Inter-réseaux Développement rural

FOOD SOVEREIGNTY BRIEF

N°11. November 2013

Improve nutrition through agriculture

The poor level of public investment in the agricultural sector and the many rights and benefits it has been granted raise questions as to its capacity to contribute effectively to the fight against malnutrition. Other than its acknowledged impact in terms of reducing poverty, the question remains as to what an agricultural policy geared more towards nutrition might contain. Furthermore, given that the fight against malnutrition is multidimensional, in what ways can the agricultural sector be encouraged to implement such a policy?

This bulletin summarises the recent publications in the field of both nutrition and agriculture, to present the elements of a response to these topical questions. Following a reminder of the principal forms of malnutrition and their causes, the bulletin will seek to describe the strategies implemented so far to combat malnutrition, notably in West Africa, and the main proposals aimed at providing a renewed approach in the agricultural sector.

Introduction

The desire to see closer links between agriculture and nutrition agendas is nothing new. Since it was founded, the United Nations Food and Agriculture Organisation (FAO) has considered nutrition one of the objectives for the farming sector and of agricultural policies. In West Africa, food security strategies of the nine member countries of the Interstate Committee for Drought Control in the Sahel (CILSS), include nutrition as one of the goals to pursue through the farming sector.

As the principal economic sector of most countries of sub-Saharan Africa, agriculture finds itself important for a large number of economic and social objectives. It is responsible for feeding a growing population, plays a part in conserving and managing natural resources, creates jobs and income, and generates export revenues. More broadly, agriculture harbors the responsibility for tackling poverty, which is the status of the majority of poor households living in rural areas. In the absence of a framework of incentives and faced with these many priorities, the agricultural sector therefore often makes an implicit or indirect contribution to combating malnutrition in numerous countries of sub-Saharan Africa. Globally, agricultural policies are focused principally on increasing production of foodstuffs and income, an approach, which relies on the fact that malnutrition will be reduced as a result of agricultural development and the elimination of rural poverty. Specific interventions to prevent and treat malnutrition have therefore largely been left to ministries of health or have been implemented via humanitarian mechanisms during food and nutrition emergencies.

Interest in agriculture for nutrition has been renewed particularly by the recent review of the Millennium Development Goals. On that occasion, the international community highlighted the poor levels of investment in nutrition as one of the principal explanations for the lack of progress towards reducing hunger, reducing hunger in the health and education sectors, and more generally, for delays recorded in bringing down levels of poverty. Faced with these observations, the international community is attempting a renewed approach to tackling nutrition, acknowledging its complex and multi-dimensional nature. Several recent initiatives embody this approach, including the Scaling Up Nutrition movement which encourages the design and implementation of multi-sector nutrition plans to which the agricultural sector is expected to make a decisive contribution.

I – Causes and evolution of malnutrition in West Africa

Malnutrition: what are we talking about?

There are various forms of malnutrition (cf. diagram) – chronic or acute undernutrition, micronutrient deficiency, overweight or obesity – and these may exist concurrently in a country, household, or individual. They may reflect a recent and sudden deterioration in the nutritional status of an individual, as is the case with acute undernutrition (also called wasting), or on the contrary, may be the result of a process caused by nutritional deficiencies and/or recurrent infections since birth, which is the case with chronic undernutrition, (also referred to as stunting). Lastly, the various forms of malnutrition may reflect a lack of micronutrients, that is to say a vitamin or mineral deficiency in the body.

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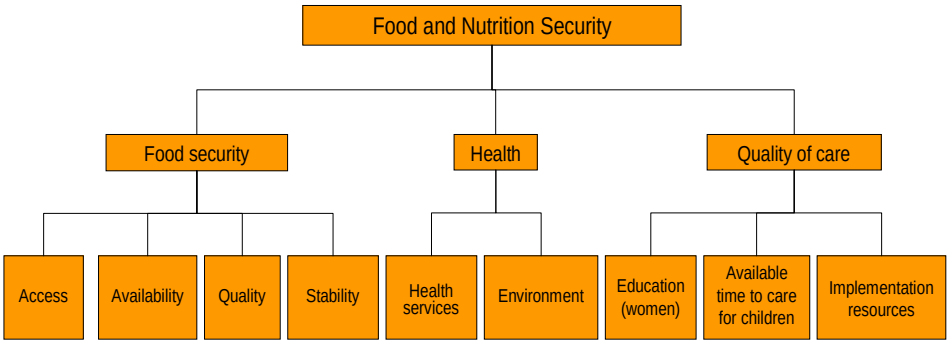
The determinants of Food and Nutrition Security (FNS)

Whatever the forms of undernutrition, the two fundamental – or immediate – causes are illness and/or insufficient food intake. Often these two factors form a vicious circle: insufficient food weakens the immune system and increases susceptibility to illness. Infectious diseases in turn increase the need for nutrients and weaken the immune system. These two immediate causes themselves depend on different health factors (for example, access to health services, hygiene, water and sanitation), on the quality of care received by pregnant women, mothers and children, and on access to food of sufficient quantity and quality. The concept of nutrition security is formulated on the basis of these three underlying causes of malnutrition – food security, health, and care [R1].

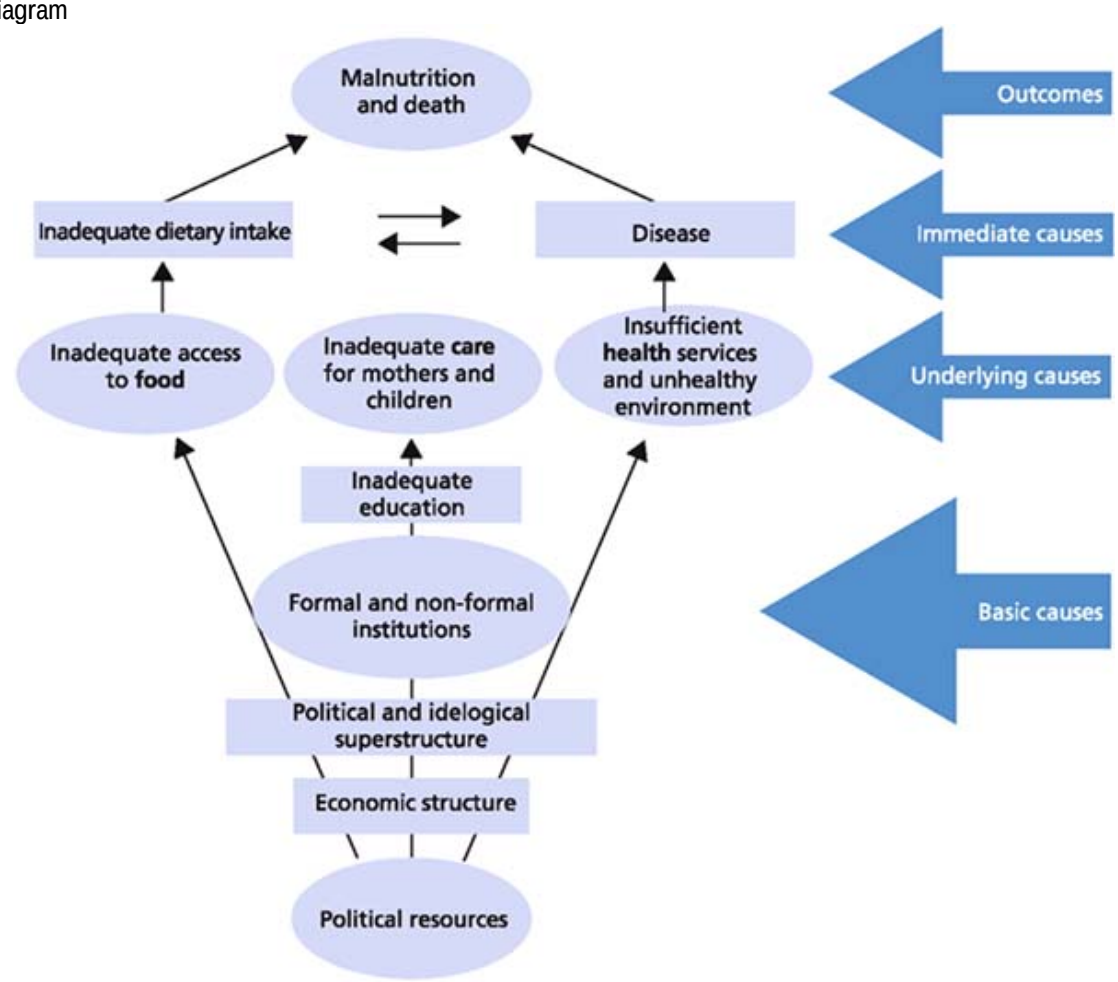
In order to incorporate all the determinants of malnutrition, in October 2012, the Committee on World Food Security (CFS), which is part of FAO, suggested to use, "*food and nutrition security*" (FNS) as the ultimate goal of any development policy or programme. This concept encompasses the four tenets of food security (reflecting regular access to food of sufficient quantity and quality[1]) and the three underlying causes of malnutrition, thus taking into account the complexity and multidimensionality of food and nutrition insecurity (cf. diagram below).

FNS Determinants



Source : CIRAD / Methodology Guide

Causal Diagram



Source: FAO, Keynote paper: measuring hunger and malnutrition, John B. Mason, Tulane University, New Orleans, LA, USA

1 - The definition adopted at the World Summit on Food Security in 2009 bases food security on four tenets: i) physical, economic and social *access* by individuals to food via the market and/or productive resources; ii) *availability*, i.e. the quantity of food available at national, local and household level; iii) health and nutrition *quality* (or use) of foodstuffs, water and diets as well as respect for food preferences; iv) and *regularity* (or stability) of access, availability and quality.

The relative impact of the various factors of malnutrition depends on the context and local issues which can only be understood by carrying out an accurate analysis of the food and nutrition situation in a specific area [R2].

State of malnutrition in Africa and the consequences

All forms of undernutrition affect the health, development, wellbeing and survival of the individuals concerned, and have the gravest consequences for mothers and young children.

It is estimated that 26% of children worldwide exhibit stunting, that 2 billion people suffer from one or more micronutrient deficiency, and that 1.4 billion people are overweight. Aside from the social impact, the economic cost of malnutrition is estimated to represent 5% of global GDP (3,500 billion US dollars), due to a loss of productivity and health care costs.

According to figures from Unicef, in 2013, 39% of children under 5 were suffering from chronic malnutrition in West and Central Africa (a proportion which exceeds 50% in Niger). Past early development, stunting can become irreversible, and the damage to a child's physical and mental development is likely to be permanent in adulthood. Chronic malnutrition affects the capacity of countries to develop in the long term and represents a major factor in replicating poverty from one generation to another.

Acute malnutrition regularly reaches rates equivalent to or above 10% (According to WHO, 10% is the alert treshold) in 8 countries of West and Central Africa. This situation is already extremely worrying and deteriorates further during the hunger gap (period between two growing seasons) in countries of the Sahel, and when populations face a climatic, economic or political disaster, as has regularly been the case over the past decade in West Africa. In the Sahel, one child in five dies before the age of five: half of these deaths are attributable to malnutrition.

Lastly, while poor people are among the most vulnerable to undernutrition, micronutrient deficiencies and chronic malnutrition can affect all social strata of the population. In Burkina Faso, while the poorest households remain the worst affected (42% in 2010), around 18% of the wealthiest households are also affected by chronic malnutrition, with this proportion reaching 33% for the poorest [R5].

II – Why should we support a "nutrition-sensitive" agriculture?

The failure of sector-based strategies to fight against malnutrition

As nutrition is not a de facto in any institution, it is generally ministries of health, and more broadly, health, hygiene and health services, which are in the front line in most African countries. They are responsible for preventing and treating acute undernutrition, micronutrient deficiencies and infectious diseases, which may be the root cause of undernutrition. However, despite the efforts of countries to integrate treatment of malnutrition into basic health services, health systems are often unable to cope with the extent and costs of malnutrition. This situation can be explained both by the weakness of the health sectors, and by the high prevalence of acute malnutrition in the countries of the Sahel in particular. In times of crisis, it is the humanitarian programs with the support of the international community, which try to respond to sudden increases in the occurences of acute malnutrition. These levels have gradually become the principal threshold for triggering humanitarian interventions by donors. However these interventions, which focus on the nutritional rehabilitation of children whose survival is directly threatened, are shown to be inefficient in tackling chronic, multi-factor malnutrition, which needs to be treated using comprehensive, long-term interventions, notably relating to food.

In regards to this, it is ministers of agriculture who historically have had the right to deal with interventions associated with food security in the countries of West Africa. However, the agricultural policies of West Africa predominately remain focused on increasing production and productivity in the sector. From this point of view, the recurrence and frequency of emergencies in the Sahel and West Africa, in which issues of food and nutrition become more acute, raise questions today about the potential of the responses provided by the agricultural sector. Relying for the most part on boosting production, these policies struggle to respond to problems of food insecurity among the most vulnerable populations. Recent household economic assessments[2] reveal that the income of the majority of populations considered as poor or extremely poor (around 60% of rural households) rely most often on a range of precarious economic activities, among which only a small proportion is devoted to farming and livestock production. The majority of agricultural development policies and programmes target farmers who have access to productive assets [R7].

What role can agriculture play in promoting the SAN?

The most direct contribution the agricultural sector can make to food and nutritional security is, without doubt, the improvement of food availability through agricultural production [R1]. In a number of West African countries, production level has scarcely kept pace with population growth and is at its threshold, which can be an ongoing contributor to food vulnerability. Generally speaking, cereal production may be meeting the caloric needs of the population (estimated at 2100 kcal per person per day); however, the region is under-producing proteins and fats, which countries must import in order to be self-supporting. Consequently, it is critical for the agricultural sector to have as its goal a diversification in agricultural production as well as productivity.

When it comes to nutrition, however, research shows that beyond a certain threshold caloric intake (in reality, quite low), which is the primary nutritional contribution of cereal, it does not improve the nutritional status of an individual. This counter-intuitive relationship is illustrated, for example, by the situation in the region of Sikasso, Mali, where high agricultural production is frequently accompanied by high rates of chronic malnutrition among young children. A comparison of Sikasso with the other Malian regions can explain the magnitude of this "stunting": caused by poor food diversification and most likely by a lack of childcare due to a heavy agricultural workload [R3]. This is not an isolated situation: there are 21 countries that have reduced by 50% the number of people not attaining minimum caloric consumption (this is the first indicator that MDG uses to measure success in fighting hunger). Of those 21 countries, only 6 are on the right track towards also reducing by 50% the number of children suffering from low birth weight (the second indicator used to measure progress toward adequate nutrition).

Besides producing food, the agricultural sector creates jobs and generates revenue for farmers, resulting in an increase and an

2 -The "Household Economic Assessment" (HEA) model is a method for analysing household vulnerability and was devised by the Food Economy Group in the 1990s

improvement of food consumption in farm households. It also gives them access to other goods and services (for example, health services), which can affect nutrition. Agricultural policies can also minimize the impact of crop seasonality and help regulate the general price level of food products through managing the volume of supplies and the organization of value chains (storage, preservation, etc.). Recent crises in West Africa, however, have underscored the inadequacy of these policies when it comes to the problem of food accessibility for all individuals. Food security among the poorest households depends primarily on the close link between these measures and social protection interventions or humanitarian assistance (through food distribution or subsidies, for example) [R2] [R7].

Finally, with respect to the hygienic and nutritional quality of food, the agricultural sector is, without a doubt, in the best position to ensure adequate production of diverse and nutritive food products. Here again, however, in order to have an impact on nutrition, these efforts must be coordinated with nutrition education activities that will result in food choices and policies, which are focused on agri-food processing (whether on a small-scale or industrial-scale) oriented to guarantee the retention of nutrients in processed foods. Lastly, it is vitally important that individuals have sufficient purchasing power to have access to these products.

The *potential impact of agriculture on the health landscape and health care* [R4]

Even with access to quality food regularly available during the year, an individual whose body is not able to digest adequate nutrients will suffer from malnutrition. This situation may, for example, result from an illness that weakens the individual's metabolism. The risks are all the more important for a child whose environment does not have the capacity to identify and to treat in a timely manner the problems, or who does not benefit from adequate parental care. Experience shows that these situations may in some cases relate to farming activity, for example, when the latter does not allow quality time for adults (particularly mothers) to take care of their children. Thus the introduction of a new crop aimed at improving agricultural productivity can increase household incomes, but it may also have consequences of increasing the responsibility of working women and weigh on the quality of childcare, negatively impacting the child's nutritional state. In the same way, some disease factors may be directly linked to the agricultural environment; an irrigation or a fish farming project may have unintended consequences concerning the prevalence of mosquitos in the area, and therefore the risk of contracting malaria.

The need for intersectoral and multidimensional action

The recognition of the multidimensional nature of food security and nutrition has encouraged the emergence of many initiatives that attempt to bring together agendas linked to agriculture, food security, and nutrition. For example, in West Africa, "AGIR," was initiated by the European Union and centers on resilience, "Faim zéro" (Zero Hunger) was borne by ECOWAS, and the international movement "Scaling Up Nutrition", of which 11 countries of the region are involved (Benin, Burkina Faso, Ivory Coast, Ghana, Guinea, Niger, Nigeria, The Gambia, Mali, Senegal, and Sierra Leone). The diversity of stakeholders, entry points, and priorities - resilience, hunger, and nutrition - complicates the overall conversation and extent of the initiatives. However, they share a certain number of findings, among which is the failure of sectorial strategies to fight against food and nutrition insecurity, and the need to ensure a continuum between emergency and development interventions.

Each of these initiatives identifies the agricultural sector as a major tool for action to promote FNS (Food and nutrition security). They draw on many research studies in the world of nutrition and agriculture to promote initiatives. It is noteworthy that the FAO published its latest report on the World-wide State of Food and Agriculture in October 2013 on "food systems for better nutrition". Furthermore, CGIAR, the Consultative Group on International Agricultural Research, launched a research program entitled "Agriculture for Nutrition." For its part, the medical journal, The Lancet, which is an authority on nutrition issues, published in 2013 an article devoted to the analysis of multi-sectorial strategies to fight against malnutrition, in which agriculture is featured prominently.

Scaling Up Nutrition Movement

Launched in 2010, today, *Scaling Up Nutrition* (SUN) is comprised of 43 countries and is based on a high-level political commitment to the fight against malnutrition. Acknowledging its multi-dimensional nature, member countries commit themselves to increasing the coverage and effectiveness of their nutrition programs and to maximize the potential of other sectors, particularly agriculture, in the fight against malnutrition. At the global level, the SUN movement encourages the exchange of experiences among countries involved between development partners, United Nations institutions, NGOs and private stakeholders. At the country level, the movement is based on the implementation of intersectoral platforms and multi-stakeholders encouraging consultation and improving coordination and interventions in the field. The member countries are currently finalizing their multi-sectorial plans of action to fight against malnutrition.

On the operational side, several practical tools were also developed, such as the ACF manual, "Maximising the Nutritional Impact of Food Security and Livelihoods Interventions[3]." The World Bank has produced internal recommendations in order to better integrate nutrition issues into the agricultural programs it supports. Finally, on the political front, FAO recently published a summary of "key recommendations for improving nutrition through agriculture," a document aimed at integrating nutrition into agricultural programs and policies.

A donor agenda?

One may wonder about the ownership of these initiatives by the states, and in particular, those responsible for agricultural policies that place more emphasis on production challenges and productivity than on nutrition. In the logic of aid alignment, it is sometimes difficult for the development partners to reconcile their desire to convince the Member States to integrate these new elements in their policies to support, rather than replace, national and regional processes. This is especially the case for the agricultural sector, which has already been assigned a large number of economic, social, and environmental objectives sometimes difficult to attain.

3 - For more information:
http://www.actionagainsthunger.org/sites/default/files/publications/Optimiser_Limpact_Nutritionnel_des_Interventions_Securite_Alimentaire_et_Moyens_Dexistence_07.2011.pdf

III - How to make the agricultural sector more nutrition sensitive?

Comments and recommendations supported by these initiatives are not seamless and consensual. They differ particularly according to the direction of the organizations that support them (depending on whether they come from the nutrition or agriculture sector, humanitarian or development actors, operating structures, or political initiatives). Some are technical and very specific; others on the contrary, are of a very general nature.

Make agricultural policies more nutrition oriented

Target more policies on the poor and women

The summary of "key recommendations to improve nutrition through agriculture" [R6] from the FAO, calls to target more agricultural programs and policies towards poor households, which are the most vulnerable to food and nutrition insecurity. This includes proposals aiming to improve their production systems, facilitate their access to agricultural inputs, secure their productive potential, and have access to decent jobs. These recommendations also propose to improve the conditions of market accessnfor the most vulnerable populations, in particular, to sell or access varied and nutritious food [R6]. These recommendations, however, pose questions regarding the potential of the agriculture sector to reach the poorest households that are in part disconnected from crop and livestock production. The capacity of agricultural policies to encourage their reinsertion as producers moreover is increasingly a part of the debate [R7].

Whether they come from an agricultural or nutrition background, most studies recommend addressing gender inequalities, through income generated from farming, or from control over productive and financial resources within farming households. It is especially important to strengthen the empowerment of women and their abilities to provide time and adequate means of support for mother/child healthcare. It is acknowledged that women represent a category of the population both particularly impacted, and a powerful tool in reducing malnutrition. This can be achieved through improving their nutrition status - particularly during pregnancy and breastfeeding - and by the quality of care that they give their children in the first years of their lives. It appears that the distribution of income and productive resources within the household is a decisive factor for the nutritional status of its members, since women are for the most part more vigilant in responding to the needs of young children for whom they are responsible [R4], [R5].

Encourage high nutritional value chains

All recent studies promotes, beyond basic staple foods, the support of agricultural policies in supply chains of high nutritional value such as livestock, dairy products, fish or fruits or vegetables. The objective is to improve the national availability of these products, essential to a healthy, varied diet. It is particularly recommended to guide the agricultural research in these sectors in order to improve productivity or encourage the selection of varieties or species with a high nutritional content. The creation of incentives is also encouraged to ensure the dissemination of good practices at the production, processing, marketing and consumption of products coming from these sectors [R1], [R4], [R6].

At the household level, a specific attention should be paid to the production of varied and nutritious foods by smallholder farmers and most food insecure populations. Beyond the objective of income diversification, it is about ensuring that they can reap the nutritional benefits of these crops by home consumption. Experience in promoting vegetable gardens has taken place in many countries, especially by NGOs [R4], [R8].

Support the development of agro-ecology practices

Beyond the possible reorientation of agricultural programmes and policies, the United Nations Special Rapporteur on the right to food, Olivier de Schutter, evaluates the different agricultural models to promote, dependent on their potential to fight against hunger and malnutrition. He presents agro-ecology as the agricultural model the best able to respond to the different pillars of food security. He proposes that by increasing productivity at the local level this model can improve food availability and reduce rural poverty. Therefore, it improves accessibility of smallholder farmers to food whilst preserving the sustainability of ecosystems. De Schutter calls on decision-makers to implement ambitious strategies and programmes to support these agricultural models, both by specific investments in research and infrastructure, and by the creation of incentive frameworks allowing the development of agro-ecology on a larger scale [R9].

Enrich food with more nutrients

The imperative to obtain rapid results in reducing malnutrition urgently coincides with the need to identify interventions targeting specifically, nutritional objectives in the agricultural sector. Several types of interventions are highlighted and experimented in various countries in order to improve the diets of the populations through the production of food with strong nutritive content, and the improvement of the entire food value chain.

At the production level: bio-fortification

A strategy generally presented as complementary to production diversification is the possibility of bio-fortification of dietary staples [R1], [R4], [R8]. This technique aims at reinforcing the content of micronutrients of certain traditional food crops in order to fight against certain deficiencies. This is particularly the case for iron and vitamin A, for which deficiencies are associated with illnesses like anemia and blindness, in which the most serious cases involve premature death. Some experiments have also been conducted for several years in several countries in Africa and in South Asia, like in Uganda, with the "orange-fleshed sweet potato" obtained by crossbreeding a variety rich in beta-carotene, the precursor of vitamin A. Another example of this is the "pearl millet," a variety rich in iron also obtained by crossbreeding, tested in India and in certain countries in Africa like Bennie. If these techniques are promising in terms of public health, they pose a certain number of questions. Firstly, of the population's acceptance of these new varieties, which raises the question of food preference, and respect for household consumption styles, an essential element of the concept of food security. The other

question relates to technologies used to obtain these new varieties. If the orange-fleshed sweet potato and the pearl millet are the result of crossbreeding, other crops like the "yellow rice," developed by a private laboratory in 2000, or a variety of bananas grown on an experimental basis in Uganda, are the result of genetic modifications. Large-scale mobilizations have already taken place to oppose the dissemination of these crops. Here, as for GMOs in general, questions remain regarding the environmental, agricultural, and health effects of these crops, as well as seed ownership issues. These questions are all relevant, given that rice is the most widespread food crop in the world.

At the level of the food chain, the preservation of nutrients and fortification

In addition, if the nutritious quality of food may be potentially improved at the level of production, the entire food system may also strongly affect the final products. Between production and consumption, agricultural products are stored, transported, processed, and packaged. All these steps can have an important impact on their nutritious content and food safety. A final series of recommendations therefore aims to either improve the preservation of nutrients along the entire food production chain, or increase its quality through a fortification processing of food. The technique involved in adding micronutrients during processing or cooking is already greatly improved, in general at the household and processing industry level, at the urging of the Health Ministries. Beyond iodized salt that is widely used in many countries, one finds examples such as sugar enriched with vitamin A in countries in Central America and in Zambia, or curry powder enriched with iron in South Africa. Fortification is generally regarded as an effective method for reducing micronutrient deficiencies when households do not have access to sufficiently varied and nutritious diets. The agricultural production sector, however, is less directly concerned by these interventions that require strong coordination between industrial sectors and national enforcement agencies of health regulation [R4].

IV - The governance issues of a multi-sectoral policy

Whatever the combination of interventions used at a country level may be, the governance issues remain substantial in order to plan and concretely implement a multi-sectoral policy. It is even more difficult when the States and their development partners are mostly organized in a sectoral manner.

Improving the coordination measures

As a result of its multidimensional and inter-sectoral character, nutrition does not have any institutional anchoring and generally finds itself hosted by a division within the Ministry of Health, which limits the coordination capacity with the other sectors. In order to promote inter-sectoral and inter-actor coordination (ministries, technical and financial partners, private sector, civil society), several countries have created coordination measures. In Brazil, the inter-ministerial coordination occurs within the National System of Food and Nutritional Security (SISAN), a structure that brings together 17 ministries under the auspices of the President. The SISAN is in charge of the formulation, the adoption, and the implementation of food and nutrition policies in the country. This measure is supported by the National Council for Food Security and Nutrition (CONSEA), a multi-stakeholder platform which supports the development and the implementation of programmes and guarantees the monitoring of political commitments. The creation of this type of multi-stakeholder and inter-sectoral platforms is strongly promoted by the SUN movement, which made it one of the essential stages of the commitment of member countries. Building on these coordination bodies, the “SUN countries” are encouraged to produce multi-sectoral plans of action to combat malnutrition, including or integrating, health and food security interventions. The 11 West-African countries engaged in the initiative are now in the process of developing these plans of action.

However in practice, the challenges of the coordination are large, due to the development of common strategies, their financing, and their implementation on the ground. In addition to the horizontal coordination, there is a need for vertical coordination between the central State and the decentralised or deconcentrated levels involved in the operational implementation.

Institutional anchoring does not resolve all the coordination difficulties

In Senegal, “la cellule de lutte contre la malnutrition” (CLM) was created in 2001 and marks, according to its current coordinator, the move to a “programme approach”, preventative and multi-sectoral. Made up of representatives of technical ministries involved in nutrition, local governments, and members of civil society, it is placed under the authority of the Prime Minister with the aim to coordinate the interventions of the State as partners on the subject of nutrition. Field action has already made it possible to achieve significant results:; the extension of the nutrition aid network at the community level has made it possible to lower the prevalence of chronic malnutrition. However, the CLM coordinator underlines that the challenges of inter-sectoral and multi-stakeholder coordination remain significant.

Thus, Senegal’s experience shows that the existence of a focal point within the ministry does not necessarily guarantee efficient coordination. A common working framework and contacts are necessary at each stage, from the definition of the strategy to the planning, to the implementation and the monitoring of actions. “*At the Ministry of Agriculture level for example, we were in contact with the Department of Analysis, Forward Planning and Agricultural Statistics (DAPSA) which is notably responsible for managing the National Plan of Agricultural Investment (PNIA)” explains the CLM coordinator. “But we realised that this connection was insufficient and that we needed contacts at all levels of the Ministry of Agriculture – at technician level, research, information, etc – for each stage of our mission”*. The coordination difficulties are reinforced by the positioning of the “cellule” (committee), in charge of both the strategic planning and the implementation on the ground. This position of execution agency can notably raise coordination questions with the technical services of the Ministry of Agriculture [R10].

Coordination between sectors is not synonymous with coordination between players

In addition to the dialogue between the departments involved (Agriculture, Health, Industry, Education, etc.) there is the question of coordination between the other players, in particular, civil society, the private sector and even technical and financial partners (PTF). In Senegal, if the CLM (Fight Against Malnutrition Unit) was created as an "entry point" for external players, the coordinator particularly regrets that the PTF still does not appeal to the unit when they discuss nutrition related issues. This situation is explained in part, amongst the development partners,

by this sector-specific organisation. Nutrition questions are often still delegated to the management committees responsible for health in PTF, of which the traditional representatives are the departments of Health. But this difficulty is also explained by a degree of competition, which sometimes exists between Departments in order to secure finances from sponsors. The issue over finances reflects and reinforces the difficulty of coordination, since finances assigned to nutrition come from various sources, and at the same time, the potential difficulty of ensuring overall coherence or the continuity of actions over time [R10].

Coordination in the field: operational issues

The issues regarding coordination ultimately occur on an operational level, in articulating the programmes defined on a national level to the regional State institutions, and in the approaches towards local development. However, a study carried out by *Action contre la faim* in Burkina Faso shows that on matters regarding nutrition, coordination between different sectors can be facilitated at a local level, considering the lower number of parties involved and the close proximity of these parties, all working under the supervision of regional governors. But this is not the case in all contexts. For example, in Kenya, it seems that despite the creation of technical forums on nutrition at a committee level, which are supposed to promote coordination between sectors, there are sometimes difficulties in communication to other sectors, particularly to agriculture (R5).

Integrating nutrition into agricultural policies

If the contribution of the agricultural sector to a multisectoral policy on nutrition is accepted in a growing number of countries, there also lies the question of the practical integration of nutrition into the agricultural sector to allow practical developments in the field. This matter can be discussed from the perspective of the knowledge and skills of field officers from the departments of Health, to the objectives and the institutional organisations of the departments. Initiatives in countries at this level are often recently implemented and it is therefore difficult to glean information on their efficacy.

Including nutrition in the objectives of agricultural policies

With the support of the FAO, the CAADP (Comprehensive Africa Agriculture Development Programme), run by NEPAD (New Partnership for Africa's Development), has organized three regional workshops across the African continent with the aim of revising the national Programmes of agricultural investment (PNIA) from the perspective of a better contribution to nutrition. In West Africa, the workshop held in November 2011 brought together the ministers of Agriculture, Health, Finance and civil society from 17 West African countries, which led to plans of action being drawn up. Although the process was a relative success in several countries, it seems that it was not suitable for others, since the process was initiated externally.

Raising awareness about nutrition in the agricultural sector

One of the difficulties often highlighted in order to improve the integration of agricultural activities and nutrition, is the necessity of speaking a common language. To overcome this divide, several countries decided to reinforce training programmes on nutrition for representatives in the departments of agriculture. Burkina Faso is, for example, in the process of reforming its programmes at the National School of Agriculture in order to integrate basic classes on nutrition for its students. These initiatives will undoubtedly be fruitful in the coming years. Numerous experts recommend replicating these types of initiatives to improve the knowledge on nutrition amongst professionals and experts in the agricultural world [R5]. The reverse could undoubtedly be proposed for students and professionals of nutrition and/or health.

Creating a division to be responsible for nutrition

Beyond raising awareness, some countries have decided to reinforce the mandate for nutrition from the department of agriculture. In particular, Kenya created a division in charge of nutrition within the Department of Agriculture, with the aim of integrating agricultural interventions more concretely with nutrition in the field. The representatives of this division, particularly those of agricultural extension, are in charge of raising awareness, training and providing support services to communities and households. They are therefore key providers of nutritional information [R5]. However, as is the case in Kenya, this type of structure is generally constrained by insufficient finances to scale up the actions. Furthermore, coordination with the divisions responsible for nutrition within the department of health is even more necessary to avoid overlaps, and to ensure that their actions fully complement each other.

Including monitoring indicators related to nutrition in agricultural programmes

In order to understand the impact of agriculture on the nutritional situation and more importantly, to plan and pilot interventions in favor of nutritional and food security, certain countries have deemed it necessary to develop specific indicators and to ensure that the information is collected and analyzed by the agricultural sector. In Burkina Faso, since 2004, the bi-annual review of the agricultural sector has been collecting data, corresponding to the anthropometric indicator, the brachial perimeter, which is used to detect malnutrition amongst children under 5 years of age. This data collection showed evidence of the possible disjuncture between the availability of grain in a given region and the nutritional status of children. However, questions are raised over the type of data to collect. Indicators linked to diet (for example, those which measure food diversity) could be more relevant than anthropometric indicators for repositioning agricultural programs.

Therefore, it is clear based on these examples, that beyond the definition of the strategy and the actions to implement, the challenges of management and coordination are particularly important in order to put in place a policy between sectors. In this respect, programmes implemented in Brazil under the initiative *Fome zero* provide much to learn from, such as, implementing incentivizing mechanisms to promote full cooperation between departments. This is the case with the Bolsa Familia programme, which determines money transfers to targeted poor populations based on the children attending school and making regular visits to health centres. In the same way, the school canteen programme, based on purchasing food products from small family farms, can create an important link between a policy of social welfare and nutrition with the agricultural policy destined for small farms. For the majority of the countries engaged in the SUN initiative, the governments are still in the experimental stages, and the movement is trying to promote exchanges of experience with the intention of developing public policies, which respond to the individual challenges of each country.

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This report reviews a number of intervention possibilities with regards to the food system (production, the production chain post-harvest, consumption) in the context of a multisectoral approach to the fight against malnutrition. .
http://www.fao.org/docrep/018/i3300e/i3300e00.htm

R2. Prendre en compte la sécurité alimentaire et nutritionnelle dans les projets de développement - Guide d'auto-évaluation ex ante à l'usage de concepteurs de projets - Version provisoire. Bricas N,, Aspe C., CIRAD, AFD, MAE. 2013, 22p.
This guide was designed as a practical tool to review the different aspects that can promote a development project to actively participate in food and nutritional security (SAN), by means of a questionnaire based on its determining principals.

R3. Le « paradoxe » de Sikasso (Mali) : pourquoi « produire plus » ne suffit-il pas pour bien nourrir les enfants des familles d'agriculteurs ? Dury S., Bocoum I., Cirad Umr MOISA, sept-oct 2012, 13p.
From the causal outline of malnutrition, this study analyses the specific determining factors of chronic malnutrition in the Sikasso region, in conjunction with other regions in Mali.
http://publications.cirad.fr/download.php?dk=566290&doc=36058

R4. Improving nutrition through multisectoral approaches. World Bank, 2013, 172p.
This report presents an operational guide for teams at the World Bank and development partners to maximise the nutritional impact of their programmes for agricultural development, social welfare and health.
http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/02/05/000356161_20130205130807/Rendered/PDF/751020WP0Impro00Box374299B00PUBLIC0.pdf

R5. Sowing the seeds of good nutrition: Making Agricultural Policies Deliver Better Nutrition. Etienne du Vachat, Action contre la faim, en collaboration avec CIRAD, GRET, 2013, 45p.
Based on three case studies (Burkina Faso, Kenya, Peru), this study evaluates how the international agenda on agriculture and nutrition translates to the actions taken by countries and identifies the principal constraints to overcome. The case study on Burkina Faso is available in French on the ACF website.
http://www.actioncontrelafaim.org/fr/content/graines-bonne-nutrition

R6. Key recommendations for improving nutrition through agriculture. FAO, 2013, 2p.
This summary of 5 policy recommendations and 10 operational recommendations was put together following a comprehensive review of the existing guides and instructions (published by international institutions, research centres and NGOs) to maximise the impact of agriculture on nutrition.
http://unscn.org/files/Agriculture-Nutrition-CoP/Agriculture-Nutrition_Key_recommendations.pdf

R7. Atelier sur la protection sociale, Campagne Cultivons. 20 & 21 mars 2013, Dakar. Résumé synthétique, Inter-réseaux, 6p.
Focusing on the policies of social welfare in West Africa, this workshop also questioned the ability of agricultural policies and response programmes to crises in the agricultural sector to cater for the needs of the poorest populations
http://www.inter-reseaux.org/ressources-thematiques/article/atelier-sur-la-protection-sociale

R8. Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? Maternal and Child Nutrition 3. The Lancet, june 2013, 16p.
This article from the medical review The Lancet examines the existing scientific evidence on the impact of interventions by several sectors, including agriculture and social welfare on the determining factors of nutrition and makes recommendations on the stances to retain in order to maximise them.
http://www.thelancet.com/series/maternal-and-child-nutrition

R9. Report submitted by the Special Rapporteur on the right to food, Human Rights Council Sixteenth session 16ème United Nations General Assembly. Olivier De Schutter, december 2010, 23p.
Based on recent scientific publications about agroecology, this report underlines the huge potential of this type of agricultural production to participate in the four pillars of food security and makes policy recommendations for its development on a greater scale.
http://www.srfood.org/images/stories/pdf/officialreports/20110308_a-hrc-16-49_agroecology_en.pdf

R10. Entretien avec Abdoulaye Ka, Coordonnateur national de la Cellule de lutte contre la malnutrition (CLM) du Sénégal. Grain de sel n°59-62, Inter-réseaux, décembre 2013, 1p.
Abdoulaye Ka reveals in this interview the issues of coordinating different players and different departments when developing, planning, implementing, and financing a multisectoral plan of action for nutrition in Senegal..

These *Food Sovereignty Briefs* are a joint initiative by Inter-Réseaux Développement Rural and SOS Faim Belgium. They aim to provide summaries of food sovereignty–related subjects based on a selection of particularly interesting references. They are published every quarter and distributed digitally.
SOS Faim Belgium (www.sosfaim.org) supports farmers' and agricultural producers' organizations in roughly fifteen countries in Africa and Latin America. Inter-Réseaux Développement Rural (www.inter-reseaux.org) is an association that aims to promote networked discussions, exchanges and reflection on the subject of rural development in developing countries.
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Translation: ACF
These briefs were produced thanks to the financial support of the General Directorate for Development Cooperation of the Ministry of Foreign Affairs (Belgium), SOS Faim Belgium and special support of ACF. Inter-Réseaux is supported by the Agence Française de Développement.
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Inter-réseaux, november 2013.