

# Integrated Food and Nutrition Security Programming to Address Undernutrition

## The Plan Approach

Fannie de Boer  
Inge Verdonk

### Desk Review



Wageningen UR Centre for Development Innovation (CDI) works on processes of innovation and change in the areas of secure and healthy food, adaptive agriculture, sustainable markets and ecosystem governance. It is an interdisciplinary and internationally focused unit of Wageningen University & Research centre within the Social Sciences Group.

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Plan believes in the strength of children: together with them, their families and organisations in their communities, we aim to improve access to and quality of education, health care and family income, and promote a safe environment." This is our organisation's mission as expressed in Plan Nederland's long-term plan "Vision 2012". This mission is based on Plan Nederland's vision: "The rights of the child in developing countries are deeply rooted in society, which offers children the best chance to develop to the fullest." (Source: Vision 2012) The key principles relating to the goals, strategies, themes and organisational approaches adopted by Plan over the years are highlighted below. These principles are fundamental to Plan's position and continuing success as an international organisation:

- Promoting rights is central;
- Plan acts on behalf of children and young people, listens to them and gives them a voice;
- Projects and programmes focus on sustainable development: every activity must be socially and environmentally;
- responsible and be constantly monitored;
- Cooperation, alliances and reinforcing local capacity take priority. Work at the local level provides the basis for our lobby and advocacy work at the national and international level;
- The Plan organisation is results-oriented, accountable and actively seeks ways to improve results.

The foundation of all Plan's work is the UN Convention of the Rights of the Child, which is why we take a rights-based approach to development and humanitarian response – in short, putting children at the heart of all we do. It is our view that boys and girls themselves should have the opportunity to be fully involved in setting priorities, developing strategies, assessing progress in their communities, preparing for disasters, and taking part in decisions that affect their own community – all of which builds confidence and helps them become active citizens. Participation also contributes to developing children's analytical, organisational and political skills to help them become more effective in claiming their rights. We call this child-centred community development (or CCCD for short), and its emphasis on inclusion, gender equality and non-discrimination is central to our strategy. In line with Plan's international organisational structure, national offices (NO) and country offices (CO) work closely together, with the international headquarters (IH) in London overseeing operations.

*(From: Programme Strategy 2010-2015 Plan Nederland, May 2010)*

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From a technical point of view, it is widely recognised that an integrated approach to food and nutrition security is an effective way to promote child nutritional well-being. In this desk review, based on project documents of the countries which took part in the PLAN NL supported Food and Nutrition Security Support Programme (FNSSP), what kind of interventions were undertaken and their strengths and weaknesses are compared with the lessons learned from the World Bank.

#### **Photos**

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## Rationale

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This desk review provides an overview of the implementation of Integrated Food and Nutrition Security programmes undertaken by PLAN Netherlands and PLAN Country Offices in the following countries: Bangladesh, Benin, Ethiopia, Ghana, Indonesia, Nicaragua and Peru. These countries were taking part in the Food and Nutrition Security Support Programme (FNSSP) which was implemented from 2004 – 2010. In addition, two examples (Bolivia and Nepal) are used to make a specific case clear.

The aim of this review is to gain insight on how PLAN has been designing and implementing integrated food and nutrition security programmes. The review is not an evaluation; the FNSS programme has been evaluated by others. The review is meant to look at the approach used by the different countries and its results on the final target group, children under five and their care takers. This type of knowledge is not only relevant for PLAN as an organisation, but also for other organisations involved in food and nutrition security interventions.

For this desk review appraisal reports, progress reports and evaluation reports from the 7 countries from the period 2004 – 2010 have been screened and analysed. The review is thus entirely based on secondary data – no field visits or direct observations have been carried out, and not all reports were available. Most of the evaluation reports used a more qualitative methodology. These factors might influence the observations in this review and drawing conclusions based on factual information is limited.

The expected readers of this review are PLAN staff, policy makers, staff members from other NGOs and other people interested in applying an integrated approach to address food and nutrition insecurity. Chapter 1 provides an introduction to the topic. Chapter 2 focuses on frameworks used by PLAN in the analysis of an integrated approach for FNS. Chapter 3 is a description on how PLAN addresses FNS in an integrated way in the different countries, what are the main components with examples from the field. In chapter 4 the project cycle management will be discussed using examples of PLAN and finally in chapter the overall conclusions will be presented.



## List of Abbreviations and Acronyms

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CBO	Community-based organisation
CCCD	Child Centred and Community Development
CDI	Wageningen UR Centre for Development Innovation
CSE	Credit-Saving with Education
FNS	Food and Nutrition Security
FNSSP	Food and Nutrition Security Support Programme
IFPRI	International Food Policy and Research Institute
IGA	Income-generating activities
M&E	Monitoring and Evaluation
MF	Micro-finance
PLAN NLNO	PLAN Netherlands National office
VDC	Village Development Committee
Wageningen UR	Wageningen University & Research centre



# 1 Introduction: the Bigger Picture

*The past two decades have delivered unprecedented progress in the quality of life across the developing world. Achievements have not been uniform, and there have been setbacks and disappointments. But, overall, the rate of progress in reducing poverty and increasing access to basic health services, education, water and other essential services has been without precedent in many countries. However, the progress on reducing undernutrition has been comparatively slow.*

*(ACF (2010) Undernutrition: What works? – A review of policy and practice).*

Progress towards achieving the Millennium Development Goals (halving the number of hungry people in the world by 2015) is by far not reached, despite worldwide efforts to do so. The number of undernourished people remains high at 840 million (FAO, 2011). One in four children is underweight (too low weight for age), amounting to a total of 146 million children world-wide (IFPRI, 2010). Most of these children live in South Asia; however in proportion more children are underweight in Sub Sahara Africa (UNICEF, 2009). The consequence of underweight for those children is that they might suffer from mental and physical retardation and will not reach their optimal potential for life. Micronutrient deficiencies (also called hidden hunger) affect even more people, over 2 billion worldwide. Micronutrient deficiencies relate to insufficient dietary quality and lack of diversification in the diet. Micronutrient deficiencies affect among others immune system responses, labour productivity and mental development, both in children and adults.

Common insight in food and nutrition insecurity is that hunger and undernutrition are multi-causal, and thus policies and programmes addressing food and nutrition insecurity should be multi-dimensional, multi-sectorial and integrated (Bioversity International; IFPRI, ACF, World Bank). Hunger and undernutrition should be addressed at different fronts at the same time: interventions in food production, household economic security, health and environmental sanitation, care practices, empowerment of women etc. These interventions should be implemented in an integrated way and based on a careful analysis on the causes of undernutrition in that area.

This review will explore how the different sectors (agriculture, health, water and sanitation, rural development etc.) are involved in a holistic approach to address food and nutrition insecurity within the PLAN integrated food and nutrition security programmes in selected countries.



## 1.1 Food Security

*Food Security is: When all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.*

(Source: World Food Summit, 1996).

Looking at the definition of food security 4 basic elements can be distinguished: food availability (production), food accessibility (sufficient capital to acquire food, but also the physical accessibility of food), food utilisation (quality of food in terms of composition of the diet and in terms of food safety) and stability (access to food during the year, but also for longer periods of time due to climate change and food price increases). All 4 elements of food security should be addressed in order to achieve food security. Simply increasing production - more food available - does not automatically lead to better nutrition. This is also for increased household incomes which does not automatically translate into more or better food for all family members. In order to reach nutrition security, attention has to be given to nutrition, health and care issues.

World-wide food security is under pressure, with the current changes in climate, increasing population, competition for resources (access to land, access to agricultural inputs, access to micro finance, access to new farming techniques etc.) resulting in higher food prices for the consumer and less revenue, especially, for small farmers. In addition, with the increasing urbanisation rural areas are left with too few (productive) people to produce sufficient food for the household. All these factors in combination with poverty make that households cannot acquire sufficient food throughout the year to sustain their needs for food and are going hungry.

Diets are changing due to a combination of urbanisation, population growth and greater prosperity, which alters the demands for food. Increased prosperity is linked to changes in the diet leading to higher intakes of animal products, fats and salt. Much debate is on-going on the future of our food systems, what are the most sustainable solutions to ensure that there will be enough food to feed the world. Some experts see much potential in small scale agriculture in Africa, with the current production methodologies there is high potential for improvement. Others see more future in new technologies. From countries and donors there is renewed attention to promote agriculture as driver for development and to link it to nutritional outcomes.

## 1.2 Infant and Young Child Health and Nutrition

*The effects of undernutrition on physical growth, mental development, and physical activity are irreversible. There is a small window of opportunity (the first 1000 days in life, counting from conception to 2 years of age) to address the consequences of undernutrition. The right nutrition during this 1000 day window can have a profound impact on a child's ability to grow, learn, and rise out of poverty. It also shape a society's long term health, stability and prosperity. ([www.thousanddays.org](http://www.thousanddays.org)).*

*Plan's vision: "A world in which all children realise their full potential in societies that respect people's rights and dignity". A good nutritional status is essential in realizing this vision; only a well-nourished child will be capable to develop to her/his full potential (intellectual, physical and social development).([www.plannederland.nl/jaarverslag/visie-missie](http://www.plannederland.nl/jaarverslag/visie-missie)).*

The persistent high figures of child malnutrition prompted a number of nutrition specialists to call for increased priority to reduce child under-nutrition such as in the World Bank publication 'Repositioning Nutrition as Central to Development'. In this report a plea is made to put nutrition (back) on the development agenda (World Bank, 2007). The Copenhagen Consensus (2008), gathering a number of high ranking economists, calculated the cost-effectiveness of development interventions. Nutrition and micronutrient related interventions are ranked among the most cost-effective. In January 2009 the Lancet published a series of 5 articles that became known as the 'Lancet series'. This series focused on nutrition-related interventions targeted to pregnant women and small children, with the aim of improving development. The interventions proposed are typically within the domain of the health sector and include micronutrient supplementation for pregnant women, infants and young children, breastfeeding promotion, improved complementary feeding practices for infants and young children. In their conclusion they remarked to address undernutrition in the long term, these interventions should be supplemented by interventions addressing also the underlying determinants of undernutrition like poverty, insufficient availability of food (in quantity and quality), poor education, disease burden and lack of women's empowerment.

An emerging problem, world-wide, is the increase in people with overweight, caused by excessive food consumption (often of poor dietary quality) and sedentary life style. Overweight and obesity are the main contributing factor in the development of non- communicable diseases (diabetes, cardio-vascular diseases etc.). Especially in developing countries we see people with overweight and underweight occurring simultaneously within the community and even within the same family. However, the focus of the interventions under review is alleviating undernutrition of women in reproductive age and children. Undernutrition is the main nutritional problem in the areas where PLAN is working.

#### *Integrated food and nutrition security programmes*

Although nutrition is an individual-level outcome, the causes of undernutrition are beyond the control of an individual. The underlying causes of undernutrition are rooted in food insecurity (either/or food availability, accessibility, utilisation and stability), insufficient access to quality health care and environmental sanitation and care practices for women and children. In general, the problem is not only food availability or only access to health services, but a combination of the different factors. Hence, addressing food and nutrition insecurity requires an inter-sectorial approach, interventions directed at food security but also at health and environmental sanitation and care practices. The household is an appropriate entry level, but in order to be effective also other levels like community, district and even national level have to be included. The integrated approach to food and nutrition security at community/household level (the level where PLAN intervenes) includes interventions to address:

- Food insecurity (availability, accessibility and utilisation of safe and socio-culturally accepted food);
- Ensuring access to functioning health services and safe water and sanitation; and,
- Adequate care practices.

In addition, the main target groups of PLAN are women in child bearing age, infants and young children. Especially an improvement in nutritional status for infants less than two years of age has a great impact in the growth and development also later in life (addressing undernutrition in the first 1000 days of life). Investing in agricultural development especially in small farmers and female farmers is key – three quarters of Africa's malnourished children live on small farms and 43% of the agricultural work is carried out by women. In addition, these investments can create the necessary impulse for people to stay in rural areas to produce food. Success depends on ensuring local markets are accessible and functioning; on improving education about nutrition; and on investing in better research and evidence (Save the Children; 2012).





## 2 Integrated Food and Nutrition Security Approaches in the PLAN context

*The need for an integrative approach*

*For a long time it has been assumed that agricultural programs would address rural poverty and undernutrition through increasing food production, reducing food prices, and increasing the income of households. Despite increases in food production, household food availability, income, and in many cases also in food consumption and diet quality, childhood undernutrition persisted. Clearly, increased agricultural production and household income are not sufficient to reduce undernutrition. To achieve greater impact on nutritional outcomes, agricultural programmes should incorporate a non-agricultural component like knowledge on maternal health-seeking and care-giving practices or collaborate closely with complementary non-agricultural interventions that provide nutrition education.*

*(World Bank, 2007)*

### 2.1 The Development of PLAN's Integrated Food and Nutrition Security Programme

During the 80s and early 90's the main focus of PLAN's food and nutrition security (FNS) interventions were directed to food availability - improving agricultural production. Efforts to promote non-farm income generating activities were very limited. Financial support to farmers (credit) was an add-on to improve agricultural production. Since 1992 growing attention has been given to environmental issues.

During the 90's a shift within PLAN's programming was made. PLAN started to work in domains. 5 domains were identified: Livelihood, Education, Habitat, Health and Child Rights. Interventions to address food and economic security were placed under the domain of Livelihood. Interventions in the domain of Livelihood included agricultural production, micro-finance and micro enterprise development, land- and soil conservation, and vocational training. Interventions to combat child undernutrition (nutrition education, child growth monitoring) were implemented through the domain of Health. In those years all programming was done in a vertical version, along the lines of the different domains.

At the end of the '90s the focus of PLAN's work shifted from supporting individual (foster) children to more community-based approaches "*However, PLAN's efforts are strongest and most effective in communities as a whole and, to a lesser extent, on the level of the individual child. On a household level basic agricultural production by peasant households and access to microfinance services to women have been the dominant areas of interventions so far*" (PLAN 2006). This led to the organisation-wide adoption of the Child Centred Community Development (CCCD), as the basic framework for all PLAN's interventions (2004). The CCCD approach has been the leading framework for a more bottom-up and community based approach addressing poverty and child rights' violations in a more strategic way.

In 2004 PLAN Nederland (NLNO) launched the Food and Nutrition Security Support Programme (FNSSP), with the aim of enhancing the capacity of PLAN staff and partners in selected countries to increase the effectiveness of FNS programmes in achieving results on reducing child undernutrition. With FNSSP, PLAN Nederland intended to make a shift from working in a more vertical way (one domain) towards a more integrated approach. FNSSP challenged staff working in different domains to collaborate and address issues in specific geographical area and be less focussed on domains.

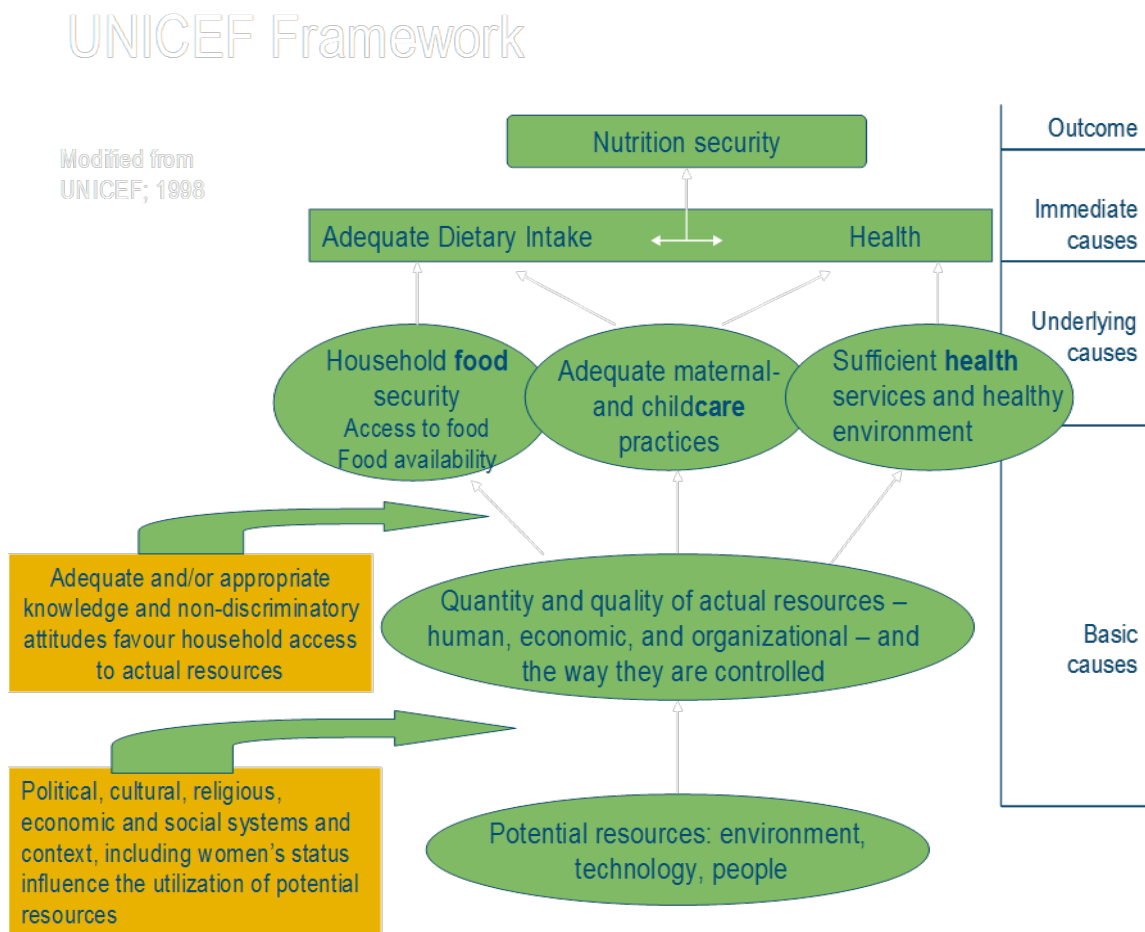
## 2.2 Conceptual Frameworks for IFNS Applied by PLAN

### *UNICEF framework*

The UNICEF framework was developed in the early 1990's and shows that improving FNS by nature is a multi-sectorial and integrated activity, because of the multiple causes for food and nutrition insecurity. However, an integrated approach to address food and nutrition insecurity is by no means mainstream (IFPRI, World Bank); often because of the complexity of collaboration between sectors. Often projects addressing food and nutrition insecurity are programmed to promote food availability (agricultural projects) and/or food accessibility (market access, value chain), in which it is assumed that the increased food availability and/or accessibility will 'automatically' translate into increased food consumption and improved nutritional outcomes. In general, the problem is more complex. Issues like intra-household decision-making and resource allocation, health care utilisation and caring practices, access to health care and environmental sanitation are all factors impacting the food security of the household and the nutritional wellbeing of the individual.

The relationship between the different causes for food and nutrition insecurity and how they are interlinked is shown in the UNICEF framework. PLAN uses the UNICEF framework to assess and analyse the different causes for nutrition insecurity and to design interventions to address those.

Figure 1: UNICEF conceptual framework on nutrition security

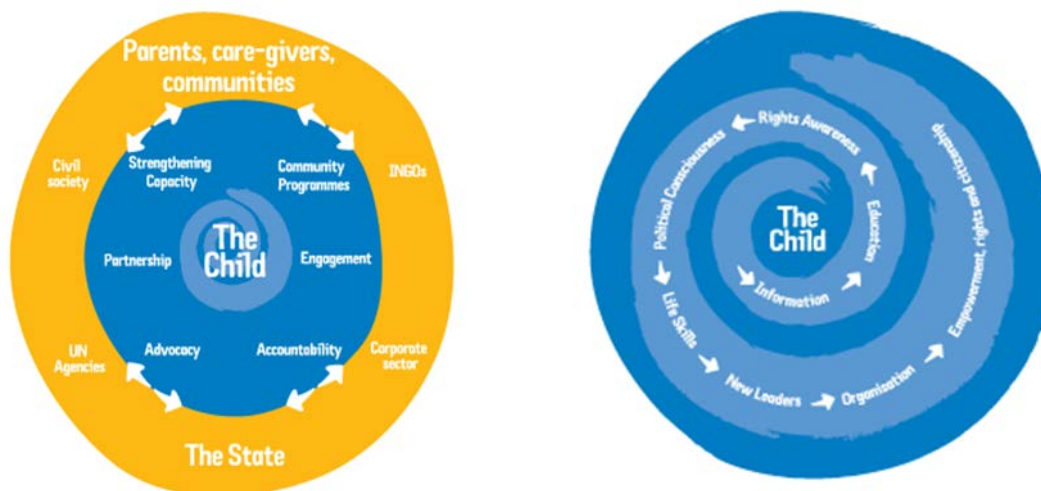


This framework defines the relationship between the different causes for undernutrition and its complexity to address those. Household food security is just one of the three underlying causes contributing to nutrition security. Other factors contributing to nutrition security are access to health services, safe water and sanitation and adequate caring practices. Combinations of these factors lead to adequate dietary intake and good health that together translate in nutrition security. In addition to the underlying causes of nutrition insecurity, the UNICEF framework draws attention to the need for adequate basic conditions in order to achieve food and nutrition security, such as an adequate political, cultural, religious, institutional environment, education, gender equality etc. Also this framework focuses on an integrative approach to address food and nutrition security. There are populations with adequate food who nonetheless do suffer from undernutrition because of poor feeding practices or diarrhoeal diseases which is linked to poor hygiene and unsafe water. Mother's knowledge on childcare may improve, but low access to health or nutrition services may prevent them to apply in a proper way their new knowledge. Hence addressing only one of the causes of the framework will not be sufficient to mitigate undernutrition. The UNICEF framework was developed in 1990, and is still widely used to assess, analyse and plan interventions to address food and nutrition insecurity; PLAN also uses this framework in their planning.

### *The Child Centred Community Development approach, a guiding framework for all PLAN's interventions*

This approach builds on PLAN's long experience of working with children and communities. CCCD is an inclusive, non-discriminatory approach that focuses on the child in his/her context, reflects good development practice and incorporates qualities that are important for effective and sustainable people-centred development. It is defined as: a rights-based approach in which children, families and communities are active and leading participants in their own development. It enhances their capacity and opportunity to work together with others to address structural causes and consequences of child poverty at all levels.

This approach is an integral part of all PLAN's interventions.



**Figure 2. The CCCD approach**

The guiding principles of CCCD that apply to all programmes are:

- Children are at the centre;
- Guided by human rights standards and principles;
- Responsibility and accountability;
- Inclusion and non-discriminations;
- Gender equality;
- Participation.

The focus of PLAN's programmes is on those children who are most vulnerable with a special focus on children living in poverty, children who are excluded and marginalised as well as children affected by conflict and disasters. A child-centred approach does not mean that PLAN will only work with vulnerable children. PLAN engages with multiple levels such as households, civil society and government organisations. As a principle, PLAN programmes should always be able to demonstrate their contribution to a society in which the rights of children are respected, protected and fulfilled. All programmes are tailored on these principles; CCCD is at the heart of PLAN's programming.

***Including a Right based approach in FNS programmes***

*In Bolivia and Nicaragua PLAN strengthened the implementation of national nutrition programs and laws. Communities and the municipalities are trained and strengthened in their capacity for FNS, so that they are empowered to take on their roles as duty bearer and at the same time the right holders are made aware of their rights.*

*Municipality staff also receives training on technical issues and if necessary Plan supports the appointment of new staff. Furthermore the municipality is trained on the existing national policies and laws. In this way the municipality has an improved capacity to take on their role as duty bearer.*

*Producer groups are strengthened and linked to the local agricultural department. The farmers receive technical training and support to improve their agricultural production. Farmers train other farmers through model farms.*

*Youth and parents are trained on nutrition. Volunteers, including youth groups, form nutrition groups which do regular weighing of the children and give education to peers. The ministry of health supports the groups and attend meetings to give additional training.*

(From: PLAN USA ([www.planusa.org/contentmgr/showdetails.php/id/2521502](http://www.planusa.org/contentmgr/showdetails.php/id/2521502)).

Summarised by Inge Verdonk.



### 3 PLAN's Integrated Approach to Food and Nutrition Security in Practice

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*Poverty is often accompanied by undernutrition and food insecurity. Particularly children are affected, and especially girls, because girls are often receiving less food than their brothers. In the fight against undernutrition and food insecurity, Plan supports families with agricultural inputs and better cultivation techniques and/or income generation activities, so they are able to produce or purchase more food for the household. Through nutrition education, safe drinking water and better health care PLAN helps parents to take better care for their children. The main focus is on women in child bearing age, infants and young children. Women are the main producers of food at household level. Also promoting girls to go to school has shown an impact on the food and nutrition security situation within the household.*

(Source: Adapted from [www.plannederland.nl/](http://www.plannederland.nl/))

As was discussed in chapter 2 there are different causes for undernutrition (see UNICEF framework) which require solutions in different fields in an integrated way.

The integrated food and nutrition security programmes undertaken by PLAN include interventions in the fields of: agricultural production, increasing crop and dietary diversity, access to markets, enhancing entrepreneurial skills (off and on-farm), micro finance, nutrition education but also on access to safe water and sanitation, improved health services and advocacy on making policies more food secure and nutrition sensitive. In all countries reviewed, attention is given to (empowering) women and children.

The UNICEF framework is used in designing PLAN's Integrated Food and Nutrition Security programmes. CCCD is the approach guiding the project design so that interventions will improve the livelihoods of children, in the context of their households and their communities. Below, we will analyse and discuss the interdisciplinary character of the PLAN's Integrated Food and Nutrition Security programmes along the UNICEF Framework (with the focus on Household Food Security, Health and Sanitation and Care) in which we will unravel (household) food security into three pillars: availability, accessibility and utilisation. Gender will be discussed as a cross cutting topic. How such an integrated project could look like is highlighted with an example from PLAN Bangladesh.

#### ***PLAN Bangladesh: an example of an integrated approach***

*In Ward 6 there is a Village Development Committee (VDC) that helps people to develop themselves by their own efforts. First of all, an assessment was made by the community to identify the main bottlenecks for health and nutrition. Issues identified were: sanitation, education, nutrition and other problems. They asked for assistance from different Government and NGOs and decided that PLAN Bangladesh was the best institution to help them. The following activities were undertaken:*

1. *Training in sanitation and the promotion of latrines monitored by the community;*
2. *Awareness on the importance of the intake of Vitamin A capsules for pregnant and lactating women, regular medical check-ups during pregnancy and lactation;*
3. *Growth monitoring and promotion;*
4. *Promotion of exclusive breastfeeding and complementary foods after 6 months of age;*
5. *Development of home gardens for the cultivation of fruits and vegetables for own consumption and income generation;*
6. *Training of community health worker in vaccination and nutrition promotion.*

*The people viewed the interventions to be sustainable after PLAN would withdraw their support.*

(Source: Assessment report on IFNSP Plan Bangladesh by Dr. Md Aisrul Hoque et al., 2010).

### ***Actions to improve food availability***

*Food availability means sufficient quantities of appropriate, necessary types of food from domestic production, commercial imports, or donors and are consistently available to individuals or are in reasonable proximity to them.*

<http://www.fantaproject.org/focus/foodsecurity.html>

Activities to improve food availability aim at increasing food production to raise the amount of food available at household level and on the (local) market. Improved food availability can increase the quantity, the quality and the variety of the diet at household level. However, increased agricultural output by itself does little to ensure that the poor and vulnerable people will have access to the food produced, or that the nutritional quality of the diet will improve. The World Bank stated that “agricultural interventions are most likely to have an impact on nutrition outcomes when they move beyond the narrow focus of increasing agricultural production but included also people’s livelihoods, gender equality, and investment in the livelihood assets of the poor” (World Bank 2007).

Examples of successful nutrition-sensitive agriculture-based interventions are:

- Promotion of home gardens to cultivate fruits and vegetables preferable in combination with small animal rearing and a health/nutrition education and behavioural change programme;
- Special attention to include female farmers in agricultural interventions in combination with a nutrition education and behavioural change programme. This combination is particularly effective at delivering improved nutrition outcomes, especially among the lowest income groups. Included in the intervention has to be activities to relieve women from some of their household activities to create time for agricultural production.

All country programmes reviewed included an agricultural component. Interventions undertaken were: improving agricultural production (food and cash crops), crop diversification, livestock rearing, irrigation, home gardens, school gardening, improving agricultural inputs and services, training and capacity building for farmers and volunteers. The aim of these interventions is to stimulate the production of nutritious food, to increase food diversity and to increase food availability and income during the off-season.



### **Home gardens**

*One of the successful interventions in all countries is the promotion of home gardens combined with keeping small animals. The activities included training on vegetable and fruit production. Demonstration farms and school gardens were often used for practical training. Households received improved seeds and sometimes fruit trees. Where little space was available people made creative use of growing vegetables over fences, planting in pots and sacks and using wasteland for gardening.*

*Because animal proteins are valuable in children's diet, animal production was promoted along with the home gardens. Cultivating fish and rearing of guinea pigs, chicken, goats, pigs and cows was stimulated and training was given. Veterinary services were improved by training volunteers in animal health care and vaccination campaigns against diseases for animals.*

*These interventions were closely linked with nutrition education on the importance of a diverse and balanced diet. Products of the home gardens were often used in cooking demonstrations. Local recipe books were developed to promote the consumption of home grown products. Excess produce was sold at the local market for income.*

*The production of the home gardens led to a greater variety of food served in the households (checked by the dietary diversity score) and surplus sold on the market which gave the women more income.*

Summarised by Inge Verdonk.

### **Climate change and sustainability in food availability**

*Climate change is a major concern for all farmers, but especially for the youth, they are the farmers of the future who have to produce under the adverse effects of the changed climate.*

*In several countries special attention is given to introduce technologies which help farmers to adapt to difficult climate conditions which happen more often due to climate change.*

*New improved varieties of seeds are introduced which are drought resistant, early maturing or pest resistant (e.g. in Nicaragua and Ethiopia). In Bolivia PLAN assisted the farmers to reintroduce the traditional potato varieties which are more resilient for the harsh and extreme weather circumstances in the altiplano. This reduced the risk of harvest failure.*

*One of the main problems of the climate change is the irregular rain pattern. Drought is often a limiting factor for production while too much rain causes floods and erosion. To assure sustainable food production, farmers are trained in improved water and soil conservation methods. Irrigation systems and multiple use systems are built. The use of wood saving stoves is promoted to save fuel wood and time expenditure for the women to collect wood. At the same the production of these stoves is a good income generating activity for women groups. Agroforestry is stimulated and many trees are planted, in Ethiopia alone more than 2 million trees.*

Summarised by Inge Verdonk.

Actions to improve access to food:

*Food accessibility – Individuals have adequate incomes or other resources to purchase or barter to obtain levels of appropriate foods needed to maintain consumption of an adequate diet and nutritional level.*

*(<http://www.fantaproject.org/focus/foodsecurity.shtml>).*

Activities in the field of food accessibility aim at increasing the incomes of the poor, in order to increase their food consumption. There is a wide range of these income generation schemes such as public works schemes for food and/or cash, promotion of off-farm income and food subsidies/transfer systems. Also special and/or supplementary feeding programmes can increase food accessibility. Supplementary feeding can form a strategy to address undernutrition in specific groups. These programmes are most effective when they are directed to individuals vulnerable for undernutrition like children, pregnant and lactating mother, school children, old and sick people (like people living with HIV/AIDS). For such a programme to be effective, careful screening of the group has to be done and the right composition of the food provided to address the nutritional deficiencies identified.

At community/household level (the level where PLAN FNS programmes are operating) interventions are designed to increase on/off farm income and creating employment opportunities. These interventions are directed to poor households with only marginal assets or no assets to make a livelihood, as well as vulnerable households at high risk of food insecurity. Main approaches are skills training, business promotion and micro-finance schemes.

All FNS programmes reviewed included interventions to increase access to food. Emphasis was placed to ensure access to micro-finance and skills training for income generating activities. Special attention was placed to include women in the activities. Activities promoted were vocational training, introduction of new cash crops, value chain development, income generating activities, access to markets and access to saving and loan associations. To make these activities more nutrition sensitive - the translation of higher income into better nutrition – all programmes offered a nutrition education programme to improve nutrition for infants and young children, early childhood stimulation and promotion of a healthy diet for the family. In addition, all countries had a programme to strengthen the position of women. Research has shown if women can decide how to spend the household income, the nutritional status of the family will improve.

### ***School lunches in Ghana***

*The communities in North Ghana very much appreciate the school feeding programmes. In this food insecure area the children get sometimes only one or two meals a day. The school lunch helps them to concentrate on the lessons. For the parents it means that they can stay the whole day on their farms during the short rainy season.*

*However another aim of the school feeding programme is to link local farmers with the school feeding programme and increase the local demand of the food produced. At farmer level PLAN has been promoting the cultivation of nutritious crops like soy beans. The women groups who cook the school lunches received training on how to prepare soy beans. It is regularly put on the school menu, so that the children get used to this new nutritious food. Furthermore the soy bean is a 'women's crop' which means that the proceeds of the sale go to the women. In the same way the school feeding program benefits from the production of vegetables which are now year round thanks to irrigation developments of Plan.*

Summarised by Inge Verdonk.

### ***Credit programme in combination with nutrition education (PLAN Benin)***

*Poor women in the project area were assisted with micro finance (MF) with as aim:*

- Women should have funds to implement income generating activities;*
- To accumulate savings to prevent debts;*
- As a vehicle for nutrition education, hygiene and health and financial management.*

*The system is called credit – saving with education (CSE). Credit was given for a short return cycle. Savings were the collateral for the credits – when credits were not paid back, the savings were lost. However, screening of the proposed activities was weak. Many women embarked on the same activity leading to an overflow of the products produced on the market. Many of the poorest women were not reached because they did not have extra money as collateral and out of fear they would not be able to pay back (in time) they were not selected. High interest rates were charged (4%/Month). Administration was at time difficult – women did not get a receipt of their savings – and at times it was difficult to withdraw their money when they needed it. Education – directed on behavioural change – was given on financial management (enterprise money management, sales increase, to plan for the best business), health and nutrition (diarrhoea, malaria, HIV/AIDS, child diseases, breastfeeding).*

*Changes observed were: improved child feeding practices (more diversification in the meals), breastfeeding (giving colostrum), use of clean water, protection of meals using covers, higher immunisation rates. For the business skills the following was observed: better use of sales opportunities, better control of the marketing of their products, improvement of savings, simple bookkeeping skills. 40% of the women did not have problems with paying the fees and saving additional money. Money made was used for HH food needs (25%), education for the children (25%), personal needs (25%), and personal investments (25%).*

*To include the poorest women another type of saving/loan system was started. Each member of the (poor) women group saved a very small amount, part of the money was used for savings and the other part was used to buy a goat for the women group. The offspring of the goat was shared amongst the members of the women group. This could be an interesting way to reach the poorest.*

(Source: Evaluation of the FNS Program in Couffo Department, January 2007 by René Tokannou et al.)

### ***Actions to improve the use and utilisation of food***

*Utilisation – Food is properly used: existence of proper food processing and storage practices, adequate knowledge and application of nutrition and child care, and adequate health and sanitation services*

*(<http://www.fantaproject.org/focus/foodsecurity.html>)*

Food utilisation refers to the socio-economic aspects of foods (sufficient and nutritious food available and accessible for all members of the household) as well as to the biological utilisation of food. Activities under this heading include promoting the consumption of good quality diets (exclusive breastfeeding, consumption of nutrient-dense foods and dietary diversification), child care, nutritional knowledge, eating habits, intra-household food distribution etc.

All PLAN integrated food and nutrition security programmes reviewed, included a health/nutrition education programme emphasising exclusive breastfeeding, appropriate weaning of infants and young children and the promotion of a healthy diet. Cooking classes and attending agricultural fairs are part of the interventions to promote a healthy diet and to introduce new crops for consumption like soybeans. In addition, much emphasis was placed on dietary diversification by promoting home gardens in combination with rearing small animals and/or aquaculture.

### ***Action learning project on nutrition education in Bangladesh***

*In Bangladesh one of the action learning projects (Part of the FNSSP) was on the improvement of nutrition education on exclusive breastfeeding. Despite nutrition education sessions with pregnant mothers on exclusive breastfeeding, the acceptance of the message and translating into changed behaviour (exclusive breastfeeding) was below expectations. Different causes were identified in the action research such as timing of holding the sessions; the person who gave the message was not viewed as an expert (man) and the non-involvement of the husband and the grandmothers in the education sessions. Changing the time slot, having an experienced mother as change agent and providing information sessions for fathers and grandmothers improved the rates of exclusive breastfeeding practices.*

(Source: ALP on exclusive breastfeeding Bangladesh).

### ***Actions to strengthen the health services and environmental sanitation***

To improve the nutritional situation it is necessary to have adequate health services. Improved management, capacity building of health workers, volunteers and birth attendants, the improvement of referral services, and improved transportation are all potentially important interventions in a FNS programme.

PLAN health programme focuses on preventable childhood diseases (immunisation, health and nutrition education, growth monitoring to detect and act on undernutrition), early childhood stimulation and actions in the field of maternal and reproductive health (pre- and post-natal clinics, capacity building for birth attendants and health staff, nutrition advice).

To improve access to clean water and environmental health, PLAN is promoting activities such as safe water supply, promotion of latrines and its use, basic hygiene classes including the importance of hand washing at schools and community level. All surveyed countries had activities varying from basic hygiene (PLAN Peru) to providing safe water supply, hygiene lessons and sanitation (PLAN Bangladesh).

### ***Community-led Total Sanitation (CLTS) in Ethiopia***

*One of the priority health issues in the Health Extension Programme of the Government of Ethiopia is personal hygiene and environmental sanitation, which requires improved safe water supply, improved sanitation and improved hygienic practices.*

*A CLTS programme was piloted by PLAN Ethiopia in the Southern Nations Nationalities and Peoples Region (SNNPR) to supply safe water and sanitation facilities, training on the CLTS approach to PLAN staff and staff of partner institutions including government staff. With CLTS community members do have an active role to prevent open defecation. They receive an awareness training on the health hazards of pollution with faeces of water and the danger of using polluted water. The message taught to the community is simple; the environment should be defecation free with the motto*

- *No to open defecation;*
- *No to eating shit;*
- *No to drinking soup of shit.*

*After the training and the awareness campaign, villagers discussed the issue of sanitation and the use of safe water and decided to stop open defecation. Even within two days, two of the villagers have already started digging pits for their latrines. To PLAN staff they told: 'We (the community) have developed an action plan and we will implement it. Please revisit us after a month, we will together celebrate the good news of a sanitised village.'*

(Source: <http://plan-international.org/what-we-do/water-and-sanitation/ethiopian-communities-take-the-lead-in-ending-open-defecation> )

### ***Actions to strengthen care practices***

A mother's knowledge on child care, her status in society and her access to and control over resources determine the quality of child care. Care practices can be improved by actions such as community-based child care arrangements (the mother can work for longer time and the child can play in a stimulating surrounding), income generating activities and labour-saving measures especially for women, training and education for women, including health and nutrition education, promotion of breastfeeding, infant and young child feeding practices etc..

PLAN is implementing a wide variety of actions to support caring practices for women and children with interventions like early childhood development centres and activities (several countries), fuel efficient stoves (Ethiopia), local production of weaning foods (Indonesia), offering scholarships for girls to increase their school attendance (Ghana). All country programmes offered health and nutrition education directed at promoting exclusive breastfeeding and appropriate feeding practices for infants and young children, often combined with cooking demonstrations.

### ***Addressing dietary habits***

*One of the objectives for the integrated FS programme of PLAN Nicaragua was to ensure that feeding practices were improved. The baseline showed that meals served were quite monotonous (high in staple foods) and the intra-household food distribution was in favour of men and sons (they received the best part of the meals).*

*Home gardens were promoted for own consumption of vegetables to diversify the diet. Health/nutrition promotion sessions were organised together with home visits by the health/nutrition volunteers to give tailored made advice on nutrition and health. Nutrition talks and cooking demonstrations were given during the monthly growth monitoring session. Children considered underweight received special attention of the nutrition volunteer.*

*During the evaluation focus groups on child care practices mentioned there was increased knowledge on proper feedings practices for infants and young children awareness and usage of the knowledge learned such as proper waste management and washing hands. Overall, there was more diversity in the meals and the number of children underweight was decreased.*

(Source: Evaluacion final del Proyecto: "Familias trabajando juntas por su seguridad alimentaria", 2010).

### ***Gender and Food and Nutrition Security***

Women are responsible for half of the world's food production, and in most developing countries women produce between 60 – 80% of the food. Yet, women producers are often regarded as subsistence producers or as assistants on the farm. Since they are not considered as farmers and economic agents, their access to inputs, including information, is limited. Women in Africa receive less than 10% of small farm credit and 1% of total credit to the agricultural sector (FAO 2010). To bring female farmers at par with male farmers special attention should be given to equal access to inputs; time expenditure of women on farm work, household duties and care giving; gender differences in property rights; education for women; increasing women's assets; increasing women status; addressing gender differences in care of children; good care and feeding practices for children and; intra-household food distribution (IFPRI, 2000). Social and gender relations within the household are important determinants for intra-household food distribution. Power relations (issues such as who has control over the money earned, who determines what will be eaten and who is responsible for the preparation and distribution of food) are very important for food consumption and intra household food distribution. There is ample evidence from research that food produced and money earned and controlled by women, is used more often to the nutritional benefit of the household than income earned by men. Educational status of women and knowledge on nutrition and health is an important determinant of nutritional status of their children (through access to information and openness for new insights). Time available for food preparation and child care may determine food intake of the members of the household. Especially ensuring exclusive breastfeeding of 6 months with appropriate feeding practices afterwards is essential to give the infant a healthy start in life.

All country programmes studied had a gender component. Interventions are directed to give women skills and resources to acquire more income (improving agricultural production with emphasis on "women" crops, facilitating access to micro finance to do business and promotion of back yard farming, a "women" activity). In general, all these activities are highly appreciated by the women and their families and are viewed as a way to address gender inequality and promoting nutrition security. In addition, all country programmes offer nutrition education and promotion to inform the mothers and caretakers on the need for exclusive breastfeeding, appropriate weaning practices, early childhood stimulation and preparation of a healthy diet. In some of the evaluation reports it was mentioned that the programmes were only successful to a certain extent in addressing gender inequalities. To address gender inequalities more time than the average project duration is needed. In some programmes efforts were also made to address gender differences by explicitly sensitising fathers to care for their.

Within the nutrition education programmes the role of other decision makers other than the direct provider of care (generally the mother) was considered. The role of fathers and mothers in law might be essential to decide what to feed the infant and young child and other decisions such as how to spend the household budget. In Ghana, PLAN Ghana formed daddy clubs to draw support from the fathers for the mother and their babies. Also in Bangladesh, men were taught in the nutrition education classes how to support their wives with infant and young child feeding. PLAN Peru set up classes to teach the fathers on early childhood stimulation. It is important to keep attention focused on how to improve the role and responsibility of men in FNS and the care for their families.

Furthermore there is a risk that the focus on empowering women with additional activities, will overburden the women which can go at the cost of taking care of the family. Care should be taken to include also interventions to ease the work load of women like supplying water close by, fuel wood etc. This will decrease her time expenditure to search for these essential items.

### ***The Women Empowerment Project, Nepal***

*The women empowerment project started in 1999, and focused on poor, landless and marginalized ethnic women in Makwanpur district, Nepal. The main aim of the project was to improve women's livelihoods, productivity and income through organisation and empowerment. Microfinance, capacity development in agriculture and other productive and business skills were at the heart of the project. In addition, life skills, gender, health and nutrition education and sanitation were integrated in the project area.*

*By 2008, over 20.000 women were involved in the project. The project's evaluation in 2008 showed some remarkable effects on household food security. 47% of the surveyed households reported increases in crop production, amongst others leading to a higher proportion of households reporting food sufficiency for more than 9 months of the year (15 – 28%). 80% of the households reported improved food habits and a higher consumption of vegetables.*

(Source: PLAN.NL and Centre for Development Governance, 2008).





## 4 Analysing PLAN Integrated FNS Projects Using the Project Cycle Management

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The causes of undernutrition are complex and interrelated (chapter 2). The immediate causes are inadequate dietary intake and disease. The underlying causes are food insecurity, inappropriate care practices, an unhygienic environment (water and sanitation), and inadequate health services. All these factors either on its own or in combination result in increased vulnerability for undernutrition. The basics of all causes of undernutrition are rooted in poverty and are the result of interactions between social, political, demographic, and societal conditions (figure 1). To address the complexity of undernutrition, a careful assessment has to be made to investigate where and when problems occur, how they interact and counteract and how to address undernutrition in a coherent way.

Addressing undernutrition will require interventions which integrate food security with livelihoods, health care, micro finance, nutrition etc. (Le Cuziat; 2011). As such addressing undernutrition requires multidisciplinary identification, analysis, preparation, pilot actions and collaboration across a variety of sectors and stakeholders. The need for a well-designed project, following the project cycle is essential. In this chapter PLAN's programming in integrated FNS will be investigated using the project cycle management. It is here pictured in a linear fashion, in reality it is a cyclic learning process:

**Assessment=>Analysis=> Planning=>Intervention=>Monitoring=>Evaluation (or Reassessment)**

### *Assessment, analysis and planning*

All country programmes that have been reviewed were planned using the UNICEF framework as the main guiding principle together with the CCCD framework. In some countries, the sustainable livelihood approach was used in addition. The assessments were made with the stakeholders involved including children and local leaders. The results of the analyses of these assessments were put in a logical framework which formed the basis for the project proposals. The project proposals that have been screened are considered quite good reflecting an integrated approach and simultaneously addressing the problems identified in food security, nutrition, health, environmental sanitation, and care. Gender is a transversal theme within PLAN. In the proposals gender inequalities and related issues were properly addressed. An example of an integrated FNS project proposal comes from PLAN Bangladesh:

*Name project: Integrated FNS project / PLAN Bangladesh*

*Duration: January 2008 to June 2010*

*Objective:*

- 1. To improve health and nutrition status of under 5 children, and pregnant and six weeks lactating mothers through an integrated and participatory approach to reduce child morbidity and maternal mortality;*
- 2. An integrated FNS programme model developed for replication to other areas.*

*Specific objective:*

*To increase families' capacity for enhanced FNS of 189,000 U-5 children and 18,000 pregnant and lactating women in the 25 unions targeted.*

*Main activities:*

- 1. Community mobilisation and community capacity building;*
- 2. Increase access to adequate and appropriate food – food production (homestead food production, crop diversification, improved farming, establishing demo plots, poultry and livestock rearing + vaccination, beekeeping, school gardening, capacity building on food, nutrition, health and hygiene issues for community health and nutrition workers, teachers and School Management Committee;*
- 3. Food availability (micro finance, food based income generated activities, safety net (for the extreme poor) and specific programmes for the lean season (Monga);*
- 4. Food consumption: (promotion of exclusive breastfeeding and complementary feeding, cooking demo and change of food habits, use of iodised salt ;)*
- 5. Quality health services (management of diarrhoea, ARI, child caring and development activities. Community health and nutrition workers (CHNW) will be trained to lead the BBC sessions on the importance of exclusive breastfeeding, weaning food, use of I salt and will do follow up home visits. Women will be encouraged to visit ANC and PNC check-ups and attend growth monitoring sessions. Ministry staff will be trained and strengthened to deliver such services;*
- 6. Sanitation and hygiene practices (awareness on personal hygiene, training to make low cost latrines, disposal of solid waste, repair and maintenance of wells and sanitation structures on cost sharing basis. Households will be linked to local government institutions and other NGO service;*
- 7. Advocacy and dissemination of project results;*
- 8. Capacity building of Plan and partner staff.*

(Source: Project proposal on IFNSP. October 2007).

### *Focus on nutrition*

The main outcome of PLAN's integrated food and nutrition security programmes is improved nutritional status of women and children. To ensure that the focus will be on nutrition improvement, a specific objective on nutrition has to be formulated with specific activities contributing to nutrition improvement. All PLAN's integrated FNS proposals had included a specific objective on nutrition improvement. However, these nutrition objectives were not always formulated in a SMART<sup>1</sup> way, to enable monitoring progress and measuring its impact. A good example of a SMART specific objective has been formulated by PLAN Indonesia.

#### *Overall objective:*

- 1. To develop integrated FNS interventions with evidence effect in reducing child undernutrition for replication in Indonesia and elsewhere;*
- 2. To contribute to national and international insights into development of an integrated FNS programme interventions in order to reduce child undernutrition.*

#### *Specific objective:*

*To reduce child undernutrition by 5%, in PLAN's programme areas of Lembata, Sikka and Dompu by year 2010 (end of programme).*

(Source: Annual progress report December 2008 – November 2009 / PLAN Indonesia).

In the example of PLAN Bangladesh (see page 22) the specific objective should have been expressed in a more SMART fashion. Now the specific objective is formulated as a more general statement, which raises questions like: when can one consider the FNS to be enhanced? When can this project be considered a success? In the Indonesian example the specific objective states that the expected outcome of the interventions will lead to a reduction in undernutrition of 5%. This is verifiable and can be confirmed by measurements provided base line data are available. A SMART formulated specific objective on what the programme exactly wants to achieve will strengthen the results of the project.

### *The implementation phase including monitoring*

#### **Definitions**

Monitoring is the on-going collection and review of information on project implementation, coverage and utilisation of inputs – measuring inputs, outputs, resources and processes.

Evaluation is a process of data collection designed to assess the effectiveness of the project in attaining its originally stated objectives and the extent to which observed changes are attributable to the project – measuring outcomes, results.

Impact evaluation is measuring the change in the condition (positive and/or negative) of the target population which generally reflects the overall and specific objectives of the project and to what extent the interventions have led to this change (attribution).

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<sup>1</sup> SMART – Specific, Measurable, Achievable, Realistic and Time-bound.

In the implementation PLAN is partnering with other development organisations, selecting their partners on the basis of their technical know-how (drilling water holes, building latrines, but also organisations strong in community mobilisation). The PLAN country offices together with the programme units are overseeing and monitoring all activities during the implementation of the project. All FNS projects aim to improve the life of women and their children and are focusing on the poor. Projects are implemented with the participation of the community members. Many projects also included interventions to strengthen existing local structures and putting FNS on the local development agenda. Projects are working at different levels to promote FNS e.g. the FNS programme of PLAN Peru, working at the individual level, household level and at community/municipality level.

### ***Objectives food and nutrition security project Peru***

*The objectives of the FNS project in Peru were:*

- *Better availability of nutritious food;*
- *Better accessibility of nutritious food at household level;*
- *Improved practices for health, nutrition, hygiene and early stimulation for pregnant women and children;*
- *Strengthen municipalities and communities in FNS.*

*For the last objective training was given to local leaders and local governmental staff on the different aspects of FNS. Community members were assisted to make developmental plans for the allocation of land for cultivation, including different health activities (mobilization for immunization, training and support to local health volunteers), establishing early warning systems at community and a proper response system for those people at risk for food insecurity (local task force). By directing attention towards collaboration between community members, local government and other institutions on FNS, the community started to develop other interventions such as ecological home gardens which were supported by other donors. This collaborative effort from municipalities, community members and funding agencies increases the sustainability of some of the interventions implemented with PLAN's support.*

(Source: Evaluacion final del proyecto de seguridad alimentaria y nutricion en Piura y Cusco. 2010).

All FNS programmes reviewed included an M&E system, baselines and annual progress reports were made and evaluations were held at the end. In some projects also midterm evaluation was done.

Baselines are made with a mix of qualitative and quantitative methods. The baseline for Bangladesh for example (Report on baseline survey on the Integrated Nutrition Project of PLAN Bangladesh, 2005) provides a wealth of information on the health/nutritional status of mother and child, health practices and the health system, but limited information on agricultural and food security related problems. It is more a general baseline of the intervention area than a baseline providing the basic information on the interventions envisaged under the project. This could hamper to monitor the progress of the activities and to assess the impact of the project.

The annual progress reports follow a format where the progress to the objectives and results obtained has to be reported. In the format, questions are included to reflect on the progress and possible needed adjustments within the project.

The evaluation reports showed that the beneficiaries highly appreciated the projects and found the different interventions to support and improve their well-being beneficial. The fact that problems were addressed in an integrated way was viewed as very positive, although the integration of the different interventions was not worked out well in all cases. In the case of PLAN Nicaragua the evaluation mission commented that the coordination between the different project components at field level was rather poor, despite the vision that the different components on FNS should be integrated. This hampered to assist, in an optimal way, those families with undernourished children.

In some countries, not much attention was given to monitor progress and success of the interventions. For example in Ethiopia it appeared that there were no noticeable results of some of the income generating activities such as goats and sheep rearing, sewing machines (lack of market), donkeys (sudden death), poultry (low survival rate), heifers (take a long time to have results). By monitoring the process of the IGA more closely (need for process indicators) some of the results could have been better and the interventions could have been adjusted to address the circumstances.

Evaluation reports were prepared by local evaluators or local knowledge institutes and are of different quality. A mix of qualitative and quantitative methods has been used, which proved to be a good method for the evaluations, though the reports showed a rather strong bias to qualitative methods. What is clearly lacking in all evaluation reports is the answer to why certain results were observed because in most M&E systems no process indicators were included. The answer to questions such as: In what way and to what extent have farmers' productivity increased? or How has peoples' purchasing power improved? was hard to assess. The answers on such questions would have been helpful to learn why some interventions were more successful and under which conditions and others not.

In all FNS evaluation reports, as final outcome/impact measurement, anthropometry has been used and compared with the data collected at the beginning (baseline) of the project. All showed an improvement in the anthropometric measurements, the children measured were nutritionally better off. However, these measurements are difficult to interpret, since it is not clear if the children of the same village has been measured (similar cohort) during the baseline and the end evaluation, was it the same season when the children are measured (especially weight is sensitive for seasonal influences), and what are the national trends. This makes it difficult to interpret to what extent the project activities were successful to improve the situation.

### **Indonesia**

*The IFNS programme in Indonesia uses child undernutrition (underweight) as an indicator for success. In addition, in the project proposal, the project objective/ambition partly is expressed in % reduction in child undernutrition. Before the project started, a baseline survey has been implemented by IPB Bogor. IPB Bogor has worked with (representative) samples and provided data on child malnutrition for the project areas as a whole, and the specific project areas (Dompur, Lembata and Sikka).*

*In project monitoring, data on child malnutrition have been collected at the community level, and compared to the baseline data.*

*Of course data based on a representative sample are not necessarily comparable to the data of specific communities and one cannot conclude on the basis of these data that child malnutrition has or has not been reduced due to the project interventions.*

(Narrated by Marianne van Dorp).

### *Impact assessment*

*There is a new push for evidence on the impacts of development programs, prompting careful assessment of what works and under which conditions, potentially resulting in more effective interventions for poor people*

(Source: IFPRI, 2010. Learning what works).

Many international organisations and donors have expressed the need for evidence on what works in food and nutrition security at different forums (IFRPI, World Bank, International Initiative for Impact Evaluation, USAID etc.). For impact evaluation the leading question should not only be what works? but rather under what conditions does it work, for whom, what part of the intervention works, and for how much? and to what extent has the project interventions attributed to this success? To supply such empirical evidence rigorous impact evaluations are needed, selecting the right indicators, using a good baseline and evaluation (before and after situation) and a control group. Main question of the impact evaluation is on how change came about and to what extent the observed changes can be attributed to the interventions undertaken. Results of an impact evaluation are always case-specific.

*How is impact defined?*

*The term impact refers to the set of program results that occur at the beneficiary-level and that can be directly attributed to program activities, rather than external factors. Impact may be defined as intermediate improvements in the capability of program beneficiaries to influence their own lives, such as through improved access to resources, or improved knowledge attained through training programs.*

*More typically, impacts may also refer to final improvements in the economic and personal well-being of individuals who receive goods and services through the program. Impacts are often confused with program outputs, which refer to the quality and quantity of goods and services delivered through program activities.*

(Source: Fanta FS indicators. 1999).

In the evaluation reports reviewed, some of the evaluators tried to reconstruct to what extent the project activities could contributed to the results observed. Due to methodological limitations (no good baseline, no set-up of the impact assessment at the start of the project) it was not possible to determine the impact of the interventions. Outcome/impact indicators are commonly measured by PLAN projects (anthropometry and in some case dietary diversity score) however, this could not be linked to measure the impact of the project activities. What is missing is a good methodological structure to do an impact assessment.

Looking at the different evaluations reports reviewed, the following comments can be made on the M&E system:

- All projects reviewed had a monitoring and evaluation system in place;
- All evaluation reports commented on the need to strengthen the existing M&E systems;
- With a good M&E system in place more internal learning could have taken place and some of the weaknesses identified (selection of some of the interventions) could have been timely addressed;
- Indicators chosen were mainly on output and some on outcome. Process indicators to measure e.g. the process of integration were not included in the M&E system;
- The M&E system in place in the different projects were insufficient to measure impact of the interventions undertaken. Most indicators used, like production levels and undernutrition rates are influenced by many other factors like seasonal variations, food prices etc..

## 5 Conclusions

PLAN's integrated food and nutrition security programmes are an excellent example on how to address food and nutrition insecurity at community level, using the UNICEF framework as a guiding principle. Programmes are made by doing a community diagnosis (with participation of the different actors like elders, farmers, women, school teachers, children etc.) to identify the main causes related to food and nutrition insecurity. The outcome of this diagnosis leads to a programme design based on the felt problems of the community and encompassing all pillars of the FNS framework such as:

- Food availability (improving agricultural production for own use and for the market etc.);
- Food accessibility (micro-finance, access to markets, improvement of household income etc.);
- Utilisation (nutrition education, food processing, promoting increased intake of micronutrients etc.);
- Care (promotion of breastfeeding, nutrition education etc.);
- Health and environmental sanitation (growth monitoring and promotion, access to safe water, latrines, personal hygiene etc.);
- Gender (strengthening the position of women etc.).

The general observation is that the integrated FNS projects in the different countries have been to a certain extent a success in many dimensions, in terms of bringing positive changes in food and nutrition security in the project area (improved nutritional status for infants and children), a change in the thinking and behaviours on infant and young child feeding (increase in exclusive breastfeeding rates, feeding more diversified diets to children), increased food security (increased agricultural production, animal rearing for income and own consumption, more home gardens available with resulting in increased home consumption of fruits and vegetables but also more income disposable. Innovative way of setting-up the projects (integration between the different domains: food security, health, nutrition, environmental sanitation). Also the interventions were directed to different target groups like women and children, (female) farmers, schools, health staff etc.

Comparing the PLAN supported FNS programmes with the lessons learned (adapted to include integrated FNS) from the World Bank (2007) the following comments can be made:

### *Following an integrative process of planning and implementation*

PLAN uses the UNICEF framework to assess and analyse the different causes for food and nutrition insecurity. Programmes are based on this analysis and the project documents demonstrated a good grasp of integration of the interventions to address the causes of undernutrition. All integrated FNS programmes included components on food availability, accessibility and utilisation in addition to care and health and sanitation and strengthening the position of women. However, in the implementation (as evidenced in the different evaluation reports) it is for some countries difficult to maintain this integrated approach. To have process indicators to measure the integration and give in time the information to take appropriate action, will be helpful to ensure the implementation in an integrated way.

### *Taking an integrated approach towards FNS in the local context*

In all countries surveyed PLAN staff, in collaboration with local key stakeholders, designed and implemented the programmes. The exact interventions were depending on the assessment and analysis of the local problems. All programmes included agriculture (food production for household consumption and for markets), income generating activities combined with micro finance, improving health services, improving water supply and sanitation, nutrition/health education.

PLAN works with local partners with technical expertise on the problems to be addressed. Capacity development is undertaken to strengthen the local partners but also CBOs.

### ***Mainstreaming gender***

All PLAN's interventions are directed, directly or indirectly, to women and children. Women are supported with agricultural interventions, income generating activities, access to credit, skills training, health/nutrition education etc. Support was given to adolescent girls by giving scholarships and skills training. A possible threat can be that women are overburdened with all additional tasks which can go at the expense of her care-taking activities. Possible solutions are to make provisions for water, fuel wood but also vegetable gardens etc. closer by the homestead, which is happening in PLAN supported programmes. This will save her time and energy in collecting the basic necessities. In addition, in PLAN supported project growing attention is focused to draw men into the activities and take their responsibility for the care of the household. Women do have a key role both in agricultural production and nutrition. Improving women's status and decision-making power directly affect the nutritional status of their children, also included in PLAN's interventions. However, not much was found on land-rights issues for women and other violations of rights for women. It does not feature in the evaluation reports, hence it is unknown if it is not a problem in the areas where PLAN is working or that the problem is not recognised.

### ***Incorporation of nutrition education and communication strategies***

In all countries surveyed PLAN had a nutrition/health information/education programme to support the interventions. Women are taught on all kind of topics like the need of exclusive breastfeeding, appropriate infant and young child feeding but also preparation of their own produce such as vitamin A-rich vegetables and soy bean. Also growth monitoring and promotion, immunization and ante- and post-natal clinics were encouraged in combination with nutrition education. Research has shown if women do know about the nutrition significance of food, and they are in the position to grow nutritious food themselves, they are more likely to improve the diet (World Bank, 2007).

### ***Monitor and evaluate progress on nutritional outcomes***

All programmes do have an M&E system and measure progress mainly on output indicators and some outcome/impact indicators. Impact studies have not been done and the current system is also not suited to do an impact assessment. The monitoring and evaluation system need strengthening which was a recommendation in all evaluation reports reviewed. As far it can be assessed, M&E is mainly used for accountability, less examples where M&E was used for internal and external learning including feedback loops to adjust the interventions.



## References and Resources

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Country	Report title	Report type	Date
Bangladesh	Consolidated Food and Nutrition Security program Mid-term report	Evaluation	June 2009
	An evaluation of integrated FNS project +appendix A	Evaluation	December 2010
	Assessment report on Integrated Food and Nutrition security project Plan Bangladesh	Evaluation	June 2010
	Integrated FNS project 2008 - 2010	Proposal	2007
	Integrated Nutrition project – Annual progress report	Progress	January – December 2006
	Integrated Nutrition project – Annual progress report	Progress	January-December, 2005
	Baseline survey of the integrated nutrition project of Plan Bangladesh	Baseline survey	April 2005
	Project proposal on Integrated Nutrition project July 2004 – December 2007	Proposal	2004
Benin	Integrated livelihood package and institutional learning - 2008 – 2009	Annual report	2010?
	GAD Integrated livelihood package and institutional learning	Grant agreement	2008
	Evaluation of the FNS program in Couffo department (Benin) pilot phase (2004-2006)	Evaluation	2007
	Country case study	Case study	?
	Financial report	Budget	
	Household Food security project in the Couffo Department	Project proposal	2003
Ethiopia	End term evaluation of FS project of Shebedino program unit in SNNPR	Evaluation	2009
	Food and Nutrition security country programme outline	CPO 2007 - 2010	2006
	Five year food security & sustainable livelihoods strategy for Bugna Woreda – Plan Ethiopia	Project proposal	2004
Ghana	Final evaluation. The Sissala integrated community development programme 2002-2006	Evaluation	2007
	FS programme in The Sissala District, Upper West region, Ghana	Identification mission report	June 2002
	Assessing FNS; the impact of Plan Ghana activities in household food security and nutritional health. West Sissala district	Evaluative	???

Indonesia	Combating Malnutrition (child centred integrated) FNS program IDN 120	Evaluation	2010
	Food and Nutrition Security Project Plan Indonesia	Evaluation	2010
	Child centred integrated FNS programme to combat child under nutrition in Nusa Tenggara area in Indonesia	Proposal	2008
	Child centred integrated FNS programme to combat child under nutrition in Nusa Tenggara area in Indonesia	Annual progress report December 2008 – November 2009	2009
	Food and nutrition security assessment at Lembata program unit working areas in Nusa Tenggara province	Baseline	2006
Nicaragua	Consultaría sistematización de experiencia del proyecto “Familias trabajando juntas por su Seguridad Alimentaria”	Evaluation/ Lessons learned	2010
	Evaluación final del proyecto “Familias trabajando juntas por su seguridad alimentaria”	Evaluation	2010
	Familias trabajando juntas por su Seguridad Alimentaria – consolidando acciones desde la perspectiva de medios de vida sostenibles	Reformulation Proposal	2007
	Evaluacion Nutricion y Seguridad Alimentaria	Evaluation	2006
	Proyecto Piloto “fortaleciendo los medios de vidas de las familias de forma sostenible”	Research on action learning project	2006
	Familias trabajando juntas por su seguridad alimentaria	Annual progress report January 2005 – September 2005	2005
	Families working together towards food security	Mid-term evaluation	2005
	Familias trabajando juntas por su seguridad alimentaria	Annual progress report January 2004 – October 2004	2004
	FS and sustainable agriculture with emphasis on coffee	Annual progress report February 2004 – October 2004	2004
	Food security and sustainable agriculture in Nicaragua – Innovations in quality organic coffee production and integrated small farm management	Proposal for DE/NLNO	2003

Peru	Informe preliminar de evaluación producto 2	Evaluation	2010
	Comunidades y familias mejorando una alimentación nutritiva para sus niños y niñas"	Concept note	2007
	Proyecto SAN Comunidades y familias mejorándole estado nutricional de los niños y niñas	Proposal	2007
	Proyecto SAN Plan Peru y socios en Cusco y Piura	Proposal?	2007

## Appendix 1 – Definitions

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### **Acute hunger**

Acute Hunger is when lack of food is short term, and is often caused when shocks such as drought or war affect vulnerable populations.

### **Chronic hunger**

Chronic hunger is a constant or recurrent lack of food and results in underweight and stunted children, and high infant mortality. „Hidden hunger“ is a lack of essential micronutrients in diets.

### **Disability Adjusted Life Years (DALY)**

DALY is the sum of years of potential life lost due to premature mortality and the years of productive life lost due to disability (WHO).

### **Food security**

When all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

### **Hunger**

Hunger is often used to refer in general terms to MDG1 and food insecurity. Hunger is the body's way of signalling that it is running short of food and needs to eat something. Hunger can lead to malnutrition.

### **Malnutrition**

An abnormal physiological condition caused by inadequate, excessive or imbalanced intake in macronutrients,- carbohydrates, protein , fats - and micronutrients.

### **Millennium Development Goal 1 (MDG 1)**

Eradicate extreme poverty and hunger - has two associated indicators for its hunger target: 1) Prevalence of underweight among children under five years of age measures undernutrition at an individual level, collated by WHO and maintained in a global database on nutrition that allows comparability across countries. 2) Proportion of the population below a minimum level of dietary energy consumption measures hunger and food security, and is measured only at a national level (not at an individual level) through national food balance sheets based on aggregate data on food availability and assumed patterns of food distribution in each country. However, increased aggregate food availability is not synonymous with improved nutritional status.

### **Nutrition security**

Achieved when secure access to an appropriately nutritious diet is coupled with a sanitary environment, adequate health services and care, to ensure a healthy and active life for all household members.

**Severe Acute Malnutrition (SAM)**

A weight-for-height measurement of 70% or less below the median or 3 SD or more below the mean international reference values, the presence of bilateral pitting oedema, or a mid-upper arm circumference of less than 115 mm in children 6 – 60 months old.

**Stunting**

Reflects shortness-for-age; an indicator of chronic malnutrition and calculated by comparing the height-for-age of a child with a reference population of well-nourished and healthy children.

**Undernutrition**

When the body does not have adequate amounts of one or more nutrients reflected in biochemical tests (e.g. Haemoglobin level for iron deficiency anaemia), in anthropometric indicators such as stunting (low height-for-age) or wasting (low weight-for-height) and/or in clinical signs (e.g. goitre for iodine deficiency or bilateral oedema).

**Underweight**

Measured by comparing the weight-for-age of a child with a reference population of well-nourished and healthy children.

**Wasting**

Reflects a recent and severe process that has led to substantial weight loss, usually associated with starvation and/or disease. Wasting is calculated by comparing weight-for-height of a child with a reference population of well-nourished and healthy children. Often used to assess the severity of emergencies because it is strongly related to mortality.

From a technical point of view, it is widely recognised that an integrated approach to food and nutrition security is an effective way to promote child nutritional well-being. In this desk review, based on project documents of the countries which took part in the PLAN NL supported Food and Nutrition Security Support Programme (FNSSP), what kind of interventions were undertaken and their strengths and weaknesses are compared with the lessons learned from the World Bank.

**More information:** [www.cdi.wur.nl](http://www.cdi.wur.nl)

