

Authors

Noortje Verhart, Annoek van den Wijngaart,
Mona Dhamankar, Katrine Danielsen¹

Bringing agriculture and nutrition together using a gender lens²

The feminization of agriculture is well recognized: women are acknowledged as the main food producers in mainstream development policy and practice. However, women are disproportionately affected by hunger and malnourishment. A growing body of literature focuses on how to contribute to improved nutrition through agricultural interventions. 'Women's empowerment' is often cited as a promising strategy for improved nutrition. Yet, there are multiple meanings of women's empowerment and a lack of evidence on the linkages between women's empowerment and food and nutrition security. As a result, proposed and emerging responses do not provide the evidence of what works and why; neither do they result in sustainable food and nutrition security.

This paper contributes to literature on the linkages between food and nutrition security using a gender lens; through which we can consider specific power relations between men and women. The paper argues that addressing unequal gender power relations is part of the solution to achieving improved nutrition and agricultural outcomes.

Finally, the paper introduces the Nutrition and Gender Sensitive Agriculture Toolkit for addressing food and nutrition insecurity using an explicit gender lens. This toolkit was developed as part of a KIT and SNV partnership.

¹ Noortje Verhart, Mona Dhamankar and Katrine Danielsen are senior advisors for the Royal Tropical Institute (KIT), Amsterdam, the Netherlands. Annoek van den Wijngaart is an independent consultant and nutritionist, based in Jakarta. Thank you Julie Newton and Nasrin Sultana for your comments and contributions to earlier versions of this paper.

² This paper is based on a literature review and test results of the nutrition and gender sensitive agriculture toolkit in four countries in the SNV Asia project in Cambodia, Indonesia, Lao and Nepal



KIT





1 Introduction

The United Nations Food and Agriculture Organization (FAO) reports that women comprise around 43% of agricultural labour force in developing countries. The percentage is as high as 80% in some countries in sub-Saharan Africa (FAO 2011b): *“The vast majority of food production that is attributable to women makes them the principle agents of food security and household welfare in rural areas.”*

Women are the main food producers, yet they are disproportionately affected by hunger and malnourishment. Maternal and child under-nutrition is the cause of 3.5 million deaths annually (Black *et al.*, 2008). Under-nutrition takes many forms: under-nutrition, micronutrient deficiencies and overweight (IFAD, 2014). Over a lifetime, malnourished individuals can earn 10% less than well-nourished people. According to IFAD (2014), good nutrition is thus not just an outcome of economic growth and social development, but an essential input as well. Investing in nutrition through agriculture is more than a social good, it is sound policy and economics.

FAO (2011b) estimates that if women worldwide had the same access to productive resources as men, they could increase yields on their farms by 20–30% and total agricultural output by 2.5–4%, lifting between 100 and 150 million people out of hunger. Evidence tells us that: when women make more decisions on how to feed their children and on how much time to use on this; and when women have better access to healthcare, under-nutrition rates go down. Women’s status is linked to the under-nutrition rate, under-nutrition of themselves and their children. However, despite global efforts to address under-nutrition among women and children, rates remain high.

This paper is a background to the Nutrition and Gender Sensitive Agriculture Toolkit, which KIT and SNV developed in partnership³. The approach in this paper is based on the premise that gender relations are at the core of both nutrition and agricultural issues; and, that addressing unequal gender relations holds part of the solution to link the two fields. The paper looks at current debates on food and nutrition, arguing that an explicit gender lens can be helpful to bring food and nutrition together.

The Nutrition and Gender Sensitive Agriculture Toolkit includes tools, which aim to help practitioners plan and design holistic agriculture programmes using a nutrition and gender lens. The toolkit was developed to gain insights into how gender relations shape and reproduce food and nutrition insecurities at individual, household and community level, and how addressing these holds part of the solution to improve men, women and children’s nutritional status. The toolkit can be found online, see footnote.

³ www.NGSAtoolkit.org

2 Linking agriculture to nutrition - an emerging approach

2.1 Introduction to food security

Agriculture's main role is to deliver an affordable, accessible and nutritious diet for all without doing nutritional harm. (Brown, L. 2014). Agricultural development is seen as the main pathway to contribute to food and nutrition security⁴. For the purpose of this paper, food security is used as an entry point to look at agriculture and nutrition linkages. There are many different definitions of food security, which show its evolving and flexible nature. However, in this paper, the definition of the 2009 World Summit on Food Security (WSFS) is used in which four main pillars of food security are identified: availability, access, utilization and stability of food (FAO, 2009b).

Availability refers to sufficient quantities of available food from domestic production or imports; and for such food to be consistently available to individuals. At household level, this translates into capacity to produce enough food, or to have resources to purchase foods.

Access refers to each household having physical, social and economic access to enough food. This requires knowledge and ability to produce or procure food. This is linked to having resources at the household level (capital, labour, knowledge) and existing food prices on the market.

Utilization refers to actual consumption of diverse food to meet individual dietary and nutritional needs. It also covers food processing, storage options and decisions around what food is purchased, prepared and consumed and allocation in the household.

Stability refers to a reasonable degree of stability in the above, with reference to food supply, access and utilization.

The final declaration of the WSFS suggests that if one or more of these pillars is not in place - or when any of these key variables are disrupted - food security of a nation, communities, households, and individuals, are at stake.

The above pillars have proven useful for comprehensive analyses of food security's complex dimensions, as well as the need for actions at different levels in agricultural programmes. Interventions that aim to contribute to improved food security have generally focused on food availability and access. For example, many international programmes focus on increased agricultural production and productivity of commercial cash crops. This is achievable through agricultural training, providing inputs and improving extension services. The aim is to increase production for consumption and to produce more so that surplus can be sold resulting in increased income to purchase food. This means that on top of productivity training, programmes also focus on improved market access for farmers to sell their produce.

⁴ The agricultural pathway is just one pathway that influences nutrition and women's empowerment, but it is the focus of this paper

Box 1

Example of an agriculture project by SNV in Cambodia

During 2009, SNV conducted a market situation analysis for vegetables in Svay Rieng province, Cambodia. This was based on observations across the rest of the country which indicated a growing demand for fresh vegetables throughout the province. To help respond to this growing demand, SNV is supporting the Cambodian Farmers Federation of Agricultural Produc-

ers, a local federation of farmer associations, to increase their capacity for collective production and marketing, empowering smallholders to negotiate a better position for themselves in the vegetables value chain.

Source: Project books SNV Cambodia

While enhanced agricultural productivity is an important development goal, merely producing more food, or improving market access to sell surpluses, does not automatically lead to food security or improved nutrition (Herforth *et al.*, 2014). Increasing farmers' income does not automatically lead to improved well-being of family members in terms of education, health, nutrition and care. During the 2009 WSFS, it was stated that food security cannot be achieved without adequate nutritional value (FAO, 2009b) in terms of protein, energy, vitamins and minerals for all household members at all times (Quisumbing *et al.*, 1995). This emphasises the importance of utilization in improving food security. Recognising that more food produced and/or higher incomes from agricultural production does not automatically lead to better nutritional status has led to multiple initiatives and attempts to look for those agriculture pathways that also contribute to nutrition security.

2.3 Towards a nutrition lens in agriculture

Nutritional status is determined by three broad factors (SPRING;2014): food, health and care. The first factor refers to food availability and access. In relation to nutrition security, available and accessible food also needs to be sufficient, safe, nutritious and diverse, in order to support healthy and active lives. However, only having plenty of healthy food available, accessible and utilized, is not enough. The capacity to efficiently metabolize nutrient-rich foods is also important and this depends on: the health environment (in terms of pathogens and environmental contaminants); water quality; and accessible sanitation and health facilities. The third factor refers to care practices and child feeding practices at home. Examples of caring practices are child feeding, support and cognitive stimulation for children, and care and support for mothers during pregnancy and lactation.

The UNICEF conceptual framework on under-nutrition

The UNICEF conceptual framework (UNICEF, 1990) on under-nutrition focuses on these three broad determinants of under-nutrition (food, health and care), and distinguishes immediate, underlying and basic causes of under-nutrition. Immediate causes of under-nutrition are inadequate dietary intake and diseases. Underlying causes refer to food insecurity at household level, inadequate care practices and lack of hygiene and access to health services. For example, enough food may be available but if it is only staple food, this does not support a diverse diet. Or, lack of access to health services leads to diseases, which means that diverse food cannot be properly metabolized. Basic causes of under-nutrition are attributed to societal structures and processes, such as access to resources and socio-economic and political contexts (Lancet;2013).

This UNICEF framework relates causal factors of under-nutrition with different levels of social organisation. Immediate causes affect individuals, underlying causes relate to families, households or communities, and basic causes are related to the sub-national, national and regional level. This is important to keep in mind when food and nutrition security are considered together. Food security pillars can also be addressed from different levels and when doing so, issues change.



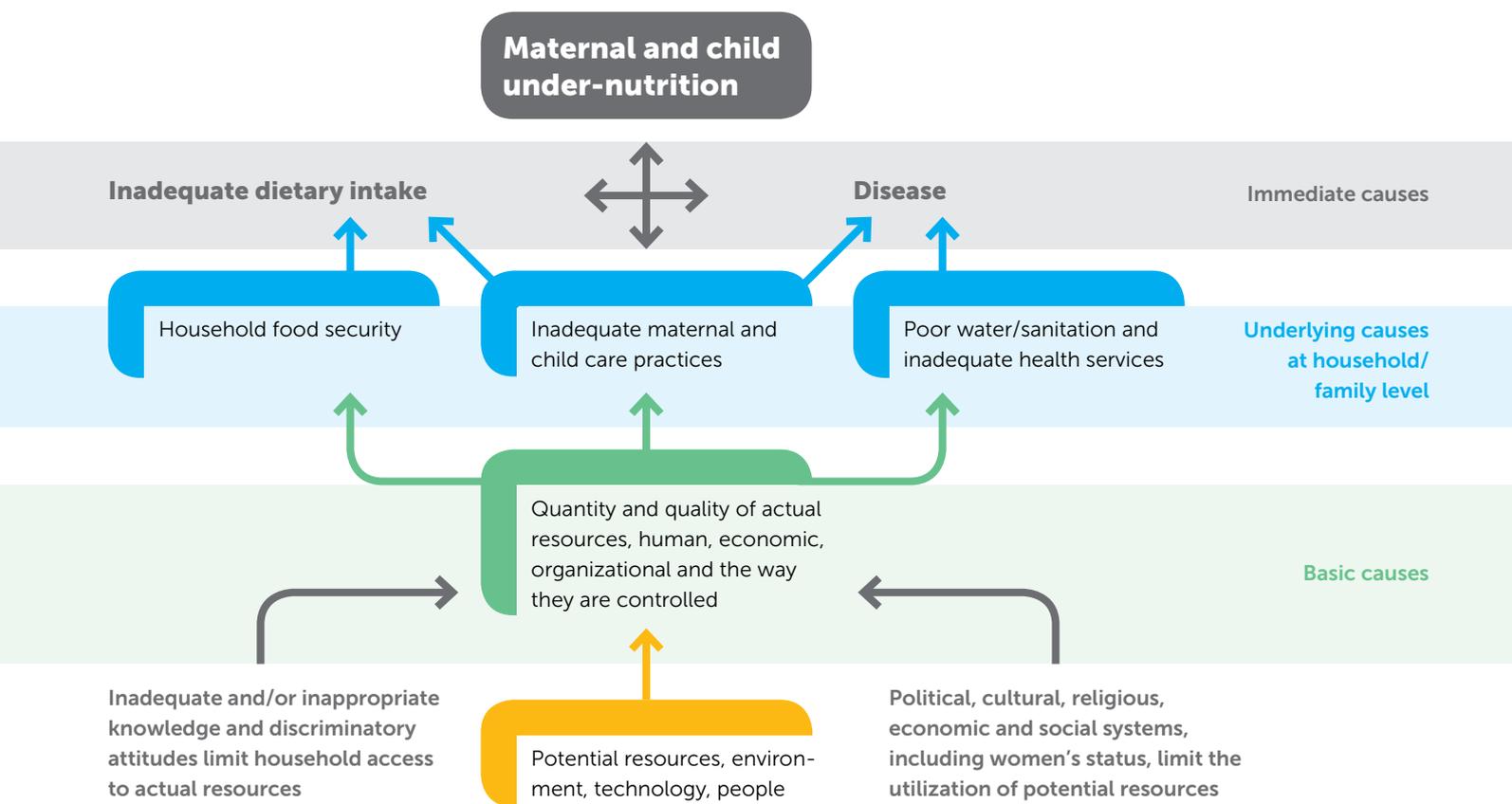


Figure 1: UNICEF framework on causes of under-nutrition

Women and children are especially affected by malnourishment, in particular children under two years old as damage done to the health and growth of children under this age is irreversible later in life. According to the Lancet series on under-nutrition and health (2008), maternal and child under-nutrition results in stunting, wasting⁵ and deficiencies of essential vitamins and minerals. Under-nutrition during a mother's pregnancy until a child is two years old can cause irreversible physical and cognitive deficits (SPRING, 2014). Good nutrition and healthy growth during 0-2 years have long lasting benefits throughout life, such as better school performance and learning capacity, improved cognitive and socio-emotional development, and increased work capacity and productivity. Improved nutrition outcomes are defined as improved fetal and child development. Pregnant women and mothers are therefore seen as key to address the problem of malnutrition.

The Lancet framework for action

In 2013, the Lancet presented a new under-nutrition framework, demonstrating how to achieve optimum foetal and child growth and development (see Figure 2 below), which builds on the UNICEF framework. The Lancet framework further explores how to address the three determinants of under-nutrition: food, health and care. It outlines immediate causes of under-nutrition: dietary (eating routine), behavioural (feeding and care practices) and health (low burden of infectious disease). And it outlines the underlying determinants of those: food security (link to eating routine), caregiving resources (link to care practices), access and use of health services (link to low burden of diseases) and hygienic conditions. These determinants are context-specific, shaped by economic and social conditions, national and global contexts, capacity, resources and governance (The Lancet, 2013).

⁵ **Wasting:** moderate and severe - below minus two standard deviations from median weight for height of reference population. **Stunting:** moderate and severe - below minus two standard deviations from median height for age of reference population.

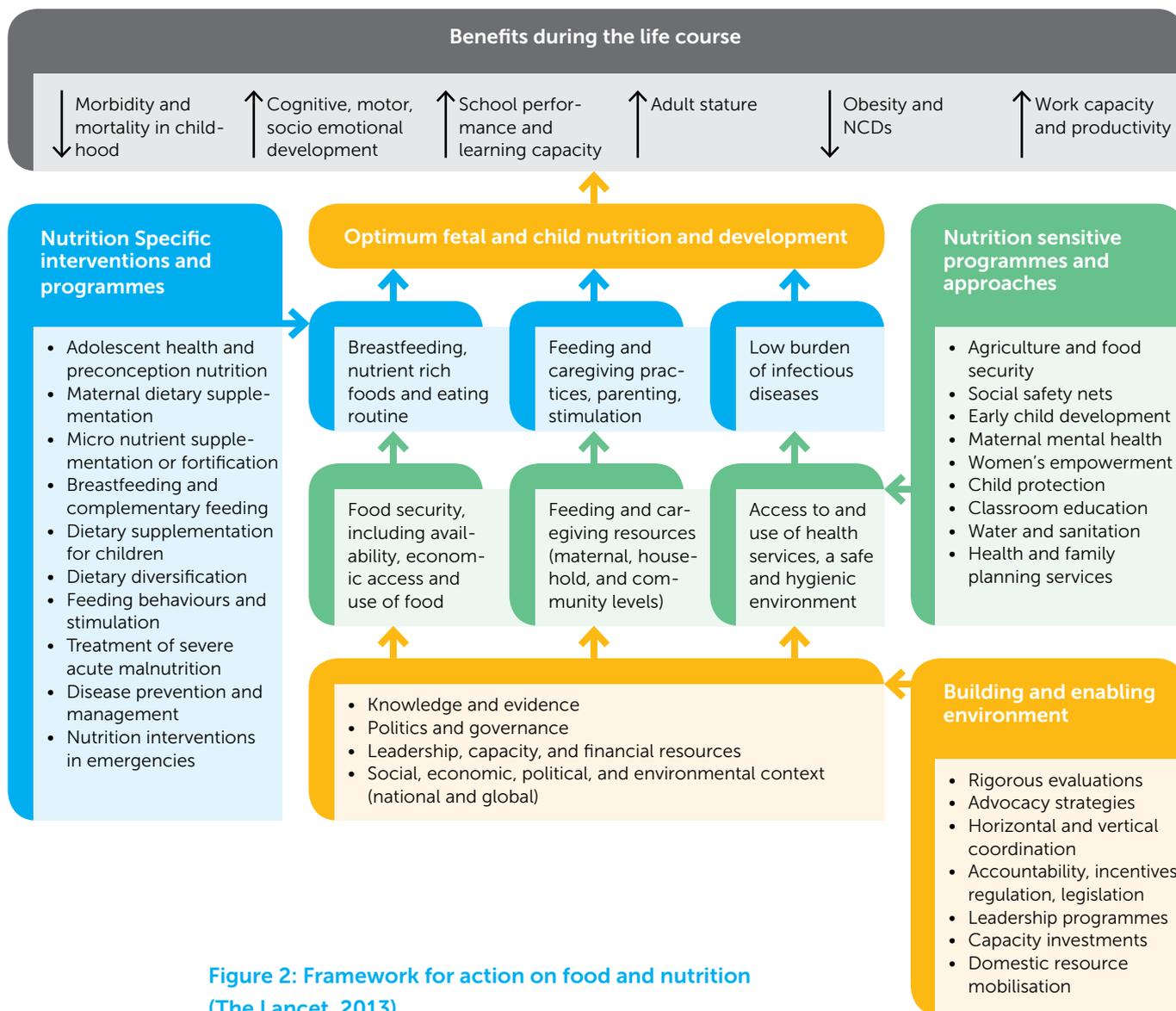


Figure 2: Framework for action on food and nutrition (The Lancet, 2013)

The Lancet framework is a framework for action and defines broad areas for interventions. It is a first step towards the development of a multi-sectoral model to address nutrition. Nutrition-specific programmes are those that aim to address the immediate causes of under-nutrition: eating routines, feeding, caregiving and parenting practices, and low burden of infectious diseases (Lancet, 2013). Nutrition programmes are critiqued for solely focusing on the health sector to deal with dietary intake, care practices and prevalence of diseases. Because of this, nutrition-sensitive programming has emerged. These are programmes that address the underlying factors of under-nutrition, such as the food security situation, caregiving resources and health care access and use.

As there is growing international support and agreement that food and nutrition are interlinked, key pathways and principles are emerging to link the two (SPRING, 2014). These conceptual pathways between agriculture and nutrition help to understand and measure various agricultural investments or activities and how these address under-nutrition of women and children (i.e. nutrition outcomes defined by food security, health and care).

Pathway frameworks linking agriculture and nutrition

The 'pathways frameworks' that have emerged (i.e. Herforth and Harris, Meeker and Haddad, Henson and Humphrey, Department for International Development UK, World Bank), conceptualise how interventions in agriculture can contribute to improved nutrition security. Nutrition security is broadly defined as improved dietary intake together with an improved health status of both mothers and their children. This means that the way nutrition security is defined links directly to women as mothers and how they influence children's nutrition status before pregnancy, during pregnancy and after pregnancy, as main caregivers. As we'll see below, pathways towards improved nutrition focus on women in their role as mothers and their tasks as caregivers.

The three main pathways in the below figure address the linkages between agriculture and nutrition through food production, agricultural income and women's empowerment. The women's empowerment pathway consists of three interrelated components: women's use of income; women's ability to care for themselves and family members; and women's energy expenditure. Factors that influence those three components are numerous, from which social norms, knowledge, skills and decision-making power are highlighted in the explanatory briefs (SPRING;2014). See the pathways example from Herforth and Harris (2014) below:

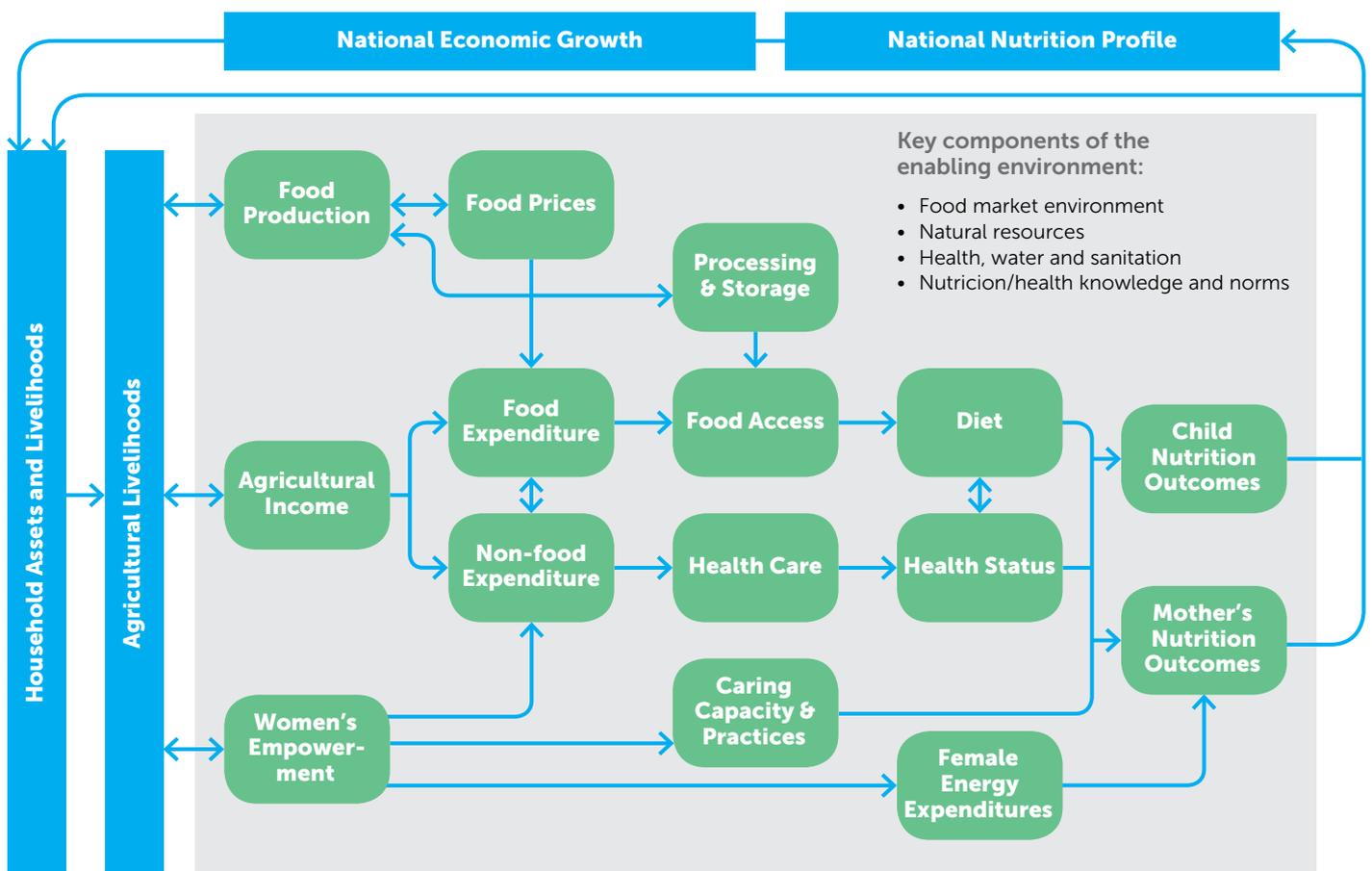


Figure 3: Pathways framework, Feed the Future: Linking agriculture and nutrition by Herforth and Harris (2014)

The World Bank (2007) identifies five potential pathways for improved nutrition in agricultural programmes: 1) increasing food expenditure, 2) increasing food production, 3) increasing food availability at national level, 4) increasing economic growth and 5) women's empowerment. An AgriDiet briefing paper (Meeker and Haddad, 2013) unpacks six pathways through which agriculture is hypothesised to affect nutrition outcomes: 1) agriculture as a source of food, 2) agriculture as a source of income, 3) food prices (and how they are affected), 4) women's social status and empowerment, and 5) women's time and 6) women's own health and nutritional status.

The women's empowerment pathway

Women's empowerment is considered an important pathway to contribute to improved nutrition when implementing agricultural programmes. In this pathway, women are looked at as mothers or as future mothers and how they can contribute to nutrition security in that role. Women's empowerment in relation to nutrition is conceptualised in the above pathways in the following ways (SPRING (2014), Du, L. (2014), Meeker and Haddad (2013)):

- Women's empowerment leads to greater influence of women at household level, for example in terms of how income is used. The assumption is that women, in their role as main caregivers, spend a higher percentage of their income on food, health and care, which leads to nutrition security.
- Women's empowerment leads to an improved nutritional status of women themselves, for example due to workload changes or due to more influence over household income (see above bullet point), which means that they have healthier pregnancies and have more resources to care for their children.
- Women's empowerment leads to increased influence how they use their time. The assumption is that this will lead to more time being allocated to feed their babies and to ensure young children are healthy.

According to BRIDGE (2014), despite the growing focus on women's empowerment as part of food and nutrition security solutions, the proposed and emerging responses to under-nutrition have not so far, or are unlikely to, result in sustainable, food and nutrition security for all. Women's empowerment as a separate pathway helps to emphasise the importance of looking at the role and position of women in agriculture and nutrition. However, the danger of separating women's empowerment as a separate pathway is that it positions women as drivers of food and nutrition security. This obscures the fact that women also perform other roles and that these roles (i.e. mother versus income earner) are at times conflicting. It also fails to analyse the relations of power that women are embedded in, which shape what they are able to decide over and what they have access to. The roles women perform and the decisions they can make influences their nutrition situation, and that of their children.

Conceptualising women as the solution leads to interventions that zoom in on the improvement of individual capacities of women in the context of their current role and position. This overlooks the resistance that may exist within the family, community or other places, to use their newly-gained capacities. It also ignores the fact that roles and responsibilities women perform are socially constructed and can change.

The focus on women's empowerment, instead of gender, leads to varied interpretations of what empowerment means. This continues to pose challenges to the ways in which interventions are conceptualized, implemented, and measured, and what (intended and unintended) impacts these interventions have. As a result, evidence on what works is scarce, which could help to further define what women's empowerment means in the context of food and nutrition security. Women's empowerment has not been unpacked as a concept in a consistent and practical manner. This leads to confusion of how it can be operationalised in real time interventions.

Current methods to look at women's empowerment are not helpful for gaining a full understanding of men and women's complex realities; and, how nutrition-sensitive agricultural interventions can improve these daily realities. The roles of women and men cannot be taken for granted, neither in isolation. How these roles are linked, interconnected and influence each other has not yet been considered in the context of food and nutrition security.

The below chapter explains how a gender lens has been conceptualised in this paper and how it can be applied to food and nutrition security. The chapter after that looks at the existing women's empowerment pathways from that lens. This aims to show how gender relations shape and are shaped by food and nutrition security. The last chapter refers to the programme design toolkit - the Nutrition and Gender Sensitive Agriculture toolkit - which includes tools to design interventions to contribute to food and nutrition security by addressing and changing gender relations.

3 Introducing a gender lens: linking food and nutrition security

This chapter introduces a gender lens to link food and nutrition security. . The aim is to further the debate on how women's empowerment can contribute towards better nutrition outcomes of agricultural programmes. A gender lens, encourages a holistic understanding of the different roles of women and men and their ability to negotiate on production, distribution and consumption of food. The gender lens in this paper provides a conceptual basis to conduct a gender analysis on top of, or alongside a nutrition assessment. The gender analysis concepts that underpin the gender lens in this paper are: division of labour; access and control over resources; decision-making; and norms and values.

An important aspect of this paper's gender lens is that the four concepts - roles, access, decision-making and norms - are interrelated and influence one another. For example, it is not possible to only look at the division of roles between men and women without looking at how that influences access and decision-making, and vice versa. Also, gender is considered in a relational way, which means that each of the concepts, are looked at from both men and women's perspective. It means that the roles of women and men are both important to understand; and, that women's and men's access to resources and decision-making is significant.

Gender relations influence what women and men do, what they have access to and what decisions they can make. This influences their food and nutrition security situation. These gender relations are dynamic and change all the time due to planned interventions, policy changes, changing behaviours or other influences. As a result, a food and nutrition security situation may be affected by changing gender relations, but food and nutrition security interventions likely affect and change gender relations as well. See Figure 4 below:

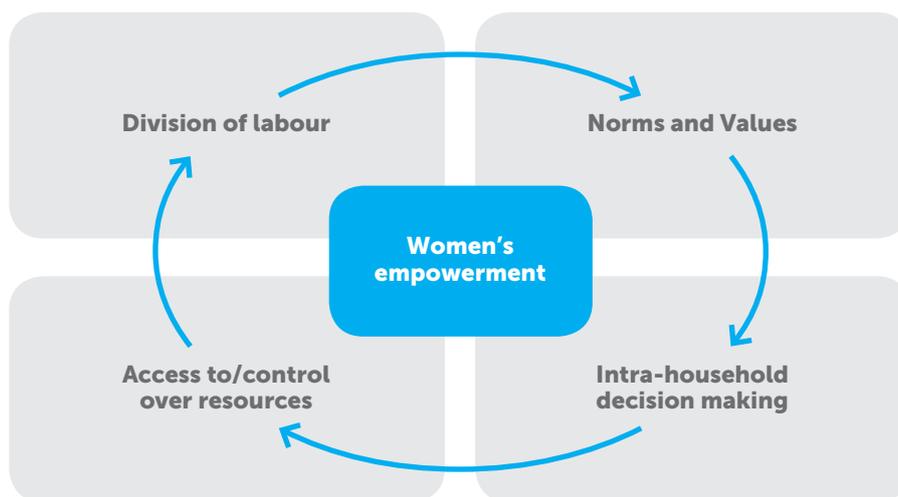


Figure 4 Gender relations framework, adapted from van Eerdewijk and Danielsen, 2014

Gender relations are produced and reproduced through norms and values in different institutional spaces at different levels (household, community, national, global and everything in between). Spaces where norms and values are being reproduced are for example, community meetings, religious communities, health clinics, schools, but also government and policies.

A gender lens helps us to consider at community and household levels:

- 1** The roles men and women play in agricultural production and consumption;
- 2** Access and control over resources men and women have (in relation to commercial and subsistence production), access to health services, clean water and hygienic toilets);
- 3** Intra-household decision-making around production and consumption (including care practices for children);
- 4** Norms and values and how these shape what people are supposed to do (role performance), their access to resources and how decisions are made in relation to food production and consumption.

4 Women's empowerment through a gender lens: a solution?

Using a gender lens helps us understand the complex relations women and men operate in, and how this influences food and nutrition security at individual, household and community level. It allows for analysis of how changing gender relations can contribute to food and nutrition security. Women's empowerment pathways are used as a starting point. Using a gender lens shows how critical it is to define women's empowerment carefully and how men and women's realities are often far more complex than we initially may think.

• Gender relations in food production

As noted in the introduction of this paper, women constitute a large part of the agricultural labour force. Women work as unpaid family labourers; self-employed producers; on- and off-farm employees; entrepreneurs; traders and service providers; and technology researchers and developers (Hill, 2011). However, they are mostly invisible in these roles and are not recognized for how they contribute to agricultural production.

Women's roles in commercial agriculture often remain invisible, and their role in subsistence agriculture is frequently seen as an extension of their domestic tasks which does not require additional support in terms of extension services, inputs and training. The lack of attention given to women's domestic tasks jeopardizes the availability and diversity of food crops available for household consumption which women have control over. If women had similar access to productive resources as men, they would be able to produce more. In addition, commercialization in agricultural production can lead to women's displacement in producing food crops that were previously in their domain. As Vigneri *et al.* (2009) found, the notion of distinct men's and women's crops does not exist. It is the crops that require few inputs and have low productivity that women grow and once such crops are grown commercially, men take control and benefit.

Box 2

Illustrations of how commercialisation in agriculture changes gender relations in production

Fischer and Qaim (2012) note that in Kenya, when the banana sector was commercialized due to increased demand for bananas, banana production, which was traditionally under women's control was 'centralized under men's control' and women lost their income source. In addition, women also missed out on potential profit that from this higher demand for bananas.

Carney *et al.* (cited in Quisumbing and Pandolfelli, 2009) state that in Gambia, women 'lost rights to grow swamp rice on

communal land when an irrigation project gave control of the land to male heads of households', who were defined as the farmer and owner of the land. Considering that rice is the preferred staple in Gambia, in doing so women lost their source of food security. In other similar circumstances, women have lost land through privatization and titling as they are not regarded as farmers or owners of the land.

Source of both citations: Mudege and Verhart, 2012

Women's inputs to farming labour, including laborious work such as weeding and post-harvest processing is overlooked, as well as recognition for food preparation, fuel and water collection and the myriad of other household tasks women perform (BRIDGE, 2014). The time women spend on different tasks, as well as the lack of recognition for these tasks, influences women's capacity to care and the conditions in which food is prepared (i.e. availability of clean water) which influences their role in nutrition security.

Food production is the starting point of most agricultural pathways towards improved nutrition. Understanding the role women play in food and other agricultural production, the access they have to resources to perform these tasks - and the recognition they receive - are important issues to understand and address for increased availability of food. This goes beyond their role as caregivers in the family. The way women's household and caregiving tasks and their productive tasks interrelate and affect each other, is important to take into account while working towards effective pathways towards improved nutrition through food production.

• **Gender relations and the use of income from agriculture**

Women's discretionary income has a greater impact on child nutrition and food security than men's (UNICEF, 2011, Smith *et al.*, 2003). Women's increased control over income and assets can affect their nutritional status, which in turn is based on their spending decisions and the social networks and cultural norms that influence those decisions (FAO, 2011 in Du Lian, 2014). However, cultural norms that affect women's spending decisions may change in the process of women's empowerment, which may also affect women's preferences how to use their income. The effects on nutrition are then hard to predict.

The textbox below points to the need for more empirical evidence to determine how empowerment affects income use and whether it as a result, increases food access. It shows the need to unpack how decisions are made over household expenditures, before we can see where changes are needed to ensure that increased influence of women over income, leads to improved nutrition results.

Box 3

Changes in income use

Despite evidence supporting the hypothesis that women are more likely to allocate resources toward household expenditures, especially those benefiting children, scholars have also expressed caution about using the economic models that have come to these conclusions. They point out that higher spending outcomes on child goods could also result in a decrease in expenditure on other important household costs (that may

also benefit nutrition goals). Also, certain methods of female empowerment may have opposite effects. For example reducing gender discrimination could lead to women's preferences gravitating toward those of men, which might result in reduced spending on children or other family related expenses.

Source: Doepke and Tertilt, 2011

The textbox below refers to the different ways men and women in Cambodia look at how money should be spend, and how that is embedded in the roles they have in the house. Changing the roles men and women have, may change their perspectives on how they spend their money, but also what is needed to ensure that family members eat a diverse diet.

Box 4

Perspectives of men and women on how money should be spent - example from Cambodia

"According to men, money should not be used to buy food. Food is something they produce, and money should be spent on other issues, such as better housing and unexpected expenditures (saving). Women, however, said they wanted to save money, but that they needed money also to buy food in order to make nutritious meals for the family." Women

indicated that they are responsible for making a healthy meal, while men are responsible for bringing in money for other expenditures.

Source: Field notes from testing the Nutrition and Gender Sensitive Agriculture Toolkit

Increasing women's control over family income is difficult, so programme efforts often zoom in on additional income-generating activities for women which do not take into account what women already do to contribute to family income. As women play a dual role in the household, working on both domestic as well as agricultural production tasks (including subsistence farming), additional activities to earn their own income will likely impact on their existing time and labour burden.

Box 5

Decision making around what to sell and what to eat - example from Cambodia

"Men and women told us that women decide what the family eats. Men provide the money to buy food. As a result, men decide what portion of home production they sell, and what they keep for home consumption. In the village, there is no fruit at the market. Women have to go to a market in the district to buy fruit, which is far away. As men drive the motorbike, women can only go to the market when they go with

their husbands (women only drive a motorbike when there is an emergency). They never go together to the market to buy food. Men only go to the market when they want to sell food, and women can then come along to buy food."

Source: Field notes from testing the Nutrition and Gender Sensitive Agriculture toolkit in Cambodia

- ***Gender relations and food utilization***

The utilization pillar of food security refers to actual consumption of diverse food to meet individual dietary and nutritional needs. It also covers food processing and storage options and decisions around what food is purchased, prepared and consumed and allocation in the household. Decisions women can and are allowed to make within the household are related to their position in the family which is, for example, linked to their roles and access to resources. It is therefore useful to know how decisions are made around what to produce, where to produce it, and how to use income. It is also essential to ask about decision-making: what are women allowed to eat? Who eats first? Who decides how food is eaten and by whom? Substantial evidence shows that households do not necessarily act in a unitary manner when allocating resources; women and men often have different preferences for allocating food and non-food resources and may therefore distribute these resources differently based on their bargaining power within a household (Quisumbing and Maluccio 2000b).

Existing gender norms influence food distribution at different levels, down to the household level. Women in relatively well-off households can still be food insecure and lack good nutrition due to the way food is shared and distributed and their lack of influence to claim their share. (FAO, 2008). Existing gender norms mean that having adequate supply of food may not translate to good nutrition as social norms may dictate who gets what food and when (FAO, 2008). For example in Zambia, women tend to be more undernourished than men (Brown, 2009) as men eat first, and women eat the leftovers.

- ***Gender relations and access to health care***

Women's limited access to and control over productive resources, such as land, loans, labour and agricultural training, also creates obstacles for access to and control over other services such as healthcare, information on good care practices and clean water sources. Besides the fact that women miss out on information and knowledge on health and care, they may not be able to decide about the time they spend on caring, the money they spend on healthcare, or which trainings to attend. Women's empowerment pathways do acknowledge that women's empowerment allows for decision-making in all these areas (production, income, care and health), however, interventions so far have shown that neither agricultural development nor nutrition interventions have been able to address women's time, access and decision-making issues in relation to each other.

This requires looking at all tasks women perform, how they may be conflicting and what resistance, obstacles and opportunities exist to change this towards improved nutrition outcomes. It especially requires us to look at contextual factors, such as the below textbox shows. Norms and values around marriage, and when women marry at an early age, can from an important factor contributing to under-nutrition among children.

Stunting and wasting are influenced by prenatal factors in Indonesia, where many pregnant women are underweight due to poor maternal nutrition and little healthcare. Repeated pregnancy, high workloads during pregnancy, and pregnancies at a young age contribute to the problem. Malnourished mothers tend to give birth to underweight babies. Currently 5.5% of infants in Indonesia are born with low birth weight, a marker of maternal malnutrition and predictor of a child's future growth. After birth, poor feeding practices, lack of awareness of good nutrition for infants, and lack of access to good health care worsen the issue of children's stunting and wasting. The underlying factors that contribute to this

position of women can be found in what decisions they are able to make around marriage, pregnancy and what work they perform while pregnant. When women do not have decision-making at this stage in the child's development, it is not likely that their status improves after delivery. Women's empowerment is therefore not only essential in terms of workload and time, but goes much further and is about basic decisions such as age of marriage, pregnancy and dealing with domestic violence.

Source: Field notes from testing the Nutrition and Gender Sensitive Agriculture toolkit in Indonesia

- **Gender relations and care practices**

Women's multiple roles and identities as producers, consumers and caregivers, are not always recognised. Women's different roles affect their food and nutrition security. Roles can also be conflicting at times and we need to know when that is the case, and if so how it works. Agricultural pathways towards improved nutrition can be an opportunity to address under-nutrition, but it can also be a threat. For example, when women need to work in the fields, this may interfere with feeding their infants and young children (UNICEF, 2011).

In existing women's empowerment pathways, women's own nutritional status is linked to caring ability and healthy pregnancies. One way of improving their nutrition status is to reduce women's work burden. Women's work burden is however connected to their role as food producers, but also as income earners from agricultural production. Reducing women's work burden, affects therefore food production.

Improved care practices require knowledge of how to care well, access to resources to care well (time, money) and influence over decisions regarding use of resources and time. To design nutrition and gender sensitive agricultural programmes, women's roles in agricultural production and the link to their caregiving practices, needs assessing. This can be done by looking at what women do (in relation to men), what they have access to (in relation to agricultural and health-related resources), what decisions they can make as a result, and how these are embedded in local structures.

Interestingly, where roles overlap and potentially conflict, is where food and nutrition security solutions can be targeted. The below example in the textbox, shows how breastfeeding can be conflicting with women's role in the field. Interventions that solely focus on informing women about exclusive breastfeeding, is not enough. Other additional activities are needed, which are often context specific (i.e. include men in these discussions, discuss the issue of time use etc.). We need to look at what works when and where. Nutrition programmes which focus solely on pregnant women and mothers to reach young children during their first 1000 days do not consider women's gendered relationships and therefore their ability and space to make decisions about issues such as exclusive breastfeeding. See textbox below.

Box 7

Exclusive breastfeeding and why it doesn't happen in Lao

While using the Nutrition and Gender Sensitive Agriculture Mapping Toolkit in Lao, exclusive breastfeeding practices were discussed. Infants are often fed steamed rice when they are only 1.5 months old. When researchers tried to find out why, women told them that they need to work in the fields again after 1.5 months after giving birth. The fields are far from their homes, which means that they cannot go back home to feed their babies. As a result, they leave their babies at home with caregivers - their parents or older siblings of the baby. These infants are fed, for example, just steamed rice. Not only is this too early after 1.5 months, the rice is also fed by hand, which may lead to contamination and diseases.

Based on the above short story, it becomes clear that women's role in the field, and the need to go back to work rather soon after giving birth, creates an obstacle to breastfeed exclusively. It means that simply inviting women for this type of information may not be effective; firstly because they cannot change the fact that they need to go back to work on their own, and secondly because they are not the only one taking care of their babies. The grandparents and brothers/sisters are also potentially important to invite to the discussions on exclusive breastfeeding.

Source: Results from field testing of Nutrition and Gender Sensitive Agriculture Mapping Toolkit in Lao

Before designing nutrition-sensitive agricultural interventions, it is critical to obtain insights and thus understand the role women play in agricultural and domestic tasks, and how that is related to what men do, how that affects their access to resources (land, money for health care, time), their decision-making and how this is influenced by norms and values.

Box 8

IFPRI research in Nepal into relationships between women's empowerment and nutrition

In rural Nepal, IFPRI researchers surveyed more than 4,000 households to investigate the impact of women's empowerment on nutrition. They worked with the Women's Empowerment in Agriculture Index to assess women's empowerment in agriculture and examine the extent to which mother and child dietary diversity and nutritional outcomes improve when improvements take place in different domains of women's empowerment including control over income, autonomy of production, community engagement and workload. The findings suggest that improved nutrition is not necessarily correlated with women being empowered in all domains of empowerment and that different domains of empowerment may have different impacts on nutrition.

For maternal body mass index, engagement in community organizations and control of income emerge as important, whereas empowerment related to women's autonomy in agricultural production decisions and workload are determinants of women's dietary diversity. Autonomy in production and, to a lesser extent, workload emerge as determinants of child nutrition.

Overall the results show that the domains of empowerment that are significant for women and children's diet and nutrition outcomes may not always overlap.

Source: Malapit, H.J.L. et.al. (2013)

5 Putting a gender lens into practice

5.1 Introduction to the Nutrition and Gender Sensitive Agriculture Toolkit

One way to put the gender lens into practice in designing nutrition sensitive agricultural programmes is to use the Nutrition and Gender Sensitive Agriculture toolkit, which includes tools to use the gender lens in practice in an agricultural context, on top of a nutrition lens.

The toolkit helps plan nutrition and gender sensitive agricultural programmes and provides questions to understand what the current food and nutrition security situation is and how this is influenced by (intra-household) gender dynamics. It thus provides a guide to discover what the

current food and nutrition situation is, how that problem is embedded in different sectors (agriculture, nutrition, health, water and sanitation) and how a gender analysis can be applied in these fields. The four main gender analysis questions are in three main domains: agriculture, nutrition/health, and water and hygiene. Interwoven gender questions are: who is doing what in the sector; who owns what in that sector; who makes decisions about what; what norms and beliefs are important; and how issues in the three sectors interrelated.

Using the toolkit fulfils a dual purpose: to collect data to plan nutrition and gender sensitive agricultural interventions which are based on assessment findings (i.e. understanding how gender relations shape food and nutrition situations); the second is to make men and women aware of the issues in their lives, household and community and to create a demand for tailored interventions. As Okali (2011) stated: *"We need a much better understanding of what changes we are looking for, and a better understanding of what we base that on. We may need to revise our understanding of what that change should look like."* The assessment toolkit provides the first steps to develop a common understanding of the situation in a community among members and leaders on what the situation is, and what potential changes they see happening.

5.2 Intervention planning

Strategies resulting from using the toolkit share a common thread of responding to identified problems relating to under-nutrition, agriculture and gender inequalities in a multi-sectoral way. Strategies ask for responses that are participatory, empowering, locally-owned and environmentally sustainable. Based on the BRIDGE 2014 overview report on gender and food security, some directions address gender issues in the context of food and nutrition security approaches. Using the Nutrition and Gender Sensitive Agricultural Toolkit should contribute to:

- Developing gender aware programming that goes beyond instrumentalizing women. This means that programmes need to go beyond the inclusion or recognition of women as vulnerable or as potential drivers of economic growth. This means that interventions focus on increasing the range of choices that are socially endorsed.
- Assessing multiple dimensions of women's empowerment. For example, women's productive and financial capacity does not indicate whether they have the power to use those resources.
- Revisiting current measurements for women's empowerment in the context of food and nutrition.
- Looking for alternative frameworks that provide the basis for women's empowerment indicators, which capture social, cultural and relational dimensions.
- Promoting women's increased access and control over resources. Such as land, health and care services.
- Recognizing and respecting women and men farmers' local knowledge in order to develop locally-relevant, gender-just food and nutrition security solutions.
- Linking women and men in communities with local government and service providers to discuss and plan improvements (making services fit for the needs of men and women, considering their current roles and access).
- Engaging women, men, girls and boys in nutrition and food interventions and listen to them during assessments.



6 Concluding remarks and ways forward

This paper reviews current debates on food and nutrition and argues that using a gender lens can be helpful to bring together food and nutrition. The paper also assesses the current ways women's empowerment is used as a pathway towards improved nutrition in agriculture; and the gaps in this approach from a gender perspective. The Nutrition and Gender Sensitive Agriculture Toolkit aims to address some of these gaps in current approaches and to design interventions that bear in mind gender inequalities. But this is only a starting point; there is an urgent need to re-define food and nutrition security in a political and people-centred way. Food is a basic human right and food and nutrition insecurity are social injustices. A focus on social injustice means that food distribution and food system structures need to be questioned to find out who is affected most by these systems and why. Only when we achieve this, can we come to gender-just and sustainable food and nutrition solutions now and in the future.

References

- Black, R.E., Allen, L.H., Bhutta, Z.A. et al. (2008) Maternal and child under nutrition: global and regional exposures and health consequences. *The Lancet* 371(9608) p. 243-260.
- Brody, A., Spielloch, A. and Aboud, G. (2014) *Gender and food security: towards gender-just food and nutrition security*. UK: IDS.
- Brown, L., Deshpande, C., Hill, C.L.M. et al. (2009) Module 1: Gender and Food Security. In: *Gender and Agriculture Sourcebook: investing in women as drivers of agricultural growth*. World Bank; Washington DC, USA.
- Brown L. (2015) Rebalancing Agriculture will Deliver for Nutrition and Gender Equality www.securenutritionplatform.org
- Charman, A.J.E. (2008) *Empowering women through livelihoods orientated agricultural service provision: a consideration of evidence from Southern Africa*. Helsinki, Finland: UNU-WIDER.
- CGIAR and Helen Keller International. (2014) *Inspiring change: institutionalizing gender in nutrition and agriculture interventions*. Penang, Malaysia: World Fish.
- Doepke, M and Tertilt, M. (2011) *Does female empowerment promote economic development?*
- Doss, C.R. (2001) Designing Agricultural technology for African Women Farmers: Lessons from 25 years of experience. *World Development* 29(12) p. 2075-2092.
- Du, Lidan, (2014) Leveraging agriculture for nutritional impact through the feed the future initiative: a landscape analysis of activities across 19 focus countries. Arlington, VA: USAID.
- Eerdewijk, van. A. and Danielsen K. (2014) *Gender Matters in Farm Power*, Study for Cimmyt, research program on Maize.
- FAO. (1996) *Rome declaration on food security*. World Food Summit, 13–17 November 1996, Rome, Italy: FAO.
- FAO. (2008) *The state of food and agriculture: biofuels, prospects, risks and opportunities*. Rome, Italy: FAO.
- FAO. (2011) *The state of food and agriculture 2010-2011: women in agriculture: closing the gender gap for development*. Rome, Italy: FAO.
- FAO. (2009) *Declaration of the World Summit on Food Security*. Rome, Italy: FAO.
- FAO. (2012). *Gender and nutrition*. Draft Issue Paper
- FAO. (2013) *The human right to adequate food in the global strategic framework for food security and nutrition: a global consensus*. Rome, Italy: FAO.
- FAO. (2013) *Making agriculture work for nutrition: synthesis of guiding principles on agriculture programming for nutrition*. Summary for use during the ICN2 Expert Meeting on Nutrition-Sensitive Food and Agriculture Systems. Rome, Italy: FAO.
- Fischer, E. and Qaim, M. (2012) 'Gender, agricultural commercialization and collective action in Kenya'. Paper presented at: *the International Association of Agricultural Economists Triennial Conference*, Foz do Iguaçu, Brazil, 18-24 August, 2012.
- DFID. (2014) *Can agriculture interventions promote nutrition?* Evidence paper
- Henson, S., Humphrey, J. and McClafferty, B. (2013) *Nutritious agriculture by design: a tool for program planning*. GAIN-IDS Discussion Paper. USA: GAIN.
- Herforth, A. and Harris J. (2014) *Understanding and applying primary pathways and principles. Brief #1*. Improving Nutrition through Agriculture Technical Brief Series. Arlington, VA: USAID/ Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) Project.
- Herforth, A. et al. (2012) *Prioritizing nutrition in agriculture and rural development: guiding principles for operational investments*. Health, Nutrition and Population (HNP) Discussion Paper. Washington DC, USA: World Bank.
- Hill, C. (2011) Background paper. Prepared for: *UN Women Expert Group Meeting on enabling rural women's economic empowerment: institutions, opportunities and participation*. New York, USA: UN Women.



- IFPRI. (2013) The challenge of hunger: building resilience to achieve food nutrition and security. In: 2013 *Global Hunger Index*. Washington DC, USA: IFPRI.
- IFAD. (2014) Improving nutrition through agriculture
- Kabeer, N. (1999) Resources, agency, achievement: reflections on the measurement of women's empowerment. *Development and Change* 30(3) 435-464 UK: Wiley.
- Kiriti, T., & Tisdell, C.A. (2002) *Commercialisation of agriculture in Kenya: case study of urban bias on food availability in farm households*. Social Economics, Policy and Development 27, University of Queensland, Australia
- Lancet (2013) Maternal and Child Nutrition Executive Summary of the Lancet Maternal and Child Nutrition Series
- Malapit, H.J.L. et al. (2013). *Women's empowerment in agriculture, production diversity, and nutrition: evidence from Nepal*. IFPRI Discussion Paper 01313. Washington DC, USA: IFPRI.
- Meeker, J. and Haddad, L. (2013). *A state of the art review of agriculture-nutrition linkages: an agridiet position paper*. AgriDiet briefing paper.
- Mudege N.N. and Verhart N. (2012) *Gender rights and food security: think piece*. Amsterdam, Netherlands: Royal Tropical Institute.
- Nelson, J.A. (2015) Husbandry: a (feminist) reclamation of masculine responsibility for care. *Cambridge Journal of Economics*, 1-15. Oxford, UK: Oxford University Press.
- Okali, C. (2011) Achieving transformative change for rural women's empowerment Expert paper - Expert Group Meeting Enabling rural women's economic empowerment: institutions, opportunities and participation - UN Women In cooperation with FAO, IFAD and WFP
- Quisumbing, A. R., & Maluccio, J. A. (2000b). Intrahousehold allocation and gender relations: New empirical evidence from four developing countries. International Food Policy Research Institute.
- Quisumbing, A. and Meizen-Dick, R. (2012) 'Women in agriculture: closing the gender gap', *IFPRI Global Policy Report*, Washington, DC: IFPRI, www.ifpri.org/gfpr/2012/women-agriculture
- Quisumbing, A. (2012) Innovative approaches to gender and food security: changing attitudes, changing behaviours. *IDS Insights* issue 82.
- Quisumbing, A.R., Brown, L.R., Feldstein H.S., Haddad, L. and Peña, C. (1995) *Women: the key to food security*. Washington DC, USA: IFPRI.
- Ruel, M.T. and Alderman, H. (2013). Nutrition-sensitive interventions and programmes: how can they help accelerate progress in improving maternal and child nutrition? *The Lancet*.10;382(9891):536-51
- Smith, L.C., and Haddad L. (2000) *Explaining Child Under-nutrition in Developing Countries: a cross-country analysis*. Washington, DC: IFPRI.
- Smith, L.C., Ramakrishnan U., Ndiaye A., Haddad L. and Martorell R. (2003) *The importance of women's status for child nutrition in developing countries*. IFPRI Research Report 131. Washington DC, USA: IFPRI.
- SPRING. (2014) *Understanding the Women's Empowerment Pathway Brief #4*. Improving Nutrition through Agriculture Technical Brief Series. Arlington, VA: USAID/Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) Project.
- UNICEF. (1990) <http://www.unicef.org/nutrition/training/2.5/4.html>
- UNICEF. (2011) *Gender influences on child survival, health and nutrition: a narrative review*. New York: UNICEF; Liverpool, UK: Liverpool School of Tropical Medicine.
- UNICEF http://www.unicef.org/infobycountry/stats_popup2.html (accessed 4-12-2015)
- Vigneri, M and Holmes, R. (2009) When being more productive still doesn't pay: gender inequality and socio economic constraints in Ghana's cocoa sector. Paper presented at the FAO-IFAD-ILO Workshop on Gaps, trends and current research in gender dimensions of agricultural and rural employment: differentiated pathways out of poverty, Rome March 31-April 2



- Webb. (2013) Impact Pathways from Agricultural Research to Improved Nutrition and Health: Literature Analysis and Research Priorities Conference paper for Second International Conference on Nutrition (ICN2), Rome 19-21 November 2014
- Weingarter L. (2005) The concept of food and nutrition security in Achieving Food and Nutrition Security Actions to Meet the Global Challenge A Training Course Reader Klaus Klennert (Editor)
- World Bank. (2007) *From Agriculture to Nutrition: pathways, synergies and outcomes*. Washington DC, USA: World Bank.

