

Food Security

**Rising food prices are often associated with increased hunger. Are higher prices not an incentive for farmers to produce more food?
What structural framework conditions (social, political) do farmers need to respond to such incentives?**

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Abstract

Pizza or Pasta for dinner? This luxury problem is reserved only to a small number of people. The over one billion people suffering from mal- or under-nutrition have increasingly become a reality that the public, politics and the international community can no longer ignore. Attacking the roots of food insecurity though, is a far more complex and political issue than one could assume. The following paper discusses the major underlying mechanisms of food crises, food insecurity, hunger and poverty. It shows who is affected why by which mechanism, on both the micro and macro level. Referring to the successful example of the Brazilian food policy, ways of addressing the problems are introduced and further elaborated to a guidance of necessary and recommendable conditions that need to prevail and measures that should be implemented in order to achieve food security. We find that the most necessary condition is political will. Without the commitment of politicians to change underlying structural conditions through legal, economic and technological reforms, no improvement of the food situation can be expected. In addition, all stakeholders need to be part of the process and empowered to not only achieve, but to sustainably achieve stability in food security on an acceptable level.

Table of Contents

1	Introduction	6
1.1	The Right to Food	7
1.2	Definition of Food Security.....	7
1.3	The Importance of Agriculture.....	9
1.3.1	Small Farmers and World Market Price Fluctuations.....	9
1.3.2	Economic Sphere and Rising Food Prices	10
1.4	Reasons and Mechanisms Behind a Food Crisis.....	12
1.5	Micro Perspective.....	14
1.5.1	Rural Poor vs. Urban Poor	14
1.5.2	Value Chain.....	15
1.5.3	Supermarketisation.....	16
1.6	Macro Perspective: Developed vs. Developing Countries.....	17
2	Brazil's Food Security Policy – A Successful Example?.....	18
2.1	Brazil's Food Security Policy – Fome Zero.....	18
2.2	The poverty pockets in Brazil	20
2.3	Main Policy Areas.....	21
2.4	Actors of the Zero Hunger Program.....	23
2.5	State Actors, Private Actors and Partnerships.....	23
2.6	Results	24
3	Strategic Objectives for an Enhanced Food Security	26
3.1	The Problems to Empower Smallholder Farmers	27
3.2	Capacity Building.....	28
3.3	Sustainability of Projects and Ownership	30
3.4	Participation of MNCs	31
3.5	Outcome Monitoring.....	33
4	Conclusion.....	35
5	Literatur.....	37

Table of Figures

Figure 1: Influencing factors of food security	8
Figure 2: Patterns of price developments among food commodities, 2003–July 2008.....	10
Figure 3: Number of undernourished people in the developing world	11
Figure 4: A framework for analysing vulnerability to future food insecurity	12
Figure 5: Reasons for food crises.....	13
Figure 6: How agricultural R&D affects the poor	14
Figure 7: Environmental Impact of the Product	15
Figure 8: Links between agricultural support measures of advanced countries and production decisions in developing countries	17
Figure 9: Poverty as a root cause of hunger.	19
Figure 10: The vicious circle of hunger.....	20
Figure 11: Overview policy areas and their programs	22
Figure 12: The market creation approach to development.....	31
Figure 13: Framework for Conceptualizing M&E Systems	34

«There is no such thing as an apolitical food problem»

(Amartya Sen, Nobel prize winner in Economy)

1 Introduction

There are more than one billion hungry people in the world and every five seconds a child younger than ten dies from malnutrition-related disease or hunger. The world population is expected to reach 9.1 billion by 2050 and food production will need to nearly double by this date in developing countries. Poor people spend between 50 and 80 percent of their income on food. About 40 percent of the world's arable land is degraded to some degree and will be further affected by climate change. In developing countries, there are about 500 million small farms supporting around two billion people. (IFAD, 2010a)

The world is facing its worst food crisis since the 1970s, due to the food, financial and economic crises of 2008 which has drawn even more people into hunger and poverty. In 2009, world hunger reached a historic high and as a consequence, the wish for food security is more present than ever. But still, food prices are not expected to drop back to pre-crisis levels for at least ten years. (South Centre, 2008, p. 2)

The issue of food security is not only a problem of food deficiency, money, and distribution problems, but has very often political and structural reasons behind. Likewise, Jacques Diouf, general director of the UN World Food Organization, asserts that «eradicating hunger in the world is not a problem of money, but a problem of volition». (DEZA, 2009, p. 3)

With every crisis, there comes opportunity. This is why the causes of the current crisis must be closely analysed and understood. It should be the starting point for developing countries to improve their abilities to produce food, protect the vulnerable population and ensure fair prices to farmers, so that their living standards can be improved.

In this analysis, we put a focus on agricultural production in the context of high food prices: Should governments support large scale corporate farmers or rather small-scale farmers and sustainable agricultural production? Are higher prices not an incentive for farmers to produce more food? And what structural framework conditions would farmers need to respond to such incentives?

The paper first discusses the importance of agriculture and the dependency of small farmers on world market price. Then it analyzes micro and macro perspectives of food security and outlines short-, medium-, and long-term improvements. In the centre of the analysis stands a case study of Brazil's food security program «Fome Zero», which illustrates the main political areas, actors and the importance of political volition. Finally, means to achieve goals like a reduction of extreme poverty, helping people to help themselves, and effectiveness will be discussed.

1.1 The Right to Food

The right to food was first mentioned in the Universal Declaration of Human Rights (UDHR) of 1948, which represents the first global expression of rights to which all human beings are entitled. Although not legally binding, the declaration has influenced many national constitutions and international treaties to promote and protect human rights. The great contribution of the UDHR is the extension of the human rights beyond civil and political rights (1st generation HR) to economic, cultural and social rights (2nd generation HR). According to Article 25 UDHR, «Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services». (UN – United Nations, 1948)

The concept of adequate food consists of can be divided into three aspects: adequacy, quality and quantity. Food supply should be adequate, meaning culturally acceptable and fit with the prevailing dietary culture. Further, it should cover nutritional quality and quantity (energy) and be safe (i.e. free of contaminants). The 2nd generation human rights are a constitutional part of the human rights system, but the lack of political will to implement them, impedes their full positive effect. The Plan of Action adopted by the World Food Summit in Rome 1996, has changed this situation significantly. (FAO, 2010a)

112 Heads and Deputy Heads of Government and State attended the World Food Summit and formally renewed their commitment to the right to adequate food, to access to safe and nutritious food and to be free from hunger. They considered it intolerable that more than 800 million people throughout the world, and particularly in developing countries, do not have enough food to meet their basic nutritional needs. During the conference they expressed their political will and commitment to achieving food security for all and to fight against hunger in all countries. The Summit concluded with the signing of the Rome declaration, which established the goal to halve the number of undernourished people no later than 2015 and eventually to achieve food security for all. (FAO, 2010b) In addition world-wide public awareness of the extent of hunger and malnutrition was successfully increased and most important, the political commitment necessary to promote effective strategies to reach its target was given. (UNHCHR, 2010)

1.2 Definition of Food Security

The definition of food security most commonly used is still the one of this latter World Food Summit of 1996. It defines food security as existing «when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life». (FAO, 2010c)

Food insecure people are those individuals whose food intake falls below their minimum calorie requirements, as well as those who exhibit physical symptoms caused by energy and nutrient deficiencies resulting from an inadequate or under-balanced diet.

At the time, it seemed realistic to expect a decrease of the number of chronically under-nourished people by 2015 by 50 percent. This aim also formed the basis of the first UN Millennium Development Goal to halve the proportion of people living in extreme poverty and hunger. But despite these optimistic expectations and actions taken, the Food and Agricultural Organization of the United Nations (FAO) estimated in 2009, that world hunger had reached a historic high, with 1.02 billion people going hungry every day.

Why is the fight against hunger and poverty so difficult? As can be seen in the following graph, food security is a complex topic and stands at the intersection of many disciplines and is influenced by a lot of different factors:

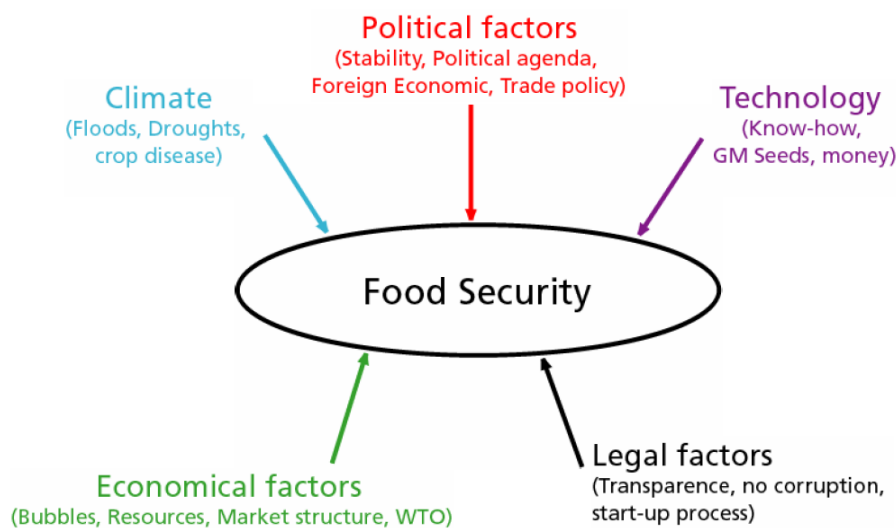


Figure 1: Influencing factors of food security
(Source: own graph)

The above graph shows us that out of the five factors we defined as most influential, climate cannot be influenced directly, but instead indirectly via technology and prevention plans for emergency situations. At the same time, technology transfer depends on the legal system and accessibility to technology – or on market conditions in general so to say. These – legal and economical – factors then again are a product of political outcome, be it trade policy or legal system characteristics. This important insight therefore leads us to emphasize the importance of political will to change prevailing economic, legal and other depending factors.

But still, the direct causes of poverty and hunger lie in the economic, legal and technological factors, which cumulate in agriculture as the primary food producing sector. In the following section, the importance of agriculture and the role farmers and especially small farmers play, shall be outlined.

1.3 The Importance of Agriculture

Hunger prevents poor people from escaping poverty because it diminishes their capacity to work, learn and care for themselves. There are strong direct relationships between agricultural productivity, hunger and poverty. Three out of four people in developing countries live in rural areas and make their living from agriculture. The higher the number of the rural population obtaining its income solely from subsistence farming – without the benefit of technologies or access to the markets – the higher the incidence of malnutrition. Therefore, improvements in agricultural productivity aimed at small-scale farmers will benefit the rural poor first. They are central to any solution to today's global food crisis and the long term problems of poverty and hunger. (SAAG, 2010)

The 2008 «World Agrarian Report» by the Assessment of Agricultural Science and Technology for Development, a FAO affiliated international organization, points out, that agriculture based on small scale farming is the best guarantee for a sustainable food security. Smallholder farmers are often highly efficient producers and contribute significantly to a country's economic growth and food security.

1.3.1 Small Farmers and World Market Price Fluctuations

Increased agricultural productivity enables farmers to grow more food, which translates into better diets and, under market conditions that offer a level playing field, into higher farm incomes. With more money, farmers are more likely to diversify production and grow higher-value crops, benefiting not only themselves but the economy as a whole.

In order for smallholder farmers to help improve world food security, they need secure access to water and land, as well as to rural financial services to pay for quality seed and inputs such as fertilizer. They also need an improved local infrastructure, storage facilities, roads, bridges and transportation to get their products to market, and technology to receive and share the latest market information on prices. Smallholder farmers need agricultural research and technology to improve their resilience to rapid economic and environmental changes and information on the best use of seeds and fertilizers to raise agricultural productivity. They need stronger organizations, so they can have greater bargaining power in the marketplace and can influence national, regional and global agricultural policies. Making these important inputs available to the small-holder farmers will result in a serious boost of food production. They lower costs and improve the incentives for farmers to increase production. (IFAD, 2010b)

Small farmers are highly dependent on price fluctuations of the world market. On the one hand, they suffer from low prices. Subsidized agricultural surpluses from the North destroy the local market of similar products. Small farmers are not able to sell their products and have to give them away for a very low price. Consequently they face problems to feed themselves

and their families. This situation has a devastating negative influence on the local market. As a result, a paradox phenomenon appears: The import of agricultural goods becomes cheaper than the self-production. This can lead to a decline of the local market.

On the other hand, an increase in the world market price can have negative consequences as well. In late 2007, for instance, enhanced use of bio-fuels, high oil prices of more than \$100 per barrel, as well as some other reasons caused the price of grain to rise significantly. In consequence, food riots took place in many countries around the world. Small farmers were not able to buy the same amount of grains as before. Also in 2007, people in the streets of Mexico City protested against the rising cost of corn. Indeed, the price of maize on world markets had escalated and the price of corn tortillas had almost doubled in Mexico. Bearing in mind that 104 million Mexicans consume over 300 million tortillas every day, corn truly is a food staple and many people in the poorer parts of the country have little else to eat.

1.3.2 Economic Sphere and Rising Food Prices

The focus of the following discussion is put on the world food prices and the winners and losers of this development. Looking at the development of food prices, the amount of agricultural goods produced and the number of undernourished people, we come to a problematic and counterintuitive result: How is it possible that despite higher production rates, the number of undernourished remains so high?

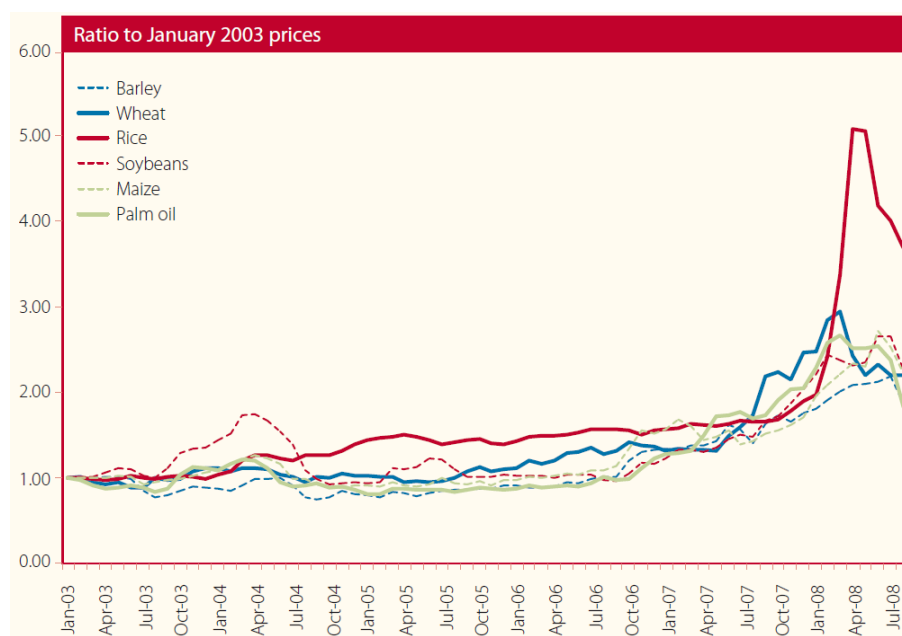


Figure 2: Patterns of price developments among food commodities, 2003–July 2008
(Source: <http://www.un.org/esa/policy/wess/wesp2009files/wesp2009.pdf>, p. 47)

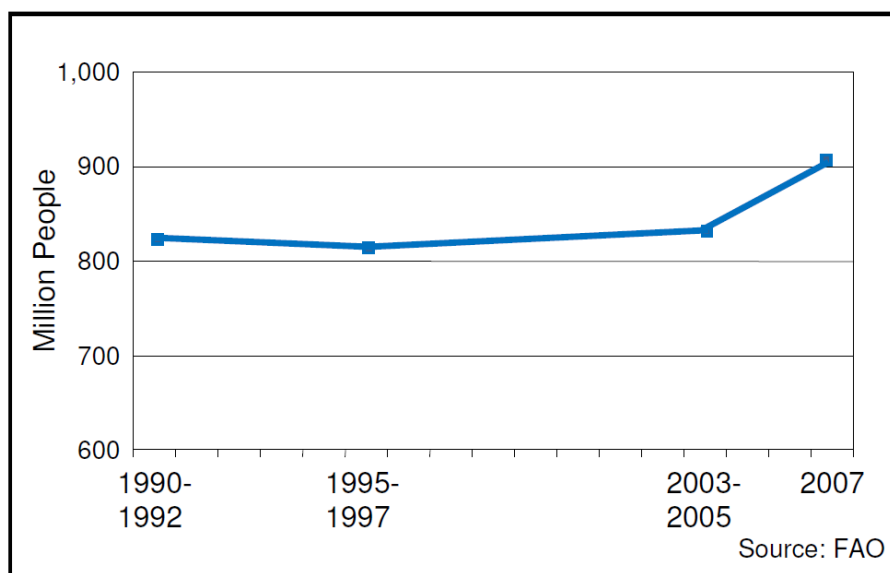


Figure 3: Number of undernourished people in the developing world
(Source: <http://www.fao.org/newsroom/en/news/2008/1000923/hungerfigs.pdf>, p. 2)

According to experts and the FAO report, it is not a question of the amount produced, but of distribution. Altogether, there is enough food produced to feed the whole world population of 6.7 billion people. There are several reasons for this development; especially some well established mechanisms in international trade that cause the number of losers to rise. One of these mechanisms is the subsidizing of agriculture in developed countries, which directly compete with agricultural products from developing countries. Agricultural surpluses from the North, which are subsidized by the governments, overstock the markets in the South and contribute to a decline of the local agriculture. Also the production of bio-fuels stands in a direct competition to the production of food. Even if scientific results prove a negative balance concerning the energy gain with actual production methods, people continue to invest millions in energy sources, which grow on the fields. Another dangerous element is the acquirement of land in development countries by rich states as a consequence of their rising population. China for instance, is cultivating Rice for its local market on a territory of 1.3 million hectares in Madagascar. (DEZA, 2010)

So, despite the rising food prices and a raise of the amount produced, the number of undernourished people in the developing world continues rising and the food crisis (2006–2008) made essential foodstuffs unaffordable for a vast number of people.

1.4 Reasons and Mechanisms Behind a Food Crisis

How does a food crisis come about?

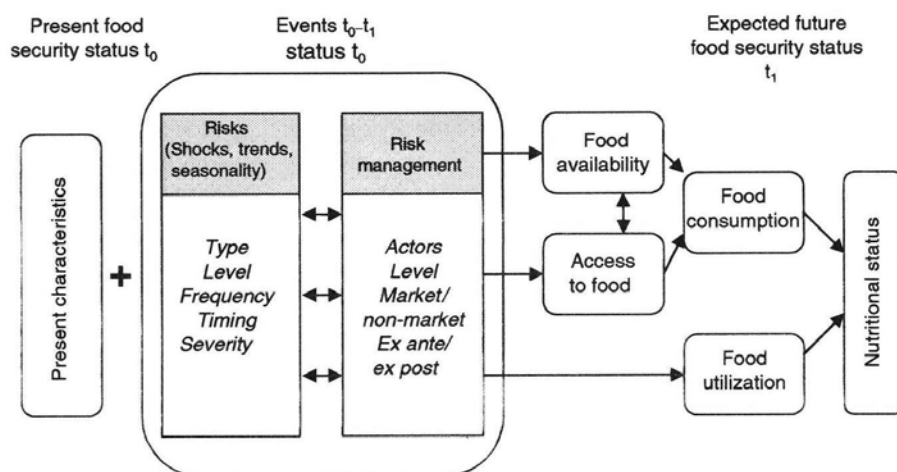


Figure 4: A framework for analysing vulnerability to future food insecurity
(Source: Guha-Khasnobis et al., 2007, p. 67)

Structurally, a wide spread assessment of food crises and their chance of arising is via the availability, access, and utilization separation. Food may be available, but not accessible to all. At the same time, the nutritional status can be worsened through utilization, if for instance, water is dirty or means of storage lead to rotting food. Depending on how these three aspects are present in a country, the impact of other reasons has greater or smaller consequences.

Closely related to the question of food security is the issue of a country's vulnerability. As figure 4 shows vulnerability is defined as the likelihood or risk a household faces that they will experience a significant decline in their access to food. This implies the fact the people's defencelessness to a specific negative outcome following a harmful event and their inability to cope with these threats. (Guha-Khasnobis et al., 2007, p. 63f)

A typical issue which is causing increased vulnerability among the poor poses special developmental and dietary needs of young children and pregnant and lactating woman. Also female-headed households, elderly people, disabled or otherwise disadvantaged groups with low support from family members and the community are less able to protect themselves against these risks. Furthermore, people living in areas where natural or man-made disasters like conflicts or drought are likely to be affected by these threats. To be able to design and also assess certain supporting programs it is very crucial to identify these vulnerable people as it helps to understand the specific subsets of the population. (Riely et al., 1999, p.17)

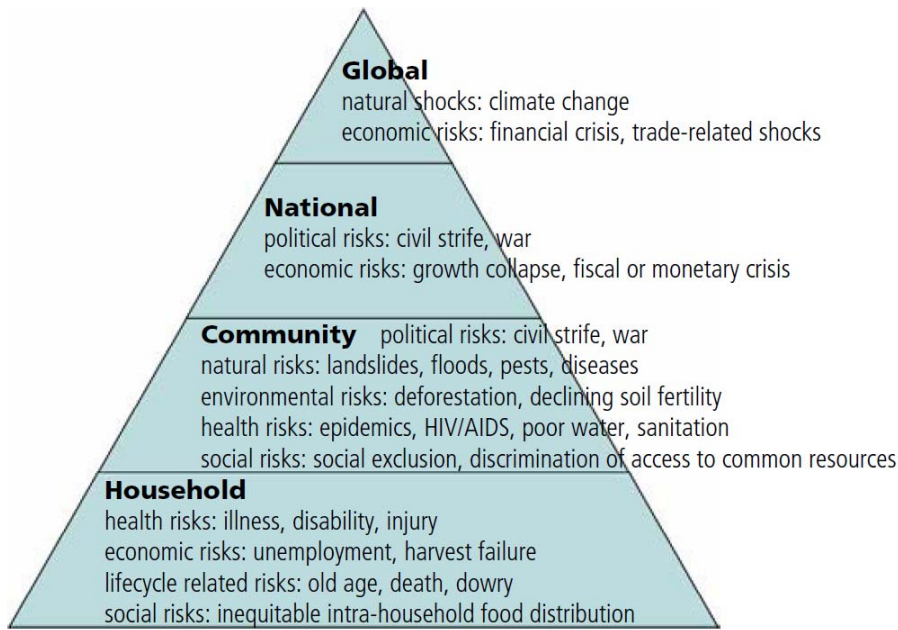


Figure 5: Reasons for food crises
 (Source: own graph; patterned on the work of Guha-Khasnobis et al., 2007, p. 208 ff)

As can be seen from the graph above, the main reasons for food crises are instability, natural disasters and high dependency on one good.

1.5 Micro Perspective

In this section we want to closer examine the processes on the micro level. What mechanisms prevail, who are the losers and why? First, we want to see how different parties are affected differently through price rises and changes in demand and supply of agricultural products.

1.5.1 Rural Poor vs. Urban Poor

By means of the following illustration we can define the actors and especially the losing parties of the food price soar:

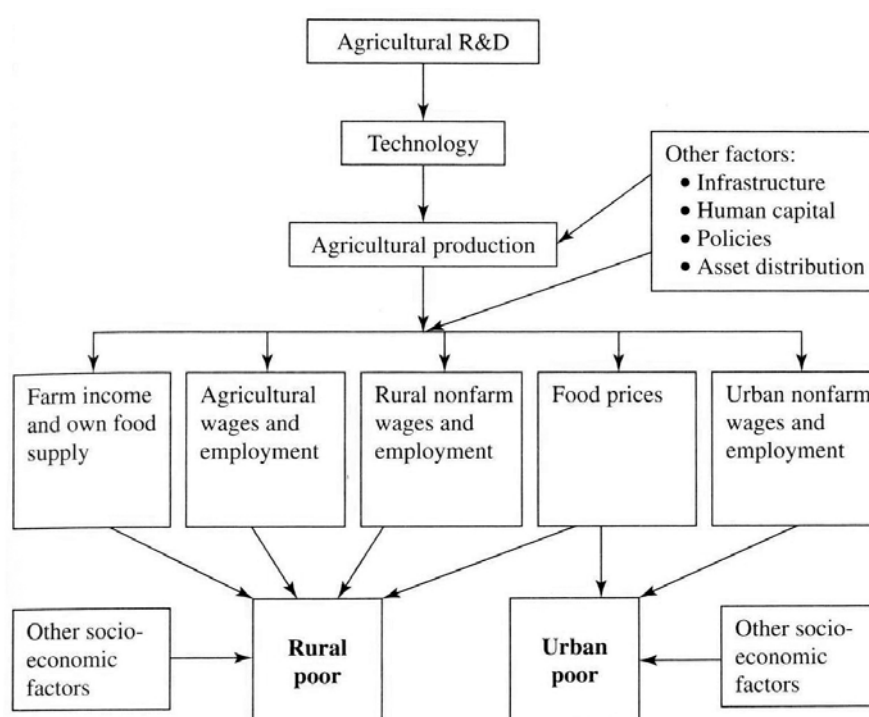


Figure 6: How agricultural R&D affects the poor
(Source: Adato & Meinzen-Dick, 2007, p. 21)

How new technology affects production highly depends on different factors such as the prevailing state of rural infrastructure and institutions, human capital, agricultural policies and prices, and the distribution of rural assets, for example land. The theory is that if own food supply increases, wages and employment increase and strengthen social standing of poor people, reducing their overall vulnerability, and lower food prices. But contrary to most expectations, rising food prices are mostly not good for the developing countries, even if they are in the role of producers. Increase in aggregate food output does not always translate into lower food prices. What is the reason of this?

1. Insufficient food marketing and distribution systems to pass up cost savings through the marketing chain. So, consumers do not benefit and cost savings are simply captured as additional profits in the marketing chain.
2. The share of the income that is spent on food rises too. This is especially hard for the urban poor: they cannot profit from the food price rise but instead feel the full weight of the price rise.
3. The rural poor lose too, due to several reasons:
 - They are also buyers, so that maybe, the price rise of another product offsets the profits achieved through the price rise in the product sold by a certain farmer.
 - Not all people have equal opportunities to profit from the price rise. The rural people are often not only geographically, but culturally separated from the «rest».
 - Distribution systems are very often so long, that the profit remaining to the farmer is marginally high than before the price rising, while the middle men skim off the largest part.
 - Penalization of non-adopters whose costs remain high. These may include many poor farmers in regions where the new technology is not suitable.

1.5.2 Value Chain

One big problem on the micro level for the rural and urban poor is that they are not a central part of the value chain and only make very small profits.

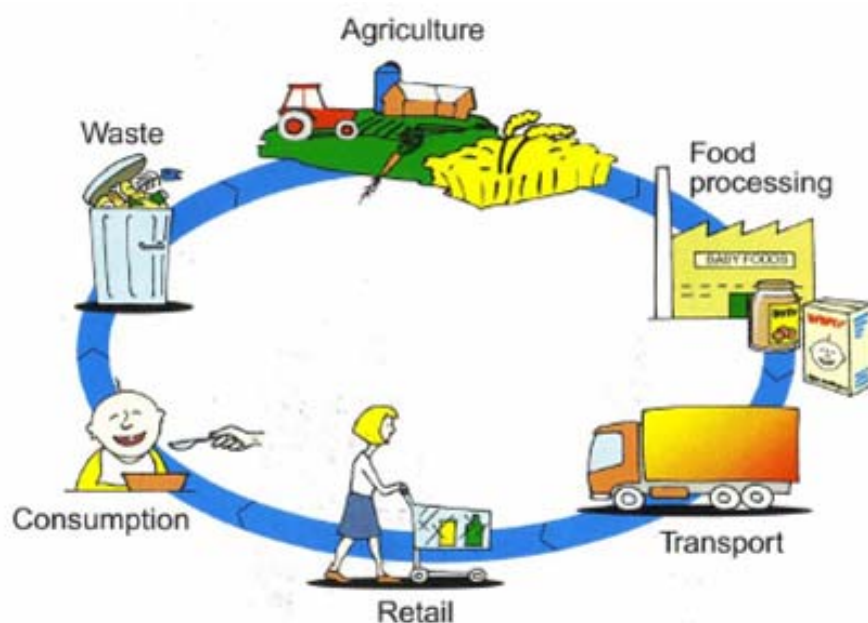


Figure 7: Environmental Impact of the Product
(Source: The Swedish Institute for Food and Biotechnology, 2010)

Firstly, they cannot profit from economies of scale and secondly, often have a small leverage compared to big sellers. Usually, the middle man receives higher profit than the producer himself. This leads to the logic conclusion Ortmann nicely formulates as follows:

«Food production and distribution is undergoing major structural changes caused by changing and diverse consumer demands, new technologies (e.g. bio- and information technologies), new product characteristics, changing firm sizes and more exposure to world markets... Another major reason for the formation of supply chains is to reduce costs, particularly transaction costs, in order to promote competitiveness. Thus, attempts to satisfy changing consumer demands and to lower costs, including transaction costs, drive efforts to enhance the competitiveness of agri-food supply chains. » (Ortmann, 2001, p. 1)

1.5.3 Supermarketisation

Another factor is called supermarketisation, which deals with the problem, how small-scale farmers can compete with foreign retailers. They represent a potential risk that domestic markets are no longer a refuge, but dangerous because of project trends from other emerging economies. Artificial constraints for smallholder farmers to domestic trade should try to be removed, in order to link them with the market, including bureaucratic barriers. Such intervention could address efficiency improvements, improvements of supply chain, collective marketing, investments in small-scale market infrastructure, and facilitation of contractual arrangements between smallholders and companies. (UN, 2008, p. 11)

But at this point we have to remember, that globalisation of the food sector considerably differs from that of other sectors. The food sector is based on agriculture, this means that the process of globalisation is constrained by nature and the process of industrialisation mediated by biology for example seasonality leads to import. Supermarkets will look for domestic supply of fresh products much more urgently than for processed goods. Also the heterogeneous food culture across the globe is clearly an opportunity for local producers.

After having examined the micro level, we will focus on the macro level in the following chapter.

1.6 Macro Perspective: Developed vs. Developing Countries

Agricultural support in developed countries often implies food insecurity in developing countries. Export subsidies can provide cheap food for consumers in developing countries but low prices are mostly considered harmful and make people in the South dependent on food from wealthy countries. Developed countries subsidize for instance beef and milk. For Sudan, beef is the number one export product and poses Sudan in a disadvantageous position compared to the subsidizing country. Sudan’s beef is not competitive enough, leading to a reduction of the amount produced due to lack of chance to sell the meat and due to the cheaper imports from beef-subsidizing countries. This has vast consequences for the beef farmers, and the same pattern evolves with a great number of other agricultural products. In some cases, poor farmers may have higher production costs than that of the subsidized market price, which means they cannot earn any money. The terms of trade develop against the developing countries. As we see on the following illustration, there is a downward pressure on prices in developing countries and developed countries skim the benefits of increasing world food prices.

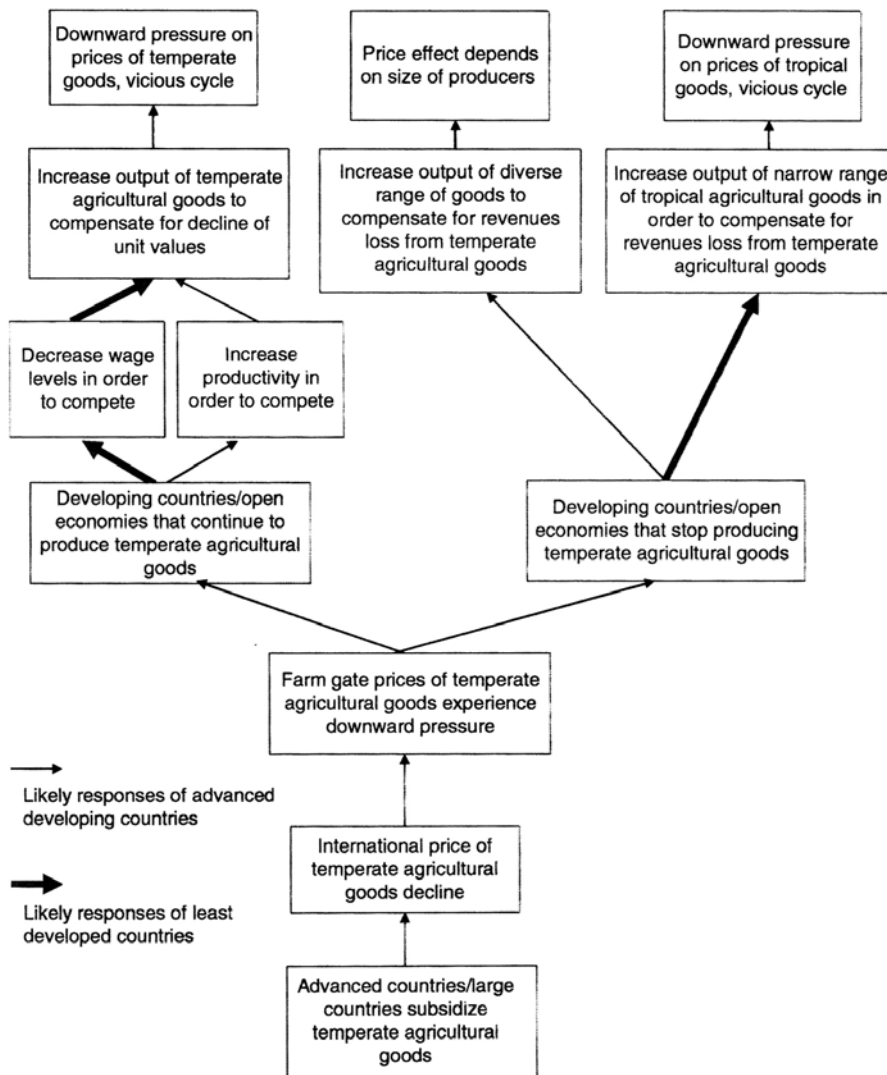


Figure 8: Links between agricultural support measures of advanced countries and production decisions in developing countries (Source: Guha-Khasnobis et al., 2007, p. 225)

2 Brazil's Food Security Policy – A Successful Example?

In 2003, President of the Brazilian Republic Luiz Inácio Lula da Silva, called «Lula» by his people, launched the program «Fome Zero» (Zero Hunger Program). The goal of this government program is to eradicate hunger and extreme poverty in Brazil.

Together with the other four BRIC countries Russia, India and China, Brazil is prospected to be one of the strongest economies around the year 2050. Not only its economy, but also the population is expected to grow on a very high level, which could again aggravate the food security situation. As we have seen earlier, a government program such as the Zero Hunger Program and especially in case of success can have a positive effect on other countries and foster similar programs. Up to now, the Fome Zero Program – which should more precisely be considered as a strategy – has reached over 44 million Brazilians. The means and policies reach from cash transfers, food banks, community kitchens and markets to school meals. At the same time, it also has a positive effect on the literacy rate and health care, through an integrated Social Mobilization Agenda. (Worldbank Blog, 2010)

Due to the fact that the Zero Hunger Program is very multi-faceted in regard to its short- and long-term goals («when?»), its functional orientation and the policies implemented («what?») or the actors involved («who?»), different ways of approaching the Hunger Zero program exist. In our assessment of the Brazilian food policy we will focus on the actors involved and the role they play. The program, the different policies and their goals, shall be discussed briefly in the following chapter, including an examination of the prevailing conditions at the time of the launching of the program. Finally, we want to critically evaluate the results and try to assess the main elements that lead to success.

2.1 Brazil's Food Security Policy – Fome Zero

At the time the Fome Zero program was launched in 2003, Brazil was the fourth largest food exporter in the world (Brazil's Food Security Policy, p. 2). The food situation in 2003 was as follows: Brazil produced 2960 kcal/day in food per capita, which lay far above the recommended minimum of 1900 kcal/day while still nearly a third of the Brazilian people faced a situation of «food insecurity» according to the above given definition of quantitative and / or qualitative insufficiency. At the same time, with a Gini coefficient of 59.3, Brazil ranked among the highest in the world (117th out of 124), indicating a very high degree of income inequality. Experts consider hunger not only as the result, but especially the cause of poverty, highlighting the importance of policies that simultaneously address poverty and hunger.

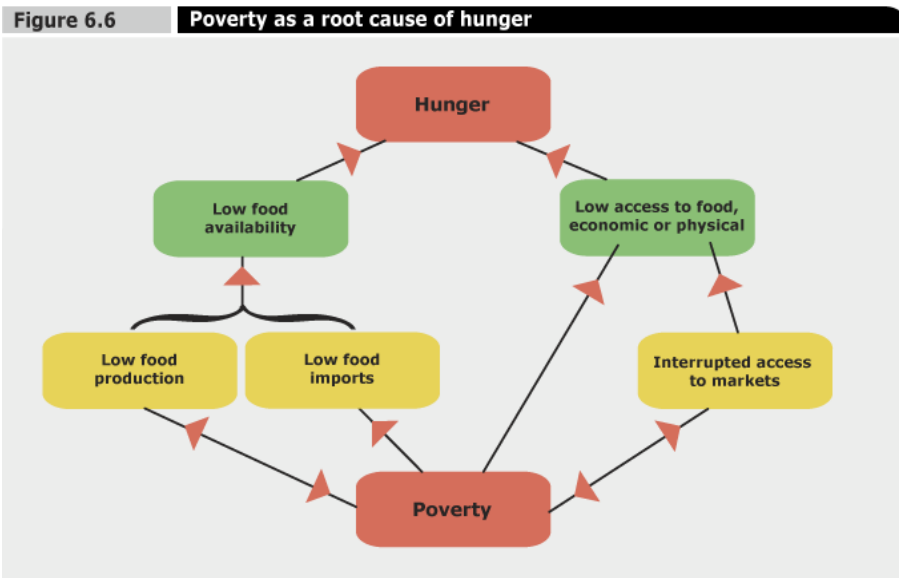


Figure 9: Poverty as a root cause of hunger
(Source: World Bank, 2004)

Poverty leads to lower food production, which then again leads to poverty. At the same time, the poor face an interrupted access to markets, excluding them from the value chain and sales markets. This cumulates in a situation of increased food insecurity.

This problem and the underlying dynamic of this process were recognized to be a great cause of poverty and hunger in Brazil. Hungry people cannot work at their full potential and are more often affected by disease. At the same time, children that don't have enough or qualitatively poor food and learn less effectively than well nourished children. The vicious circle grows when the malnourished child grows up and is not able to find a job, while at the same time raising his own children and not being able to fully provide them a healthy diet (WSFS, 2009/INF 2). This vicious circle of hunger is also the core mechanism of the problems in Brazil that needed to be solved.

2.2 The poverty pockets in Brazil

Who is affected by this vicious circle of hunger in Brazil? Lacking or too weak employment and income generation policies to counter the prevailing inequalities increase the risk of unemployment, low wages and foster the concentration of income in the hands of a small minority. This is illustrated in the right hand side of the diagram:

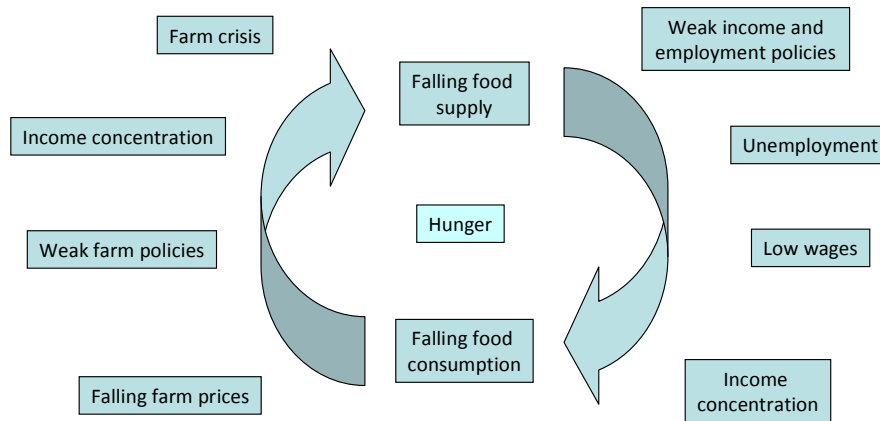


Figure 10: The vicious circle of hunger
(Source: MESA, 2010)

Due to the income concentration, the already poor will have less income to spend on food and subsequently, food consumption will fall. So on one side, the poor, unemployed or under-employed people in urban areas will be negatively affected.

At the same time, a fall in food consumption will have a negative impact on the food producers (i.e. farmers). Farm prices will fall, and again, weak farm policies will enhance income concentration and small farmers lose. Eventually, many small farmers cannot afford farming anymore, leading to a decrease of food supply.

Causes for food insecurity in Brazil lie in the increasing concentration of income and employment to the benefit of a minority due to the above mentioned developments. The Gini coefficient for Brazil in 2005 was relatively high with 56.7, but had improved from 60.7 in the year 1998. (The World Fact Book, 2010)

Even within Brazil, the differences between urban and rural areas are big.

- In the metropolitan regions, mostly the unemployed, underemployed and informal workers suffer from hunger.
- Urban areas of the small and medium-sized cities the poverty pockets are families, with an irregular income and the unemployed.
- In the rural areas the poor consist out of family farmers, informal workers, under- and unemployed people.

So, in order to achieve an impact, the different groups need to be addressed according to their own needs. In the next section, the different policies and the actors involved in the Brazilian food security policy will be highlighted.

2.3 Main Policy Areas

Four different categories of policies are implemented. The first policy category focuses on **facilitating access to food**. The most important program in this category is the Bolsa Familia Program, a Family Grant Program. In fact, Bolsa Familia is the largest income transfer program in the world. Launched in October 2003, families with a monthly income below a certain level and meeting several additional core requirements, such as school attendance of children and compulsory vaccination, were granted 140 Brazilian reais monthly (ca. US \$ 80). (Gönitzer, 2008) In 2009, the Bolsa Familia assisted around 12 million families, reaching approximately 48 million people. Since 2003, the programs budget has grown from 3.2 billion Brazilian reais (US \$ 1 billion) to 12 billion (6.5 billion US \$) (FAO, 2009).

The second policy category addresses the **strengthening of family agriculture**. These policies are especially addressing the rural poor families, victims of the above mentioned vicious circle of hunger. **Income generation** is a third policy field through which Brazil is fighting hunger and poverty. Finally, **partnership promotion and civil society mobilisation** are the fourth policy category. The following overview summarizes the policy areas and their programs.

I – Food access	II – Strengthening family agriculture	III – Income generation	IV – Partnership promotion and civil society mobilisation
Bolsa Familia (BF)	National Programme for Family Agriculture (PRONAF)	Social and Professional Training	Social Assistance Reference Centre
National School Meals Programme (PNAE)	Harvest Insurance	Solidarity Economy and Productive Inclusion	Social Mobilisation and Citizenship Education
Food for Specific Groups	Family Farming Agriculture Insurance	Food Security and Local Development Consortium	Social and Public Agents Capacity Building
Rainwater Cisterns	Food Procurement Programme (PAA)	Food and Nutrition Security Organisation	Volunteer Work and Donations
Popular Restaurants and Community Kitchens		Co-operatives of Recyclable Material Collectors	Partnership with Private Sector and NGOs
Food Banks		Guided Productive Micro-credit	Social Development Councils
Urban Agriculture			
Food and Nutrition Surveillance System			
Distribution of Vitamin A			
Distribution of Iron			
Food and Nutrition for Indigenous People			
FN Education for Consumption			
Promotion of Healthy Habits/Healthy Diets			
Workers Food Programme (PAT)			
Basic Food Basket Tax Reduction			

Figure 11: Overview policy areas and their programs
(Source: MDS website <http://www.fomezero.gov.br/>)

2.4 Actors of the Zero Hunger Program

The Hunger Zero program includes many different actors of different spheres (public, private, NGO's), different levels (federal and municipal) and different ministries. This multi-sector and multi-actor approach is widely considered as being one of the strong points of the Program (Rocha, 2009). Due to the fact that many actors are involved, the centralized structure of the Zero Hunger Program guarantees a well coordinated structure, the usage of synergies and the avoidance of overlaps. Simultaneously, a multi-sector approach enables addressing the different needs prevailing in different sectors and for different target groups. At the same time, the task of coordination formerly independent actions and programs poses a challenge to the Lula Administration, which had made the fight against hunger a top government priority. (FAO, 2009).

2.5 State Actors, Private Actors and Partnerships

In order to signalize the high priority of fighting hunger and poverty, President Lula founded the Special Ministry for Food Security and Fight Against Hunger (MESA) in the year of his inauguration in 2003. MESA was directly linked to the president's office, but due to inexperienced politicians, was not able to keep the promises it had made and consequently, government took actions to reorganize and abolished MESA 10 months later. Today, the Hunger Zero Program is coordinated by the Ministries of Social Development and fight against Hunger (MDS), Agrarian Development, Health, Education, Agriculture and Live-stock, Labour and Employment, Science and Technology, National Integration, Environment, and Finance. The main actor though, is the MDS.

A program under the coordination of the MDS for instance is the Bolsa Familia. The idea of this new program was not new, but a modified and more concentrated version of prior existing food access programs (Inter-American Development Bank, 2006). Other programs under the coordination of MDS are besides food banks and Food acquisition Program also programs that mobilize the private sector, such as popular restaurants. Another important institutional actor is CONSEA, the National Food Security council. It is mainly a policy advisory body, in which government representatives as well as civil society organisations are represented (NGO's, Business organisations, trade unions, churches, etc). (CONSEA, 2010)

As the fourth policy category implies, a core issue is to mobilize civil society and private organisations, firms and other non-state actors. Besides having local restaurants participate in a food program, also big companies and even MNCs participate in the Zero Hunger strategy. Nestlé Brazil for example, not only offers food donations to people living under the poverty line, but also supports job creation programs for low income youths of 16 to 24 year old, providing community kitchens operated by women in poor communities and holding nutrition

trainings for teachers and school cooks in order to improve the quality of food and hence the nutritional value. (Nestlé, 2010)

In reward for Nestlé's support, the Brazilian government granted Nestlé the first Zero Hunger Programme Partnership Certificate. The mobilizing of the private sector is mainly used to distribute food produced to the poverty pockets of the population and the increase the production of family farmers. (Ward, Fox, Wilson & Zarsky, 2006)

2.6 Results

As the example in Brazil shows, it is not a question of quantity, but of structure: the access to food is restricted due to an unequal distribution of income between and within countries (Gini coefficient is still around 60 for Brazil). The Zero Hunger Program intends to attack exactly these underlying structural causes of poverty and hunger.

In Brazil, another contributor to the high number of undernourished people was the exporting of agricultural goods that were desperately needed to feed the own population. Statistically it has been proven, that countries with a smaller ratio of undernourished people more often tend to be food importing countries and vice versa. So, for instance, a better policy of export could drastically improve the situation. It can be concluded that hunger is an issue of unequal distribution of income, preventing the poorest in a country from having access to quantitative enough and qualitative good food.

The difficulty with attacking problems on a structural level lies in the intertwining with political interests. In Brazil, the driving force behind the improvement of the food situation was the government, especially the Brazilian President Lula. What preconditions need to be fulfilled to mobilize political will?

The FAO report 2009 names two such preconditions: the necessity for a country-led process, including national and local, public and private partners that together elaborate a plan for food security; the necessity for accountability of the government to implement this very plan by commitments such as official declaration. In addition to these two internal factors, global partnerships, including G8 and G20 summits and FAO government meetings aimed at improving the «coordination and coherence in international strategies, policies and actions that have an impact on world food security.» (FAO 2009) are of great importance. Importantly, the long term and structural factors that cause food insecurity need to be attacked.

With so many actors involved, good governance is required on national level. No only political stability and the rule of law and respect for human rights, but also corruption control and government effectiveness are included to realize the right to food. Effective governments require institutional reform, so that all members of society are represented in the policy process.

What are the concerns of such reforms, as were applied in Brazil? One is the efficacy of the policies applied, such as the Bolsa Familia. Does the cash transfer really reach the people in need? In general, the main part of the money reached its goals, although they enable leakage problems. The other one is the sufficiency of the actions taken. The high government spending is estimated to have raised the income of the participants by 21 % and reduced poverty by 19 %, but still, many families remain under the poverty line (Rocha, 2009).

As has been said earlier, it is not a question of quantity, but how the resources, technologies and know-how to fight hunger are mobilizes. And this demands good governance and cooperation among the stakeholders.

3 Strategic Objectives for an Enhanced Food Security

As seen in figure 2 the dramatic rise of food prices since 2007 for maize, soybeans, wheat, and especially rice, pose a huge threat to global food security. A food crisis to this extent endangers millions of the world's most vulnerable human beings. The rising trend of food prices in combination with higher energy costs and – additionally since 2008 – a global financial crisis, implies a worldwide peril, because it threatens international security, economic growth and social progress. Nevertheless, these facts have a serious implication on the aim of reducing poverty and hunger as outlined in the Millennium Development Goals (MDG). To confront these problems an urgent comprehensive, coherent, and coordinated response is required.

In the following chapters we look at subject areas like *the problems to empower smallholder farmers, capacity building, sustainability of projects and ownership, as well as outcome monitoring*, which all help to achieve the following overall goals of development aid and cooperation:

- Reduction of extreme poverty
- Capacity Building (means the help to the self-help)
- Effectiveness

In the last decades there were several structural factors which led to a deterioration of food security. This can be understood in terms of supply and demand. Today, the supply side is not able to keep pace with the fast growing demand side.

Firstly, on the supply side there is a decline in food production in developing countries. The reasons for this can be found in low investments into the agricultural sector, particularly to smallholder farmers, further in deregulation of agricultural markets and trade liberalisation which were often encouraged by international financial institutions, like the World Bank or the International Monetary Fund. This lowers the incentives for farmers to remain engaged in agricultural production. So the erosion of production capacity takes place together with gradually increasing import dependence in many developing countries.

Secondly, on the demand side, many different factors contribute to the current food crisis like the increased use of food commodities for bio-fuel production and greater demand from emerging countries, such as – for example – the BRIC-States Brazil, Russia, India, and China. (South Centre, 2008, p. 3)

The former American ex-President Bill Clinton stated at the World Food Day 2008 the following declaration:

«Food is not a commodity like others. We should go back to a policy of maximum agricultural self-sufficiency. It is crazy for us to think we can develop a lot of these countries [...] without increasing their capacity to feed themselves and treating food like it was a colour television set.» (Sustainable Food, 2010)

3.1 The Problems to Empower Smallholder Farmers

To understand the context of the problems of smallholder farmers it is important to know where policy-makers pour their investments (or subsidies) in and why. For a sustainable agricultural production governments should not support medium and large-scale corporate farmers but should create a political framework which is «investment-friendly» as well as favourable to smallholder farmers. This means that small farms and especially women farmers should have access to production inputs such as land, water, micro-credits, post-harvest facilities, and access to markets. Their ability to produce enough food should be strengthened. If smallholder farmers can work successfully, then the livelihoods of vulnerable populations are protected. If additionally fair prices are guaranteed to this kind of farmers their living standards would improve. (South Centre, 2008, p. 14)

It is assumed that smallholder farmers and their families represent about 2 billion people, i.e. about one-third of the global population are dependent on this specific life form. In reality smallholder farmers do not have a lobby. Only the owners of large estate can call on this kind of representation of interests. For example, great land owners in Guatemala which are rich producers of sugar can influence the own government for tariffs. The government itself is often more interested in exports than in poor people in remote mountain valleys. (DRS, 2010)

Because of the lack of lobby smallholder farmers cannot profit from high prices at the end of the value chain. All the earnings are skimmed from better organised stakeholders who are closer to the profits due to higher prices.

The empowerment of smallholder farmers is a complex topic and is standing at the intersection of many disciplines. One of these topics is unquestionable the attempt to strengthen the public sector management capacity. More than ever – as Amartya Sen (Nobel Prize Winner in Economy) has observed – «there is no such thing as an apolitical food problem». (Médecins Sans Frontières, 2010)

Of course, drought and other naturally occurring events may trigger a food insecure situation or even a famine, but it is always a government action (or inaction) that determines the severity of these grave situations. The last decades – and even centuries – are full of examples of governments undermining the food security of their own nations; many of them intentionally. As an example shall serve the «Holodomor», the famine in the Ukraine during the 1932 and 1933, because of which millions of inhabitants died of hunger.

The increase of agricultural productivity is crucial to empower smallholder farmers and will raise their rural income and reduce food insecurity. USAID proposes therefore the following key steps:

- property rights must be secured for smallholder farmers as well
- human capital must be enhanced through education and improved health
- smallholder farmers must have access to finance
- conflicts have to be prevented
- democracy and good governance must base on principles of accountability and transparency in public institutions
- the rule of law are the base to reduce vulnerability among smallholder farmers

(USAid, 2010)

If land ownership is not available to smallholder farmers, they have little incentive to improve the land to make a living. The same can be observed with the remaining above-mentioned key steps for increasing agricultural productivity.

In the next chapter we take a closer look on the second of the above key steps: the enhanced human capital through capacity building.

3.2 Capacity Building

What is understood by «Capacity Building» and what are their implications for agricultural education? The Food and Agricultural Organization (FAO) defines the term (and the process) of capacity building as follows:

«In its broadest interpretation, capacity building encompasses human resource development (HRD) as an essential part of development. It is based on the concept that education and training lie at the heart of development efforts and that without HRD most development interventions will be ineffective. It focuses on a series of actions directed at helping participants in the development process to increase their knowledge, skills and understandings and to develop the attitudes needed to bring about the desired developmental change.» (The global development research center, 2010)

Before the 1980s, development aid based on concepts like «institution building» or «strengthening» and refers to technologies and ideas of the type «organizational engineering». In this context development aid was transferred predominantly on a micro level via training and technical support.

In the late 1980s, «capacity building» arises as a new concept which comprises both, a macro-perspective and a micro-perspective. More attention is put of the broader environmental conditions and on the problem solution ability of the states. Today, it is recognized that many problems have a systemic complexity. To solve this difficulty it is important to integrate

organisations into the local systems, and the process of capacity building on the national level. Both perspectives need a strong ownership, i.e. the success is best guaranteed if a coalition of local and national actors accepts the projects in their own interest.

Even if capacity building demands a sometimes abstract multi-level perspective, it needs practitioners who think constantly about how to leave a sustainable institutional legacy the best. But it loses relevance and makes little contributions if it is not focused on operational problems. Beside the practical view there is a cultural aspect in capacity building. The problems «out there» used to be resolved by solutions in a westernized view as follows: Maximizing the farmers profit is the surest way of maximizing agricultural production. Or to put it in other words: the higher a farmer's profit, the greater the effort and productivity of the farm. This predominantly European idea of economy especially prefers big farmers and great land owners, who can react – because of their financial background, credit rating, political connections, influence, and flexibility – much easier on price incentives than smallholder farmers.

Since the 1960s, the awareness arose that many problems were interrelated and were part of the whole systems. Aid experts and other stakeholders worked to improve these complex systems for the local people. What now can be observed in the trend to capacity building is another turning of the wheel: it is the effort to get the local people and their whole communities to improve the performance of their own systems. This approach means – loosely speaking – «the help to the self-help». (Morgan, P., 1997, p. 43)

The following example of a development programme in Nepal shows the various levels of analysis which has to be differentiated in the process to build up capacity.

Level of Analysis	Goals of the programme
Micro level	The Programme aims to provide low-income families with skills and technologies, marketing services, access to finance and access to business development services
Meso level	The Programme aims to strengthen network among various enterprises at the local level and to strengthen the capacity of the District Development Committees, local business institutions and organisations to promote micro-enterprises and create employment opportunities. For better planning and implementation of micro-enterprise development projects, the districts are encouraged to produce Enterprise Development Plans.
Macro level	The Programme aims to provide appropriate policy feedback for micro and small enterprises in Nepal. It works closely with designated institutions at the central as well as local level organisations to create conducive regulatory environment for micro-enterprise development in Nepal.

(UNDP, 2010)

3.3 Sustainability of Projects and Ownership

Sustainability can also be defined in a single phrase: «The ability of a system of any kind to endure and be healthy over the long term». Project sustainability means, that the outcomes, goals and products are maintained and that processes are institutionalized. It is desirable, if aid workers are making themselves redundant after the implementation of a project. The Swiss Agency for Development and Cooperation (SDC) for example plans at the end of their projects an exit strategy of their programs, what means, that the local partners must strengthen their own management capacities to keep the projects running even after the exit of the Swiss partners. (DEZA, 2007, p. 57)

The Swedish International Development Cooperation Agency (Sida) describes in its report about «Aid, Incentives, and Sustainability» that sustainability and ownership is not always free of trouble: «This study has revealed that despite Sida's stated desire of devolving ownership to aid recipients or beneficiaries, Sida's institutions generally fail to do so in practice».

Sida describes the process of devolving ownership as a challenging task. The fact that Sida finances projects and programs and therefore remains, in some important respects, a *de facto* owner is not beneficial for local ownership. Additionally, Sida must operate within two political logics, one of its own and secondly of the recipient country which may not be very amenable to the aim of promoting sustainable development. Even so, steps can still be taken to improve a sense of ownership among recipients and beneficiaries.

Genuine devolution of ownership can mean less control for Sida and its contractor. Less control means more risks. Nevertheless, Sida hazards the consequences to achieve more sustainable results. This less in control, however, does not mean that Sida involves less in ongoing activities in partner countries. The important conclusion shows that devolving ownership may involve greater costs of monitoring. (SIDA, 2002, p.43)

Ownership means, that the donor countries should respect their partner countries leadership and help to strengthen their capacity to exercise it. On the contrary, partner countries have to exercise effective leadership over their national development policies and strategies and must coordinate development actions. They have to translate these national development strategies into prioritised, results-oriented operational programmes. Furthermore they have to take the lead in coordinating aid at all levels in conjunction with other development resources in dialogue with donors and encouraging the participation of civil society and the private sector. (The Paris Declaration on Aid Effectiveness, 2005, p. 3)

3.4 Participation of MNCs

One of the many actors which is seen as one of the most important partners to reduce food insecurity among the poor in developing countries is the community of multi-national companies (MNCs). Naturally, these large firms follow different goals than for example the states, politicians, donors or non-governmental organizations. As shown in figure 12 their first aim has to be the maximization of economical success instead of the social welfare of the respective people.

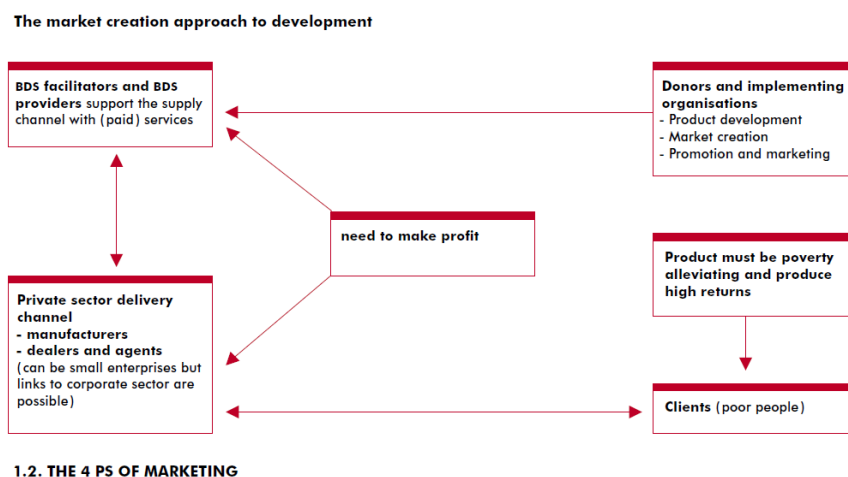


Figure 12: The market creation approach to development
(Source: Heierli, U. & Polak, P., 2000, p.16)

Nevertheless, the Swiss world's leading nutrition, health, and wellness company Nestlé became the partner «Number One» of President Lula's «Zero Hunger Program» in Brazil in 2003. Nestlé donated chocolate-flavoured milk powder NINHO for children over six years of age which served about 443'000 people in need. The MNC collaborated with one of the major Brazilian NGOs, Pastoral da Criança, to distribute the food products. Furthermore, Nestlé's participation included the support on job-creation programs for youths age 16-24, qualification of community kitchens in poor communities, and nutrition training of teachers and school cooks to improve school meals and nutrition education. (Nestlé, 2010)

Why did the leaders of a significant number of companies, including other giants like IBM, Ford, Bayer or Unilever, support the Zero Hunger program with at least \$1.5 billion in financing (Smith, 2003)? These commitments are following the strategy of Corporate Social Responsibility (CSR) of each of these firms. CSR is hereby defined as the voluntary contribution of the private market to reach sustainable development in consideration of the stakeholders. The analysis of the right strategy includes the economy, the environment, and the society. (SECO, 2010)

Peter Brabeck-Letmathe, CEO in charge at Nestlé to commit to this project, clearly states in a speech at London Business School in 2006 that «it is not done to improve corporate image. (...) The principal reason our companies support community programs is because it is a part of our strategy to become well integrated into the country where we are working. (...) If Corporate Social Responsibility is viewed primarily as a set of standards imposed by outside actors, the majority of businessmen will not, in the long run, embrace it. If it is viewed as philanthropy – of giving increasing amounts of shareholder returns to worthy causes, it will also fail. But I think if businessmen can understand it as something which comes out of basic business strategy, where definitions and limits are placed on CSR as result of identifying a company's best long-term interests, then I think that Corporate Social Responsibility has a chance of becoming imbedded in business thinking, not only for the enlightened few, but for all businessmen who seek sustainable and outstanding long term results for their shareholders.» (Brabeck-Letmathe, 2006)

One can therefore conclude that leaders of MNCs who are acting according to the shareholder value approach have found motives which are moreover naked opportunism than a conviction that Brazil should eventually distribute its wealth more equitably. Engagements in food programs have to be business-driven. Apart of the fact that some charitable companies try to leverage their actions by showing their philanthropic work to be seen to do good, for most of the MNCs the investment in improving the status of food security has to be accompanied with tangible, monetary profit; at least in the long-run. These kind of incentives are given in many emerging markets, most of all in the BRICs . Multi-Nationals should – in their own interest – position themselves in these countries, gain knowledge about the respective markets, establish networks and contacts; with the side-effect to decrease food insecurity in these regions.

In general, private companies need the expectation of growing markets and therefore have to see frameworks and guidelines which allow a less developed country to promise profitable environments in the future to support campaigns like the «Zero Hunger Program» in Brazil. And once a multi-national company is involved in such an activity, it is very costly in terms of image to recall their participation.

3.5 Outcome Monitoring

Development cooperation needs effectiveness for its legitimation. Therefore aid agencies are looking for ways to improve aid effectiveness, including conditionality, capacity building, good governance, sensible indicators and outcome monitoring. Cooperating sponsors therefore have to be enabled to track the flow of program resources and to assess its impact to improve the circumstances of the respective population.

Reasonable indicators can be an essential part of managing the qualitative and quantitative aspects of project design and management. But they need to be designed with care and made relevant to field participants if they are to fulfil their potential. The indicators must measure consequently outcomes and processes. (Morgan, P., 1997, p.43)

Monitoring and evaluation (M&E) systems are the crucial instruments for strategic and operational management of food-securing activities. Whereas monitoring describes a periodic, regular oversight to improve efficiency and to adjust work plans, evaluations are episodic assessments aiming to improve effectiveness, impact, and future programming. (UNICEF, 1991, p. 4)

To correctly evaluate such projects, to understand problems, define solutions, influence decision-making and affect positive change, one has to analyze the various phases separately. In an early stage of M&E analysis, all or most of the attendance was put on the measurement of program outputs. Nowadays, there is an understanding to break the entire chain of activities down. First of all, there is a need to calculate exactly the program inputs as a set of resources which are used for the program. This includes the evaluation of human and financial resources, physical facilities, equipment, and operational policies. The program processes are the activities to use the program inputs to achieve the demanded results. Only as a third step, M&E systems analyze the program outputs. At this point, quality and quantity of goods and services delivered under the program and their degree of utilization are measured. Finally, the program impact can be divided into impacts on capability, which refer to the intermediate-level program outcomes, and the impacts on well-being, which particularly analyze the final results at the beneficiary-level. (Riely et al., 1999, p. 20-24)

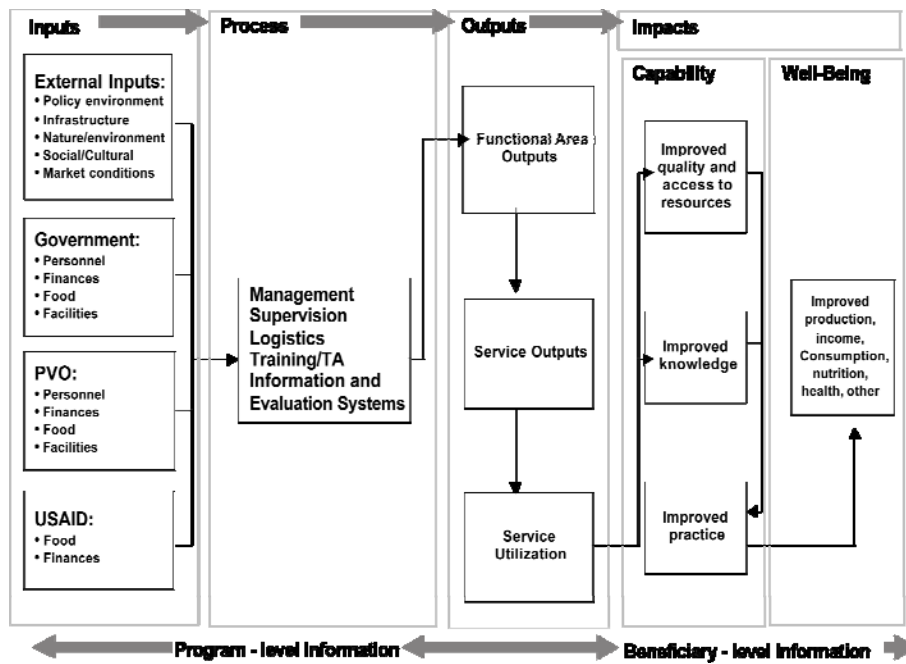


Figure 13: Framework for Conceptualizing M&E Systems
(Source: Riely et al., 1999, p. 25)

Monitoring processes thus primarily oversees the achievement of intended program outputs, such as the portions of food delivered to a distribution centre, or the number of people which are directly served. Impact evaluations rather focus on the extent to which a program causes improvements in food security conditions, such as securing a higher nutritional status.

But the success of such support is closely related to program-external processes which have to be added to the analysis of a program. The parameter of vulnerability of a society because of changes in world food prices, climatic disasters or other uncontrollable factors have to be included in the assessment. Adding these characteristics, even a decrease of the food security in a country might be a successful result as the evaluation might show that beneficiaries would have been even worse without the influence of the respective program.

4 Conclusion

More than one billion people are suffering hunger these days, an alarming share of the world's population lives in a status of food insecurity. As this paper shows, particularly rural poor in developing countries live under circumstances of greatest poverty, grave nutritional conditions and enormous vulnerability. Frameworks, rules, and policies on a macro-level as well as on a country- or community-level hinder philanthropic individuals and institutions to overcome this situation.

Nevertheless, as the case of Brazil's «Zero Hunger Program» shows, it is possible to improve the level of food security for certain people under certain circumstances. First of all, it is essential to understand the underlying causes of the crises. On the supply side, inappropriate support policies and declining investments in the agricultural sector, deregulation of agricultural markets, trade liberalisations, eroding production capacity, increasing import dependence and dumping (through subsidies of developed countries) in many developing countries have to be detected and considered to fight for the good cause. On the demand side, bio-fuel production and greater demand from emerging countries are factors which contribute to the crisis. Further elements are the weather, natural disasters, financial speculation, corruption and the increased energy prices which also contribute to the crisis.

The current food crisis forces developing countries to rethink their agricultural policies, to promote long-term sustainability and to protect the most vulnerable producers. Due to the fact that a lot of external factors influence the crisis in developing countries, solutions require a global reaction of the international community. In the short-term, emergency aid has to protect basic needs of the poor. If not addressed immediately, under-nutrition, especially for babies and children, can have very negative consequences and lead to chronic illnesses or even to death. Additionally, short-term measures should reduce the effects of increased prices on inequality through direct aid, and provide access to inputs such as fertilisers to boost production. In the medium and long-term, the capacity of developing countries to participate in the market, to cope with climate change, and to improve their production capacity has to be improved. A lot of money invested in research, does not really connect to reality of small-holder farmers. To bring back farmers needs to reality, it is important to collaborate directly with them on a local level, and to listen to their needs. Advising services could help small-holder farmers to become more competitive, and to participate in the market, strengthen their voices, and to integrate them in the value chain. The factor prevention is also important in building a stable macro environment, trade promotion, and developing market and storage infrastructures. In a long term, natural resource management has to be improved, for example in increasing productivity and production capacity, improving sustainable and diversified production and raising investment in agriculture and research. These measures should also lead to higher value-added products and stable prices.

Rising food prices are therefore not a solution to make small farmers better off; quite the contrary can be observed. Influence of developed countries and trade organizations combined with actions of speculators can cause significant fluctuations of world food prices and with that jeopardize the food security of millions of people. Although many players on an international level fight for the improvement of these circumstances, the individual interests of powerful actors hampers the solution-finding process massively.

Thus, game-changing progress primarily has to be achieved with restructuring programs on national or regional level. Brazil's government recognized the issues and challenges of its countries' population and the underlying structural causes. Particularly the problem of unequal distribution of income had to be tackled. Thanks to the government's accountability and commitment, the Zero Hunger Program received support from local, public and private partners as well as global partnerships. Good governance is therefore a crucial factor the tailor-made a successful aid program to fight hunger in developing countries; a necessary but not sufficient element. Additionally, smallholder farmers have to be empowered in a modified political framework, risk management has to be improved to decrease people's vulnerability, capacities must be built up, frameworks need to allow multi-national companies to predict future growth in the area, and resulting projects require strict planning, monitoring and evaluation to be sustainable. The more precise these factors are fulfilled, the more probable effective improvement of the food security will become.

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