCDs such as diabetes, cancer, and cardiovascular diseases. Obesity in urban women has increased from 3% to 4.3% in 15 years.[7] At the same time, urban food insecurity is a growing concern due to high rates of urban poverty and fluctuating food prices.[8] The simultaneous presence of over- and underweight has been defined as the double burden of malnutrition.[9] While Ethiopia still appears to be at the onset of a dietary transition compared to the rest of urban Africa,[10] this trend is expected to increase with growing urbanization and economic development.[11]

The link between malnutrition and diets that are low in diversity or quality has been well established.[12] In Ethiopia, food production and intake of calories have increased considerably over the period from 1996 to 2011, and the food basket is changing with a gradual shift toward high-value foods, such as animal products, fruits and vegetables, and processed foods. However, irrespective of the level of income, the Ethiopian diet remains heavy in starchy staples.[13] Poor dietary diversity has been associated with chronic malnutrition in Ethiopian children. Fourteen percent of children under 5 years receive the minimum recommended four food groups.[14] Dietary factors also contribute to the NCD burden in Ethiopia, with diets low in fruits and vegetables and high in sodium as the leading dietary risks.[15] An Ethiopian survey found that 60.4% of respondents mentioned that they add salt or salty sauce to their food always or often.[16]

Factors influencing diets include food availability, affordability, education, health, and water and sanitation.[17] In Ethiopia, diets have been associated with seasonality,[18] distance to markets, maternal knowledge,[14] household incomes,[13] gender inequalities,[19] and religious aspects affecting intake of animal-source foods.[20] While livestock ownership has been shown to be beneficial to dairy consumption and child growth,[21,22] exposure to poultry in the household dwelling has been linked to stunting, most likely due to increased risk of infections.[23]

Agricultural production, particularly of cereals, has been contributing to overall economic growth, and helping to reduce poverty, food insecurity, and malnutrition.[24] National food production has been supplying more than 3000 calories per capita in 2015. However, the focus on cereal production might have affected production of other more nutrient-dense food groups.[25]

Food prices have also been shown to impact consumption. Meeting international guidelines for fruit and vegetable consumption is out of reach for the poorest households in Ethiopia[27] and might become more difficult with prices for fruit, vegetables and animal-source foods increasing more rapidly than prices for cereals.[28] With urban growth, demand for food items may rise, which in turn, could further elevate prices.[29] Increasing urbanization will also have an impact on food availability.

There is currently a wide variety of retail outlets, ranging from private modern retail to public cooperatives to informal vendors, with the domestic modern retail sector fast emerging.[30] In rural areas, remoteness and access to markets are major issues. While recent investments in road infrastructure and integration of markets might have contributed toward better resilience to droughts,[31] a large share of the population still lives more than 10 hours travel time from an urban center,[32] making people dependent on their own production.[33]

Poor water supply and sanitation are risk factors for child stunting.[34] Access to improved sanitation and safe drinking water, while increasing,[35] is still very low. Millions of Ethiopians still lack improved water, and only 13% of households have water and soap available for handwashing.[36]

2.2 Historic Overview of Nutrition Policies and Programs

With a history of repeated droughts and famines, past nutrition policies in Ethiopia have largely focused on food security and acute malnutrition. In the early 1990s, Ethiopia developed its Agricultural Development-led Industrialization Strategy (ADLI), which considered agriculture as the driving force of the economy, focusing on poverty reduction and productivity especially related to smallholder agriculture and cereal production. Increased productivity was achieved through better access to modern agriculture inputs, extension services, and road connectivity.[37,38]

ADLI also provided the guiding framework for Ethiopia's development strategy in the 2000s, leading to the Growth and Transformation Plan (GTP) in 2010,[38] which put more emphasis on commercialization in the agriculture sector. Also, the Agriculture Sector Policy and Investment Framework, the 10-year road map for development, is focused on promoting fast development and increased productivity, but less on production of nutrient-dense crops.[39]

Breaking the cycle of repeated drought response and emergency appeals for food aid, the Productive Safety Net Program (PSNP) was launched in 2005 to promote development and forestall emergencies.[40,41] While the PSNP targeted food deficit regions of the country, an Agricultural Growth Program (AGP) focused on increased production in areas with more growth potential.[37]

Focusing on economic growth, food security, and scaling up nutrition programs has made an important contribution to reducing undernutrition.[43,44] However, stunting did not decrease in all regions despite increasing program coverage of the health system.[45] Already in the mid-1990s, Pelletier pointed out that the highest rates of chronic malnutrition were found in food surplus regions,[46] which became more apparent with the data of the 2005 Ethiopia Demographic and Health Survey (EDHS) showing that chronic malnutrition was highest in agriculturally productive

regions. These findings made it obvious that the policy focus on food security alone was inadequate, and a shift was needed toward nutrition security.

The Lancet series on Maternal and Child Nutrition was launched jointly with National Nutrition Strategy in 2008. This was followed by the NNP in 2008, in which policy attention turned toward stunting reduction. The Cost of Hunger study in 2012 further shifted the focus toward stunting by highlighting its impact on individuals, the importance of the social and economic situation, and the need for long-term developmental and multisectoral approaches to nutrition.[47] The launch of the revised NNP I in 2013 also coincided with a major Lancet series on Maternal and Child Nutrition. The NNP I was signed by nine ministries, emphasizing the multisectoral nature of nutrition and applying a life-cycle approach targeting women and children with major focus on stunting and micronutrients.

In the meantime, the Health Extension Program (HEP) was launched in 2003, as part of the government strategy to achieve universal coverage of primary healthcare,[39] and expanded quickly, integrating community-based nutrition interventions. While the implementation of the HEP could be affected by gaps in service provision related to incomplete health records, [48] the HEP has made a variety of preventive health services available in rural areas—including micronutrient supplementation, infant and young child feeding, growth monitoring and promotion, and community-based management of acute malnutrition.[49]

The NNP II in 2016 put even more focus on nutrition-sensitive interventions. As discussed later, this could have been due to the findings of the 2013 Lancet series, which concluded that a focus on nutrition-specific interventions alone would not be sufficient to reduce chronic malnutrition while it also focused on addressing adolescents.

At the same time, in 2015, issues related nutrition-sensitive agriculture became more apparent through a number of publications.[14,18,50-55] This helped in making the PSNP IV and soon after the AGP II more nutrition-sensitive, in terms of targeting and delivery of services and also in terms of program interventions, such as promoting production of diverse nutrient-dense crops. Both these programs have been implemented through the agriculture extension service, which through Farmer Training Centers and adoption of modern inputs has increased productivity.[38]

Although women are central to addressing undernutrition, there is little evidence of gender-focused approaches in addressing undernutrition.[37] Policies on land rights, ensuring joint land certification, have had significant effects on women's empowerment, particularly on dimensions that indicate

female participation and roles outside the home.[56] These developments also had the potential to buffer women from the impacts of food price increases.[55]

Sectors outside of agriculture and health have also started taking nutrition into account. The Ethiopian government recognized school nutrition as a cross-cutting issue in the new Education Sector Development Program V and, in 2016, launched the School Health and Nutrition Strategy.[57]

The formulation of a National Hygiene and Sanitation Strategy (2006) and the ONE WASH National Program were important measures to substantially improve the water, sanitation and hygiene (WASH) situation, as well as the health and well-being of rural and urban communities.

Addressing nutrition through multisectoral policies has come a long way in Ethiopia and definitely helped reduce undernutrition through expansion from nutrition-specific to nutrition-sensitive strategies.[58] Multisectoral mechanisms such as the National Nutrition Coordination Body and the corresponding National Nutrition Technical Committee have been important achievements.[40] However, multisectoral coordination and integration have not as been effective as was hoped, mainly due to inadequate commitment and lack of strong, appropriate governance structures. While multisectoral collaboration is taking place, it is primarily in the form of networking and coordination, placing a strong emphasis on meetings and on monitoring and evaluation.[37] An important achievement of Ethiopia's efforts toward use of multisectoral evidence for decision making was the launch of the National Information Platform on Nutrition (NIPN) in 2018. The NIPN is an initiative by the European Union (with support from the Foreign, Commonwealth and Development Office and the Bill and Melinda Gates Foundation) which aims to bring together and analyze existing information and data from all sectors to support the development of evidence-based policies and programs to improve human nutrition.

3. Goal and Objectives of this Review

The overall goal of this review was to document nutrition policy outputs over the last 10 years based on published policy documents.

In order to better understand the nutrition policy landscape in Ethiopia, the specific objectives of the review were to identify and describe:

- the goal setting and framing of nutrition in policy documents from different sectors,
- the policy instruments (or tools) used or proposed in policy documents to improve nutrition,
- the types of evidence used in policy documents.

The review did not consider the implementation of these policies or policy outputs.

This review made important contributions to the NIPN in Ethiopia.

The recent NIPN capacity needs assessment revealed that, while evidence is available for decision-making in nutrition, it is not always used systematically.[60] Therefore, by describing the policy landscape and the use of evidence for policymaking, the review contributes to the objectives of the NIPN to help researchers better understand the policy environment and how to intervene and influence the policymaking process. In addition, understanding which evidence is used in policy documents, helps to identify the gaps in the information and research needed to make evidence-based policy and implementation decisions. The review further contributes to the NIPN process steps (Figure 1), especially the question formulation process (based on government priorities) and communication of findings to decision-makers.[68]

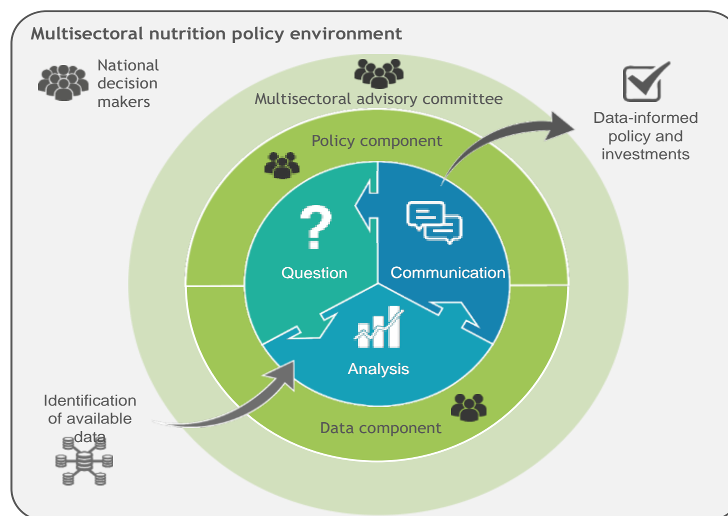

Figure 1: NIPN Operational Cycle

Source: NIPN, 2018 (see reference 68)

4. Methodology of the Policy Review

The multisectoral nature of nutrition requires that different sectors address nutrition problems, which is where the concept of policy integration stems from.[61,62] Candel's framework of policy integration comprises of four dimensions: policy frame, sector involvement, policy goals, and policy instruments.[61] The aim of this review is to assess these dimensions in terms of problem framing as part of the goal-setting in policy outputs, involvement of different sectors, and type and mix of policy instruments proposed in the policy outputs. Policy outputs are direct results of decision-making and include policies, strategies, plans, or programs.[62]

Problem framing has been defined as the "degree to which the policy community agrees on the definitions of, causes of, and solutions to the problem."[63] Given the multisectoral nature of nutrition, nutrition-related problems have been framed in different ways.[64,65] Assessing goals and

objectives of policy outputs from different sectors should provide insight into how nutrition problems are framed and addressed. Assessing the involvement of different sectors will help to understand the level of integration across sectors.[61] The review also considered policy instruments, which are tools for the government to enforce or implement policy outputs. Instruments in this review were categorized using Hood's definition of instruments based on the different resources used (information, authority, financial or organizational capacity) (Table 1).[66]

Table 1: Hood's "NATO" (Nodality, Authority, Treasure, Organization) Framework of Policy Tools

	Nodality (Information)	**Authority (Legal)**	**Treasure (Financial)**	**Organization (Institutions)**
General purpose of the instrument	Advice Information provision Training Reporting	Regulation Self-regulation Licenses	Subsidies Cash or food distributions Grants Taxes	Administration Provision and coordination of services

Source: Adapted from Hood, 1983 and Howlett, 2000 (see reference 66 and 67)

Obtaining a better understanding of these four dimensions (framing, sector involvement, goals, and instruments) will contribute to a clearer picture of the degree of policy integration of nutrition in Ethiopia.

Search and Selection Process

Searches were conducted online using Google Scholar and Scopus, websites of government institutions and international organizations. Annex 1 provides detailed information on the search strategy. Figure 2 below shows an overview of all the documents and where they were retrieved from. More information on the search strategy and selection process are provided in Annex 1.

Data extraction and analysis

The following data were extracted from the documents: main sector/ministry, document type, document title, year of publication, timeline, issuing institutions, contributing institutions, other nongovernmental institutions, main goals and objectives, nutrition-related goals and objectives, nutrition-related indicators, and references related to nutrition. All included documents were then imported into Nvivo (version 12.6.0) to conduct a content analysis.

Policy documents were coded and analyzed in terms of the type of malnutrition and the target group or determinant that the instrument addressed. Policy instruments (or tools) were categorized as information, authority, finance or organizational capacity instruments.[66] Use of evidence was assessed by reviewing the list of references, if provided, or by identifying the sources of the data provided in background sections of the policy documents. We therefore used a similar methodology as the one applied in the NIPN policy review from Uganda.[26]

An *a priori* list of codes was used and complemented by an inductive coding approach, allowing for additional codes that emerged from the documents. Thematic areas were identified by collating data relevant to each code and code group and then rearranging them by identified themes.[69] More information on the coding approach can be found in Annex 1.

5. Findings of the Policy Review

5.1 Descriptive Findings

A total of 131 documents were identified of which 58 were excluded because they were published before 2010 (n=11), they were neither available electronically nor as hard copy (n=5), or they did not make reference to nutrition at all (n=42). Most of the excluded documents were provided by the health sector (Ministry of Health [MoH] and the Ethiopian Food and Drug Administration [EFDA]) related to water and sanitation or by the Ministry of Urban Development and Housing. This resulted in exclusion of 73 documents, of which some addressed the same programs. For instance, there were two documents on the PSNP, three on the AGP, two on the School Health Program, and three on the ONE WASH Program. In these cases, the multiple documents were included in the analysis as one unit. This review included 18 program documents (but of 13 programs), 18 guidelines, 13 legal documents, 11 strategies, 8 (action) plans and 5 policies. Most policy outputs stemmed from the health sector (n=18), followed by multisectoral outputs issued by the federal government (n=10) and the Ministry of Agriculture (MoA) (n=8). Most of the policy documents were published in 2016 (n=14) and 2017 (n=11).

Annex 2 provides the list of documents included in the review (referenced as 101-173) and Annex 3 provides the timelines of selected policy outputs.

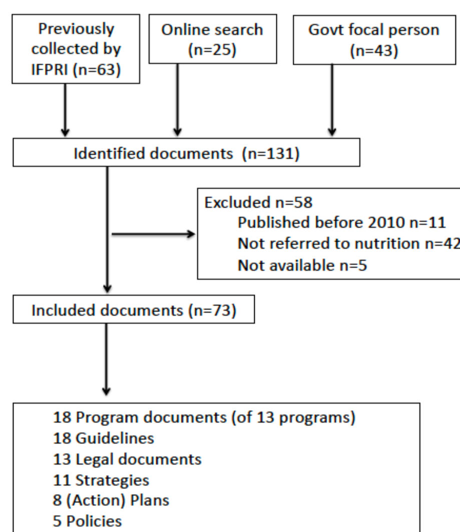

Figure 2: Overview of Included Documents

Contributing Sectors

Only 32 documents listed sectors that contributed to their development, with the Ministries of Education, Agriculture, Women and Children Affairs, Health, and Water mentioned most often (see Figure 3). Thirty-five documents listed nongovernmental partners, with the majority mentioning United Nations (UN) agencies or NGOs (n=19 and n=21 respectively) as contributors, followed by bilateral and multilateral donors (n=15), and only three documents referred to the private sector as a contributor to the document. Alignment with other policies and frameworks was mentioned in more than half of the documents (n=38), with most of them claiming alignment with GTP (n=19) or the NNP I or II (n=11).

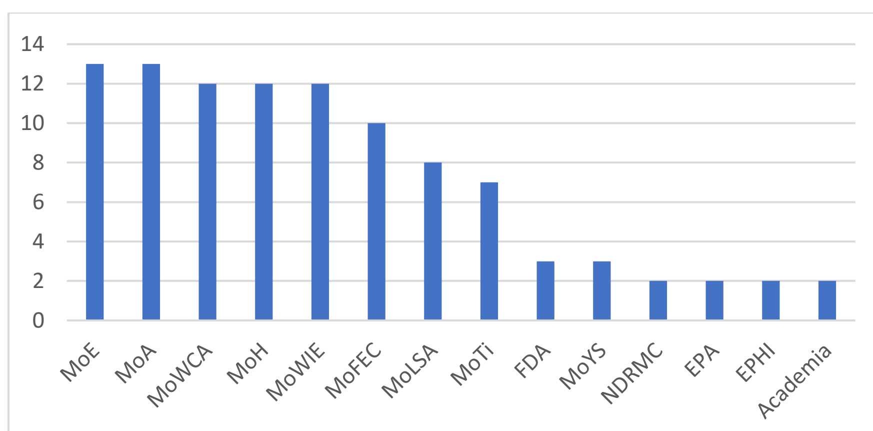

Figure 3: Number of Policy Documents with Different Contributing Sectors

5.2 Goals and Objectives of the Different Policies

Goals and objectives of the policy documents were analyzed to understand how nutrition was framed. Sixty of the documents reviewed included goals or objectives that were relevant to nutrition. In total, about 104 goals or objectives were identified and coded in terms of types of malnutrition, diets and determinants.

5.2.1 Objectives Related to Types of Malnutrition, Diets and Target Groups

Most of the objectives were specifically related to undernutrition or diets. Only three objectives referred to breastfeeding or hunger (Figure 4). General objectives related to nutrition aimed to achieve optimal nutritional status[126] or improve nutritional status in general.[158] “Zero stunting” in children under 2 years was the aim of the Seqota Declaration.[169] Reducing severe acute malnutrition was the objective of NNP I[149] and documents addressing humanitarian crises.[118] Ending hunger was the goal of the Agriculture Sector Investment Prioritization, NNP II, and the National School Feeding Strategy.[105, 148, 151] Improving diets, making them more diverse,[102, 118, 126] and rich in vitamins and minerals[136] were objectives of policy documents primarily from the agriculture and health sectors. Protecting, promoting, and supporting exclusive breastfeeding for the

first 6 months and continued breastfeeding for up to 2 years and beyond were objectives of the National Adolescent, Maternal, Infant and Young Child Nutrition (AMIYCN) guidelines and the Baby Food Control Directive.[106, 108] The National Food Fortification Program Plan aimed to reduce micronutrient deficiencies in general,[145] while the National Adolescent and Youth Health Strategy referred to iron-deficiency anemia among adolescent girls.[143]

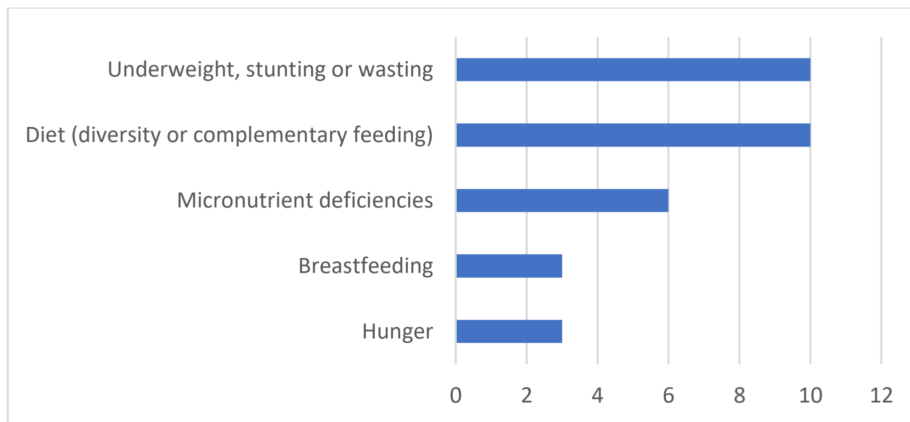

Figure 4: Number of Objectives Related to Types of Malnutrition and Immediate Causes

Policy objectives most often addressed children in general,[117, 136, 151, 152, 153, 170] specifically children under 5 years of age[118, 148, 149, 158, 169] or infants.[106, 107, 108, 140, 148, 169] Fewer objectives included women of reproductive age[106, 148, 149, 158, 169] or adolescents.[106, 143, 148]

5.2.2 Objectives Related to Determinants of Malnutrition

Most of the objectives were related to food production, education, or health. These were followed by objectives addressing water and sanitation, food security, and food safety (Figure 5).

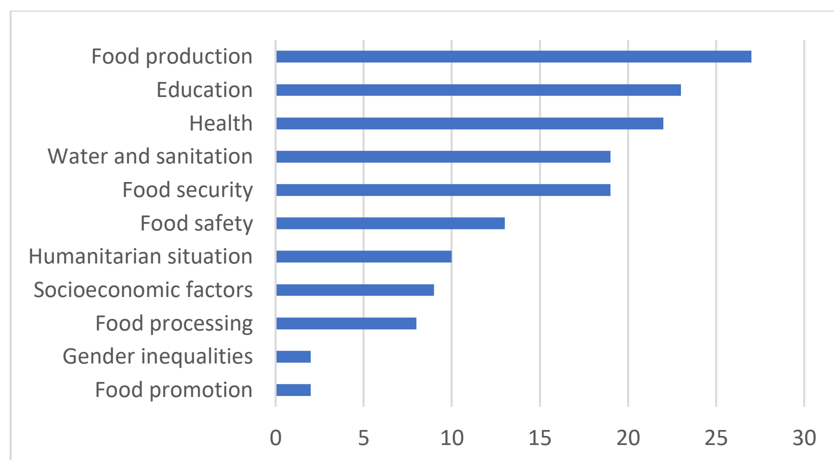

Figure 5: Number of Objectives Related to Different Determinants of Malnutrition

Objectives related to food production were mostly aiming to increase productivity and commercialization,[102, 105, 117, 120, 133, 136, 151, 169] increasing yield,[119] improving food and/or nutrition security,[104, 105, 117, 118, 120, ,154, 155, 164] and reducing food losses[163, 169] and/or nutrient losses along the value chain.[126] Other documents aimed to increase access and availability of adequate food year-

round[126, 158, 169] and diversify production with an emphasis on micronutrient-rich crops.[169] Poverty reduction, income of rural smallholders or urban poor,[102, 104, 120, 162, 169, 172] or protecting livelihoods[118] were additional objectives of the agriculture sector.

Improving food safety was an objective primarily mentioned in documents issued by the health sector or the federal government. Most regulations or directives issued by the EFDA were targeted at improving quality and safety of raw materials and food products in the processing of milk products, cereals, oils,[109, 115, 128, 142] of infant formula, follow up formula, and formulas for special nutritional purposes,[108, 140] and of imported food[129] or of food supplements.[130] Other EFDA regulations aimed to ensure the quality and safety of everyone involved in the delivery, importing, and distribution of food.[127] The National Hygiene and Environmental Health Strategy and the NFNP both aimed to ensure food safety throughout the value chain.[126, 147]

Food processing, labeling, and marketing were mentioned only in a few objectives. The National Food Fortification Program Plan of Action aimed to reduce micronutrient deficiencies through fortification of wheat, salt, and edible oil and other food vehicles.[145] The objective of the Baby Food Control Directive was to control the manufacturing, import, export, distribution, and packaging and labeling information of regulated products.[108] The Food Advertising Directive aimed to protect consumers' health by ensuring the reliability and truthfulness of food advertisements.[124]

The main health related objectives aimed to reduce morbidity, mortality, and disability and improve the health status,[137] protect the public from health risk or improve health in general[130, 160] or of particular population groups such as pastoralists[162] or students.[170] The National Health Policy further aimed to raise average life expectancy[146] and the National Strategic Action Plan for the Prevention and Control of NCDs (referred to as the "NCD Action Plan") envisioned reducing the burden of NCDs by promoting healthy lifestyles.[156] Saving lives, reducing morbidity and reducing the spread of illness and death from infectious disease, NCDs, and a variety of disasters were the aims of policies addressing humanitarian crises.[114, 118, 138]

Improving access and quality of health services was also a common objective. While the National Health Policy aimed to achieve universal health coverage,[146] other documents specified access to integrated primary healthcare[118] or to nutrition and nutrition-smart health services.[126] Other documents committed to ensuring quality of health services[132] by providing a comprehensive package of promotive, preventive, curative, and rehabilitative health services[137] or by improving the outcomes of clinical care, patient safety, and patient centeredness.[121]

Most objectives related to education addressed student retention in schools, the quality of education, nutrition education, and the overall school environment. The National School Health and Nutrition Strategy and the School Health Program both aimed to contribute to student retention in schools while promoting convenient and healthy school environments.[152, 170] Further objectives addressed the quality of education services[117, 132, 136, 152,] or educational achievement and efficiency.[151, 152, 170] The Homegrown School Feeding Program and the Emergency School Feeding Program also emphasized the importance of inclusive education to reduce dropouts.[117, 136] Documents addressing school health aimed to improve the knowledge of health "to produce a 'health conscious' generation"[170] or promote skills-based health and nutrition education.[152] The Food and Nutrition Policy more widely aimed to improve food and nutrition literacy in general.[126]

Objectives related to water and sanitation mostly addressed the access to safe water and improving personal hygiene. The Baby and Mother WASH implementation guidelines and the ONE WASH Program aimed to improve personal hygiene and environmental sanitation[107, 159, 160] and increase awareness of sanitation and hygiene in general[107, 147] or particularly in schools.[153] Further objectives were linked to increasing access to water for consumption and sanitation in general,[147, 159, 160] but also WASH services such as clean and potable water at schools creating safe and sanitary school environments.[152, 153, 169]

Gender-related objectives were rare and either targeted at supporting working women with childcare facilities [111] or aimed to improve social and gender equality and equity through providing school meals. [151]

5.3 Policy Instruments

Policy instruments or tools proposed in the policy documents were categorized based on the different governmental resources used for their implementation: information, legal, organizational, or financial instruments.[66,67]

5.3.1 Information Instruments

Most instruments suggested in the policy documents provided information in the form of nutrition education and SBCC to the general population as well as trainings and capacity building for health or agriculture extension workers or teachers.

Using SBCC with the support of information, education, and communication materials including leaflets, posters, booklets, job aids, and teaching manuals to support the adoption of "small do-able" actions to improve nutrition was suggested by multisectoral and agriculture documents.[149,

[102, 169] Participation in health and nutrition community SBCC sessions was also integrated in the PSNP IV and organized by health workers in consultation with agriculture extension workers.[164] The NFNP aimed to tailor SBCC for nutrition literacy to specific behaviors of pregnant and lactating women, children, and adolescents that are culturally appropriate and context specific.[126] Age-appropriate SBCC for nutrition education and information has also been suggested for adolescents.[143] SBCC specifically for emergency nutrition to promote improved infant and young child feeding was proposed by the Humanitarian and Disaster Resilience Plan.[118] In addition to applying SBCC to increase consumption of safe, diverse, and nutrient-dense foods, the Nutrition-Sensitive Agriculture (NSA) Strategy also suggested using SBCC to promote production of fruit and vegetables in households, communities, and schools[158]

Information instruments promoting the production and consumption of diverse foods, and also to build capacity of agriculture extension workers in nutrition-sensitive approaches, were most common in the agriculture sector. Raising awareness about nutrient content and use of poultry meat, eggs, food handling, storage, processing, and consumption has been proposed by policy documents of the agriculture sector.[102, 105, 162] Properly documenting and managing knowledge and information to reach smallholder farmers and other practitioners in a timely manner was suggested by the Agriculture Extension Strategy.[104] Agriculture extension services should help improve nutrition-sensitive knowledge and practices of farmers in crop and livestock production[104, 148] through nutrition education, but also through demonstration of nutrition-sensitive production. The AGP II provided details on how this could be achieved: training farmers through demonstration plots to promote home-gardens and the production of fruits, vegetables, nutritious root crops, cereals, oil seeds, biofortified crops, and pulses. Also included in this effort are training, improved milk, poultry, small ruminants, and fish production to make them part of a diverse diet.[102] In addition to demonstration sites at Farmer Training Centers, the NSA Strategy suggested using model farmers.[158] Training for farmers should also include post-harvest management practices,[163] food handling, storage, food safety, preservation, packaging,[158] pest monitoring,[138] increasing productivity, and supplying surplus to schools.[151]

Integrating nutrition education in agriculture demonstrations could be done by embedding nutritional messages in all trainings and demonstrations through Agricultural Innovation and Technology Centers.[169] Also, field schools have been suggested for nutrition education and promotion of homestead gardening to improve food utilization, safe food storage and preservation, and addressing nutritional needs of infants and women.[119] Building capacity of agriculture extension workers would require incorporating nutrition in pre-service trainings and in-service training for agriculture extension workers and program managers.[102, 149] This will require revisions

of curricula at Agriculture Technical Vocational Education and Training (ATVET) and higher-learning institutions to ensure nutrition-sensitive agriculture competencies.[158]

Evidence-based health education, tailored to specific age groups and specific behaviors, mostly related to underweight and less so to overweight, were proposed particularly in health sector policies. Both the National Health Policy and the Health Sector Transformation Plan called for evidence-based health education programs promoting healthy lifestyles and behaviors for individuals, families, and communities.[135, 137, 146] More specifically, health facility workers should be trained on essential nutrition actions[162] as well as counseling techniques related to AMIYCN.[106] Health workers should also have capacities to prepare enriched complementary foods.[169] Only a few documents addressed issues related to overweight, obesity, or nutrition-related NCDs, but they did suggest promoting physical activity to prevent childhood obesity in general [148, 169] and for adolescents specifically[143] through daily activities in schools, at home, and recreational and leisure activities.[170] The NNP I and II and NCD Action Plan further suggested increasing public awareness through national dietary guidelines on NCDs and their risk factors, such as dietary behaviors to reduce salt and sugar intake[148, 156] and to increase fruit and vegetable consumption while reducing consumption of sugar-sweetened beverages.[149]

With regard to specific age groups, promoting healthy dietary behaviors, nutrition education, and counseling services have been proposed for mothers to promote, support, and protect optimal breastfeeding practices and complementary feeding for infants under 2 years through individual and group counseling.[137, 148, 149] Also, adolescents,[143, 148, 169] and pregnant women,[148, 149, 169] and children 5 to 10 years of age[148] were targeted with information instruments.

The school setting has been recognized as a good platform for awareness raising and sharing nutrition information, acknowledging that literacy and numeracy education should be combined with essential life skills.[151, 152] Information instruments in schools focused on life-skills training, using SBCC approaches on hygiene and sanitation, dietary behavior change, and food safety for older and younger children.[151, 153, 159, 168, 169] Educational interventions could also be provided through cooking demonstrations, counseling on healthy diets and lifestyles,[170] or through integrating physical activity in youth education.[143] In addition to SBCC and health promotion interventions, the NNP I proposed incorporating nutrition into school curricula at primary and secondary levels, vocational trainings (such as ATVET) and higher-learning institutions, building capacity of teachers and teacher associations on nutrition and food security,[149] and updating textbooks with health and nutrition information.[152] Other channels for sharing information on nutrition included "student services"[116] or school clubs.[151, 160] The training of teachers and of parent-teacher association members in child nutrition areas, hygiene, and sanitation behavior was also proposed.[153, 169]

Proposed information instruments related to water and hygiene were mostly related to promoting handwashing and safe handling and preparation of food.[148, 169, 189] Promotion of food hygiene and safety was suggested at the household level[147] and also by broadcasting information on good sanitation and hygiene practices.[159]

Information instruments related to gender and nutrition were suggested only by a few policy documents. Giving women equal opportunities to participate in trainings, encouraging women's groups to participate in trainings or field schools,[103, 119] and providing support to female farmers in Farmer Training Centers, [158] were approaches suggested by the agriculture sector. In the education sector, it was proposed to review curricula content to improve relevance and gender responsiveness, with a preference for female learners and attention to life skills.[116]

Since audiences for the proposed instruments differ, some documents suggested making printed materials for trainings, guidelines, and pocket guides available at different levels to different stakeholders.[102, 103] This included, raising awareness in both public and private sectors at federal and regional levels, including government offices, research, and academia about food fortification, while promoting it to the consumers to raise the demand for and consumption of fortified foods.[145] The NNP I proposed building the food industry's capacity to meet international standards for quality and safety of fortified food and for locally manufactured or imported food items.[149] The AGP II also aimed to build nutrition capacity of the private sector and cooperatives.[102, 103]

5.3.2 Legal Instruments

Legal instruments that have already been endorsed, mostly aim to protect breastfeeding, ensure food safety, and support food fortification. Policy documents called for the enforcement of these while proposing potential new regulations to encourage consumption of healthy food and discourage consumption of unhealthy food.

Legal instruments related to maternity leave and the code on marketing of breastmilk substitutes aimed to protect, promote, and support breastfeeding. The AMIYCN guidelines and NNP I and II called for maternity regulations to facilitate breastfeeding by women in paid employment, granting extended maternity leave, followed by the right to one or more daily breaks or a daily reduction of hours of work to breastfeed.[106, 148, 149] The NNP II called for the enforcement of the already endorsed Baby Food Control Directive.[148]

Reinforcing regulations to ensure that food is produced, processed or fortified locally or that imported is safe for consumption, was promoted by several policy documents. The NFNP called for

implementing a legal framework for ensuring the safety and quality of foods throughout the value chain.[126] This would require developing or revising directives, standards, legislation, and manuals to control the quality and safety of food products, as well as issuing certificates of competence for manufacturers, importers, exporters, distributors, and quality control laboratories.[148] Food items that should be regulated include fortified foods, food fortificants or premixes, micronutrient supplements, breastmilk substitutes, complementary foods, therapeutic and supplementary foods, iodized salt, and water.[149] Enforcing food safety standards in handling, transportation, and warehouse, storage, and marketplace operations was not only considered important to reduce postharvest losses,[163] but should also to respond to and to manage food safety risks along the entire food chain, including during emergencies.[135] However, this would require strengthened mandates and capacities of food safety inspectorates, food laboratory facilities, and endorsement of regulation tools such as Good Manufacturing Practices, Good Hygiene Practices, Hazard Analysis Critical Control Points, and other ISO standards.[163, 147] Furthermore, for schools, food handlers, and school feeding programs that store and prepare food served to students need to be regulated,[169] but would require national standards for food procurement, safety and quality control and trainings for food handlers and feeding programs in and around schools.[152, 155] Standards for fortified wheat flour and edible oil had been initiated but require the development of further regulation and implementation directives.[145] NNP I and II called for food fortification regulations enforcing the monitoring and quality control of salt iodization at production sites.[148, 149]

Legal instruments aiming to encourage consumption of healthy food or to discourage unhealthy food have been proposed in a few policy documents. NNP II called for formulating and enforcing legislation and regulations that address unhealthy lifestyles and diets, ensuring production and marketing of healthy foods, promoting local production and consumption of fruits and vegetables, enforcing labeling, and minimizing the impact of marketing on dietary patterns of children, young people, and families.[148] The NCD Action Plan suggested specific legal options to promote healthy diets by replacing transfats and saturated fats with mono- and polyunsaturated fats, imposing regulations to reduce salt in manufactured food products, and increasing taxation of sugar-sweetened beverages, and front-of-package labeling of salt and sugar content of packed and processed food and drinks.[158] Furthermore, the School Health Program called for prohibition of promotion of soft drinks, sweets, and foods that are risk factors for obesity.[170]

5.3.3 Financial Instruments

Financial instruments suggested in the policy documents ranged from providing access to financial support, direct support with cash through social protection programs, feeding programs through schools or humanitarian interventions, micronutrient supplements, and agricultural inputs. Furthermore food-for-work or cash-for-work programs, such as the PSNP, and provision of water

and sanitation facilities were other instruments suggested by the policy documents. Taxes on unhealthy foods and drinks had already been put in place.

Credits, grants, microfinance services, and other income-generating initiatives to support increased access to nutritious food among vulnerable groups, particularly unemployed women and female headed households have been suggested by both NNPs.[148, 149] NNP I further suggested creating economic opportunities for women through development groups and cooperatives to locally produce complementary foods.[149] Specifically for the agriculture sector, it was suggested to facilitate credit linkages with microfinance institutions, promote income-generating activities,[158] and set up grant funds to create credit access for farmers to purchase the technologies,[105] such as postharvest loss minimizing technologies as well as servicing and maintenance of the technologies.[163] This improved access to finances or increased income should also help facilitate market access and linkages.[158]

Providing agricultural inputs, services, and technologies with the aim of building the economic capacity of the urban and rural populations were common instruments promoted by documents of the agriculture sector.[154] The NSA strategy proposed to strengthen veterinary and safe abattoir services and strengthen Farmer Training Centers to promote and demonstrate nutrition-sensitive technologies, such as irrigation, postharvest, food processing, and production of nutrient-dense varieties through biofortification for year-round availability and access to nutritious foods.[158] The School Feeding Program envisioned distributing improved seeds of cereals, pulses, vegetables, fruit, root crops, oil seeds, and promoting organic farming.[151] In humanitarian situations, financial instruments aimed to provide livestock feed, emergency seeds, essential farm tools and equipment, and restocking of core breed animals as well as destocking for households at risk of losing significant portions of their herds.[118, 138]

Strengthening and expanding the social cash transfer program for ultra-poor and labor constrained families was suggested by NNP I.[149] The PSNP IV design document proposed an expansion of its social cash transfers, making them nutrition-sensitive. As per its design, PSNP beneficiaries would receive direct support if they were exempt from public works. Pregnant women and caregivers of malnourished children were able to transition from public works to direct support.[164, 165] The NNP II and the Seqota Declaration also suggested linking food-insecure households with children under 2 years of age to social protection services and nutrition-sensitive livelihood and economic opportunities.[148, 169] Providing cash assistance, food, or its equivalent in cash to food-insecure beneficiaries are interventions suggested in humanitarian situations.[138] Food for work or public works in the PSNP are also tailored to identify and plan nutrition-sensitive public works, such as latrine construction, health-post construction, schoolroom construction, and

development of homestead/kitchen gardens on the land of female-headed households with severe labor shortages.[164, 165]

Providing food assistance and therapeutic food, either through school interventions, social protection programs, or humanitarian interventions was suggested by various documents. School feeding programs that provide free meals for pre- and primary school children in food insecure areas were suggested to relieve hunger, improve school attendance, and educational outcomes.[116, 148, 154, 155, 158, 169, 170] School feeding was proposed as part of school gardens or in collaboration with local farmers to ensure "homegrown" school feeding.[136, 138] The school feeding program also envisaged construction of cafeterias and kitchens.[151] School interventions could also include micronutrient supplementation, deworming,[116, 170] or financial support and education materials for poor pupils.[116] Feeding programs for food insecure households were part of the PSNP, including cereals and pulses.[164, 165] The Seqota Declaration envisaged targeted supplementary feeding for malnourished pregnant and lactating women,[169] which was also part of humanitarian plans in addition to distributing therapeutic food and essential drugs to treat and manage severe acute malnutrition.[114, 118, 149]

Providing micronutrient supplements and other nutrition services was suggested either through regular health services as part of the Comprehensive Integrated Nutrition Services (CINuS) or through schools to target children and adolescents. These proposed interventions included prevention and control of anemia, vitamin A and folic acid deficiency, and deworming.[118, 138, 149, 169] This could be implemented through supplementation, targeted home fortification, or multi-micronutrient supplements, micronutrient powders, or lipid-based nutrient supplements.[169]

Promoting access to sufficient resources to allow for access to safe and clean water, sanitation, and irrigation schemes in the community, but also specifically in schools was suggested in policy documents. Schools should provide services and resources to improve the physical facilities and foster a safe and healthy environment[116] to ensure a healthy, safe, and secure learning environment for boys and girls[152] with access to safe and clean water.[148] In humanitarian settings, developing and providing adequate, safe, and inclusive water supply through various sources such as piped water, springs, boreholes, and water harvesting as well as water trucking was suggested.[153] The development of clean, child-friendly, inclusive, gender specific, adequate and improved latrines, handwashing, and urinal facilities should take safety, ease of maintenance, durability, and cleanability into account.[153, 159]

Taxation as a tool to reduce consumption of unhealthy food was only suggested by the NCD Action Plan. This would be done through increasing taxation of sugar-sweetened beverages,(156) while the already endorsed Excise tax imposes taxes on foods high in saturated fats and salt.(122)

Some of the policy documents also suggested ways to improve resource mobilization for nutrition programming and efficiency of funding. The NFNP called for a system to maximize resource mobilization and allocation from the government treasury, community, private sector, development partners, and other national, regional, and international institutions and organizations through fostering strong linkages for optimal learning, research, and technology transfer.(126) Fostering international health partnerships, pooled funding, public-private partnerships, and collaboration with NGOs was also suggested.(135, 151) Leveraging partnerships with private sector and development partners could be a mechanism to support food fortification.(145) Engaging parents from schools to support school feeding programs and supporting local food industries to produce supplementary food or snacks for school feeding was suggested to ensure sustainable funding of school feeding.(151)

5.3.4 Organizational Instruments

Organizational instruments were mostly proposed for improving existing institutions, mechanisms, and services. However, establishment of new coordination structures for multisectoral and vertical coordination along administrative levels was also suggested.

Improving health and nutrition services through the community and schools was suggested in the health, education, and agriculture sectors. The policy documents of the health sector aimed to provide preventive, curative, rehabilitative, and emergency health services and ensure quality and safety.(135) Quality improvement was particularly envisaged for priority health conditions and diseases like maternal and child health, malnutrition, communicable and noncommunicable diseases, and clinical and surgical services.(121) For remote areas of pastoral communities and during humanitarian crises, policy documents called for mobile health and nutrition teams to improve access to nutrition services, ensuring a minimum standard for young children in special situations.(102, 148) As mentioned under "information instruments," schools are recognized as platforms to provide health and nutrition services. However, the National School Health and Nutrition Strategy called for these services to be simple, safe, and familiar, and address problems that are prevalent and recognized as important within the community.(152) Ensuring supply of technologies, financial and human skills for farmers, and partnerships with agro-processing and farming enterprises were suggested by the Post-Harvest Management Strategy.(163)

Considering potential overlaps in targeting the same communities and households with different services, several documents suggested ways to ensure linkages between sectoral programs. The School Health Program suggested linking children diagnosed with acute malnutrition to feeding programs,[170] the PSNP promoted linkages between agriculture and health extension workers, linking CINuS, which is part of the health extension package, with SBCC sessions for PSNP beneficiaries.[164, 165]

NNP II suggested integrating nutritional assessments, counseling, and support in HIV treatment, care, and support services; strengthening the capacity of the agriculture and livestock sectors to better integrate nutrition-sensitive interventions and indicators into agriculture programs, policies, and guidelines and linking school health and nutrition interventions with other WASH and health programs in schools.[148, 158] The School Feeding Strategy proposed linking micronutrient services for adolescent girls and other health services such as deworming with school meal programs.[151] School feeding programs could further link up with programs promoting farming, horticulture, fisheries, small ruminant animals, and poultry production in and around schools as well as with national social safety net programs such as the PSNP.[151]

Establishing new multisectoral governing bodies to coordinate nutrition-related programs and issues across sectors was proposed in several policy outputs. The NFNP proposed to establish a Food and Nutrition governing body and institutional arrangements from federal to *kebele* levels with leadership of the highest government decision-makers to govern and coordinate the implementation of the NFNP.[126] Other policy documents proposed several other structures, for example, postharvest management institutional and operational structures were promoted in the Post-harvest Management Strategy to ensure clear roles, responsibilities, and accountability.[163] The National Food Fortification Program Plan of Action called for the National Food Fortification Steering Committee to be strengthened.[145] The School Feeding Strategy aimed to strengthen institutional arrangements between different ministries while establishing a school feeding platform chaired by higher influential leaders.[151] Also, in the agriculture sector, policy documents called to establish and strengthen food and nutrition structures within MoA and its affiliates at all levels, ensuring regular planning and review meetings of relevant directorates and sectors.[105, 158] The NCD Action Plan suggested a multisectoral coordination mechanism to prevent and control NCDs and risk factors at all levels of the government to strengthen multisectoral responses.[156]

Several policy documents promoted vertical coordination with multiple sectors and stakeholders and service provision at all levels from the highest to the lowest administrative level. The Food and Nutrition governing body proposed by the NFNP should ensure authorities, accountability, legal framework, and functional organizational structure from federal to *kebele* levels.[126] This would also require strengthening capacity, which the NNP II envisaged will facilitate comprehensive integration

of nutrition into planning and implementing initiatives.[148] Also, school WASH structures and school feeding programs should be established from federal to school level with shared responsibilities and accountability mechanisms.[151, 153] Integration of prevention and control of NCDs and their risk factors should be ensured in multisectoral Woreda Transformation Platforms.[156]

Multisectoral coordination could be done by establishing effective interdisciplinary post-harvest management coordination systems.[163] Strengthening the Emergency Nutrition Coordination Unit within the MoA, which consists of different governmental and nongovernmental stakeholders, could ensure coordination of specialized nutrition assessments.[114] The school feeding program aimed to coordinate with Woreda health offices, EFDA, and universities to ensure technical assistance for safe food preparation.[151] Gender considerations in improving services have been rare. The school feeding program encourages the participation of women in all aspects of school meal provision, more women in the management and leadership of the school feeding program and building their capacity to manage the operation. It also includes engaging women's enterprises to benefit from school feeding in food production, preparation, agro-processing, packing, and storage.[151]

5.4 Evidence-based Decision-making

5.4.1 Evidence Used in the Policy Documents

The majority of policy documents provided some references to publications with most of the evidence originating from Ethiopia, from surveys as well as research studies. Forty documents provided actual citations as footnotes or as a reference list at the end of the document. While many documents provided data on the malnutrition burden, its consequences, and potential solutions, they did not always provide the references they used. Most of the evidence originated from Ethiopian surveys and studies, largely provided by Ethiopian government agencies, particularly the Central Statistics Agency (CSA) and the Ethiopian Public Health Institute (EPHI). The EDHS are jointly conducted by CSA, EPHI, MoH and international consultants. The estimates of child anthropometry presented in the EDHS have been deemed the official numbers since the mid-2000s, which might explain why it was the most widely quoted national survey, particularly for stunting data. The National Food Consumption Survey, the Micronutrient Survey, and the School Health Nutrition Survey were also frequently quoted. While half of the evidence originated from surveys, almost as much evidence from research studies was used from research studies. In terms of research conducted in Ethiopia, the Cost of Hunger study was widely quoted. [135, 148, 151, 169, 170] It estimated the cost of child undernutrition in terms of Gross Domestic Product, which was an important argument to advocate for more action on undernutrition.

Documents from the health sector or prepared by multiple sectors used the most global evidence (Figure 6). Most of the global evidence that was provided in the policy documents stemmed from UN reports or guidelines, such as the Food and Agriculture Organization (FAO) report on “State of Food Insecurity” or the World Health Organization (WHO) or UNICEF reports on micronutrient deficiencies. Global UN reports were also used to put data from Ethiopia into context with global rankings. Global studies or guidelines were also used to advocate for potential interventions. The National School Feeding Strategy mentioned the recognized potential of schools as a platform for awareness raising, as described in a policy brief of the Global Panel on Agriculture and Food Systems for Nutrition. [151]

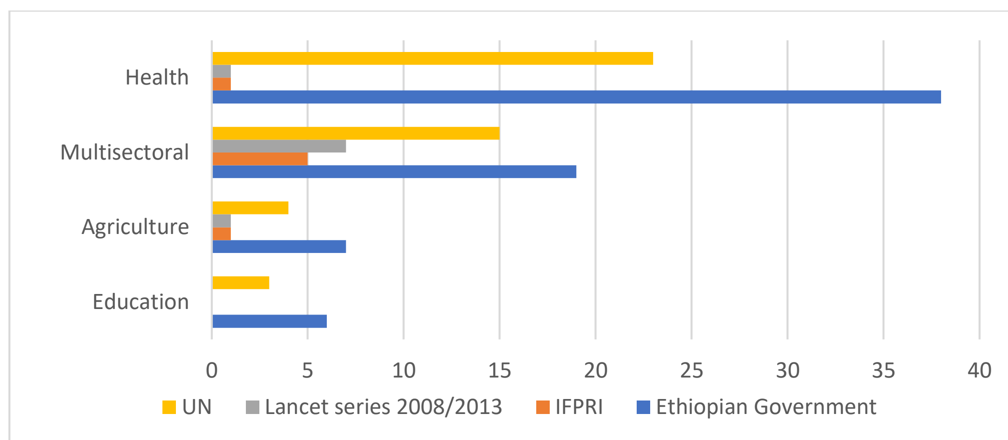

Figure 6: Sources of Evidence by Sector (Number of References)

In addition to evidence from UN reports and global guidelines, the Global Nutrition Report and specific Lancet series were quoted in some policy documents. Particularly the Lancet series of 2008 and 2013 seem to have informed some of the policy documents. The 2013 Lancet series on “Maternal and Child Nutrition“ was referenced in the Seqota Declaration, the AMIYC Guidelines, the NNP II, and the NCD Action Plan.[106, 148, 156, 169] The main finding of these series used in the policy documents was related to the importance of nutrition-sensitive interventions for stunting reduction, which nutrition specific interventions alone would not be able to achieve. The Lancet series from 2008 was referenced in the NNP I regarding the stunting burden in low- and middle-income countries and the importance of addressing it.[149]

Most policy documents explained the development process for the documents at least partially, including the contribution of different stakeholders and timelines. However, very few actually elaborated how they used evidence for the documents’ development. Only the Post-harvest Management Strategy explained the type of evidence and how it was used to identify the respective objectives of the strategy:

> *“For each strategic objective, a set of intervention areas were identified through literature review, field studies undertaken by the author/consultant, extensive interviews with a whole range of actors in the agricultural value chain including government officials.”* [163]

Most evidence presented in the policy documents was related to undernutrition, mostly to chronic and acute malnutrition of children under 5 years of age and the progress made in reducing chronic malnutrition (Figure 7). This was followed by evidence on micronutrient deficiencies and diets. Evidence on overweight and obesity was limited in Ethiopia and mostly originated from the EDHS or global sources such as the WHO. The lack of data related to overweight and obesity as risk factors for NCDs was highlighted by the NCD Action Plan:

> *"To increase the use of data on NCDs and risk factors for evidence-based decision making[….] a comprehensive monitoring framework should include relevant outcomes (mortality and morbidity), exposures (risk factors), and health system capacity and response."* [156]

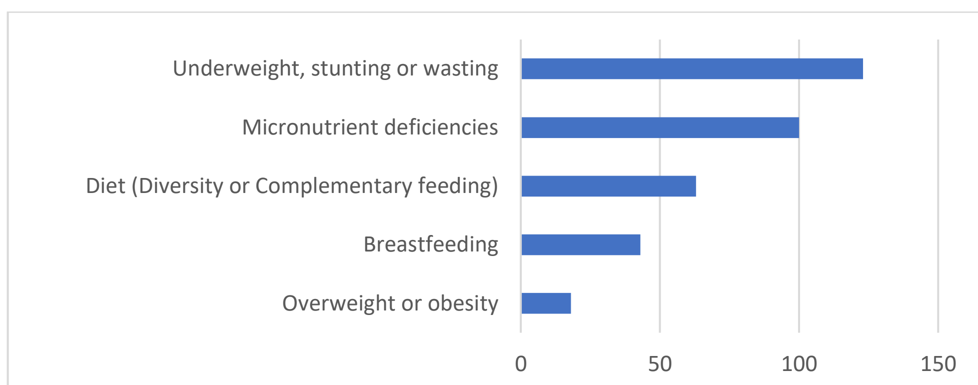

Figure 7: Number of References for Different Types of Malnutrition and Immediate Causes

Almost all of the policy documents that provided any evidence used data on children under 5 years of age and women of reproductive age. Only about 20 references were made to evidence on adolescents. The lack of data on adolescents was also highlighted by the Adolescent and Youth Health Strategy:

> *"Lack of adequate operational researches on adolescent and youth friendly services and limited – […] Nationally representative surveys or studies on the prevalence of NCDs and their risk factors among adolescents and youth are not available*." [143]

Evidence on determinants of malnutrition was mostly related to health, food production, water and sanitation, or gender inequality. Evidence related to health was either on the burden of malnutrition or nutrition-related diseases and the implications for health or for reproductive health.[106]

Food production evidence was mostly presented in terms of what types of crops were produced, to what extent, potential food loss,[163] and food insecurity[135, 169] as well as the contribution of crop production to economic growth.[120, 132,133] However, the NSA Strategy also referred to the effect of food production on diets and malnutrition.[158]

Studies on water and sanitation and the impact on chronic malnutrition were referenced in a few sector-specific documents.[107, 147, 169] Policy documents referenced the "Situation Analysis of the Nutrition Sector in Ethiopia", providing evidence on how poor sanitation could affect chronic malnutrition.[34.] Studies from Zimbabwe and Mali were also quoted in this context.[107]

Determinants related to gender and women empowerment were mentioned in few policy documents, [104, 106, 149,169] and were strongly emphasized in the NNP I:

> *"Gender inequalities can be both a cause and an effect of hunger and malnutrition. Not surprisingly, higher levels of gender inequality are associated with higher levels of under-nutrition, both acute and chronic (FAO, 2011). … The nutritional status of girls and women is affected not only by biological factors but also by systematic inequalities within households and the sociocultural norms prevalent in a specific community. Given these unequal conditions, women and girls have poorer nutrition outcomes throughout the lifecycle, higher rates of mortality, less access to health care and greater household food insecurity (UNSCN, 2004)."* [149]

5.4.2 Promotion of Evidence-based Decision-making

Twenty-two documents promoted the use of evidence and emphasized the importance of evidence-based policymaking. The GTP II suggested building capacity in health and other relevant disciplines for this purpose:

> *"To develop and implement evidence-based decision making and to develop long term strategies, systems will be established to build research capacity to be conducted in health or other relevant disciplines."* [133]

The Health Sector Development Program (HSDP IV) dedicated one of its ten strategic objectives to improve evidence-based decision-making:

> *"This [strategic] objective is about improving decision making through evidence generation, translation and dissemination. It promotes and advocates the culture of generating quality data, ensuring transmission and acquisition of complete and timely data, verification, analysis and synthesis of data from multiple sources and using evidence at all levels to improve quality and equity of health services."* [135]

Using monitoring, evaluation and learning activities to identify constraints and generate information for decision-making was proposed in several policy and program documents.[104, 116, 137, 163, 164] The Agricultural Extension Strategy of Ethiopia emphasized that *"decisions are changed into actions when they are based on facts and realities on the ground."*[104]

Few documents suggested generating new evidence or ways to disseminate the evidence to different target groups. Generating new evidence for "*decision-making, learning and accountability*" was proposed by the NFNP, [126] while the Seqota Declaration committed to better use of existing data by synthesizing existing evidence for decision-making: "*Conduct systematic reviews and publications of the existing nutrition data for programming and decision-making.*" [169]

The Seqota Declaration further highlighted how dissemination of different sources of information was envisaged:

> *"The Seqota Declaration Implementation Plan shall use various mechanisms to disseminate information to inform decisions at various levels of the implementation system and to inform the public at large. […] which will be disseminated through publications, reports, workshop proceedings and policy briefs."* [169]

The Education Sector Development Program V highlighted the importance of targeting the right information to the respective audiences *"to inform different types of management decisions at different levels. […] it must be ensured that the right information is available to the right audience(s)."* [116]

6. Discussion and Recommendations for Future Policies

This review found a rich nutrition policy landscape in Ethiopia with the problem of malnutrition recognized in policy documents and an increasing awareness of the cross-cutting nature of the response. Overall, there is a good mix of nutrition policy instruments although some sectors did not formulate nutrition goals and policy instruments are not aligned across sectors, types of malnutrition, or target groups.[61]

The following section will include a discussion followed by recommendations for policies and policy instruments in general and for making policies more evidence based. The discussion and recommendations emanate from findings of the review which considered published nutrition policy documents and did not consider the actual implementation of these policies nor the challenges related to their implementation.

6.1 Discussion

The malnutrition situation in Ethiopia is only partially improving, while at the same time the double burden of malnutrition is becoming more visible and would require comprehensive, multisectoral policies to address it. While Ethiopia is still suffering from a high burden of stunting and wasting, the transition to an epidemiologic panorama dominated by NCDs is underway. While

many of the reviewed policies recognize and act on issues related to malnutrition, the focus is still more on undernutrition than on all forms of malnutrition. An important achievement in the policy response to malnutrition has been the realization of the multisectoral nature of malnutrition and the need for multiple sectors to take responsibility. This has particularly increased from the 2000s with the National Nutrition Strategy, followed by the revised NNP in 2013, which have progressively become more multisectoral. The agriculture sector started adopting a nutrition-sensitive approach from about 2015 through the AGP II and PSNP IV. Also, the education sector has integrated nutrition as part of its school-based programs. The Seqota Declaration was an important step, particularly for bringing the health, agriculture, water, and education sectors together as part of one initiative. However, as pointed out previously,(37,58,71-73) coordination among sectors is not fully functioning, particularly at lower administrative levels, and the existing coordination bodies do not have a clear institutional anchor. Therefore, there have been calls for a supra-ministerial structure(58,71) and better coordination of multisectoral issues such as food fortification, (145) NCDs, (156) school feeding.(151)

Nutrition was framed largely in terms of undernutrition in the objectives of the policy documents, particularly in sectors outside of health. Only policy documents prepared by the health sector or by multiple sectors such as the NNP or the Seqota Declaration recognized all forms of malnutrition. However, there seemed to be overall agreement that food insecurity, undernutrition, and micronutrient deficiencies are major problems in Ethiopia. This is consistent with other studies(74) and implies that the "undernutrition bias" described in the 1990s might still be valid.(46) Even documents that did refer to overweight (148, 156) only mentioned it as a risk factor of NCDs and not as a public health concern of its own. This seems in line with other studies looking at framing of nutrition, where undernutrition was considered the main problem(74) and an awareness of the variety of nutrition problems was found only in some health sector studies,(75) but less so in sectors not directly working in nutrition.(51,76)

Policy instruments proposed and produced as part of the policy process are numerous but mostly focus on education and information and often miss the opportunity to make nutrition promotion their objective. While this review did not consider the implementation of the policies, an interesting observation was made when reviewing the guidelines that were developed to support policies and programs. For instance, in 2016, the first year of NNP II, a number of key guidelines were produced on micronutrient deficiencies and adolescent, maternal, and infant nutrition, as well as a family health guide and the NNP multisectoral implementation guidelines. However, as pointed out by our analysis of this review, most of the guidelines and tools proposed or produced as part of the policy process focused on education and information. Financial instruments were mostly applied in

humanitarian situations or food security programs. Legal instruments largely aimed to improve food safety during production and processing, protect breastfeeding, and regulate fortification.

While some of the policy instruments might have an impact on diet, they do not consider nutrition as part of their objectives. For instance, the GTP II calls for increasing the production of fruits and vegetables, but with the aim of increasing exports rather than increasing consumption. Another example is the recent excise tax on food items high in sugar, fat, or salt, which could have an impact on consumption, but does not seem to be motivated by health promotion. Also, the Directive on Supplements could aim to prevent micronutrient deficiencies but is mostly focused on food safety.

Commitment to evidence-based policymaking was visible from several policy documents, but the use of evidence in the policy documents is often incomplete. In line with how nutrition was framed as part of the objectives, the evidence provided in the policy documents also mostly referred to the stunting burden and the impact of stunting on the economy(47) as well as 2008 and 2013 Lancet series. The influence of the EDHS, the Cost of Hunger study, and the Lancet series was also pointed out by different studies.(55,71) This implies that both global and Ethiopian evidence was used consistently. However, when it comes to research studies from Ethiopia, policy documents usually refer to them randomly and only to individual studies and rarely to reviews of Ethiopian studies. Research on adolescents, overweight, and nutrition-related NCDs is widely missing in Ethiopia, a gap which has also been addressed in relevant policy documents.(143, 156) The evidence was primarily on health issues, a bias which has been associated with making the health sector responsible for nutrition.(77) Since about 2015, Ethiopian evidence on the nutrition–agriculture linkages has emerged, which might have contributed to the agriculture sector adopting more nutrition-sensitive approaches. Annex 3 provides a visualization of the policy output timelines and how they coincided with the publication of selected evidence. Furthermore, considering that a number of policy instruments are targeted toward nutrition education and awareness raising, hardly any of the evidence provided addressed issues around knowledge, behaviors, or perceptions.

6.2 Recommendations for Policies and Policy Instruments in General

- **Policies addressing nutrition should make more effort to consider all forms of malnutrition simultaneously and not in isolation**(7) by ensuring access to affordable and quality diets and discouraging a shift to diets rich in ultraprocessed foods that are high in sugar, fat, and salt. At the same time, promotion of breastfeeding and complementary feeding should aim to protect children not only from undernutrition but also from obesity later in life.(78) Addressing the double burden of malnutrition should therefore be ensured in terms of the goal setting, the selection of policy instruments, and generation of evidence.

- **More long-term integration of nutrition is needed to obtain or maintain political will for nutrition-sensitive approaches.** In agriculture programs, there has been momentum in adopting nutrition-sensitive approaches. However, more long-term integration of nutrition in agriculture will be important. For instance, the next phase of the sector's Policy and Investment Framework could put a stronger emphasis on nutrition.[79] In other sectors where mainstreaming has not fully taken off , this will be even more relevant.[80] Using "knowledge brokers" who have multisectoral understanding[81] or nutrition champions[71,74] could help strengthen multisectoral linkages as well as sectoral accountability.

- **Gender issues need more than a mention in documents, but also long-term action targeting deeply rooted social norms.** While gender policies are in place already, policies alone might not be enough after centuries of marginalization.[82] More should be done in terms of addressing social norms and women's daily struggles, such as travel times to water points to reduce women's workloads in rural Ethiopia,[35] improving access to credit and extension services, training on agricultural technologies, and food distribution within the household.[83]

- **Using the right mix of policy instruments will be important to address nutrition more broadly.** Education instruments and interventions need to be linked with instruments addressing environmental aspects (such as legal and organizational instruments), without putting most of the responsibility on the individual and therefore making it difficult to improve dietary behaviors when food is not available, accessible, safe, or affordable. Policies and programs should therefore ensure that efforts to improve nutrition knowledge are complemented by efforts to make markets not only more accessible but also healthier.[14]

- **Tailoring existing instruments more toward improving nutrition would better leverage existing institutionalized efforts.** While most identified legal documents focus on food safety for locally produced as well as imported products, legal interventions could be considered to protect nutritious food or discourage consumption of unhealthy food. The excise tax is a step in the right direction but linking such efforts to nutrition objectives and expanding them to regulating promotion and availability of unhealthy foods, particularly in and around schools, would be an important next step.

6.3 Recommendations for Making Policies More Evidence-based

- **Producing syntheses of existing evidence from Ethiopia and dissemination events with concrete and simple advocacy messages tailored to policymakers should be considered.** It was highlighted that existing evidence seems mainly descriptive, with insufficient intervention-related evidence to support policy development.[84] Capacity and leadership are also needed to synthesize available evidence, allowing policymakers to make informed decisions about different policy options.[84-86] Evidence should therefore inform different aspects of decision-making: including factual information, but also context and feasibility aspects of a decision.[87]

- **Research on effectiveness of interventions in the local context is particularly needed.** Since investments in nutrition may not be seen in the immediate future, it may be difficult to maintain political will for instance in nutrition-sensitive agriculture, where there has been important momentum in the last five years.[55] For other sectors, this political commitment is still at earlier stages and may require even more effort. Collaborative program evaluations, such as those done for infant and young child feeding programs, could be important contributions to intervention research.[88]

- **Linking policymaking with evidence also requires communication skills and effort to engage in policy dialogue**.[84] Making research relevant and readable, understanding the policy process, building relationships with policymakers and engaging with them routinely, flexibly and humbly, were among key recommendations for researchers to successfully influence policy.[89]

6.4 Limitations of the Policy Review

This review does not come without limitations. It only included government documents that were available online or electronically and thus may have missed documents that were only available as hard copies. This review therefore only captures government commitments outlined in policy documents and cannot make any conclusions in terms of implementation of these policies. Similar to a NIPN policy review conducted in Uganda,[26] we found that references of the evidence were not consistent and therefore made it difficult to identify the actual source. Our findings on evidence use in policy documents are therefore not complete since not all the evidence provided in the policy documents could be categorized. At the time of the data collection, public health measures related to COVID-19 were starting to be enforced, which posed a challenge for conducting interviews with stakeholders or consultations to validate findings.

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8. Annexes

Annex 1 – Methodology of the Review

Search Strategy and Selection Process

Searches were conducted online using Google Scholar and Scopus (www.scopus.com) with the following search terms: (nutrition OR food OR education OR agriculture OR water OR transport OR trade OR urban OR health OR women OR children OR adolescents) AND ("policy" OR "plan" OR "strategy" OR "program*") AND Ethiopia. In addition, websites of different ministries and government institutions (health, agriculture, water and irrigation, sport, education, innovation and technology, finance, transport, trade and industry, urban development, science and higher education, women, children and youth, labor and social affairs, city administration) and websites of the WHO, FAO, UNICEF, Intergovernmental Authority on Development , the African Union, the United States Agency for International Development (USAID), and NGOs (CARE, Save the Children, and Concern) were searched. In addition, 16 ministries or governmental institutions were contacted by email of which eight focal persons in ministries were also contacted in person with the aim to collect relevant documents (see list of contacted institutions in table 1a below. About half of the documents had already been collected previously by IFPRI as part of its policy work.

Policy outputs and instruments were included in this review if their publication date was 2010 or later to understand the most recent developments and not to overlap with policy reviews conducted in the past. Included documents had to be published and endorsed by at least one of the ministries (or related sectors) that were signatories of the NNP and therefore linked to nutrition. Documents from institutions linked to the respective ministries, such as the Ethiopian Food and Drug Administration, were also included. Included documents did not always have food or nutrition as part of their objectives but had to have an action or recommendation addressing food or nutrition. Geographic scope of the documents was restricted to national documents published in English or Amharic, one of the official languages. If documents were in Amharic only, they were reviewed by Amharic-speaking team members and partially translated. Documents that had neither goals, nor proposed actions, nor recommendations on food and nutrition were excluded.

Different policy outputs were identified as part of the search. Policy instruments proposed within policy outputs as well as actual instruments such as guidelines and legal documents have been considered. Guidelines that were entirely targeted to educate the public on specific dietary or hygiene behaviors were categized as information instruments. Operational guidelines, such as

program implementation manuals, were considered and coded like other policy outputs in terms of the policy instruments proposed within the document.

Table 3. List of Ministries Contacted

No	Name of Ministry
1	Disaster Risk Management Commission
2	Food and Drug Administration
3	Ministry of Agriculture and Natural Resources
4	Ministry of Finance and Economic Development
5	Ministry of Foreign Affairs
6	Ministry of Innovation and Technology
7	Ministry of Labour and Social Affairs
8	Ministry of Mines
9	Ministry of Transport
10	Ministry of Urban Development and Construction
11	Ministry of Water, Irrigation and Energy
12	Ministry of Women's, Children and Youth Affairs
13	Ministry of Youth and Sport
14	Ministry of Education
15	Ministry of Health
16	Ministry of Trade and Industry - Food Beverage and Pharmaceutical Industry Development Institute

Coding Approach

Policy output documents (policies, strategies, action plans, programs, legal documents) were coded and analyzed in terms of their objectives or goals. Codes related to diets and type of malnutrition that the goal addressed (over- or underweight, micronutrient deficiencies, diet, breastfeeding, hunger), the age group that it referred to (infants under 2 years, children 2–5 years, adolescents 10–19 years, women of reproductive age 15–49 years or men 15–49 years, elderly, or general population) or the determinants of malnutrition (health, water and sanitation, food security, food production, food safety, food processing, food promotion, food prices, food availability, social protection, macroeconomy, humanitarian situation, human rights, education, socioeconomic, gender inequalities, climate change).

Policy instruments, such as guidelines and legal documents, were categorized using Hood's classification into information, financial, legal or organizational instruments[66] and coded in terms of the type of malnutrition, the age group, or determinant that the instrument addressed.

The evidence was categorized into evidence from Ethiopia, other countries, or global studies as well as into national and global surveys or research studies. Also, like the goals, the type of evidence was categorized into: type of malnutrition or immediate causes that the goal addressed (over- or underweight, micronutrient deficiencies, diet, breastfeeding, hunger), the age group that it referred to (infants under 2 years, children 2–5 years, adolescents 10–19 years, women of reproductive age 15–49 years or men 15–49 years, elderly, or general population) or the determinants of malnutrition (health, water and sanitation, food security, food production, food safety, food processing, food promotion, food prices, food availability, social protection, macroeconomy, humanitarian situation, human rights, education, socioeconomic, gender inequalities, climate change).

Annex 2 - List of Documents Included in the Review

Table 2. List of Included Documents

Reference Number	Sector	Title of Document (Year)
101	MoA-WB	Agricultural Growth Program II Project Appraisal Document (2015)
102	MoA	Agricultural Growth Program II Program Design Document (2014)
103	MoA	Agricultural Growth Program II Program Implementation Manual (2015)
104	MoA	Agricultural Extension Strategy of Ethiopia (2017)
105	MoA	Agriculture Sector Investment Prioritization (2019)
106	MoH	Adolescent, Maternal Infant and Young Child Nutrition guideline (2016)
107	MoH	Baby and Mother WASH Implementation guideline (2017)
108	EFDA	Baby Food Control Directive (2018)
109	EFDA	Cereal and Cereal Product Manufacturers Internal Quality Control Establishment Directive (2017)
110	MoWCA	Child Right Mainstream Guideline (2016)
111	MoWCA	Children Daycare Guidelines (2016)
112	MoH	Community-Led Total Sanitation and Hygiene Training Manual (2012)
113	MoH	Comprehensive Integrated Nutrition Services (2016)
114	NDRMC	Disaster Risk Management Strategic Program and Investment Framework
115	EFDA	Edible oil Good Manufacturing Practice (2017)
116	MoE	Education Sector Development Program V - Program Action Plan (2015)
117	MoE	Emergency School Feeding Program Implementation Guideline (2015)
118	NDRMC	Ethiopia Humanitarian and Disaster Resilience Plan (2018)
119	FDRE-WB	Ethiopia Lowlands Livelihood Resilience Project (2019)
120	MoA	Ethiopia's Agricultural Sector Policy and Investment Framework (PIF) (2010)
121	MoH	Ethiopian National Health Care Quality Strategy
122	Ministry of Revenues	Excise Tax (2019)
123	MoH	Family Health Guide (2016)
124	EFDA	Food Advertising Directive (2015)
125	EFDA	Food and Medicine Administration Proclamation No. 1112 (2019)

126	FDRE	Food and Nutrition Policy (2018)
127	EFDA	Food Exporters Importers and Wholesalers Directive (2014)
128	EFDA	Food Manufacturing Factories Pre-licensing Directive (2017)
129	EFDA	Food Registration Directive (2019)
130	EFDA	Food Supplement Directive (2016)
131	MoWCA	Gender Analysis Training Module (2015)
132	MOFED	Growth and Transformation Plan I (2010)
133	National Planning Commission	Growth and Transformation Plan II (2016)
134	MoH	Guidelines for the Prevention and Control of Micronutrient Deficiencies (2016)
135	MoH	Health Sector Transformation Plan (HSTP) (2015)
136	MoE	Homegrown School Feeding Implementation Manual (2014)
137	MoH	Health Sector Development Program (HSDP IV) (2010)
138	NDRMC	Humanitarian Response Plan (2019)
139	MoH	Hygiene and Environmental Health and Neglected Tropical Diseases (2018)
140	EFDA	Infant Formula, Follow up Formula and Formulas for Special Nutritional Purpose Directive (2011)
141	MoH	Integrated Refresher Training for Health Extension Workers - Community Based Maternal, Newborn and Child Health Program (2011)
142	EFDA	Milk Product Factory Internal Quality Management System Guideline (2018)
143	MoH	National Adolescent and Youth Health Strategy (2016)
144	MoWCA	National Children's Policy (2017)
145	MOTI	National Food Fortification Program Plan of Action (2017)
146	MoH	National Health Policy (2011)
147	MoH	National Hygiene and Environmental Health Strategy (2016)
148	FDRE	National Nutrition Program II (2016)
149	FDRE	National Nutrition Program I (2013)
150	MoA	National Pulses Strategy
151	MoE	National School Feeding Strategy (2017)
152	MoE	National School Health and Nutrition Strategy (2012)
153	MoE	National School Water, Sanitation and Hygiene (SWASH) Strategy and Implementation Action Plan (2017)
154	MOLSA	National Social Protection Policy (2014)
155	MOLSA	National Social Protection Strategy (2016)
156	MoH	National Strategic Action Plan for the Prevention and Control of Non-Communicable Diseases (2019)
157	FDRE	NNP Multisectoral Implementation Guideline (2016)
158	MoA	Nutrition Sensitive Agriculture Strategy (2016)
159	FDRE	ONE WASH National Program POM (2014)
160	FDRE	ONE WASH National Program Document (2013)
161	FDRE	ONE WASH phase II - Program Document (1018)
162	FDRE-WB	Pastoral Community Development Project – Project Appraisal Document (2013)

163	MoA	Post-Harvest Management Strategy in Grains in Ethiopia (2018)
164	MoA	Productive Safety Net Program IV - Design Document (2014)
165	MoA	Productive Safety Net Program IV - Program Implementation Manual (2014)
166	EFDA	Regulation for Food, Medicine and Health Care Administration and Control No 299 (2014)
167	FDRE	Regulation Investment Incentives no-270 (2012)
168	MoE	National School Water, Sanitation and Hygiene (SWASH) Implementation Guideline
169	FDRE	Seqota Declaration Implementation Plan (2016)
170	MoH	School Health Program (SHP) (2017)
171	MoH	School Health Program Nutrition Service Package
172	FDRE-WB	Urban Productive Safety Net Program – Project Appraisal Document (2015)
173	MoH	WaSH Leadership-Management-Governance-In-service-Training module (2018)

Annex 3 – Timelines of Key Policy Documents and Presentation or Publication of Relevant Evidence