

Nutrition and Scalable Safety Nets in Ethiopia

Desk Review

30th June 2021

Produced by N4D
with the support of the Centre for Humanitarian Change
on behalf of the Building Resilience in Ethiopia project.



A technical assistance programme implemented by Oxford Policy Management (OPM) for:



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1. Introduction

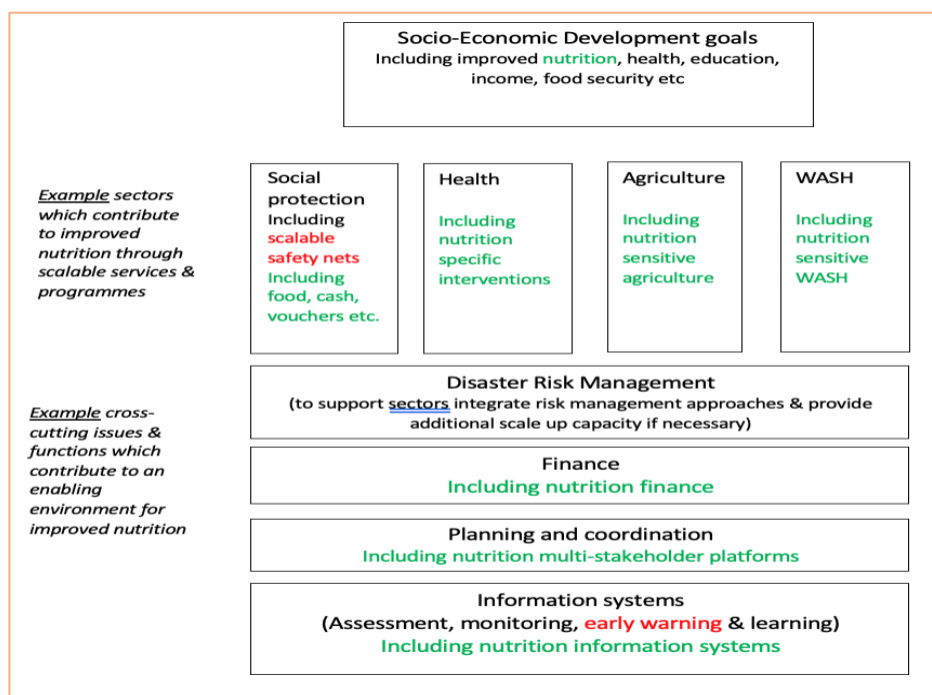
This desk-based review informed the development of an Options Paper and Action Plan to improve the contribution of the shock responsive component (SRC) of Ethiopia's Productive Safety Net Programme (PSNP) to help prevent malnutrition resulting from shocks through improved early warning and operational practices¹. Emphasis is placed on the current and potential role of anthropometric and other nutrition data in strengthening early warning systems (EWS) and in informing the scale up of the PSNP's SRC and humanitarian food assistance (HFA). International good practice in promoting nutrition through EWS and scalable safety nets (SSNs) is reviewed in Section 2 and is followed in Section 3 by a description and analysis of current EWS and SSN practices in the Ethiopia context. The possible actions and ways forward for strengthening EWS and PSNP contributions to nutrition is contained in Section 4 with the next steps outlined in Section 5.

2. Good practice in Early Warning and Scalable Safety Nets for Nutrition

This section summarises the literature on international good practices in early warning systems (EWS) and scalable safety nets (SSN) in relation to the prevention and management of malnutrition. An overarching conclusion is that, if they are to contribute effectively and sustainably to the prevention and management of malnutrition, EWS and SSNs need to be integrated within broader shock responsive nutrition and sustainable development strategies as illustrated in **Error! Reference source not found.** below (USAID, 2017; Shoham, Dolan and Leather, 2020).

Figure 1: Scalable safety nets & early warning within shock responsive nutrition & development systems

¹ This assignment is being carried out by [N4D](#) and the [Centre for Humanitarian Change](#), contracted by OPM Building Resilience in Ethiopia (BRE) programme and financed by FCDO and USAID.



This integration requires high-level political commitment as without high level buy in, efforts to increase the nutrition sensitivity² of EWSs and SSNs are likely to either fail or be short-lived.

2.1. Shock responsive sustainable development

In many contexts of protracted fragility and crisis, shocks further undermine weak governance and public services which, in turn, exacerbate the magnitude and severity of extreme poverty, malnutrition, morbidity and mortality (OECD, 2018). Recognition of this has added impetus to efforts to develop national shock responsive development policies and plans whose primary objective is to provide resource transfers to protect consumption and livelihood assets (O'Brien, Scott, *et al.*, 2018). To achieve preventive shock response, greater coherence between humanitarian, development and peacebuilding systems is necessary (USAID, 2017)³. In contexts of protracted crisis, there are increasing efforts to strengthen national and local service delivery systems including the shock responsive capacity of these systems in ways which build resilience to shocks and can be scaled up quickly so as to prevent increases in humanitarian need. Emergency preparedness and response are key elements of a shock responsive system and are increasingly being integrated into long-term development service provision.

This contrasts with the historically predominant responses to shocks which have relied heavily on the scale up of parallel response systems, often managed and implemented by

² Nutrition sensitivity refers to the extent to which EWS and SSNs contribute to nutrition.

³ The term "shock responsive" comes from social protection systems and the need for these systems to be able to respond flexibly in the event of an emergency (OPM, 2015). However, food, health and other sectors are increasingly aiming to build resilience and scalable programmes in response to shocks (UN, 2020; OPM, 2021).

international humanitarian actors, with short term humanitarian funding. From a nutrition perspective, a short-term approach tends towards the treatment of malnutrition (rather than its prevention) and places insufficient emphasis on systems strengthening.

The limitations of a short-term approach to humanitarian assistance in contexts of protracted crises have long been recognised (Hendrickson, 1998). It is now widely agreed that in many of these contexts, building resilience and responding to shocks through long term, government led systems, with a greater role for national and local organisations (referred to as the 'localisation agenda'), is a more sustainable, timely and effective approach (OCHA, 2017).

However, it cannot be assumed that it is always possible to rely on the scale up of long-term public sector programmes as the appropriate response to shocks (O'Brien, Scott, *et al.*, 2018, p. iv). Where governments or other ruling authorities are parties to conflict or exclude certain citizen groups from accessing public services, a greater role for the humanitarian system is necessary in order to ensure basic needs are met in accordance with humanitarian principles. Even in these contexts, humanitarian systems can adopt longer-term, shock responsive approaches if supported by reforms in humanitarian planning and financing.

Shock responsive social protection and SSNs have, in many contexts, been leading the way in efforts to build resilience to shocks with other sectors, including nutrition, lagging behind in building the required capacities for shock responsive scale up (O'Brien, Holmes and Scott, 2018). The lack of resilience building expertise and knowledge of other sectors can result in the attempts to add on interventions to SSNs which risks already complex programmes becoming overly cumbersome and can inhibit the realisation of their primary objectives (O'Brien, Scott, *et al.*, 2018).

2.2. Multi-sectoral approaches to the management of malnutrition

Increasing recognition of the political, economic and social benefits of investing in nutrition (Shekar *et al.*, 2017) has led governments to recognise nutrition as a priority as reflected in Target 2.2 of the Sustainable Development Goal (SDG)2:

By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons (United Nations, 2015).

However, improving nutrition goes beyond SDG2 alone and is linked to each of the SDGs. It can play a transformational role in driving sustainable development. For example, improved nutrition contributes to better public health and to poverty reduction. To make progress on sustainable development therefore, it is essential to make progress on nutrition.

Similarly, achieving target 2.2 will depend on progress across many of the other SDGs, including those concerned with clean water and sanitation, renewable energy, education and gender equality (SUN Movement, 2021).

Numerous countries have translated this global recognition of the importance of nutrition into national development plans by integrating improved nutritional status as a primary target and have developed multi-sectoral strategies to guide multistakeholder actions towards achieving these targets (Development Initiatives, 2020). In contexts of recurrent crises and shocks and in line with wider good practice, these long term multi-sectoral plans can integrate actions across multiple sectors in order to build nutrition resilience and to scale up long term, public sector programmes in response to shocks. However, resilience building objectives and actions need to be explicit within these plans to prevent and manage malnutrition more effectively.

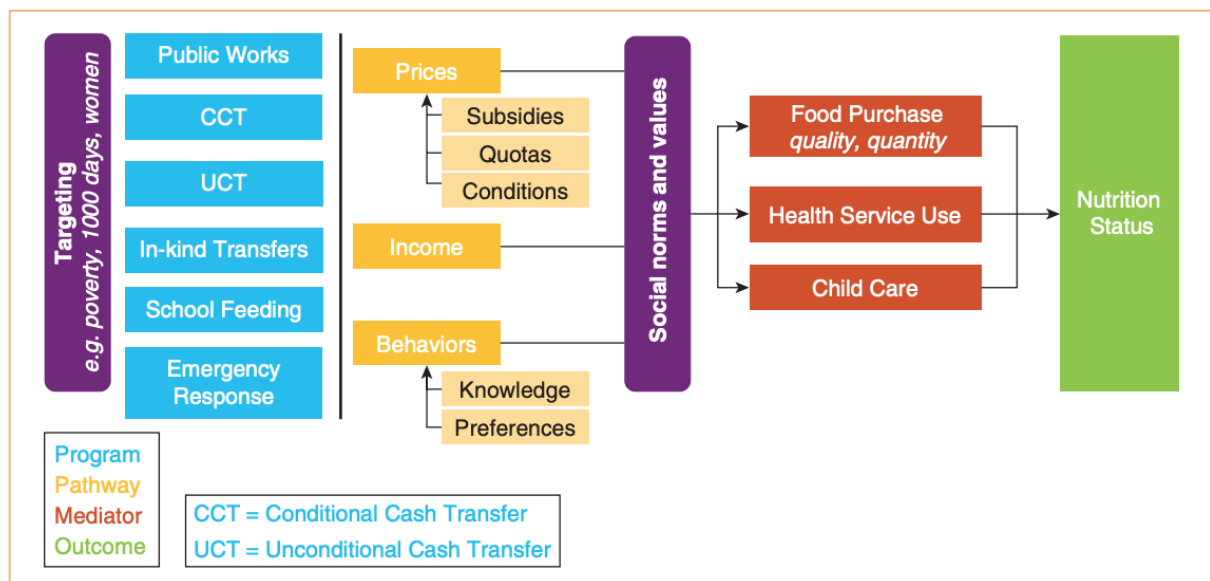
The PSNP and HFA in Ethiopia are two operational mechanisms that contribute to the prevention and management of malnutrition although they cannot be expected to prevent or manage malnutrition on their own given the range of inter-linked and underlying determinants of malnutrition. Thus when shocks occur, there is a need to be ready to rapidly scale up interventions across a range of sectors, including health, water, sanitation and hygiene (WASH), agriculture and livestock and social protection (Heidkamp *et al.*, 2021). In this review therefore, whilst the focus is on the contribution of the PSNP and associated early warning approaches, other broader EW and operational approaches that could contribute to better nutrition outcomes in Ethiopia are also highlighted.

2.3. Scalable Safety Nets and Nutrition

2.3.1. Nutrition sensitive social protection

As argued by Alderman (2016: p4), social protection is inherently nutrition sensitive through its targeting to families at risk of malnutrition, including the poor, households with young children and pregnant and lactating women. This feature, along with the often-large social protection budgets, fosters the potential for addressing underlying determinants of malnutrition. Figure 2 shows pathways whereby nutritionally vulnerable populations can be targeted through social protection programmes through mediating effects on the main determinants i.e. food (quality and quantity), health access and uptake (including water and sanitation) and caring practices.

Figure 2: Indicative pathways from social protection to nutrition



Source: Alderman, 2016

Evidence of the impact of social protection interventions on nutrition outcomes is mixed. As stated by Alderman ((Alderman, 2016), “social protection transfers tend to increase household budget devoted to food—often more than other income sources—and highlights evidence that transfers can change diet composition and quality”. Cash transfer (CTs) have been found in some settings to have a positive impact on levels of haemoglobin and anaemia by increasing the ability of families to purchase a better quality diet including foods that are rich in minerals and vitamins. As Alderman states, “the overall effects of income on nutrition outcomes are not clear and vary by country experience and across studies. In general, it appears that both conditional and unconditional cash transfers have not delivered improvements in nutrition commensurate with their success in addressing poverty”. It is noteworthy that studies into the impact of CTs on nutrition outcomes are very challenging to design and execute, particularly in fragile and conflict affected areas where uncertainties which can impact on a research setting are very high. However, one randomised control trial CT impact study from Pakistan found that when a higher amount of cash was transferred, the risk of child wasting was reduced after 6 months and, after one year, these children had better linear (height) growth outcomes indicating positive nutrition outcomes with the programme design which also included WASH and behaviour change communication (Fenn et al., 2017).

Overall, CTs, as well as asset transfers, in-kind transfers and user fee removal/vouchers for health services, can improve household income, food expenditure on more diverse and quality diets and increase expenditure on participation in health services (African Development Bank, 2017). In other words, social protection programmes, can help to address household poverty and food insecurity—two key drivers of undernutrition.

However, actions to tackle poverty and food insecurity address only some of the constraints to good nutrition. A family can purchase food if they have funds, but they cannot as readily

purchase proper sanitation and enough clean water; nor do the funds received from a transfer programme guarantee easy access to quality health care. The most effective transfer programmes are those that address both the demand for public health services and invest in the supply and quality of such services (Alderman, 2016). Safety net programmes can increase their nutrition sensitivity by factoring in a wider range of food and non-food needs, including costs associated with domestic and livelihoods water consumption needs (for example for pastoral populations), health care access costs (for example the cost of travel to and from clinics and for prescriptions) etc, into the value of the resource transfer. It is noteworthy that food and cash transfers have been found to be critically important for mitigation of COVID-19 related economic shocks on households, but established systems might not have enough capacity to meet the increases in demand (Heidkamp *et al.*, 2021).

Evidence from cash and food transfer programmes in Mexico, Bangladesh, and Pakistan suggest that the following design features of such schemes can help to achieve impacts on nutrition including through other intermediate drivers such as care practices and access and use of health services:

- transfer size meaningfully increases household income;
- targeting during the first 1000 days of life;
- inclusion of women's empowerment actions;
- the programme is combined with behaviour change interventions; and
- provision of maternal and child micronutrient supplements.

Alderman (2016: p30) concludes that social protection programmes need to do the following if they are to maximise their contribution to nutrition outcomes:

- Target activities to the most nutritionally vulnerable populations.
- Include educational activities within social protection interventions to increase household awareness of health and nutrition caregiving and health-seeking behaviours. E.g. NICHE and the Pakistan study mentioned above.
- Enhance the quality of nutrition services (e.g. growth promotion and interventions for improved diet quality) into social protection interventions—particularly transfer programmes.
- Use school feeding programmes as vehicles for micronutrient supplementation and deworming, including links with nutrition education.
- Scale up in times of crisis to reduce the long-term negative impacts of shocks.

When combined with other interventions that impact on the drivers of malnutrition, targeting the same at-risk communities, SSNs can make an important contribution to the prevention of malnutrition. The scale up of SSNs should, therefore, be informed by monitoring and analysis of nutrition vulnerabilities (immediate and underlying drivers and associated risks) and implementation made as nutrition sensitive as possible to help prevent malnutrition.

Safety net interventions can be effective in addressing at least some of the underlying causes of malnutrition, particularly if their contribution to improved nutrition is an explicit

consideration in the design and evaluation of programmes, and there is collaboration with other sectors to maximise collective impact (Ruel and Alderman, 2013, p. 2). Nutrition-sensitive social protection interventions are therefore essential elements of a multi-sectoral approach to sustainably reducing malnutrition, even if the direct impact of any one intervention on nutrition outcomes is limited.

2.3.2. Shock responsive social protection, Scalable Safety Nets and Nutrition

As outlined above, social protection has led the way within shock responsive development strategies and systems (O'Brien *et al.*, 2018). A definition of shock responsive social protection by OPM is provided in **Error! Not a valid bookmark self-reference..**

Box 1: What is shock-responsive social protection?

'Shock-responsive social protection' focuses on shocks that affect a large proportion of the population simultaneously (covariate shocks). It encompasses the adaptation of routine social protection programmes and systems to cope with changes in context and demand following largescale shocks. This can be ex-ante by building shock-responsive systems, plans and partnerships in advance of a shock to better prepare for emergency response; or ex-post, to support households once the shock has occurred. In this way, social protection can complement and support other emergency response interventions.

Source: O'Brien, Holmes and Scott, 2018

SSNs can be considered as a subset of shock responsive social protection. The number of countries in Africa in addition to Ethiopia with scalable safety nets has been steadily increasing in recent years, e.g. Kenya (Pearson *et al.*, 2018), Uganda (Maher and Poulter, 2017), Mali (O'Brien, Congrave, *et al.*, 2018) and other Sahelian countries (O'Brien *et al.*, 2017). A description of the Kenya Hunger Safety Net Programme (HSNP) and its impact on drivers of malnutrition is presented in Box 2 below. Evaluations of the HSNP show that recipients of the emergency support are more likely to spend their cash on meeting immediate household needs and are therefore less likely to invest in productive assets or business enterprises.

Box 2: Kenya's Hunger Safety Net Programme (HSNP)

The HSNP is an unconditional CT programme, which aims to reduce poverty, hunger and vulnerability of the poorest households living in four counties in the arid and semi-arid lands (ASALs) of northern Kenya. Group 1 are service users that received regular electronic cash transfers, with the amount gradually increasing to KES 5,400 or £42 bi-monthly, directly into bank accounts. There is also a shock-responsive mechanism, which enables the programme to scale up its coverage during periods of drought to an additional 270,000 households. These households, termed Group 2, are entitled to receive one-time cash payments (KES 2,700 or £21 per month) when emergency payments are triggered. Payment is triggered automatically by a vegetation condition index derived from remotely sensed satellite data that indicates, at certain pre-agreed levels, a 'severe' risk of drought, in which case affected sub-counties are allocated resources sufficient to scale up to 50% of their population, or 'extreme' risk, where the additional allocation permits scale up to 75%.

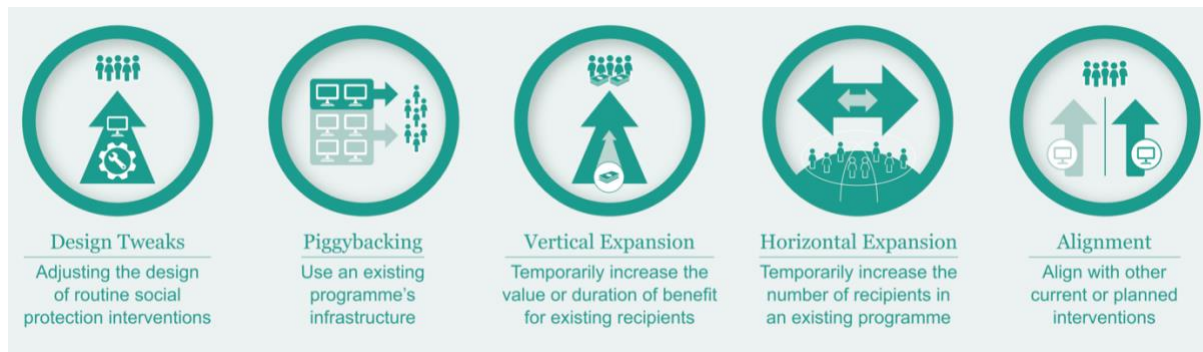
Both routine and emergency beneficiaries indicate that HSNP has enabled their household to increase the number of meals eaten per day and reduce levels of immediate food insecurity and HSNP 2 supported households to achieve more varied diets. However, this effect is mostly only sustained for the first few days after the CT, after which most of the transfer has generally been spent. Recipients are more likely to spend their CTs on meeting immediate household needs and are less likely to make investments in productive assets or business enterprises. The Nutritional Improvements through Cash and Health Education (NICHE) component of HSNP3 is expected to provide a top up cash transfer to households with pregnant and lactating mothers and children under 2 years of age and regular nutrition education with the aim of improving nutrition outcomes in the target households. To reflect the increased nutrition-focus in HSNP3 (with NICHE) there is also an increased focus on nutrition in the objectives of HSNP3 with the addition of an outcome indicator to measure the number of households in the HSNP counties with a Minimum Dietary Diversity (MDD) for pregnant and lactating women (PLW) and children under the age of 2 years.

Sources: (Pearson *et al.*, 2018; DFID, 2019)

2.3.3. Options for maximising the contribution of SSNs to the prevention of malnutrition

There is substantial literature examining how SSNs in general can contribute to improved nutrition (see Section 2.3.1 above). However, this primarily focuses on long term programmes targeting chronically poor and food insecure households. There is very limited analysis of the ways in which shock responsive components of social protection and safety net programmes can contribute to the protection and promotion of good nutrition. It is therefore necessary to consider how lessons learnt from nutrition sensitive and shock responsive social protection programmes can be applied to SSNs for nutrition.

OPM produced a typology of options for making use of social protection programmes and systems to manage shocks.



Source: O'Brien *et al.*, 2018

This typology can also be adapted and utilised for considering options to maximise the contribution of SSNs to nutrition. Examples of nutrition sensitive adaptations to SSNs might include:

Design tweaks: e.g. adjusting the calculation of the minimum expenditure basket to factor in costs associated with the range of determinants of nutrition, including food, water, health care etc.

Piggybacking: using the existing SSN infrastructure to deliver other emergency interventions that contribute to nutrition, e.g. micronutrient supplements, extended vaccination, control of diarrhoeal outbreaks, behaviour change communication etc.

Vertical expansion: e.g. increase the value, timing and/or duration of the resource transfer to take account of increased food and income gaps.

Horizontal expansion: increase the number of recipients to include households at risk of malnutrition due to shocks.

Alignment: coordinate with other scalable programmes and emergency nutrition programmes to promote convergence on the same populations at risk of malnutrition.

An analysis of good practices in nutrition sensitive social protection suggests options for maximising the contribution of SSNs to nutrition resulting from shocks (Box 3).

Box 3: Options for optimising the contribution of SSNs to nutrition

Objective is to improve the livelihood, nutrition, health and food and water security of nutritionally vulnerable people (not directly improve nutritional status).

Part of a comprehensive package, i.e. complemented by scale up of other programmes, converging on same at risk populations, at the scale required

Target people who are at risk of malnutrition due to nutrition, food, water and health insecurity.

Value of resource transfer informed by analysis of gaps across the range of drivers of malnutrition (food consumption (quality and quantity), WASH, health, caregiving).

Choice of *modality type* informed by analysis of local availability of health services, nutritious foods, water access and affordability etc.

Scale up of nutrition friendly public works and *livelihood support* in addition to HFA (e.g. to protect or compensate for assets, e.g. livestock off take).

Informed by monitoring / EW systems that identify households at risk of malnutrition due to health/food/water/nutrition / income insecurity, i.e. *informed by* a nutrition causal analysis whereby the drivers of malnutrition are understood and monitored.

The best option in a particular country may well involve implementing a combination of these (Barca and O'Brien, 2018). As outlined in more detail in Section 2.5 below, the options which are selected in the design and implementation of SSNs will depend on the context, including the awareness and priorities of decision makers.

2.4. Early warning systems informing nutrition sensitive scalable safety nets

Shock responsive development requires EWS to be integrated into broader national systems for monitoring progress in promoting sustainable social and economic development (United Nations Office for Disaster Risk Reduction, 2015). The SDGs address early warning, particularly those related to food security (SDG 2), healthy lives (SDG 3), resilient cities (SDG 11) and climate change adaptation (SDG 13) (International Network for Multi-hazard Early Warning Systems, 2017).

2.4.1. Nutrition Sensitive Early Warning Systems

The international literature suggests various good practices that can guide the design and operating of EWS in order that they effectively inform decisions and actions for better nutrition outcomes in the face of shocks. As noted above, EWS should be a component of wider information systems that monitor changes in poverty and vulnerability, underlying drivers, the success of policies and programmes and the potential impact of shocks.

Data collection and analysis should be driven by the needs of decision makers and implementers and should be directly linked to a decision-making mechanism that is accountable to act on early warnings. Whilst EW information has improved in many

countries, the timeliness and appropriateness of responses frequently has not, due to a disconnect between EW and decision making. Some commentators call for the identification of thresholds that would trigger pre-agreed actions (Maxwell and Hailey, 2020).

A comprehensive approach to EW can include: the monitoring of a wide range of potential *shocks* (e.g. drought, floods, conflict, economic crises, disease outbreaks etc), indicators relating to the *drivers* of malnutrition (e.g. food security, infant and young child feeding practices; access to water and sanitation and availability, access and uptake of health services etc), as well as changes in indicators of *nutritional status* (Maxwell and Hailey, 2020). A key overriding consideration is that the range of indicators collected and their subsequent analysis should not be an exercise in itself but rather, focussed only on what is needed to make decisions.

EWS need to be predictive if they are to inform mitigative responses prior to (for example provision of cash transfers to offset predictable seasonal shocks), or in the immediate aftermath of, shocks. This requires regularly updated baseline analyses and the modelling of the impact of shocks of varying magnitude and intensity on the underlying and immediate drivers of malnutrition.

Determining when and to what extent a safety net programme expands following a crisis requires a transparent, rules-based approach. This requires an objective indicator of the impact of the crisis on household welfare, including determinants of nutritional status, with a predefined threshold to trigger response⁴. It also requires predefined guidelines on how many households will benefit from support, in what regions, for how long, etc. This approach avoids politicisation of response, which can lead to costly delays, and enables a rapid, transparent response. It also helps the government plan its budget, thereby ensuring that resources are utilized effectively. In the case of the third phase of the Northern Uganda Social Action Fund (NUSAF III), an index of satellite-based observations of ground vegetation was used as an indicator of drought conditions and was the trigger for implementing scale-up (Maher and Poulter, 2017).

However, initiating response solely on the basis of changes in “upstream” indicators is inadequate. There is a need to understand the potential and actual impacts of shocks at the household level, to inform the scale and targeting of the response. In the case of NUSAF III, IPC analysis is used to provide a second level of information on the potential impacts of shocks on food security (Maher and Poulter, 2017).

Changes in nutritional status can be utilised as early warning indicators depending on the coverage and quality of data collected as well as timeliness of reporting (Shoham, 1987; Kelly, 1992). However, more robust and targeted analysis at country level is needed to

⁴ The [Anticipation Hub](#) is currently developing a trigger database showing the triggers used by different organisations in different countries and for different hazards.

determine the extent to which anthropometric data derived from surveys or surveillance can usefully contribute to EW and decision making. The role of measures of nutrition status and nutrition surveillance is explored in more depth in Section 2.4.2 below.

Ideally, EWS involve a nutrition causal analysis of the relative importance of different drivers of malnutrition, to inform decisions regarding the types of interventions that are most needed to prevent and address the immediate and underlying causes. This causal analysis is needed for each shock as no two shocks are the same in terms of impact and drivers of malnutrition. Action Against Hunger have developed a participatory and response-oriented methodology to conduct a nutrition causal analyses and to promote the implementation of programmatic responses adapted to these causes (Chalimbaum, Coates and Collaiezzi, 2017) which can aid in focussing on the key indicators needed and thereby avoid the pitfall of collecting of too much data requiring lengthy analysis. However, the utility of this method within EWS is limited to date. EWS are often dominated by food security analysis and consequently provide incomplete data to be able to understand the determinants of malnutrition. Consequently, resource allocations and responses are often skewed towards food security interventions, with other sectoral responses, which may be as or more significant in mitigating nutrition decline, being under emphasised and funded. Good practice requires a more holistic understanding of the determinants of malnutrition and their mitigation through multi-sectoral responses to prevent deleterious nutrition outcomes.

Good practice also includes measures to: assess the validity and reliability of data; the development of technical consensus on the potential impact of shocks using a common analytical framework; measures to minimise political interference in the process; and making findings accessible and usable to decision makers in a timely manner (IPC Global Partners, 2019).

Early warning should inform a technical response analysis and pre-arranged response plan, prior to decisions being made on the direction of the response. Response analysis informs the prioritisation of intervention types to address the causes of malnutrition, its prevention and treatment. In other words, the pre-arranged response plan needs to be flexible to accommodate updated technical analysis encompassing data from a number of sources. An agile EWS which can inform a range of early interventions across different sectors in order to prevent increases in malnutrition also requires high level, cross sectoral leadership and coordination. Transparency of data and multi-stakeholder participation from across sectors in data generation and analysis is essential to provide checks and balances (Maxwell and Hailey, 2020).

Box 4: Summary of good practices in EWS for the prevention of malnutrition

- Anthropometric indicators and those that depict immediate and underlying causes of malnutrition and that signify increased risk of malnutrition are integrated into the wider EWS and consistently monitored using a commonly agreed causal model analytical framework.
- Trigger a nutrition response analysis which focusses on timing, targeting and scale of actions needed to mitigate the immediate and underlying drivers of malnutrition and which build on response preparedness plans and therefore allows for flexibility in the response and activates linkages with other sectors to maximise positive nutrition outcomes.
- Provides early predictions of impact of shock on health (health and WASH systems), food systems (production, access and utilisation) and caring practices against a baseline or previous trends to determine where and what systems response is needed recognising that cause and effect are complex and non-linear.
- Recognises that EW is not just about data collection. its analysis and triggers but rather, it is a sub-system which relies on a wider information eco-system which should link with data being used by each type of sub-system for different purposes.
- Enables a level of understanding of the specificity of the shock being experienced and is agile enough to mobilise actions that are specific to the context.
- Makes consensus-based data and analysis available to decision makers openly, transparently and clearly demonstrating an investment case for nutrition concerns within SSNs.
- Ensure technical analysis and recommendations are not misused by political decision making processes by mitigating the degree to which ‘the wrong decisions are taken based on the mis-use of technical information.

2.4.2. The role of nutrition surveillance and anthropometric data within Early Warning Systems

In order to determine options for strengthening nutrition surveillance in Ethiopia as part of early warning to inform the shock responsive component of PSNP it is important to understand what the literature has to say about nutrition surveillance and in particular the role of anthropometry in nutrition surveillance.

There are numerous definitions of nutrition surveillance, for example:

“Nutrition surveillance systems are health information systems that entail the systematic collection, analysis and interpretation of children’s growth information to monitor nutritional status⁵.

“A food and nutrition surveillance system is a mechanism to transfer food and nutrition data into action through formulation, modification and application of the food and nutrition policy of a country” (WHO, 2013).

Nutrition surveillance may draw upon several types of data but the essential features are two-fold; data are collected across time (as in repeated cross-sectional surveys) or from repeated reporting (as in child growth monitoring) or sentinel sites (e.g. Kenya National

⁵ (ubrisa.ub.bw/.../10311/1051/Nnyepi_JPHP_2011.pdf?sequence=1&is... Nnyepi et al, 2011)

Drought Management Authority Early Warning Bulletins) and, data collection and analysis are linked to decision-making (Beaton *et al.*, 1990).

Data are not always restricted to the measurement of nutrition status alone but may be broader to understand the determinants of the nutrition status observed. A recent state of the art review of nutrition surveillance (defined here only as surveillance of nutrition status) delineates two main types of surveillance using either primary or secondary data collection. Examples of primary data collection include DHS and MICS, repeated smaller-scale cross sectional surveys (often using the SMART methodology), community-based sentinel site monitoring (longitudinal or cross-sectional) and collection of height data from school children. Examples of secondary data include data obtained from child feeding centres, clinics and community mass screenings (i.e. nutrition data collected as part of service provision (Tuffrey, 2016).

Nutrition surveillance may in broad terms be used to provide warning and evidence, of the impact of shocks (early warning), for policy and programming purposes and to evaluate programmes. Surveillance is used to monitor the impact of a response, or to establish the current needs (i.e., population numbers) and to enable projections of needs to plan future looking resource requirements. More specific objectives of nutrition surveillance are listed in the Box 5.

Box 5: Objectives of nutrition surveillance

Analysis focussed objectives

1. to describe the current nutritional status of the population, with particular reference to groups most at risk
2. to analyse the causes or factors associated with malnutrition which requires the collection of causal data within the surveillance system or cross tabulate with other surveillance systems collecting data on the determinants.
3. to predict or project, demonstrate trends and the current situation so as to assist in policy and programme formulation for early warning purposes
4. to monitor national policies, such as structural adjustment policies to discern longer term programme impact on nutrition
5. to monitor, evaluate and adapt and adjust where needed nutrition programmes and other sector programmes linked to the determinants of the observed nutrition problems

Advocacy, accountability and decision-making focussed objectives

6. to monitor progress, including towards stated national or global targets
7. to promote or advocate for decisions by governments and their partners regarding nutrition service delivery and programming across and between sectors depending on the severity of the nutrition problems.
8. to contribute to global nutrition surveillance
9. to educate and raise awareness of nutritional issues
10. to promote accountability for actions, or lack of actions

Source: adapted from WHO, 2013

The focus in this review is mainly on the role of nutrition status data and in particular, anthropometry, in contributing to EWS for shocks and also, to look more broadly at the potential utility of supporting data that helps with the interpretation of nutrition status data. There has been extensive debate regarding the utility of nutrition status data for early warning with polar opposite views being expressed by different actors. On the one hand there is a view that nutrition status is a late or trailing indicator and that by the time evidence emerges of nutrition deterioration, it is too late to affect a response. The opposite view is that surveillance of nutrition status can be timely in warning of looming crisis but its efficacy in this regard depends on the coverage of the information system, timeliness and periodicity of reporting and type of nutrition status data collected (Shoham, 1987; Kelly, 1992; Khara *et al.*, 2014). It is also important that data can be disaggregated to identify sub-groups that are experiencing nutrition insecurity, e.g. by livelihood or demographic group.

There are many country examples of how nutrition surveillance systems, including nutrition status information, have played a role in country EWS i.e., in the anticipatory actions needed to prevent nutrition deterioration and related mortality.

Primary data collection.

The most extensive use of regular nutrition surveys is through DHS/MICS which are national and sometimes sub-nationally representative data typically gathered and analysed between five or more years apart. However, these surveys have no utility for anticipatory actions but are used to provide long term trend information and help track progress towards national or global SDG and WHA targets. More regular cross-sectional surveys, using the SMART methodology, are commonly carried out, usually on a seasonal basis in countries like Ethiopia, Nigeria, Bangladesh and Uganda as an important component of nutrition surveillance and might perform an early warning function (Tuffrey, 2016).

SMART surveys tend to confirm the existence of a problem rather than a situation moving towards a problem, i.e., they measure prevalence rather than detect early changes in growth faltering. Where surveys are frequently conducted, they can provide useful trend information rather than just a data set of a point in time. Long trends of periodic cross sectoral surveys can in theory help with the understanding of what is going on in a vulnerable population and, can help make predictions of what might happen in the future i.e. where they are used for surveillance. However, if the periodicity is low, they might fail to offer this more nuanced information and only identify whether a threshold to denote an emergency has or has not been reached. For a response like PNSP which has only one trigger then a seasonal periodicity comparing current prevalence to past trends with the same other EW indicators and triggers, could provide useful information on rapid or large or unusual changes in prevalence of malnutrition even, where rates do not cross the higher emergency thresholds. It is also worth noting that thresholds used of prevalence of wasting to trigger a response or classify a situation are largely arbitrary and could be adjusted to more meaningfully take account country norms and context.

Furthermore, SMART surveys do not readily distinguish between a chronic and acute emergency unless, as in countries like Northern Nigeria or Kenya, the periodicity is frequent enough to denote trends. It is noteworthy that the cost of SMART surveys have gradually reduced⁶ and although nutrition surveys require a certain level of investment, done well, the information they provide to inform subsequent or mitigating actions is arguably warranted.

Sentinel site surveillance is a means of measuring nutrition status on the same population in order to pick up trends, slight changes compared to trends which can be improvements or (deterioration) in the nutrition situation. These populations are selected to represent the wider population while changes can be detected as they are happening and, where this is the case, they offer the opportunity to be 'anticipatory' in the actions that might be needed to prevent any deterioration. This can be done through different approaches and with varying levels of quality. For example, small-scale repeated SMART surveys in vulnerable populations/areas based on gold standard purposive sampling or more frequent monthly repeated measures of the same population or same child. However, data from Malawi shows that changes in prevalence between surveys conducted more regularly than every 3 months do not necessarily justify the effort and expense of the survey. It can also be affected through longitudinal monitoring of the same children (Tuffrey, 2016).

Good examples of this are the Save the Children NSP in Ethiopia implemented between 1986-2001 (Tuffrey, 2016), the Kenya NDMA EWS Bulletin which, over many decades has been using MUAC screening in sentinel sites and reports on this alongside many other meteorological, production, access and utilisation indicators and the Oxfam community based nutrition indicator programme in Red Sea Hills Sudan during the 1990s (Cole, 1989). Although both systems provided invaluable data for early warning decision making there were marked criticisms and flaws, e.g. lack of coverage, confounding effect of food aid, tardiness, ageing cohort and loss to follow up. Although both programmes built up considerable experience and institutional memory of baselines, seasonality and impact of shocks, reductions in external funding eventually led to the demise of both systems.

Another form of primary nutrition data collection used for early warning has involved collection of height data from school children (height censuses) which have been used in Costa Rica and Guatemala among other countries (Delgado, Valverde and Angel, 1983). However, given that height is less sensitive to shocks in the short-term than weight and that these surveys tend to be conducted at the beginning or end of a school year, they are considered to have limited utility for early warning.

Secondary data collection

Most countries have some form of growth monitoring of young children as part of health service delivery where the weight for age of children is closely monitored. In a number of

⁶ <https://reliefweb.int/sites/reliefweb.int/files/resources/A030A02C15D>

cases these data have been used, with some success, as part of an early warning system, notably Botswana, Ghana and Nicaragua (Tuffrey, 2016). However, the role of growth monitoring suffers many challenges, e.g., lack of coverages, seasonal changes in attendance, children above one dropping out of attendance, poor data quality and reporting⁷.

Data on enrolment at treatment programmes for acute malnutrition have also been used for early warning purposes in a number of countries, e.g. Afghanistan, Sudan and Ethiopia (Tuffrey, 2016). However, as with growth monitoring, there are a number of potential confounders, e.g. coverage, reporting timeliness (Ashworth, Shrimpton and Jamil, 2008). In a study in Niger, a good correlation was found between millet prices and subsequent admission rates⁸ and in East Africa, it was found that the vegetation density index and vegetation coverage index were correlated with nutrition admission and prevalence data. Coverage data are an important part of any admissions based early warning system and the advent of SLEAC surveys has made the acquisition of such data more accessible⁹. As with all types of surveillance data, the early warning utility and function of growth monitoring and admissions data will depend to a great extent upon the existence of baseline data going back of a number of previous years in order to be able to detect unusual patterns and trends (Mason JB and Mitchell JT., 1983).

One other form of nutrition status secondary data based early warning approach is the use of community screening often conducted to strengthen referrals to health centres. In Bangladesh community screening and the resulting data are used when reporting 'on the way up' by upazilas and village union level, before the data reaches provincial and federal level (Bloem *et al.*, 1995). Data are also used in this way in Malawi and Uganda.

Clearly, as outreach of digital technology improves in a country, the ability to transmit data more quickly increases thereby creating more opportunities for timely warning. This is particularly relevant to service centre-based data collection which needs to be compiled, collated and analysed at different levels of aggregation.

Finally, while stunting is acknowledged to be less sensitive to changes in food security or the health environment than measures of wasting, it is a potential predictor of future acute malnutrition as a stunted child is more likely to become wasted than a child of normal height for age. Therefore, high stunting levels can be included in the baseline information of early warning systems to indicate where shock is most likely to lead to high levels of wasting (Angood *et al.*, 2016).

⁷ [https://www.oerafrica.org/FTPFolder/Website Materials/Agriculture](https://www.oerafrica.org/FTPFolder/Website%20Materials/Agriculture)

⁸ <https://www.childimpact.unicef-irc.org/en/empirical-analyses/niger>

⁹ <https://www.fantaproject.org/sites/default/files/resources/SQUEAC>

Box 6: The potential role of anthropometry and prog

- Anthropometry or wasting treatment admissions data can have a timely early warning function but this depends on data coverage, quality, periodicity of data collection and types of anthropometric data.
- Numerous countries have successfully included routine anthropometric data collection and/or admissions data for treatment of acute malnutrition in food crisis and famine early warning systems
- The way in which anthropometric data are collected can vary enormously including: growth monitoring at health centre level; routine MUAC screening at community level and regular nutrition surveys at selected sentinel sites. It can be useful to distinguish between primary and secondary data collection with the latter representing data that are routinely collected as part of service delivery systems such as growth promotion and monitoring.
- Rates of stunting can also be incorporated into EWS as these can indicate risk of acute malnutrition in the event of a shock, i.e. stunting rates can be incorporated into risk profiles.

2.5. The role of the political environment

The sections on SSNs and EWS above present possible technical options for strengthening EWS and SSNs in ways which contribute to the effective and sustainable management of malnutrition. However, in reality the actual options which are or could be implemented are influenced by political considerations including:

- Political biases towards certain segments of the population and the marginalisation of others
- The desire to spread safety nets widely to avoid political tensions (Alderman, 2016: p30)
- Resource constraints and competing priorities.

OPM identify five attributes that influence the design and implementation of shock responsive social protection programmes: (i) political will; (ii) the regulatory environment; (iii) organisational capacity and mandates; (iv) financing; and (v) conflict (O'Brien, Scott, *et al.*, 2018).

3. The Productive Safety Net Programme and Nutrition in Ethiopia

Launched in 2005, the Productive Safety Net Programme (PSNP) is now in its fifth phase (PSNP5 2020-2025). It is the second largest social safety net programme in Sub-Saharan Africa reaching 8 million chronically food insecure people and an additional 3.9 million people that experience food insecurity resulting from shocks, particularly drought. The Government of Ethiopia has committed to develop a SSN system in which the PSNP and Humanitarian Food Assistance (HFA) work together “as one” effective system. Recently, the Ministry of Agriculture (MoA) has been given full oversight of the PSNP. For a detailed description of the PSNP see Annex 3.

Whilst this review focusses on the Shock Responsive Component (SRC) of the PSNP, its ability to contribute to the prevention of malnutrition is significantly determined by the overall design and implementation of the PSNP, in terms of targeting, resource transfer types and values, implementation systems and capacities. Hence, in this section, in addition to analysing the SRC, we also describe and examine how the core components of the PSNP¹⁰ influence the ability of the PSNP to scale up to contribute to better nutrition outcomes.

3.1. Intended PSNP contribution to the prevention and management of malnutrition

During the current Review key informants, particularly from Development Partners, highlighted that the ambitions around nutrition during PSNP5 are lower than during PSNP4. This reduced ambition is based on the recognition that the PSNP cannot on its own achieve widespread and sustained reductions in malnutrition (see Annex 4). Many other shock responsive services and programmes across different sectors are required alongside the PSNP. There is a desire to avoid overburdening already weak delivery systems with additional responsibilities and to ensure that the PSNP delivers on its core goals of reducing extreme poverty and building food security resilience to shocks.

On the other hand, it is also widely recognised that by addressing parts of some of the key underlying determinants of malnutrition, i.e. poverty and food insecurity, the PSNP is making a critical contribution to the protection and promotion of nutrition through both the core and shock responsive components. This intent for the PSNP to contribute to nutrition is reflected in the stated links between the PSNP and national nutrition policies and programmes, PSNP guiding principles, targeting criteria and special measures for nutritionally vulnerable people.

The PSNP5 design document states that the PSNP will contribute to the National Food and Nutrition Policy (NFNP) through provision of timely, predictable, and adequate transfers to the extreme poor and vulnerable in rural Ethiopia. The (NFNP) was approved in 2018 in line

¹⁰ delivering resource transfers to the core PSNP public works, permanent direct support and temporary direct support programme clients

with the Seqota Declaration, articulating the ambition to end malnutrition by 2030 in line with SDG target 2.2.

The PSNP is also intended to contribute to the policy objective of the National Nutrition Programme: to improve nutritional status of women and children in Ethiopia (Federal Democratic Republic of Ethiopia, 2018). As such, it contains an indicator on the percentage of children 6-23 months of age who receive minimum acceptable diet¹¹.

Intent to prevent malnutrition is articulated in the PSNP5 design document which states that one of the key guiding principles is that “support will address the needs of the extreme poor (for core caseload), the most vulnerable (for the transitory caseload), and the nutritionally vulnerable within these cohorts” p.30).

Nutrition sensitivity is one of the 12 PSNP guiding principles. The PSNP contributes toward addressing the underlying determinants of child nutrition and aims to contribute to the country’s overall effort of achieving zero stunting by 2030 (p31). Addressing nutrition issues is identified as a key activity across Outputs 1- 5 (PSNP5 design document, p33).

The intended contribution of the PSNP shock responsive component to nutrition is indicated in the PSNP5 SRC manual: “an early response ensures direct household-level welfare gains in food security and child nutrition” (p7). Inability to maintain adequate nutritional intake as a result of a shock is the main targeting criteria of the SRC. Furthermore, households with malnourished children should be prioritised for shock response assistance.

3.2. How the PSNP is intended to contribute to nutrition

The theoretical basis for the intended PSNP contribution to the prevention of malnutrition is that there is high correlation between poverty, food insecurity and malnutrition. Food and cash transfers are intended to help people meet their minimum food and non-food needs (including water, sanitation and health care) even in the event of shocks, thereby addressing key underlying determinants of malnutrition. Public works and livelihood support components are intended to promote more sustainable consumption through the promotion of resilient livelihood assets and activities. Nutrition sensitive approaches mainstreamed into the PSNP design and implementation are intended to promote good nutrition for particularly vulnerable groups including infants and young children and their mothers.

The PSNP5 design document states that nutrition will be mainstreamed in PSNP5 as in PSNP4, but the nutrition implementation strategy and resource allocation will be given greater attention to ensure increased nutrition results – including incorporating greater accountability measures; a mix of conditionality and incentive strategies; and earmarking of resources where appropriate (p23).

¹¹ IFRPI, Evaluation of the Nutrition-sensitive Features of the Fourth Phase of Ethiopia’s PSNP 2020, p. 79

Various aspects of the design of the resource transfer elements of the PSNP (Outputs 1 and 2) are intended to contribute to the prevention of malnutrition, including:

- The objective of optimising consumption and protecting assets
- Varying duration of assistance according to household capacity to meet their own food and non-food needs.
- Calculating the value of resource transfers in relation to an amount of food and linking to inflation.
- The primacy of transfers over other programme elements
- The option to provide in-kind food transfers where food is not available or affordable in local markets.
- The intent to provide transfers when access to food and income is most difficult
- Ensuring that pregnant and lactating women (PLW) are assigned to temporary direct support from confirmation of pregnancy until a child is two years old (i.e. 30-32 months) and caretakers of sick or malnourished children are also entitled to shift to temporary direct support.

Provisions regarding the linkages between core-PSNP activities, humanitarian food assistance and emergency nutrition interventions will remain during PSNP5. Households with a child who has been screened (through a nutrition programme) as moderately or severely malnourished will be asked if they are receiving a PSNP transfer and their response noted in their nutrition program file. For those who are PSNP clients, the primary caregiver for that child will be transitioned to temporary direct support. If they are not already a PSNP client, they will be prioritized for any horizontal expansion by the PSNP (whether through woreda or federal contingency).

Other nutrition sensitive approaches identified in the PSNP-5 design include:

- 3% of the public works capital budget will be earmarked for nutrition-sensitive activities, such as purchasing materials for cooking demonstrations for nutrient-rich foods
- 3-5 people per kebele will be selected from model PSNP clients to work as nutrition champions. This work will be included as part of their labour requirement for public works
- A portion of the woreda contingency budget will be used for the temporary inclusion of non- PSNP households that have children with acute malnutrition (Note: Such activities will be implemented only when/if additional funding is secured in the course of the program implementation.) Pg 57
- Implementation of GSD and nutrition provisions, such as adherence to light works and flexible work standards for women will be tracked and reported through the MIS
- A light nutrition behavioural nudge strategy that consists of positive reinforcement and indirect suggestions on the use of the transfer will be adopted and will be linked with payment sites to be delivered right before the clients receive the payments.
- PSNP5 has greater focus on referring participants to social programs. Linkages to social services were weak in PSNP4. PSNP5 will allocate specific responsibility and emphasis to ensuring client linkages to social services receive adequate attention and are developed more effectively, especially for the most vulnerable (PSNP5 design document p10).

Whether the next phase of the PSNP can contribute to better maternal and child nutrition status outcomes depends, in part, on its integration with Ethiopia's wider nutrition efforts. When combined with other sectoral interventions that impact on the drivers of malnutrition, targeting the same at-risk communities, the PSNP has the potential to be making an important contribution to the prevention of child and maternal malnutrition. The

scale up of assistance through the PSNP should, therefore, be informed by monitoring and analysis of nutrition vulnerabilities (immediate and underlying drivers and associated risks) options identified for ensuring that the targeting and design of PSNP assistance can optimise contributions to the management of malnutrition.

3.3. Possible ways forward for PSNP design and implementation for nutrition

Key informant interviews suggest that maximising the contribution of the PSNP to nutrition is a priority but not a top priority amongst PSNP decision makers. This means that there is willingness to consider how to increase the nutrition sensitivity of the PSNP within already defined objectives, activities, targeting methodologies, implementation capacities and budgets.

Even though the PSNP may not have direct impacts on nutrition status (due to targeting, programming and financial limitations) it makes a critically valuable contribution to efforts to prevent and reduce malnutrition by addressing key underlying and immediate determinants, especially if integrated with other sectoral programmes targeting the same woredas. Lack of evidence of impact on nutritional status (bearing in mind the difficulty in designing impact studies on nutrition outcomes as outlined in the previous section) as well as financial constraints should not be excuses for not maximising the contribution of the PSNP to improved nutrition status, within the existing programme design and budget availability.

The PSNP aims to contribute to reductions in extreme poverty, food security and vulnerability to shocks and is therefore targeted according to levels of extreme poverty and drought risk. Whilst there are strong correlations between poverty, drought induced food insecurity and risk of malnutrition, in Ethiopia these are not necessarily the primary determinants of malnutrition. Other factors such as childcare practices, access to water, sanitation and health status are also important. The **geographical targeting** criteria cannot be changed at this late stage to take account of malnutrition risk during PHNP 5 which means that there are many non-PSNP woredas where there is high risk of malnutrition due to long-term structural factors as well as shocks other than drought. Given also that the SRC is limited to core PSNP woredas, reducing the risk of malnutrition in these other woredas requires long-term, scalable programmes in other sectors, as well as the humanitarian response system. There may, however, be opportunities through **community-based targeting** within PSNP woredas to increase targeting of households most at risk of malnutrition.

There is also limited opportunity to increase the **value of the resource transfers** to take account of non-food needs due to financial constraints. However, there is still a need to factor these needs into Minimum Expenditure Baskets and estimates of household consumption gaps in order to inform evaluations of PSNP contributions to reducing extreme poverty and vulnerability to shocks, including malnutrition risk.

During PSNP4 there was high ambition to **integrate nutrition interventions and approaches** within PSNP service delivery systems but with very limited success due to both resource constraints and the delivery design. In PSNP5, decision makers are keen to ensure that the PSNP delivers on its primary poverty and vulnerability reduction objectives through an effective and efficient resource transfer and livelihood actions. Hence, there is a desire not to overburden the PSNP with additional activities and approaches. Rather, the priority would seem to be to encourage other sectors to target long-term scalable services and programmes at PSNP woredas, as well as other woredas where there is high risk of malnutrition and morbidity resulting from factors other than drought related food insecurity. From a nutrition perspective, this will require high level, cross-government political leadership as envisioned in the National Food and Nutrition Policy.

Within the foreseeable political, financial and service delivery environment, the way in which the PSNP can optimise its contribution to the prevention of malnutrition is by improving the **timeliness and duration** of the scale up of the SRC PSNP in relation to needs of at-risk populations. This requires improvements in EWS, preparedness plans, service delivery systems and decision-making processes, as already envisaged in PSNP5 design.

Preparedness and service delivery are severely constrained by the lack of integration between PSNP and HFA systems despite the policy decision on consolidation having been made in 2017. The handover of the commodity supply system from NDRMC to the MoA is stalled, seemingly by a reticence to give up responsibility and control over resources, despite the mainstreaming of emergency preparedness and response into sectors being the priority approach within Ethiopia's Disaster Risk Management Policy.

3.4. Summary analysis of current PSNP practices in relation to nutrition

International good practices	Current practice in Ethiopia	Enabling factors	Hindering factors	Options
National SSNs are integrated with other scalable sectoral interventions that impact on the drivers of malnutrition, targeting the same at-risk communities.	Integration with other sectoral interventions is weak. There is inadequate convergence of shock responsive programmes in different sectors on the same at-risk populations. For most other sectoral interventions the scalable element of the programme is met by the humanitarian response.	There is a strong policy environment. However, the National Food & Nutrition Policy still remains to be implemented. There is also a lot of past experience about where shocks effect lives and how they affect other outcomes such as nutrition status.	Insufficient high level political leadership on nutrition to ensure convergence of multi-sectoral programmes on those most at risk of malnutrition. Other sectors are lagging behind in adopting shock responsive approaches. Generally, there are weaknesses in the sequencing and layering of the humanitarian shock response mechanism with the regular programmes and the PNSP (and its SRC)	Support high level, multi-sectoral political leadership by the Deputy Prime Ministers Office to encourage scale up of shock responsive services alongside the PSNP (e.g. health, water, sanitation) and sequencing and layering with humanitarian response.
National SSNs are targeted at the areas and people most at risk of shock induced malnutrition	Even though the PSNP is intended to prevent malnutrition resulting from shocks, risk of malnutrition is not a key targeting criteria.	The PSNP is targeted at drought prone woredas with high levels of extreme poverty and thereby targets communities vulnerable to malnutrition.	Whilst there are strong correlations between poverty, drought and risk of malnutrition, in Ethiopia these are not necessarily the primary determinants of malnutrition.	Whilst options for changing geographical targeting are limited, there may be opportunities to target households most at risk of malnutrition through community-based targeting.
Particular attention is given to PLW and children during the	The PSNP has various measures to help prioritise	PSNP design is strong in mainstreaming nutrition.	Limited capacity and awareness of the implementers at all levels	Increase focus on training of frontline service providers.

first 1000 days of life from conception to 2 nd birthday	PLW and children during the first 1000 days.		& limited budget to provide the capacity development.	
The value of the resource transfer is adequate to cover both food and non-food consumption gaps	The value of the resource transfer is based upon a minimum food basket but does not take account of other determinants of nutrition	The value is adjusted annually to take account of inflation.	The scale of need and inadequate budget constrain increases in the value of resource transfers	Analysis of both food and non-food consumption gaps should inform the design of other programmes implemented alongside the PSNP.
The type of resource is adapted to local context (e.g. market access) and needs (e.g. food and non-food).	Both food and cash are made available. However, the type of assistance received is often supply rather than needs/context driven.	There are clear principles to guide decisions on the provision of food or cash	There is little flexibility in the modality of transfer.	Improved monitoring of food availability and accessibility at local level.
Resource transfers are provided early enough to prevent deterioration in the underlying and immediate drivers of malnutrition (food, health, WASH, care etc)	Resource transfers are provided very late	There is a strong emphasis in PSNP5 design on improving the timeliness of transfers	Reactive early warning systems and slow, politicised decision making	Options envisaged in PSNP5 design: (1) strengthened EW; (2) drought risk financing; (3) Drought Response and Assistance Plans (DRAPs).

4. Early Warning and nutrition in Ethiopia

4.1. How Early Warning informs the scale up of the PSNP and HFA

The calculation of transitory food assistance needs is based on the official figures produced by the national early warning system (EWS). i.e., the ongoing monthly transmission of early warning data from the woredas to the NDRMC's Early Warning and Response Directorate (EWRD) complemented by the twice-yearly needs assessment conducted jointly by government and partner agencies (MASNA). The field work for these assessments is timed to coincide with the pre-harvest period for the two main agricultural seasons (*meher* and *belg*), and the two main rainy seasons in the southern and south-western pastoral areas (*gu* and *deyr* in Somali Region). Following the *meher/deyr* assessment, projections of humanitarian needs are made for the coming calendar year (January to December). A summary of the estimated humanitarian needs for all sectors (including food) are issued jointly by the government and UN in a Humanitarian Response Plan.¹² This document is released in early January. The response plan is updated mid-year (July), following the *belg/gu* assessment. In addition, there is a rolling process of adjustment and prioritisation throughout the year based on changing humanitarian needs and resources which includes ongoing hot spot analysis.

'Hot-spots' are ranked by the Emergency Nutrition Coordination Unit (ENCU) of NDRMC on the basis of nutritional assessments, supplemented by a range of food security indicators. Under the Integrated Food and Cash Plan, woredas ranked 'Hot-spot 1' (most severe) are automatically authorised to suspend public works. Planning for the ICFRP?? begins where the early warning system ends.

The decision on transfer modalities for each region and woreda (i.e. whether to provide transitory food assistance in the form of cash or in-kind food commodities) will continue to be made at federal level as part of the national planning process. In principle, this decision will be based on an assessment of local market conditions and food availability (new guidelines on how to choose between cash and food are in development at the time of writing). In woredas where PSNP is operating, there are established procedures and criteria for determining the mode of transfer therefore, where ICFRP transitory assistance is planned in PSNP woredas it has been agreed in principle that the transfer modality should follow the choice already made for PSNP core clients. However, in practice the **modality for HFA may be determined by the availability of cash or food** resources at the launch of each ICFRP round, and more generally by the pipeline situation.

¹² The title of this document varies from year to year, having previously been called a Humanitarian Requirements Document (HRD) or Humanitarian Disaster Resilience Plan (HDRP).

While the PSNP annual cycle is linked to the Ethiopian Fiscal Year (beginning 1 Hamle / 8 July), the HRP works on the international calendar year (January to December). Meanwhile the early warning and needs assessment cycle follows the seasonality of rains, harvests, livestock production and lean periods.

The Project Implementation Manual for the Shock Response Component of PSNP 5 states that decisions to scale up (or down) shock response assistance must be made in relation to; a) pre-agreed shocks; and b) pre-agreed objective, quantitative and auditable rules or models to estimate the food insecurity generated by the shock. The manual also states that during PSNP5 significant enhancement of government EWS will enable NDRMC to improve the mechanisms and frequency by which food insecure populations are estimated both geographically and by month. PIM also states that timely shock response assistance cannot be delivered without this and that using such data removes the possibility that subjective analysis or political influence can affect decisions about which populations are selected for scaled up assistance.

During the PSNP 5 period NDRMC (and other line departments) will be supported to ensure the enhanced EWS is generating three key outputs to support the PSNP shock response program:

- 1) **Quarterly Food Insecure Population (FIP) Estimates** where NDRMC will issue quarterly updates of food insecure populations (FIPs) down to Woreda level. The updates will provide confirmed FIP estimates for each Woreda for the following quarter and projected estimates for the following three quarters.
- 2) **EW Monitoring of Extreme Events** The enhanced EWS will detail the indicators that will be used to monitor extreme events and set the thresholds by which a disaster event, in this case drought, will have been (Primarily Ministry of Agriculture; Central Statistics Agency; and National Meteorological Agency) agreed to have occurred. The NDRMC will be responsible for creating a dashboard to monitor these indicators and issue warnings or alerts on a monthly basis.
- 3) **Data required to prioritise needs against resources:** Data required to prioritise needs against resources The FIP numbers identified by the enhanced EWS will often generate needs greater than the resources available to respond over the identified time period. The guidelines will dictate how such resources should be prioritized most fairly to address needs using pre-agreed criteria. The criteria will draw on EW data sources e.g., relevant malnutrition, poverty or other indicators feeding into the government EWS.

NDRMC will collate data from several other government departments such as the Ministry of Agriculture, National Meteorological Agency and Central Statistics Agency to enable the automatic generation of quarterly food insecurity estimates by woreda. It will also make use of information available from non-state actors such as UN OCHA, WFP FEWSNET and NGOs to triangulate and confirm data. The Shock Responsive Technical Sub-Committees (SRTSC) will be responsible for progressing the development of the Shock Response Manual and

associated coordination required between government departments, donor and other PSNP implementers at the federal and regional levels (including JEOP and WFP). The SRTSC will be chaired by FSCD and co-chaired by NDRMC and meet regularly to resolve issues and policy decisions in the creation of the Shock Responsive PSNP.

4.2. The use of nutrition data in Ethiopia's EWS

The use of nutrition data in Ethiopia's EWS has evolved and changed over many years. Save the Children UK implemented a sentinel site nutrition surveillance system between 1986 until 2001 where survey areas were purposively selected to include the most famine-prone areas of the country and longitudinal nutrition data (individuals in sentinel site villages) collected. These data were used to inform early warning and response (2016). However, this sentinel site system ended in 2001 due in part to the lack of funding. Currently, the main nutrition data utilised for early warning and targeting purposes come from SMART surveys and admissions data for SAM treatment. The ENCU, situated within the NDRMC, is responsible for hotspot SMART surveys which collect anthropometric data. These often run in the same hot spot woredas year after year (Maxwell and Hailey, 2020) but do not cover all potential hot spots. The SAM admissions data are published in monthly ENCU bulletins and weekly EPHI reports. EPHI also publish a weekly epidemiological and nutrition bulletin. The SAM admission data do exhibit seasonal and livelihood specific trends (personal communication) and are/will be used along with the SMART surveys to inform hotspot prioritisation.

Other nutrition status data collected in Ethiopia as part of the Health Management Information Systems (HMIS), including underweight (weight for age) through under five growth monitoring and promotion activities and MUAC screening are not currently utilised as part of the EWS. An analysis of the utility of these data and their potential to fulfil an early warning role will be explored.

Anthropometric data have often been criticised for being a late or trailing indicator, i.e. by the time indicators of nutrition status show a deterioration, it is already too late to effect a response. However, this view is overly simplistic, since the early warning potential of anthropometric data can be utilised to manage individuals and to determine trends in the community. For the latter, its utility will depend on data coverage, the type of system deployed (repeated cross sectional, sentinel longitudinal) the timeliness of reporting, which indicators are being monitored and whether trends are being monitored.

Whilst the detection of a child with SAM is a late indicator for that child, the trends in SAM admissions to treatment programmes in the community can provide warning that the situation is deteriorating and when examined with other indicators can be used to inform preventive responses. A child who is found to be growth faltering as measured by low weight for age for example or is found to be only moderately wasted has every possibility, with detection and early referral for intervention to be prevented from further nutrition

decline and the related increased risk of mortality. At a population level data on growth faltering or declining MUAC or weight for height are a warning sign warranting early response.

Recent research into the relationship between child wasting and stunting provides evidence that prior or existing wasting increase the risk of future wasting even after recovery. The presence of wasting can slow a child's height/linear growth until weight/ponderal growth has been re-established. Thus, higher wasting in the past and changes in wasting in the present all are indicators of higher risk of wasting in the future and also, indicate risk of further stunting should shocks occur. The reverse is also true in that stunting also predisposes children to an increased risk of wasting though the pathways underpinning the direction of relationship are less clear and the risk is not as pronounced as it is between wasting leading to stunting. Prevalence data of wasting or stunting (as well as trend data) can therefore also serve an early warning function.

Important questions to address in Ethiopia regarding anthropometric data include: What data are currently collected? What are the data quality and timeliness of reporting? Whether data trends demonstrate an association with shock? and how predictive data are of further impact of shocks?

Much of the anthropometric data described above are not specifically collected for early warning purposes and instead serve programmatic functions indicating numbers in need. These data will therefore continue to be collected and collated irrespective of whether they serve an early warning role. Once these data have been mapped in more detail and described a subsequent question is whether there is value in either strengthening or further harnessing these data systems to enable a greater early warning role for the PSNP-5 SRC and HFA as has occurred in some other countries.

4.3. Reviews and evaluations of Ethiopia EWS

Various evaluations of Ethiopia's EWS highlight progress in mitigating the negative impacts of drought on people's livelihoods. At the same time, they also indicate limitations. The 'drought' dominated lens of the systems, the need for a wider understanding of shocks and the need for a broader nutrition information lens (including WASH and health in particular) restrict and limit the ability to move away from a reactive approach to predictive modelling (Drechsler and Soer, 2016; Maxwell, Spainhour Baker and Hailey, 2020).

The same reviewers have concluded that fundamental shifts to the way data are captured and to the way that analysis (modelling) drives decision making is needed if PSNP-5 and HFA are to more effectively target vulnerable populations in time to contribute to the prevention of poor nutrition outcomes emerging as a result of different shocks as articulated in PSNP-5 design documentation.

While the Ethiopia EWS demonstrates an ability to distinguish chronic and acute need, there are many elements of the system which need strengthening through better use of information technology, filling data gaps (e.g., pastoral areas and types of shock), increasing the speed of data sharing and response systems and updating baseline data and risk profiles. Machine and deep learning technique may also provide a better analysis on the overlay of nutrition interventions across Ethiopia (Kimetrica, 2020). In addition, more field data collection tools and processes are required to go beyond ad-hoc data collection and refine core analytic models (Kimetrica, 2020). For these upgrades to be realistic, Ethiopia would need to move beyond its current network supplier to cloud-based architecture.

It has also been suggested that at the heart of any move towards proactive and predictive modelling, would be greater consensus between Government and its development partners on trigger indicators for PSNP-5 scale-up. At the moment, Ethiopia's EWS is heavily dependent on producing narrative reports and subjective assessments (Kimetrica, 2020). Woreda officials have indicated that the lack of backward data flow (E.g., from central government back to woreda planning), which leaves them questioning what happens to the data they provide and whether the data are used (Maxwell and Hailey, 2020).

Other critiques of Ethiopia's EWS highlight an inadequate sense of who the clients are and their decision-making needs, which results in low utilisation of EWS outputs. The vast duplication of data and outdated techniques hamper information flow and analysis and result in incomplete geographic coverage. Three broad interconnected initiatives have been recommended (WB 2016): developing triggers linked to pre-agreed plans for scalable response (transparency); strengthening core NDRMC system (capacity); supporting relevant line Ministries (integration and flexible funding).

It has also been suggested that if there is to be consensus among actors that nutrition risk factors were to be addressed in an EWS, more diverse contextual analysis of the drivers behind malnutrition would be needed for more accurate and timely modelling. In this regard, the next phase of early warning programming has an opportunity to rise above the fear of getting it wrong that characterises so many delayed responses across the continent to a model based on no regrets – and triggering earlier response (Maxwell and Hailey, 2020). The same review argues that a significant value add would be to reduce the complexity of the current system - and one approach to doing so would be to mainstream digital data platforms that combine real-time data with predictive scenarios. Lessons from Ethiopia to date suggest the need to strengthen and build on what already exists.

4.4. Summary analysis of current EWS practices in relation to nutrition

International good practice in EWS for nutrition	Current practice in Ethiopia in comparison with good practice	Enabling factors	Hindering factors	Options for addressing hindering factors
Monitoring immediate and underlying causes of malnutrition essential to analyse and interpret nutrition risk and trends	EWS very food security focussed and apart from EPHI PHEM bulletin, WASH and health data not collated. Hot spot analysis uses range of data but analytical framework unclear	Data are available	Lack of analytical framework to utilise information to inform multi-sector nutrition risk analysis Disparate sources of data and lack of data integration Lack of transparency of how data are used to inform decision-making	Develop a clear analytical framework based on high quality data NDRMC EW bulletins demonstrating basis for decision-making
Utilise secondary nutrition data (data collected as part of service provision, e.g. SAM admission, MUAC screening, Growth monitoring, in early warning decision-making following determination of data utility)	SAM admission data utilised in hot spot analysis but other nutrition data not utilised. SAM data utility has not been validated	Good programme coverage of SAM treatment (approx. 40%) Data already collected so limited additional cost	No analysis of correlation between SAM admission data and shocks	Retrospective analysis of SAM data and real time evaluation. Analyse potential utility of MAM and SAM admission data, MUAC screening and growth monitoring data as potential leading EW indicators and whether these data can be combined with data on immediate and underlying causes of malnutrition

<p>Utilise primary data sources, e.g. nutrition surveys or sentinel site monitoring, to provide early warning</p>	<p>SMART surveys only conducted to validate LEAP and LIAS data and not conducted with sufficient regularity to provide early warning</p> <p>Sentinel site monitoring stopped in 2007</p>	<p>ENCU and partners have significant SMART survey capacity</p>	<p>Cost and current food security focus of EWS</p>	<p>Pilot sentinel site surveillance (regular SMART surveys or longitudinal surveillance) conducted in drought prone woredas to determine cost effectiveness.</p>
<p>Utilise baseline stunting data as part of risk profiling</p>	<p>Not done in Ethiopia</p>	<p>Good, disaggregated data on stunting levels across Ethiopia</p>	<p>DHS data on stunting becomes outdated after a period of time</p>	<p>Pilot whether can be incorporated into woreda risk profiling</p>

4.5. Possible ways forward for EWS and nutrition

Efforts to strengthen EWS in Ethiopia and their influence on PSNP and HFA scale up are hindered by technical methodological disputes, turf wars between ministries that limit the sharing of data, limited strategic leadership and cross-government authority within NDRMC and the over-politicisation of decision making around the allocation of resources (recognising that decision making is always political). Progress seems likely to remain slow without higher level political leadership to address these issues.

Political leadership should ensure that there is a set of higher-level **policy principles for EW and decision making** which would then guide methodological approaches, common frameworks, data sharing systems and institutional responsibilities. Examples of principles would include: EWS driven by users; EWS focussed on the needs of decision makers; EWS integrated with multi-sectoral monitoring systems which provide baselines and trends against which to predict impacts of shocks; anticipatory rather than reactive approach to shocks; mitigation of tensions between technical and political approaches; transparency in data, technical analysis and recommendations etc.

Given the breadth of challenges around EW in Ethiopia, including financial constraints, there is a need for a **step-by-step approach to the use of nutrition data within the EWS**, starting with the better use of secondary data. This would involve examination of the early warning utility of the SAM and MAM admissions data involving retrospective and real time analysis. There also needs to be an analysis of the MUAC screening and growth monitoring data collected at health post and community level to determine the feasibility of using these data for early warning purposes. Questions of coverage, quality and periodicity of reporting would need to be addressed. Over the longer-term, consideration could be given to the establishment of sentinel site surveillance, through regular SMART surveys or longitudinal data collection), beginning with piloting in drought prone, i.e. PSNP, woredas to determine cost-effectiveness. In order to fully utilise and qualify primary and secondary nutrition data, it will be necessary to develop a methodology for analysing the data in terms of its links to shocks and changes in malnutrition trends and from this, develop a framework for combining an analysis of data on immediate and underlying causes of malnutrition with the data on nutrition trends. As this is happening, the forementioned challenges in the sharing of data between ministries will need to be addressed. Any efforts to integrate new nutrition data into EW will require actions to raise the understanding of nutrition EW and PSNP decision makers regarding the added value this will provide to the timely and well targeted provision of assistance.

Annexes

Annex 1: The nutrition context in Ethiopia

Nutrition trends

Since 2000, under-five mortality (U5M) sharply declined from 166 per 1000 children in 2000 to 67 per 1000 children in 2016. In boys, the U5M reduced from 150.6 to 56.2, and in girls U5M dropped from 129.5 to 44.9. There have been simultaneous reductions in people living below the poverty line: In 2002, 53.7% of the population earned less than 1\$ per day which declined by 2018 to 23.8%. In 2003, 88% of the population earned less than 3.2\$ per day declining to 60% in 2018. These improvements enabled Ethiopia to achieve the Millennium Development Goal for U5M and for average life expectancy at birth which increased from 45 years in 1990 to 64 years in 2016. Progress has also been achieved in reducing child stunting and wasting which declined between 2005 and 2019, from 51% to 36.8% and from 12% to 7.2% respectively. Whilst these improvements represent important and marked progress, they are not necessarily resilient or sustainable. For example, wasting can still regularly go above 20% in some localities and, stunting is also affected by different types of shocks.

Although overall poverty, life expectancy, U5M and child undernutrition have improved, the nutrition situation in Ethiopia remains a significant challenge. Ethiopia is 'off course' to meet all WHA targets for maternal, infant and young child nutrition (MIYCN) though some progress has been made towards achieving the WHA exclusive breastfeeding (EBF) target, with 58.8% of infants aged 0 to 5 months exclusively breastfed. Prevalence data suggests that Ethiopia has higher than average rates of stunting for the Africa region at 36.8% compared to a regional average of 29.1%. Wasting is also higher than the regional average at 7.2% compared to 6.4%.

There are marked geographic disparities with higher stunting rates in rural versus urban areas (41 versus 26% respectively) and significant regional differences (49% stunting in Tigray Region versus 14% in Addis Ababa). Afar, Tigray, and Amhara regions have rates of stunting exceeding 40%. In these regions, estimates suggest that only 7% of children receive a minimum acceptable diet. Nationally, just 14% of children over 6 months of age consume four food groups or more (UNICEF 2018) while an estimated 31% of households (more than 30 million people) have inadequate energy intake. This correlates with data on dietary diversity taken from the 2016 DHS, which shows that availability, access and affordability of a nutritious and diverse diet is out of reach for many. In addition to dietary determinants, these regions suffer from high levels of morbidity including diarrhoeal diseases, acute and chronic respiratory infections, tuberculosis and other important diseases which can impact on nutritional status. These and other regions can also be 'hot spots' for wasting e.g. Somali region, which underscores the important point that whilst the determinants for different types of malnutrition are often the same, they express themselves differently across geographic areas with overlap in some e.g. Afar which may be less evident in others and

this too can change with time. This feature of undernutrition means that often several types of undernutrition issues need to be addressed simultaneously.

Across Ethiopia, women aged 15-49 years of reproductive age (WRA) show significant levels of wasting (22%), which has been connected to high levels of early marriage and adolescent pregnancy. High levels of anaemia are also reported in WRA at 23.4%.

In the older child and adolescent population aged 5-19 years, data from 2016 shows that 35.6% and 21.9% of boys and girls respectively are defined as underweight (low weight for age). This is an overall reduction from 2000 which was estimated at 41.3% for boys and 27% for girls but nonetheless remains high.

Underlying causes of malnutrition

To date, Ethiopia's reductions in stunting, wasting and U5M have been attributed to the roll out of cross cutting large scale programme initiatives, including the Health Extension Programme (HEP) which has reduced the national health burden, agricultural growth programme (AGP), the Productive Safety Net Programme (PSNP), Community-based nutrition (CBN) programme, national school feeding programme, Community-Led Total Sanitation (CLTS) programme and efforts to reduce anaemia in PLW. (UNDAF 2015 and Transform Nutrition 2017).

A recent 'Exemplar study' based on retrospective decomposition analysis highlights the most significant contributors to improvements in the height/linear growth for children under 5. Positive changes in height growth were associated with to be: consumable crop yield (32 percent), the number of health workers available (28 percent), reduction in the practice of open defecation (13 percent), and years of maternal and paternal education (10 percent and 5 percent). These results tally with expansion and improvements in four key sectors: agriculture, health, sanitation, and education. The growth of trained frontline care workers, in particular, has been a considerable contribution to maternal mortality outcomes. Another way of looking at this study is to appreciate the need for multi-faceted approaches to tackle the underlying determinants of undernutrition. Further, in this study, the analysis was of drivers to improvement of stunting but in all likelihood, these changes would bring about improvements in wasting and underweight.

Despite improvements in these four key sectors, across Ethiopia, systemic drivers of malnutrition vary and are entrenched in socio-economic and political realities. An estimated 87% of the population is termed "multidimensionally poor", i.e. they suffer from some combination of food insecurity, insufficient access to adequate education and health services and inadequate employment opportunities which reflects the multi-faceted nature of poverty and is different to the more standardised income based poverty measures.

These challenges are experienced differently among population groups owing to gender and other systemic inequalities. In particular, pastoral and lowland areas – for example, Afar, Oromia and Somali, are behind on many (though not nearly all) social indicators. Causes for food, health and nutrition insecurity are widespread and include (but not limited to): lower food production and productivity, coupled with unsafe and low-quality foods, weak postharvest management systems, low quality maternal and child health care, limited access to and utilization of health services and poor water, sanitation and hygiene services.

Intergenerational cycles of poor nutrition and low socio-economic status for women belie a large proportion of Ethiopia's nutrition challenge. National DHS 2016 has been analysed to better understand some of the socio-economic factors underlying maternal nutrition data concluding that four factors were largely contributing to maternal underweight (and obesity): the age of the women, residence, maternal education, and non-monetary wealth.¹ This corresponds with the growing research base showing the correlation between women's level of autonomy and self-efficacy and levels of maternal and child undernutrition.² In Ethiopia, rates of child marriage are high with approximately four in ten young women married before their 18th birthday³. Many of these young women face low levels of empowerment within the household, with husbands and mothers in law dictating how and when a woman may eat, how they care for their child and how they access key services that benefit their own health and nutritional status and that of their child/ren. Violence against women is common in Ethiopia - 2016 DHS data showing that approximately one third of all women aged between 19 to 49 years reported some form of abuse from their husband.

Given the complexity of factors determining a woman's ability to exert her agency across Ethiopia, it is common for intergenerational cycles of maternal malnutrition to be passed on to children. Women affected by wasting or undernutrition are susceptible to developing anaemia and its severe consequences during childbirth (i.e. postpartum haemorrhage), alongside other obstetric complications. Newborn babies of those mothers are often low birth weight and, in the first 6 months of life can experience wasting and/or stunting. In turn, stunted or wasted children and those concurrently wasted and stunted are more susceptible to repeated episodes of wasting and stunting, illnesses, early child mortality, compromised physical and mental development, lower levels of educability and productivity in adulthood. The economic losses for Ethiopia resulting from undernutrition have been estimated at 16% of GDP (FDRE 2016). This estimate was made in 2013, underscoring the need for more recent data.

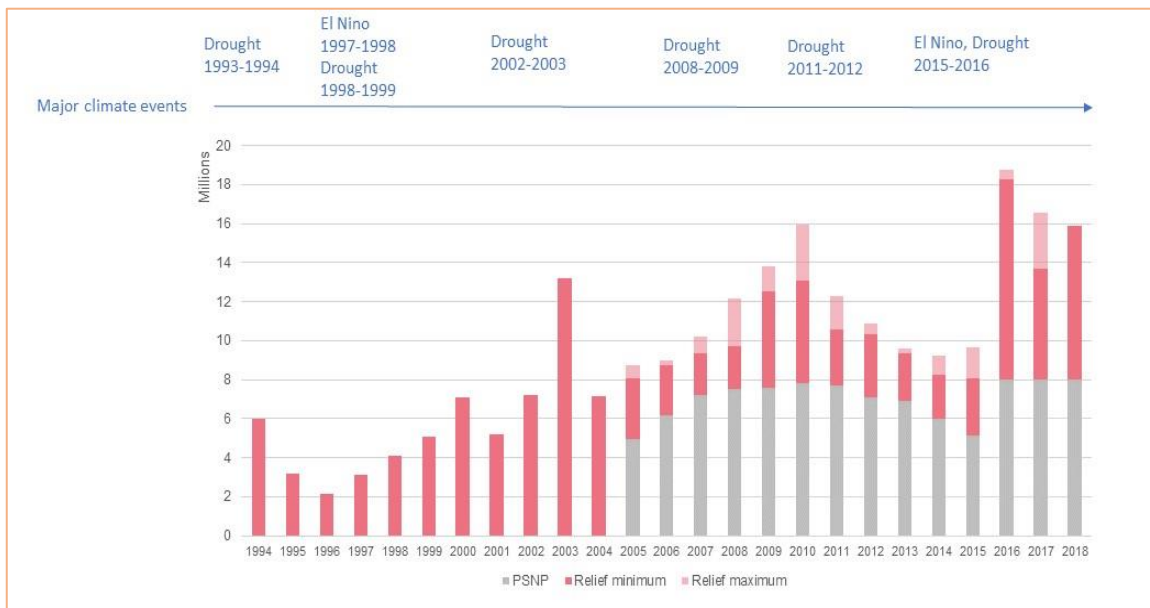
In addition to difficulties relating to systemic poverty, women's empowerment and market access, conflict displacement, disease outbreaks, climate related factors such as rain shortfalls, floods and more recently locust invasions remain key drivers and food and nutrition and health insecurity. In the 2020 targeting for the HRP (humanitarian response plans) 70% of the 1.78 million internally displaced persons (IDPs) were displaced because of conflict and the remaining because of climate related causes. It is commonly agreed that

Ethiopia's most notable challenge when it comes to sustainable progress is climate change and conflict. Ethiopia's diverse climate and topography span arid lowlands, tropical lowlands, and highlands – meaning that climate related shocks can greatly differ according to region. Approximately 15% of Ethiopians are pastoralists who occupy rangelands covering around 60% of the country (Exemplar, 2020). It is not surprising therefore, that the Exemplar study finds that wasting is highest in “areas with a high proportion of pastoralist populations, where drought and other climatic shocks are common” (See section X below for more on climatic shocks). Wasting is almost always highest within these areas amongst the agro-pastoralists, marginalised farmers and ‘failed’ pastoralists as well as in the IDPs. This is because livelihoods are more precarious and concentrate in the marginalized who also experience systemic poverty a factor underlying wasting and very likely, stunting.

In addition to these challenges, Ethiopia has a history of long-suppressed ethnic and political differences, which are being expressed, often violently, leading to rising tensions, mass population displacements and disruption of services which has a systemic impact on already marginalised populations and pressure on the resources and capacities of the Government and its partners.

Types of shock, frequency and humanitarian response

As outlined above, Ethiopia is particularly vulnerable to environmental risk and has experienced a 20 percent reduction in short rains over the past 50 years (HDRP 2018, HRP 2019). Common shocks include drought, flooding and internal conflict which may be resource driven as in Oromia between livestock and agricultural communities in marginal lands and/or of a more political nature as recently in Tigray., leading to large-scale internal displacement, (National Disaster Risk Management Commission, Humanitarian Country Team, and Partners 2019). In 2019, 8.2 million people required long-term food assistance and 8.3 million, including IDPs, were targeted in the HRP. The HRP appeals have escalated from US\$651 million in 2010 to US\$1.6 billion in 2015/16 representing roughly a 300% increase in financing, as the graph below illustrates.



Since the drought of 2015-16, the humanitarian context has changed with the modus operandi shifting from a climate induced humanitarian response to a more complex emergency situation, and the multiplication of conflict, IDPs and climate affected areas referred to as ‘hot spots’ in the EWS.

Between 2013 and 2015, 2.7 to 4 million people were targeted for humanitarian assistance with requirements between US\$ 500 and 600 million. Suddenly, with the arrival of the 2015/2016 El Niño and the 2017 Indian Ocean Dipoles (IOD), people targeted for assistance increased to 10.7 million with a financial requirement of \$1.6 billion, and since then the number of people targeted and requirements has remained above 8 million and \$1 billion, reflecting the lack of recovery from these back-to-back climate shocks. Funding to the HRP has remain on average 75 percent or above, with the exception of two years (2014 and 2016), mainly due to consistent support in the food aid sector which has been the main component of the HRP in terms of financing.

Separate to the annual HRPs, a multi-year resilience strategy in Ethiopia is focussing on 12 drought-prone zones in Ethiopia’s north-east. The selection of these zones is predicated on high levels of vulnerability to future El Niño–Southern Oscillation (ENSO) episodes and the concentration of communities that have received multi-year assistance to address both chronic poverty and food insecurity. The focus area embraces Ethiopia’s two primary dryland agroecologies: moisture deficit and drought-prone highlands, and pastoral and drought-prone lowlands. These areas were selected based on the analysis of serious drought impacts suffered in 1997-1998, 2002-2003 and 2015-2016; a contiguous area that includes more than one dryland agro-ecological zone; and a geographical area from which the phased withdrawal of humanitarian assistance is possible.

Multi-sectoral approaches to the management of malnutrition in Ethiopia

Nutrition is a key priority in the national Growth and Transformation Plan (GTP II). Nutrition targets include the following: reduction of stunting from 40% in 2014/15 to 26% in 2019/20, reduction in wasting from 9.0% to 4.9% and percentage of households using iodised salt increasing from 15% to 80% (Government of Ethiopia, 2016).

The Ethiopian EWS, the PSNP and HFA programmes all intersect with, and contribute to, GoE led, multi-stakeholder efforts to ensure food and nutrition security as guided by the national Food and Nutrition Policy (Government of Ethiopia, 2018). The implementation of this policy is overseen by the Office of the Prime Minister and Food and Nutrition Councils are being established at federal and regional levels to coordinate nutrition actions across sectors. Regional Food and Nutrition Councils should be chaired by a body to be assigned by regional presidents and be accountable to the governing body, to be assigned by the prime minister. Similar structures should be established at zonal and woreda levels, to be led by the respective zonal and woreda administrators to efficiently coordinate and implement the food and nutrition activities. At the kebele level, the food and nutrition committees will be established and led by the kebele administrators.

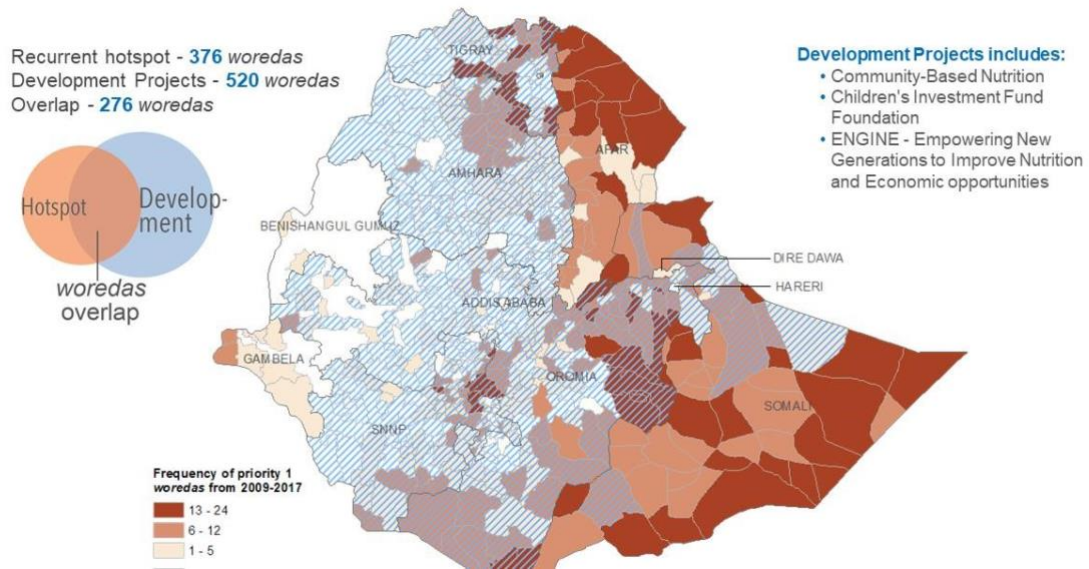
This evolving nutrition policy and institutional environment provides an opportunity to explore how to strengthen the integration of nutrition into national EWS, scalable social safety nets, humanitarian responses and other sectoral programmes like WASH and health.

Over the past twenty years Ethiopia's nutrition programming has gradually shifted from a focus on high impact nutrition interventions, including the impressive roll out of CMAM, to include a variety of multi-sector nutrition initiatives. The recent Seqota declaration fully embraces a multi-sector nutrition approach in a bid to end stunting in children under two years of age by 2030¹³. There are now various programmes that focus on addressing the underlying and basic causes of malnutrition— either by converging multisectoral activities on a population group or by increasing the nutrition sensitivity of select sector activities thereby contributing to the prevention of malnutrition. These include CINUS, Growth Through Nutrition, INSPIRE, GROW and RESET which are all multi-year and multi-sector.

However, it should be noted that few of these multi-sectoral nutrition programmes have provided robust data on nutrition impact. The map below shows how the majority of these programmes are concentrated in woredas which are not targeted in the HRPs. (ENN 2020).

¹³ <https://www.moh.gov.et/ejcc/en/sekota-declaration>

Nutrition – Development Projects *Woredas*



Humanitarian responses in Ethiopia have also begun to adopt a more multi-sector nutrition approach. The Emergency Nutrition Coordination Unit (ENCU/Nutrition Cluster) works closely with the Health and WASH Clusters toward defining a minimum package for integrated response that will be piloted in selected woredas that have high rates of severe acute malnutrition (SAM), high incidence of measles and/or cholera and have acute WASH needs. The same communities, health facilities and households will be targeted to maximizing the positive outcomes of the response.

Humanitarian needs, response and the impact of nutrition assistance is monitored by ENCU jointly with nutrition partners and FMoH and EPHI through rapid assessments, nutrition surveys (SMART methodology) and routine nutrition programme data including MUAC screening results. The number of children affected by SAM and moderate acute malnutrition (MAM) admitted for treatment and the number of malnourished pregnant and lactating women (PLW) enrolled into targeted supplementary feeding programmes are also utilised to determine need and impact.

Annex 2: Shock responsive development & humanitarian food assistance in Ethiopia

Disaster Risk Management

Given that aggressive goals of broad based economic growth and social development are envisioned in national Growth and Transformation Plan, the Government of Ethiopia recognises the need for a comprehensive Disaster Risk Management (DRM) system to reduce disaster risk and the impacts of disasters, and to protect development gains (Government of Ethiopia, 2016). The Government is currently developing a new plan, the “Ten Year Strategic Development Plan” (Government of Ethiopia, 2020).

A shock responsive approach to national development is articulated in the National Policy and Strategy on Disaster Risk Management (Government of Ethiopia, 2013). The implementation of the Policy is overseen by the National DRM Commission (NDRMC). Specific objectives include reducing and eventually preventing disaster risk and vulnerability that pose challenges to development through enhancing the culture of *integrating disaster risk reduction into development plans and programmes*, as well as by focussing on and implementing activities to be carried out before, during and after the disaster period to address underlying factors of recurrent disasters.

The DRM Strategic Programme and Investment Framework of the Ministry of Agriculture provides a strategic framework for the prioritisation and planning of investments that will drive Ethiopia’s DRM system. It is designed to operationalise the DRM policy by identifying priority investment areas with estimates of the financing needs to be provided by the government and its development partners (Ministry of Agriculture, 2014).

Social protection

Social protection is a key element of the GTPII. In 2014, the GoE approved the National Social Protection Policy, and in 2016 it approved the National Social Protection Strategy (NSPS) (MoLSA, 2014; MoLSA, 2016). Accountability for the coordination of the social protection sector and the development and oversight of policies and strategies lies with the Ministry of Labour and the Social Affairs (MoLSA). However, the NSPS identifies 23 government institutions involved in implementing the social protection strategy (MoLSA, 2016). The GoE’s contribution to key social protection programmes, relative to donors, has been rising in recent years (OECD, 2019). Within Ethiopia’s social protection system social safety nets play a dominant role and account for the vast majority of social protection expenditure (71% in 2015/16) (OECD, 2019). This includes the rural and urban Productive Safety Net Programmes (PSNPs), as well as humanitarian relief.

Humanitarian Food Assistance

Given Ethiopia's exposure to recurrent climatic shocks, which place a large population at risk of chronic and transitory food insecurity, HFA needs are determined on the basis of bi-annual seasonal assessments that predict the number of people in need of support. The main assessment is done around the *meher* rains (October / November) and feeds into the Humanitarian Response Plan (HRP) for the upcoming year. These figures are then usually updated via another assessment performed during the *belg* season (between February and June) and feed into a mid-year HRP. HFA includes both in-kind and cash transfers.

In PSNP areas, transfer modalities and cash values for HFA and RPSNP clients are aligned. In the past, RPSNP and HFA had separate operational frameworks and systems, which led to inefficiencies and inconsistent communications during the response to shocks (e.g. the El Niño crisis in 2016). To address the issues arising from misaligned operational frameworks, the Integrated Cash-Food Response Plan was established in 2019 with the objective of coordinating the response of the two systems. In addition, a recent decision was taken to transfer the responsibility for handling commodity management from the National Disaster Risk Management Commission (NDRMC) to the Ministry of Agriculture (MoA) to ensure greater alignment of the two systems. However, the operationalisation of the system is not yet finalised. The long-term vision shared by both the GoE and development partners is for the RPSNP and HFA to be integrated into a single scalable safety net for the whole country, employing consistent and efficient systems.

Taken from (Bischler, Asheber and Hobson, 2021)

Original sources: European Commission (2019), MoA (2020) and World Bank (2020b)

An independent evaluation of drought response in Ethiopia 2015- 2018 (Steets *et al.*, 2019) showed that response was timely enough to prevent many drought-related deaths, but not sufficiently timely to prevent sharp increases in life threatening cases of severe acute malnutrition (especially in Afar and the Somali region). Humanitarian organisations and donors were found to have reacted late to available warnings. This was due to lengthy assessment and government approval processes; late government recognition of the emergency; absence of emergency departments in critical line ministries; intervening political dynamics; slow funding decisions and processes; and competing humanitarian priorities. The findings of this evaluation provide a reminder that even the best EWSs do not necessarily lead to timely and appropriate responses. Other political and operational factors also need to be addressed if emergency responses are to prevent increases in the most severe forms of malnutrition.

Annex 3: Description of the PSNP

Overview of the PSNP

Launched in 2005, the Productive Safety Net Programme (PSNP) is now in its fifth phase (PSNP5 2020-2025). It is the second largest social safety net programme in Sub-Saharan Africa reaching 8 million chronically food insecure people and an additional 3.9 million people that experience food insecurity resulting from shocks, particularly drought. The Government of Ethiopia has committed to develop a SSN system in which the PSNP and Humanitarian Food Assistance (HFA) work together “as one” effective system. Recently, the Ministry of Agriculture (MoA) has been given full oversight of the PSNP.

The overall PSNP5 goal is “extreme poverty reduction in PSNP woredas” and the intended outcome is “enhanced resilience to shocks of extreme poor and vulnerable rural households in PSNP woredas. PSNP5 will target the extremely poor as opposed to the chronically food insecure as has been the case in previous phases.

The shocks referred to in the outcome statement are primarily drought shocks. Other small-scale shocks, such as localized flooding, and idiosyncratic shocks (such as the illness or death of a family member), which risk households temporarily falling into poverty, can be addressed through the woreda contingency budget. Furthermore, the systems and procedures developed to address shocks can also be used to deliver support for other economic shocks, such as the economic consequences of COVID-19, finance permitting. Other, more rapid-onset, shocks such as conflict are addressed through the humanitarian response system.

The goal and outcome will be achieved through 6 components, relating to outputs in the overall PSNP5 design. The Shock Responsive Component is one of the 6 outputs (see Box).

Box 6: Intended outcome & outputs of PSNP-5

- Output 1: Timely and adequate transfers received by eligible core caseload of PSNP clients
- Output 2: Shock-responsive transfers received by eligible clients when needed
- Output 3: Public Works respond to community livelihoods needs and contribute to disaster risk reduction, climate change adaptation and mitigation
- Output 4: Linkages to available social services facilitated for core PSNP clients with emphasis on permanent direct support (PDS) and temporary direct support (TDS)
- Output 5: Tailored livelihood options accessed by eligible PSNP clients
- Output 6: PSNP management and capacity enhanced

Under Output 1 households receive either six or twelve months of support depending on how they are categorized. Public works (PW) clients (households with adult labour available

to work on community-based public works) and TDS clients (adults who generally engaged in PW but are exempted temporarily) receive six months support per year. For the period 2018-19, the FCDO estimated that 6.8 million people were reached through PW or TDS support. Transfers for PW and TDS clients are scheduled so that households receive the support during the months where the need is greatest. This can vary from region to region. PDS clients (households who do not have adult labour available for PW) receive twelve months support. For the period 2018-19, the FCDO estimated that 1.2 million PDS clients were reached¹⁴.

Transfers are provided in the form of cash or food and are equivalent to 15 kg of wheat per month in GoE woredas or a 16.95kg food basket in NGO woredas. The core caseload will remain as it was in PSNP4 i.e. 7,997,218, across implementation regions. Cash is provided in settings where markets function well, food in areas where there is no food to purchase or food prices are extremely high.

Households are targeted using geographic criteria and community targeting to identify the most chronically poor. During PSNP5, new woredas will be selected using a combination of: (i) remote sensing satellite data showing frequency of drought shocks; (ii) prevalence of extreme poverty, and (iii) recent history of receipt of drought related emergency food assistance. Within woredas, households are selected using guidance found in the PSNP's Program Implementation Manual (PIM) on targeting criteria to be used at the community level. Household selection is carried out via community (*kebele*) targeting by community Food Security Task Forces.

PSNP4 was operational in 382 out of 670 woredas in the country and the number of woredas is expected to grow in PSNP5 as the program expands its geographic footprint, whilst maintaining the same number of core recipients (7.9 million people).

The shock-responsive transfers will be for non-PSNP households within the PSNP woredas. The refocusing of PSNP5 on extreme poverty and vulnerability will be accompanied by a realignment of PSNP woredas to the most drought-prone woredas, which is not currently the case.

PSNP5 is being financed through a combination of GOE and development partner (DP) financing. The overall budget for the five years of PSNP5 from 2020/21 to 2024/25 will be 2.381 billion USD. This does not include the woreda contingency budget. DPs have committed to 65% and GOE to 25% of the budget leaving a 10% financing gap.

Overall responsibility for the effective implementation of the PSNP resides with the PSNP Program Director, who is the Director of FSCD under the Ministry of Agriculture (MoA).

¹⁴ FCDO, 2020 PSNP Annual Review

The highest-level accountability mechanism is the Joint Strategic Oversight Committee (JSOC) which oversees the Coordination and Management Committee (CMC). New in PSNP5 is the alignment of Technical Committees and their sub-committees to specific Outputs, enhancing accountability for results at the Output level.

For Outputs 1 and 2 FSCD (MoA) has overall responsibility for ensuring the transfers achieve their objectives and is responsible for all transfers (PW and PDS). The Social Welfare Development Directorate of MoLSA and corresponding Woreda Offices of Labor and Social Affairs (WoLSA) are responsible for monitoring and supervising PDS transfers. MoF is responsible for actual delivery of the cash transfers. The Commodity Management and Coordination Unit (CMCO), which will move to MoA, will be responsible for delivery of food transfers.

The PSNP Shock Responsive Component

The PSNP scales up to provide food and cash assistance to an average of 3.8 million Ethiopians annually. The overall shock response mechanism uses a layered approach with woreda contingency funding followed by federal contingency funds to scale up the PSNP, followed by HFA where this is needed, recognising that the PSNP cannot meet all needs.

The objective of the SRC is: to ensure the PSNP provides transitory food and cash assistance to populations experiencing shock-induced food insecurity at the time of greatest need (PSNP5 SRC Manual, p7).

The PSNP can be scaled up to existing clients (vertical expansion) and additional clients in PSNP woredas (horizontal expansion). However, it is not planned to scale up PSNP5 to additional woredas – they will still be served by the humanitarian response system in the event of shocks affecting non PSNP woredas.

To date, the SRC has typically been reactive rather than proactive, i.e. scale up occurs after post-shock assessments confirm negative impacts have already been experienced. The timing, duration and quantity of assistance are unpredictable. As described in the PSNP5 SRC Manual, the scalable assistance has been provided when resources and logistic arrangements permit which means it often arrives late and not during the months when populations are most shock-affected (p6).

Reasons for the late response include:

- The calculation of those in need of assistance is not based on timely or transparent EW systems
- Slow decision making
- Resources and logistical systems are not already in place before the shock occurs
- Inefficiency due to multiple delivery mechanisms which increase financial and transaction costs

It is intended that these constraints will be addressed during PSNP5. Key activity areas during PSNP 5 are:

1. Strengthening the national government-led early warning system to monitor and predict drought shocks, including (1) Projecting cash and food needs for transitory clients quarterly, using the automated drought needs assessment system; (2) Developing an automated, objective, data-based needs projection model. See Section below for more details.
2. Establishing pre-agreed rules on how to scale up responses
3. Developing Annual Drought Response and Assistance Plans
4. Expanding geographic footprint of PSNP to cover additional drought prone woredas
5. Putting in place a single delivery system and make timely shock-responsive payments in line with Drought Response and Assistance Plans
6. Developing capacity to deliver Output 2
7. Addressing gender, nutrition and social development issues related to Output 2

Integrated PSNP and HFA systems

The Government has, since 2017, been committed to integrating the PSNP and HFA systems into one scalable (or shock responsive) rural¹⁵ safety net.

The implementation guideline for the national Integrated Cash-Food Response Plan (ICFRP) was introduced in 2017/18 (2010 EC) with the stated aim ‘to integrate and harmonise the food assistance components of PSNP and the humanitarian disaster response system.’ The primary aim of the document is to provide clear practical guidance for implementers at woreda, kebele and community levels. However, to date progress has been very slow in integrating the two systems. Key informants attributed this to reticence of institutions to hand over responsibilities and control over resources to other parts of the government system.

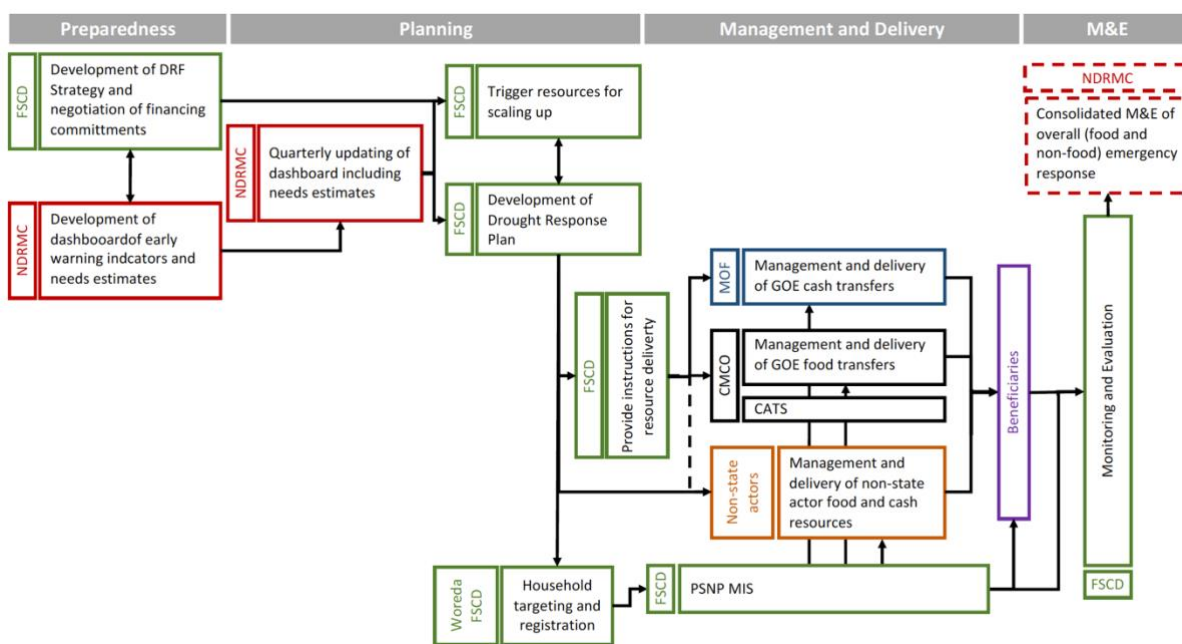
According to the ICFRP, the single scalable rural safety net will employ common systems to address both chronic and transitory food insecurity, including:

- **One system for early warning and needs assessment** under the NDRMC at federal, regional and woreda levels - assessing transitory need, and taking overall responsibility for geographic allocations of short-term food assistance to regions and woredas.
- **Common delivery and payment channels** for PSNP and HFA transfers, with *cash* managed by the government finance structures (MOFEC, BOFED, and WOFED).

¹⁵ These guidelines deal only with the *rural* safety net. A separate urban safety net system is being implemented.

FSCD will take over all responsibilities for planning, financing and implementing the cash and food assistance to households in response to drought and other economic shocks to households (for example, economic impacts of natural disasters including pandemics). The National Disaster Risk Management Commission (NDRMC), currently within the Ministry of Peace, will continue to be responsible for coordinating the early warning system and to play an overall oversight role for multi-sectoral disaster preparedness and response. The CMCO, housed in MoA, will be responsible for the food management (procurement, logistics, and tracking of delivery) of the response. As is the case for regular transfers, MoF plays a key role in the disbursement of shock-responsive cash transfers. A consolidated management structure for HFA and PSNP will be effective in PSNP5 as illustrated in Figure below.

Figure 3: Consolidated management structure for PSNP & HFA



One of the principal benefits of utilising PSNP scale up to respond to shocks is its timelines with scale up happening within two months of early warning. This compares with up to 8 months for delivery of HFA.

However, evaluations have identified the following key weaknesses in the implementation of the SRC during PSNP4:

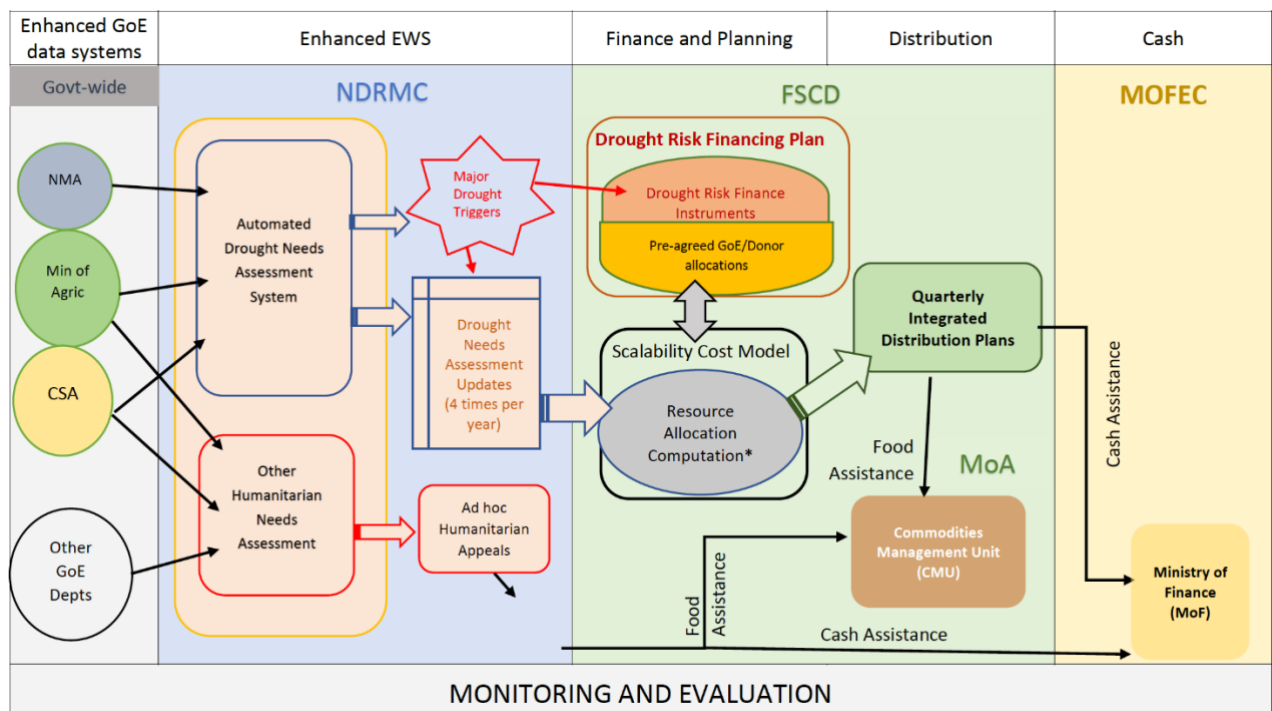
1. Scalable assistance is inefficiently provided via multiple delivery mechanisms which increase financial and transaction costs
2. The calculation of those in need of assistance is not based on timely or transparent EW systems
3. The current system provides chronically late transitory assistance

4. The timing, duration and quantity of assistance are unpredictable.

During PSNP-4, the ability to put in place the proposed changes to the handling of shock response were affected not only by the occurrence of major drought events in the first years of PSNP4, but also by the significant political and operational inertia in the existing system of disaster response in Ethiopia. Efforts to consolidate operations management were met with significant resistance; and when this resistance was combined with political unrest a decision was postponed until December 2019. The delays in consolidating management made it difficult to make the other more operational changes proposed under PSNP4 and the Rural Productive Safety Net projects.

The combination of PSNP and humanitarian food assistance has acted as a scalable safety net but has not been sufficiently shock responsive. Parallel management structures and weaknesses in the EWSs, needs assessments, decision-making, and response processes have contributed to delayed and poorly timed action. These have been compounded by poor temporal and geographic targeting, with the result that while most areas identified as needing support have received assistance, this has often not been at the time it was most needed, and the amount of resources provided have not always varied with need.

Figure 4: The PSNP SRC system



How does EW inform PSNP and HFA scale up?

Risk Financing Mechanism Guidelines provide the parameters and instructions for the implementation of the scale-up of PSNP-4 during times of emergency. The Guidelines state that scale-up must be done in accordance with the federal government's Early Warning System (the Livelihood Impact Assessment Sheets (LIAS))¹⁶

During PSNP 5, the needs estimation model will assess the volume and timing of food/consumption gaps (across population types and locations). The resulting data will include information on the number of people needing assistance, the duration of support required and the months of support that is needed (for each woreda)

During PSNP5, early warning systems will be strengthened, including an automated drought needs assessment system, which will update drought needs regularly - four times per year to coincide with the four peak hungry seasons in the PSNP regions (PSNP5 design document p43).

Annual drought risk financing plans, which will be updated regularly according to the drought needs assessment, will be developed. These will include drought risk financing instruments that will identify all pre-allocated or immediately available food and cash resources and allocate them against the drought needs assessment figures for all woredas. Where there is a shortfall, the system will generate an automatic re-allocation/reduction, based on pre-agreed prioritization criteria, drawing on relevant EW sub-system data, for example poverty and nutrition statistics. This will allow for cash and food transfers to be made in a timelier manner to clients who are experiencing a drought shock. Pg 43

¹⁶ OPM, 2017

Annex 4: The impact of the PSNP on nutrition

The World Bank cites the expansion of PSNP as being one of the three drivers of poverty reduction in Ethiopia (from 39.3% in 2005 to 25.6% in 2016), alongside agricultural growth and improved access to urban centres. Evaluations confirm that the PSNP-4 is contributing to its overall aim of increasing the number of months a household is food secure (IFRPI, 2017). A 2017 evaluation by Hoddinott and Knippenberg found that “receipt of PSNP payments reduced the initial impact of drought shocks by 57 percent and eliminates their adverse impact on food security within two years.” Without intervention, the impacts of drought persist for up to four years after the drought has ended.

Despite significant contributions to national poverty reduction and food security, PSNP-4 has shown no direct impact on maternal and child nutritional status. A recent peer review indicates that there has been no impact on child anthropometry and child dietary diversity.¹⁷ There is also limited evidence of impact on maternal outcomes including: mother’s diet, anthropometry, workload and time use for their own activities and childcare¹⁸.

The lack of impact on maternal and child dietary diversity is, in part, linked to the fact that PSNP-4 has responsibility only over core transfer of food and cash and has no control over market provision and the quality of the behaviour change and nutrition messages mothers are receiving. Poor market integration means that many people may access cash without being able to access to food (Lucian Pop et al, 2020; IFPRI, 2020).

In PSNP4, the agreed nutrition provisions were either not rolled out (e.g. Behaviour Change Communication (BCC) in Afar and Somali), not rolled out for long (e.g. BCC in many highland woredas), or experienced poor-quality rollout (e.g. Temporary Direct Support (TDS) provisions in many woredas). This was due to limited capacity and awareness of the implementers at all levels of the program, the lack of budget to provide the capacity development on this newly introduced area, and lack of accountability for inaction. There may also have been weaknesses with the strategy to achieve desired results (PSNP5 Design Document).

The programme has struggled to deliver on commitments made with regards to services for pregnant women and young children. Compliance with the requirement that women should shift from PWs to TDS has improved but there is need to reinforce efforts: 30 percent of women reported that the Community Food Security Task Force discouraged them from stopping work. Pregnant and lactating women are carrying out their co-responsibilities, but to a lesser extent in lowland regions. The share of health extension workers (HEWs) trained

¹⁷ Bahru et al, 2020

¹⁸ IFPRI, 2020 - based on a stratified sample in the four highland regions of Ethiopia in which PSNP operates. Random selection of 88 PSNP woredas located in Amhara, Oromia, SNNP, and Tigray regions)

in PSNP has risen and they are more integrated into its structures, but resource and time constraints (particularly for HEWs) led to a slow roll out of BCC sessions. Thus, the impact assessment of nutrition sensitive activities showed unsatisfactory results in most areas, including no impact on maternal knowledge regarding complementary feeding and on children's dietary diversity. PG 41

Evidence suggests that although PSNP recipients have a shorter annual food gap and have reduced their asset sales during periods of food insecurity, the PSNP cannot on its own result in improved anthropometric outcomes (Berhane, Hoddinott and Kumar, 2017; Berhane *et al.*, 2020). These findings serve as a reminder that food insecurity is not synonymous with nutrition insecurity and that many more drivers of nutrition insecurity need to be addressed for the PSNP-5 to impact on nutrition.

Annex 5: Overview of Early Warning Systems in Ethiopia

Ethiopia's EW systems have evolved over many years with early iterations beginning in the late 1970s. The current system which is used to inform the scale up of the PSNP and HFA at local and federal level focusses largely on food insecurity brought about primarily by drought and shorter-term shocks.

The following main mechanisms are used to collect, collate and analyse EW data:

- Livelihoods, Early Assessment and Protection (LEAP).
- Livelihood Impact Assessment Sheet (LIAS)
- Nutrition information from SAM treatment admissions,
- Hotspot SMART monitoring in response to indications of a hazard/shock
- Integrated Phase Classification (IPC) and FEWSNET (which includes household economy analysis).

These five data systems exist alongside other data captured by government ministries or implementing agencies, which to some extent inform either HFA, or a scale up of the PSNP.

The strong emphasis on food security indicators (e.g., crop production) and household income explains why the LEAP system which generates data on rainfall, timing of crop planting, yields etc. has been developed as the main way of estimating the numbers of people in need of HFA during each of the harvest seasons and is the main trigger for utilising PSNP contingency financing for the SRC during PSNP 3 and 4.

LIAS which is based on the HEA approach, is linked to the biannual Multi-Agency Seasonal Needs Assessment (MASNA) initiated in cropping and pastoral areas. This is described as a 'bottom-up' livelihoods approach to understanding people risks, vulnerabilities and capacities to withstand shocks and is utilised along with the IPC classification system and Hotspot monitoring to inform the HFA calculations.

HEA work in Ethiopia over the past 30 years or so has enabled the development of livelihood zoning baselines across the country which allow a modelling of the impact of shock and resulting food needs for specific livelihood groups. More recently, the HEA has also been used to examine survival, livelihoods protection and a series of graduation thresholds for PSNP beneficiaries (2018). As part of this latter analysis, estimates were made of the percentage of population that should be enrolled in PSNP but were not at the time included. More recently, the HEA approach has enabled a study by the U.K. Foreign Commonwealth and Development Office (FCDO) to make microsimulations to model the economic impacts of safety nets in the context of the COVID-19 pandemic (SPACE, 2020).

LIAS has undergone considerable updates since 2018, most notably integration with the LEAP tool. Satellite data has been integrated with field data to enhance humanitarian food security projections. Data from November of every year is used to

generate HFA requirements for January to December of the following year. Alongside the integration of LEAP into LIAS, LEAP has been updated to include a simple market model tool which generates price projection, and other tools to estimate crop yield and other dynamics. Upgrades to the LEAP tool are strengthening the role and integration of market data in EWS, however, further coordination between NDRMC and MoA could enable better integrated livestock data into EW processes. This refined HEA process is used to create woreda targets, which are used by the Food and Nutrition Cluster to generate a food and cash response plan.

Within the hotspot approach, the main criteria (outcome indicators of food security) for classifying woredas are selected in order to measure the level of severity of the problem and classify areas in three major priority categories as 1st priority, 2nd priority and 3rd priority; with the highest concern for the 1st priority woreda. In each sector, at least 50 per cent of the indicators should fulfil the criteria to be categorized as 1st priority, 2nd priority or 3rd priority. For the overall rating, 50 per cent of three or more sectors should be fulfilled.

The result of hotspot woreda classification is available in January following Meher Assessment and in July following Belg Assessment. However, if situations evolve faster, the worst affected woredas which were not considered in January or July hotspot classifications may be reported to NDRMC with a tangible justification. The format for hotspot reporting and analysis consists of the location (region, zone and woreda), P-code, previous Hotspot classification result, justification for Nutrition, Health, Agriculture, Market, Water, Education, Protection/CP/GVB classification, and summary of hotspot woredas by zone and region. The hotspot classification team at the regional level completes woreda level information such as sector of concern (Nutrition, Health, Agriculture, Market, WASH, Protection/CP/GBV and Education) as priority one, two and three and beneficiary population (emergency and PSNP) as a percentage of woreda rural population. Although information from different sectors is used in the hotspot woreda classification process, the intention is to triangulate and identify woredas that should be prioritised for food and nutrition-related humanitarian interventions. Details of hazard information included in the hotspot analysis are events that occur well before food insecurity conditions manifest. The event normally occurs or impacts the three pillars of food security (availability, access and utilization) some weeks or months before food insecurity sets in.

The hot spot analysis informs a number of activities and decisions.

- Prioritizing emergency nutrition responses (TSF in priority one (WFP), relief food in priority one in case of resource shortages; initiation of TFP responses in situations of increased cases of malnutrition and limited capacities;
- Mobilizing partners to strengthen responses especially in priority one and two woredas;
- Allocation of funding by donors especially for priority one and two woredas;
- Nutrition situation monitoring by comparing number of hotspot woredas at the regional and national levels during the same period or from one classification round to another and also changing hotspot status (improving, worsening, stable);
- Tracking of emergency nutrition response coverage and gaps in responses;

- Prioritizing emergency nutrition assessments especially in hotspot priority one woreda and partially in priority two woredas;
- Mapping of vulnerability as is the case in the humanitarian needs overview. Some of the woredas for example were classified as hotspot priority one 23 times out of 25 rounds of classification in nine years pointing to high vulnerability;
- Selection of woredas for biannual survey;
- An input for humanitarian needs overview (HNO).

Various efforts have been made in Ethiopia to improve the hotspot woredas classification system with the latest guidance produced in 2019. This document states that the framework should take into consideration the HEA baseline indicators recommended for monitoring and include outcome indicators not considered in the HEA. Moreover, the framework for collecting data should be agreed and shared across agencies for monitoring purposes and be linked to the national systems of the Monthly Food Security Monitoring and Early Warning system. It also states that for all of the selected indicators there is a need to establish and agree on description of thresholds for triggering response such as resource allocations and assessments. This most recent guidance has several additions: e.g. inclusion of protection/CP/ GBV as a classification criterion treating the Health and Nutrition Sectors as two separate sectors of classifications, revision of cut-off points for Nutrition, WASH, Education, Agriculture and Market.

For nutrition there are now six indicators in the analysis; Under five mortality rate (from ad hoc and biannual nutrition assessments), prevalence of GAM by either WHZ or MUAC, number of under five children admitted to TFP within the past reporting month, % change in admissions in last quarter, percentage of vulnerable people requesting external food relief.

Woredas classify their own hotspot status by regularly analysing and monitoring information and preparing National Monthly Early Warning Bulletins and disseminating the report to all relevant bodies at federal and regional levels. This bulletin is then passed to the Regional and Federal early warning units simultaneously.

The IPC, which distinguishes five phases of food insecurity: (1) minimal, (2) stressed, (3) crisis, (4) emergency and (5) famine. This is collated by FEWSNET to release HFA according to set criteria:

- At least one in five households faces an extreme lack of food.
- More than 30 percent of children under five are suffering from acute malnutrition.
- At least two people out of every 10,000 are dying each day.

Until PSNP 5, the different EW systems have not been substantively integrated. While LEAP data has driven PSNP4, the LIAS, IPC and hot spot SMART surveys have, in conjunction with FEWSNET, predominantly informed the HFA calculations highlighting (until recently) a lack of integration of different but complementary information systems.

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