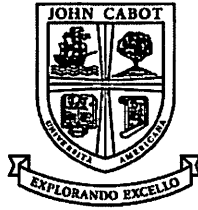


## Food Security and the Role of the Food and Agriculture Organization

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**Department of Political and Social Sciences**

**Bachelor of Arts in Political Science  
Minor in English Literature**

**Food Security  
and the Role of the Food and Agriculture Organization**

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## **Abstract**

This document examines the role the Food and Agriculture Organization (FAO) has played in strengthening world food security. Since World War II there have been initiatives aimed at food governance. The world population explosion has led to an urgent need for food governance and food and nutrition security. Issues related to food governance facing the FAO are examined, which include gender inequity, resource exploitations, protectionism, poverty, state control policies, climate change and the need for better management and use for genetically modified organisms, as well as conflicts affecting hunger in Africa.

As humankind faces the predicament of one billion hungry in 2012, the FAO faces a daunting task which the author has illustrated with examples in Africa, Asia and Mexico. Further, the author advocates that fundamental changes are needed in food and nutrition security to solve the hunger crisis. Better governance in agriculture and fisheries can, indeed, lift large numbers of people out of poverty, using natural resources in a sustainable way, and creating a green economy. A special attention is given to the gender aspect of food security and the effect that equal rights of women can have on food security. The FAO and the other Rome-based agencies can be credited with numerous efforts in trying to draw the world community's attention to the hunger situation. In spite of several summits and high-level conferences, such as the Millennium Summit in New York, the author advocates a pressing need to continue with efforts to fight hunger and malnutrition with sustainability, technological advancement in methods of agriculture and fishing and a realignment of sustainability, green economics and a push for good national governance as well fair world trade as an answer to the world food crisis.

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## List of Abbreviations

AMIS	Agricultural Market Information Systems
CFS	FAO Committee on World Food Security
COFI	FAO Committee on Fisheries
DAC	Development Assistance Committee of the OECD
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GHG	Greenhouse Gas
GMO	Genetically Modified Organisms
HLPE	High Level Panel of Experts for the CFS
IASC	Inter-Agency Standing Committee
IFAD	International Fund for Agricultural Development
IFI	International Finance Institutions
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on climate Change
ISDR	International Strategy for Disaster Reduction System
LEDC	Less economically developed countries
MDG1	First Millennium Development Goal
NATO	North Atlantic Treaty Organization
NGO	Non-governmental Organization
OCHA	Office for the Coordination of Humanitarian Affairs
ODA	Official Development Assistant
OECD	Organization for Economic Co-operation and Development
UN	United Nations
UNCED	UN Conference on the Environment and Development
UNCLOS	UN Convention on the Law of the Sea
UNFCCC	UN Framework Convention on Climate Change
UNFCCC	UN Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
UNPF	United Nations Population Fund
UNHCR	UN High Commissioner for Refugees
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization
WMO	World Meteorologist Organization (WMO)

# **Introduction**

## **Research Question**

To what extent has the Food and Agriculture Organization (FAO) of the United Nations worked towards strengthening food security in the world?

I will explore the global problem of food insecurity. This issue has many aspects, such as the global governance of food security, food prices, trade policies, government policies, also situations of truly global nature such as the earth's warming and equal rights for all people. I will also look at situations that can suddenly break down existing structures and cast hundreds of thousands of people into hunger and poverty, such as famine caused by natural disasters, refugee situations and war. Looming over this issue is the staggering number of hungry people in the world. My main focus will be the work of the Food and Agriculture Organization (FAO), which is the international organization charged with fighting food insecurity. I will look at how FAO has strived towards food security governance, and in what way does it act in order to prevent a population reaching 9 billion in 2050 from being faced with an enormous hunger problem.

## **Thesis**

FAO has made an enormous effort in its history to deal with the hunger problem and can be credited with bringing the hunger problem to the top of the agenda in the



international discussion on development issues. The hunger problem is, however, so multifaceted and complicated that no organization as such can deal with it alone. There are also several players of importance, such as individual governments, other multilateral organizations and Non-governmental Organizations (NGOs). The International community has many challenges to face when fighting food insecurity in the beginning of the new millennium. The global community needs to address several key issues, both on the regional and national level, and also of global dimensions.

### **Literature Review**

Throughout the thesis I use a variety of different sources. The newest book on Food Security is by Brian L. McDonald, published in 2010, which is a thorough assessment of the food security crisis which emerged so prominently in the global discussion on development in the last years. McDonald is an Assistant Professor of Science Technology and Society at the Pennsylvania State University and is respected as one of the foremost authority on the issue of food security. Recent sources from the media are also of importance in order to demonstrate some political aspects of the issue. In this respect I use articles from the Economist magazine. In the July 4th 2009 issue an article appeared called "Whatever Happened to the Food Crisis?", and a leader in the November 21st 2009 issue entitled, "How to feed the World". The Economist articles advocate the importance of market participation by the developing countries as a solution for food insecurity. I also use an article in the Science Magazine, 12th of February 2010, volume 327, entitled "The Challenge of Feeding 9 Billion People". In summary, the

authors explain that the growing population and the growing demand for food calls for enormous increase in food production. However, there is also a need for a multifaceted and linked global strategy to ensure sustainable and equitable food security.

FAO has published several important official reports which I use, such as the yearly FAO State of Food and Agriculture (SOFA) which is one of the most comprehensive documents published by the U.N. Organization on food security. The SOFA report 2010 – 11 has its focus on Women in Agriculture, Closing the Gender Gap for Development. The report demonstrates the importance of women in the food production and its main conclusion is that equal rights of women would mean lowering the number of hungry people by 100 – 150 million. Furthermore, I also use reports by other organizations such as an Oxfam and Save the Children report, published 18th January 2012, a Red Cross report “World Disasters Report” 2011 and a Save the Children report “A Life free from Hunger”, February 2012.

I also use independent research reports and papers, most notably Robert Paarlberg’s report of 2002, Governance and Food Security in the Age of Globalization, a Food and Agriculture and the Environment Discussion Paper 36, International Food Policy Research Institute (IFPRI), Washington D.C. Paarlberg’s main conclusion is firstly, that the problem with hunger and food insecurity is that they require a more national than global focus beginning with governments in developing countries that do not provide public goods, such as civil peace, rule of law, transport infrastructure, clean water, electrical power, public research in order to develop technology. These governments need to be able to have this infrastructure in order to reap the benefits of globalization.

I also use reports which have been compiled in cooperation with FAO, such as Fisheries, Food Security and Trade: Governance A Key to Success, by Jean-Francois Abgrall. The report highlights Governance is the key to success for the developing countries. Furthermore, the report reveals the importance in creating strategies both for small-scale and industrial fishing and building up capacity in small-scale fisheries, monitoring international negotiations in the field and investing in human resources policies. There must be political commitment on the part of central authorities.

FAO and IFAD regularly issue fact sheets, brochures and information papers, usually in connection with major summits or annual meetings, which contain the most recent data on food security, such as the FAO's Food Prices from Crisis to Stability, Global Governance of Food Security and an IFAD Governing Council Concept Note 2012. These papers all deal with the problem at hand and provide various themes for discussion, as well as statistics on hunger and population problems. The IFAD paper explicitly states the failure of the international community to reach the First Millennium Goal and reducing the number of hungry people by half by 2015.

### **Structure of the Thesis**

This thesis is structured in the following way: Chapter 1 gives an overview of the historical background, as well as efforts by the international community and the main organizations involved, the United Nations and FAO, that deal with the food crisis which started in 2007. Chapters 2 and 3 deal with several serious challenges to food security.

In Chapters 4 I give an overview of how to implement food security. In Chapter 5

and 6 two issues are dealt with which have a great potential to improve the world's food security and which have not been highlighted in the global discussion, namely the role of women and the nutritional potential of fisheries. In the end I draw some conclusions towards the issue.

### **Definitions**

For the purpose of examining the issue of food security some terms need to be defined.

In general **food security** refers to food availability and people's ability to access it. The definition of food security has gone through some changes but each new definition or variation has the common theme of people's ability to gain access to nutritious food, allowing an individual to live an active as well as healthy life. The definition is a multidimensional one that has evolved. In the 1970's at the World Food Summit the definition was focused on food supply and the availability of foodstuffs in order to expand food consumption and balance changes in the market price and production.

In 1983 the FAO redefined food security including economic as well as physical access as crucial to food security. This would also be the case for the Rome Declaration on World Food Security in 1996, which called for the reduction of hungry people by half by the year 2015. In 2006 the FAO redefined food security, including the term social access. "Food Security exists when all people, at all times have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary

needs and food preferences for an active healthy life”(McDonald 15).

### **Global Food Security Governance**

For the purpose of defining global food security governance it is first of all important to define global governance. The United Nations launched a commission in 1995 as a comprehensive effort in order to strengthen their work in many fields through global efforts. The Commission deliberated reforms in international cooperation tactics in the wake of new global changes. The result of the work of this Commission was a report that defined and explored some of the major aspects of global governance. The commission defined global governance as...

The sum of the many individuals and institutions, public and private, to manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative actions may be taken. It includes formal as well as informal arrangements that people and institutions have agreed to or perceive to be in their interest. (Karns, 3-4)

This definition meant that global governance does not refer to global government or a hierarchical structure of authority. It is the plethora of government related activities, mechanism and rules that exists today. These can be referred to a “... pieces of global governance”(Karns 3-4). Moreover, pieces of global governance are the activities that are implemented by states and other actors in order to solve global issues. This includes international law, Intergovernmental Organizations, development programs and assistance programs. This complicated web is often explained by scholars as the

international regime.

FAO defines global governance of food security as a: "...a mechanism that will facilitate debate, convergence of views and coordination of actions to improve food security at global but also at regional and national levels." (FAO *Global Governance of Food Security*)

# **1 Historical Background**

## **Introduction**

After the Second World War the world was faced with many new challenges which called for global efforts to secure peace and welfare of nations. The United Nations and their specialized agencies came into being out of necessity. This chapter gives a brief historical account of the role of these organizations in the food security context and their response to the hunger problem.

Finally, the Chapter sheds light on the most recent food crisis, which began in 2007 and which brought the huge food security problem into focus to the world community and the media.

## **Historical Introduction to Food Security**

At the end of the Second World War industrialized countries moved towards a peacetime economy. Developing territories, for example, in Africa and Asia, began to gain their independence from their colonial rulers. These countries slowly gained independent control over their agricultural production and wanted to maintain their own sovereignty over their resources and production. Moreover, countries worldwide experienced a boom in their populations. Improvements in housing, mass production of

medicines and general improvements in living conditions allowed for a greater population growth after the war. The issue of food security began to be introduced into the foundational programs and agreements of global governance as a new concept in the 20th century.

In May 1943 United States President Franklin Delano Roosevelt called together world leaders for the United Nations Conference on Food and Agriculture. The President stated that he believed in a world based on four freedoms, reflecting the cornerstone of the United Nations, and the third freedom being *the freedom from want*. This proclamation went hand in hand with the President's State of the Union Address in which President Roosevelt's third freedom has been understood to encapsulate an economic understanding that can secure healthy peacetime life for Earth's inhabitants. The aim of the UN Conference on Food and Agriculture was to implement that freedom from want, meaning a suitable food supply for all people. The creation of FAO, the organization, dealing with the freedom from want, had its roots in the creation of the United Nations during the WWII.

### **The Emergence of the United Nations**

On August 14<sup>th</sup> 1941 Roosevelt and the British Prime Minister Winston Spencer Churchill adopted the Atlantic Charter. The Charter became the foundation for the United Nations Declaration. The Atlantic Charter would hence be laying the foundation for a new intergovernmental system of cooperation. The UN Charter was drafted in two meetings between August and October in 1944 in Washington D.C. and adopted in 1945



in San Francisco. The principle agreed upon was the equality of all members. All states could be eligible for a membership if they followed a peace honoring principle. This meant that at this time the Axis powers, Germany, Italy and Japan could not become members in this world organization. Finally, a Security Council was created, made up of the most powerful and influential states of the organization.

The UN also extends into other affiliate organizations that deal with a wide range of internal and external issues within states. There are nineteen independent affiliate organizations, including The World Health Organization (WHO), the UN High Commissioner for Refugees (UNHCR), and the Food and Agriculture Organization (FAO), to name a few, but also the international finance institutions (IFIs), such as the World Bank and the International Monetary Fund (IMF), based in Washington D.C.

In recent years the UN has become more involved in conflict within states, especially in grave humanitarian and conflict situations which local authorities are not in a position to deal with on their own. A changing world has called for new special agencies and branches of the UN in order to deal with new issues, such as HIV/AIDS, global warming, environmental problems, biological diversity and food security. Such issues are global in nature and the problems involved do not stop at borders.

### **The Food and Agriculture Organization of the UN**

FAO was established on the 16th of October 1945, with the aim of increasing agricultural productivity and eliminating hunger, improving nutrition, as well as dealing with problems of surplus and shortages, and creating national agricultural

policies and principles of trade. The FAO now has 191 member states, as well as two associate members, namely the Faroe Islands and Palestine and one member organization namely the European Union.

In regards to the governance of the organization, FAO has a biennial Conference to review policies and evaluate the work and to approve of budgetary matters for the next biennium. The Conference elects 49 Council members who are rotating every three years; who oversee budgetary matters and oversee the work of the organization. The member states elect a Director General for a six-year term. At the end of 2011 Director General Dr. Jacques Diouf from Senegal retired after 18 years at the helm and was succeeded by Director General José Graziano da Silva from Brazil.

There are seven different departments at FAO, reflecting the diverse and complicated work of the organization. These are the departments for Agriculture and Consumers, Economic and Social Development, Fisheries and Aquaculture, Forestry, Corporate Services, Human Resources and Finance, Natural Resources, Management and Environment and, finally, Technical Cooperation. The headquarters are in Rome and the organization has local offices in 30 countries, five regional offices, 11 sub-regional offices as well as other units around the developing world.

FAO has a dual function as a knowledge organization on one hand, and as an organization for development cooperation on the other. It focuses on building up the capacity in partner countries and developing ways to provide better technical assistance in agriculture, farming, fisheries and aquaculture. All this is based on decades of research and knowledge gathering, and consequently, FAO is now a center for up to date information on agriculture, fisheries and forestry. The most important success of FAO in

the past was during the 1960's when FAO supported the development of high yield grains and launched the so-called "Green Revolution" in agriculture in the developing countries, saving millions of people from hunger and malnutrition (McDonald 40).

### **The "Green Revolution"**

The "Green Revolution agriculture is a system of production that developed during and following the "Green Revolution", the period from the early 1940's to 1970's where implementation of research-based agricultural methods and new technologies allowed significant increases in global agricultural production, especially in developing countries (McDonald 52). The success of the "Green Revolution" can be attributed to Nobel Prize winner and scientist Norman Borlaug. In the 1940s Borlaug was able to develop a new disease resistant variety of grain that was also high yielding. Borlaug's new wheat revolutionized agricultural farming. Taking Mexico as an example, in a little more than 10 years, between the 1940s and 1950s, Mexico was able to become completely self-sufficient having had to import half of its wheat in 1943. By the 1960's Mexico was able to produce more wheat than was needed by its own citizens thus becoming an exporter. Mexico's successful example of having gained a tremendous increase in agricultural productivity once new agricultural technologies were introduced created an explosion worldwide as countries began to use the new agricultural technologies (McDonald 52).

## **New Challenges faced by the International Community**

However, in spite of the successes of the “Green Revolution” the world soon was facing overwhelming challenges in feeding the ever-growing population. Since the 1970's food security has again become a pressing and important issue on the global governance agenda. This has especially to do with recently emerging issues, such as population growth, erosion of land, droughts, seasonal floods and climate change, to name but few. The UN convened a World Food Conference in Rome in September 1974 following an extreme famine in Bangladesh that cost the life of a million people in a period of two years. The Conference set as its goal the eradication of hunger, food insecurity and malnutrition within a decade. Implementing food security cannot only focus on increasing the production of food, but also the nutritional value of food. Today malnutrition is most prevalent in Sub-Saharan Africa and on the Asian continent. In order to tackle the nutritional aspect of food production, the International Conference on Nutrition was held in 1992 to focus on the problem of global patterns of nutritional deficiency in food.

As the hunger problem accelerated world leaders realized that a new global effort was needed to deal with the issue. It had become clear that one organization or individual governments could not cope with a problem of such an enormity. FAO called the World Food Summit in 1996, a pivotal moment in the history of food security in order to set up programs for accomplishing the goal of ridding the world from hunger, the so-called World Food Summit’s “Rome Declaration” with the aim of reducing the number of hungry people by half by the year 2015. The World Food Summit was a part of a series

of global conferences organized by the UN in the 1990s dealing with various issues which effect food security such as on sustainable development and the rights of women. A follow up conference was held in 2002. The food crisis which began in 2007 led to two major conferences in Rome. In June 2008 a High level Conference on “World Food Security: The Challenges of Climate Change and Bio Energy”, was held in Rome, and a World Summit on Food Security was held in November 2009. Furthermore, a UN High Level Task Force on the Global Food Security Crises was created in April 2008. Major industrial countries, the so-called G8, addressed the food problem in their summits in Tokyo, Japan in July 2008 and later in L’Aquila, Italy in July 2009.

### **The Millennium Development Goals**

Four years after the World Food Summit, at the Millennium Summit in September 2000 in New York, member countries of the U.N made the reduction of extreme hunger and poverty the Number One Millennium Development Goal (MDG1), “To eradicate extreme poverty and hunger”. The Eight Millennium Goals, agreed upon by Heads of State and Government leaders have since been the targets of the member countries of the UN in making the world a better place for all humankind. The fact that the hunger problem is addressed in the MDG1 demonstrates the importance of food security and the role assigned to the organization charged with fighting the hunger problem, FAO.

FAO has made a concentrated effort in revitalizing its work and functions. The Committee on World Food Security was given a new mandate in order to strengthen its

role as the focal point in the fight against food insecurity. It brings together member countries, the two other UN organizations in Rome, World Food Programme(WFP) and the International Fund for Agricultural Development (IFAD), and is able to cooperate with other international organizations such as World Health organization (WHO), the World Bank, the IMF and the World Trade Organization (WTO), along with representatives from NGOs and civilian society. In the coming years there will be an alarming increase in the population. Since the beginning of the millennium the world population has increased by 13 percent to 6.9 billion. In 2015, there will be a final conclusion to the MDG. Then, in only three years, the population of the world will be 7.3 billion. There will have been a 20 percent increase in 15 years.

### **The Economist on the Food Crisis**

The food crisis from 2007 – 2009 drew the attention of the media. The most respected popular magazine on economic issues, the free market oriented Economist argued for more investment in agriculture and the improvement of the food market, in light of farming being the single most important economic activity in most poor countries. The magazine advocated not only improved markets, but also the use of genetically modified crops (GMO's) which is highly sensitive politically, especially in Europe. The magazine also warned of the tendency to turn the concept of food security into "food-self-reliance" and barriers to trade.

In the November 21st 2009 issue, the Economist had an extensive leader on "How to Feed the World", written during the Food Summit in 2009. The leader recalled the

1974 World Food Conference in Rome and the U. S. Secretary of State Henry Kissinger's speech saying that "... no child would go to bed hungry within ten years" (13). The matter had developed differently: "Just over 35 years later, in the wake of another United Nations food summit in Rome, 1 billion people will go to bed hungry" (13).

## **Conclusion**

The global community and its organizations made a considerable progress after WWII in dealing with the many problems facing humankind. However, many problems persisted, and new global problems surfaced posing new threats to the welfare of nations. In 2007 the food crisis was brought into the spotlight. The free market oriented Economist magazine highlighted the need for more investment in agriculture and the improvement of the food market, and also the use of genetically modified crops (GMC). The next chapter deals with the many threats and challenges which brought about this crisis.

## **2 Threats and Challenges to Food Security**

### **Introduction**

The state of food security has become one of the main priorities on the international agenda, as demonstrated by the food crisis. Food security is under constant threats. In this chapter I will begin by describing the hunger problem. Then I will explore some direct threats and challenges that food security is faced with, such as population growth, volatility of food prices, the effects of climate change, the impact of biofuels production, lack of investments and agricultural output. FAO has worked for years to draw the attention of the global community to the various challenges to food security which have made it extremely difficult to achieve the First Millennium Development Goal of reducing the proportion of hungry people worldwide by half by 2015.

### **The Staggering Number of Hungry People Worldwide**

Today more than one billion people suffer from chronic hunger, representing fifteen percent of the world population. In the last three years the numbers of hungry have increased over 150 million due to various reasons, such as the effects of soaring food prices and the global financial economic crisis. But hunger has been on the rise even during low food prices and healthy economies. By



2050 9.1 billion people will need to be fed, and most of them will be in urban areas.

An article published in the Science Magazine, in 2010, titled “The Challenge of Feeding 9 Billion People” explores this question. The authors explain that the growing population and growing demand calls for an enormous increase in food production. However there is a need for a multifaceted and linked global strategy to ensure sustainable and equitable food security. The article also explores the lack of nutrients in food, the availability of food and price changes and the lack of new land to grow food on in line with the population growth. It explores the changes in market and both negative and positive aspects of globalization. A key element is sustainability which can be defined as “The use of resources at rates that do not exceed the capacity of earth to replace them” (Godfray 814).

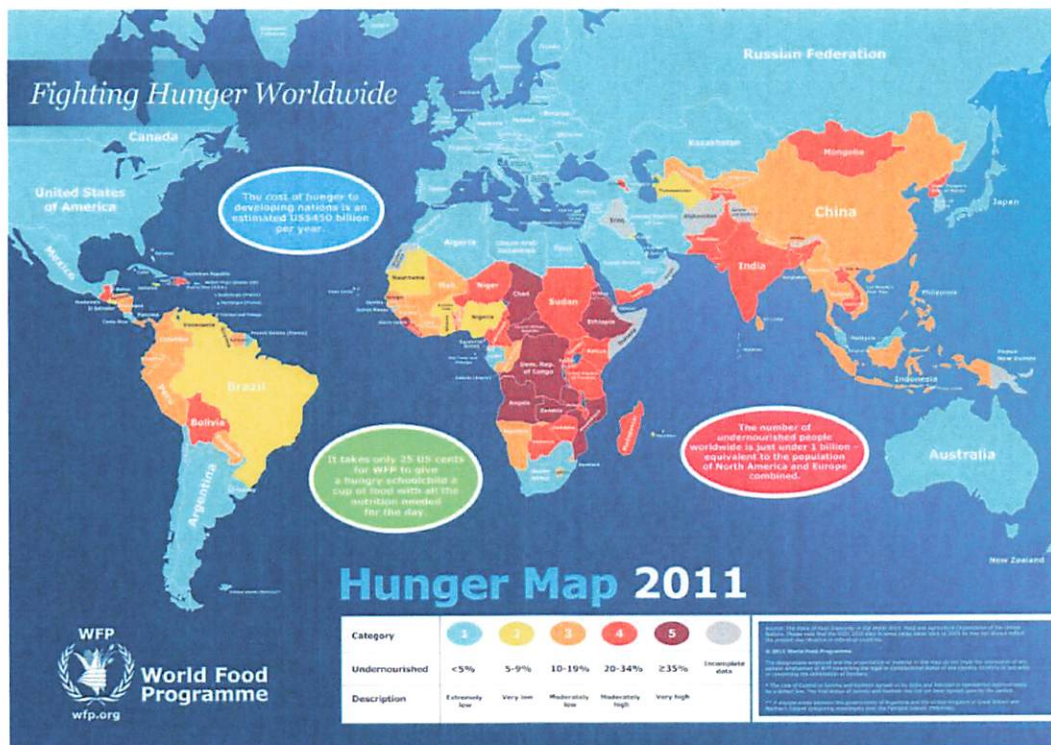


Figure 1 Hunger map 2011

<http://www.wfp.org/students-and-teachers/teachers/blog/new-teaching-tool-hunger-map-2011>

The authors also explore the development of technology, and changes in the work force including the growing importance of women. Of special interest is the controversial issue of GMOs, of which the article advocates the use. The authors are hopeful that future technology will be able to help the world in reaching the First Millennium Development Goal of ending hunger, and can also help to prevent the destruction of the Earth's sustainability.

### **Population Growth and Its Impact on Food Security**

Over the past centuries the Earth's population has been steadily rising. During the 20<sup>th</sup> century there was a significant increase, with a population of 1.7 billion in 1900 rising to more than 6 billion people in the year 2000. We might not see the same enormous growth in the 21<sup>st</sup> Century as in the 20<sup>th</sup> Century; however "... the number of people will continue to increase from around 6.8 billion people in 2009 to an estimated 9.2 billion people by 2050", according to the United Nations Population Fund (UNFPA)"(McDonald 54-55). It is also estimated that 90 percent of this new population will live in less developed regions of the world. Furthermore, it is also expected that there will be a great population growth in urban areas, meaning a massive migration from rural areas to the cities.

In the next decades people are also expected to live longer, also in the poorer countries where longevity has usually been low. By 2050 one-third the population in developing countries is expected to reach the age of sixty years. The poor populations in the urban areas will be forced into slums. Already today, one out of three people living in

cities, (around one billion people and about one sixth of the world population), live in slums. In Sub-Saharan Africa the growth of urban areas is synonymous with the growth of city slums and poverty.

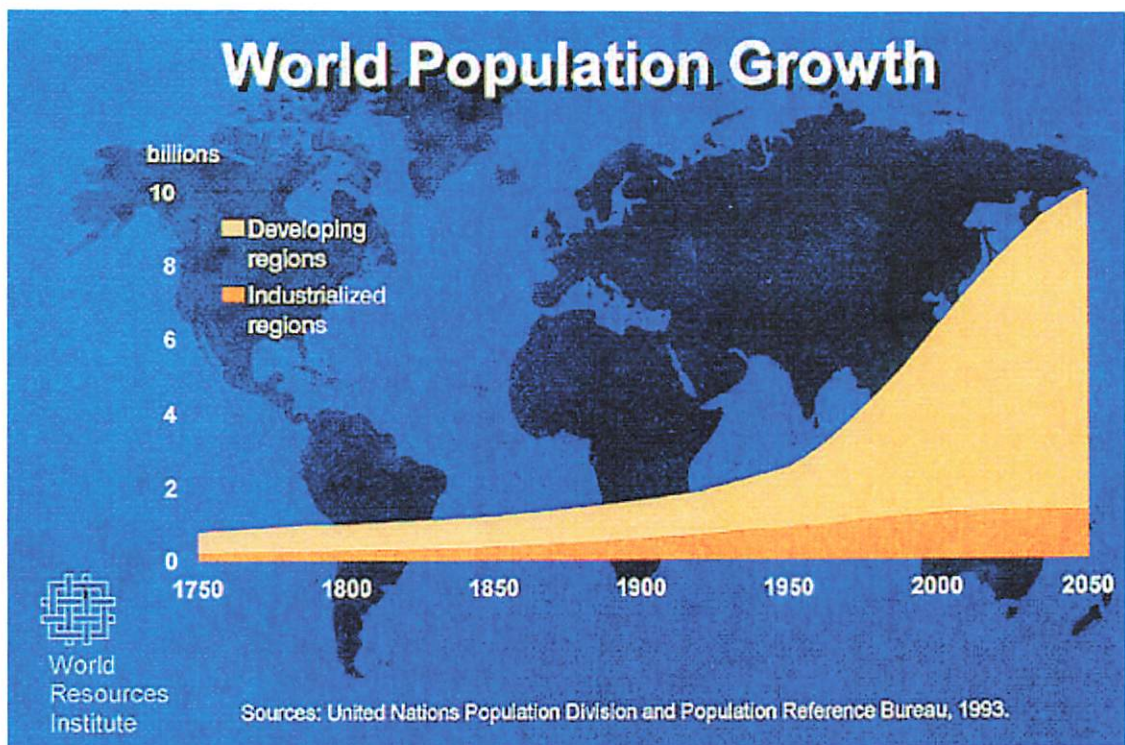


Figure 2 World Population Growth

[http://snus-news.blogspot.it/2010\\_08\\_29\\_archive.html](http://snus-news.blogspot.it/2010_08_29_archive.html)

The main problem with population growth is not so much that it is increasing but that wealth is so unevenly distributed. The large gap between rich and poor is becoming larger. Roughly 80 percent of natural resources that are used each year are consumed by about 20 percent of the world population. This reveals a persistent challenge that the world will be faced with in the next decades. The so called bottom billion living in the 21<sup>st</sup> Century will remain in a world as developed as the 14<sup>th</sup> Century Europe, with constant diseases, civil war and lack of education. This population is trapped in poverty

and will live with constant food insecurity (McDonald 30).

### **Volatility of Food Prices on Food Security**

FAO dedicated the theme of the World Food Day 2011 to volatility of food prices on food security. A FAO Brochure on World Food Day 2011, *Food Prices from Crisis to Stability* states: “Between 2005 and 2008, the world staple food prices soared to the highest levels in 30 years. During the last eighteen months of that period maize price increased by 74 percent while that of rice almost tripled climbing a whole 166 percent. Food riots broke out in more than 20 countries. Editorialists decreed the end of cheap food.” However, the prices fell 33 percent in the six months after June 2008. In 2010 grain prices shot up 50 percent and soared into 2011. Food price volatility is likely to continue which is a great threat to food security.

The volatility and high prices of food has presented a great challenge to food security of vulnerable populations, both poor farmers and the urban poor. Food represents a great share of a farmer’s income and the budget of poor consumers. This means that large price changes greatly affect their real income. Even small changes in the price of commodity for consumers or lower prices for the farmer to sell their products could, and frequently do, lead to a poverty trap. Farmers will take fewer chances to invest in productivity measures due to the continually changing prices. “Price swings, upswings in particular, represent a major threat to food security in developing countries. Hardest-hit are the poor. According to the World Bank, in 2010-2011 rising food costs pushed nearly 70 million people into extreme poverty”(FAO, *Food Prices from Crisis to Stability*).

And “In 2010 the world’s low income food deficit countries (LIFDC’s) spent a record \$164 billion on food imports, representing a rise of 20 percent on the year before” (FAO, *Food Prices from Crisis to Stability*).



Figure 3 FAO Food Price Index

<http://bilbo.economicoutlook.net/blog/?p=13035>

The effects of high food prices can be traced to many things, however in many directions and in most cases they only benefit the farmer who has plenty of resources and enough land. The poor farmers end up buying more food than they can produce. They and their families will be badly affected. In the long term price swings can lead to children not obtaining key nutrients, which is especially important during the first thousand days after birth. This prevents children from achieving a healthy mental and physical growth, which eventually will be a barrier towards their learning capacity, ultimately becoming a problem for the economy, slowing it down. “Micronutrient deficiencies have a range of impact including: lowering intellectual capacity, impairing

mental development, and compromising the immune systems of those impacted.”...especially marked in children as they can have lasting impacts at key stages of mental physical development” (McDonald 84).

The FAO brochure on food prices reveals how to combat the negative consequences of price volatility. FAO has advocated setting up safety nets. Openness to trade is frequently advocated. Restrictions can help control price volatility; however, they can also result in increased domestic price volatility due to domestic supply problems. Other ideas include closer cooperation between the private and public sectors in such situations. Government policies promoting partnership with the private sector are important in facilitating private investment, however public investment is also needed, and the public sector often provides the resources that the private cannot. It is important that those government policies promote participation by the private sector. (FAO, *Food Prices from Crisis to Stability*).

### **The Effects of Climate Change on Food Security**

FAO has for years taken the effects of climate change on food security into consideration for many years. In June 2008 FAO convened a High Level Conference on Food Security: The Challenges of Climate Change and Bio Energy, to deal with this important issue which has in many ways dominated the discussion on the future of humankind. An FAO Information Sheet on Global Governance of Food Security, 2009, states: “The long and short term effects of climate change will present further challenges to agricultural production and food and nutrition security” (FAO, *Global Governance of Food Security*).

Today there is significant evidence and agreement among scientists that human activities are contributing to changes to the Earth's climate. Firstly, the term climate refers to the overall climate system, such as the atmosphere, the hydrosphere, earth's land surface areas and the oceans and the way in which they interact together making up the climate system. The climate system changes naturally due to its own interactions and mechanisms. For example, this can include volcanoes and hurricanes, as well as other natural phenomena. However, in recent decades human activities also cause changes in the climate system. Human generated factors, such as land use results in deforestation and destruction of many species of animals, which create an imbalance in biodiversity. (McDonald 68-69)

The international community has in a concentrated way tried to focus on the problem of climate change. In its fourth assessment, in 2007, the Intergovernmental Panel on Climate Change (IPCC), associated with the World Meteorologist Organization (WMO), reported "...warming of the climate is unequivocal, as is now evident from observation of increases in global average air and ocean temperature, widespread melting of snow and ice, and rising global average sea level"(McDonald 69). The WMO has projected that between 2000 and 2009 the world has seen its warmest decade since in the beginning of climate recordings in the 1850's. In 2009 the Met Office, which is the United Kingdom National Weather Service, reported that if greenhouse gases continue to rise, there would be more than a 4 degree centigrade rise caused by global warming by the end of the 21<sup>st</sup> Century.

In 2006 U.N Secretary-General Kofi Annan stated "...global climate change must take its place alongside those threats-conflict, poverty, the proliferation of deadly

weapons, that have traditionally monopolized first order political attention (qtd. in McDonald 70). However, there is still criticism towards climate change, doubting its prominence. This only acts as a barrier for groups in order to negotiate and interact.

The affects of climate change will impact many sectors, including water resources, health and food production, changes in snow cover, for example increased thawing of permafrost. There will also be an increase in heat waves and heavy rainfall, as well as increased tropical cyclone intensity, and finally a decrease in precipitation in subtropical areas. This means climate will affects the world population's water resources, their health, use of food and access to their environment with regards to agricultural activities, with declining crop yield and less quality food, especially in developing regions. (McDonald 69)

Areas as in Sub-Saharan African and Asia will face more water scarcity, compromising their food production market. Furthermore, a group of experts from the Center for a New American Security and the Center for Strategic and International Studies found that climate change could lead to increased tensions among different groups competing in agricultural production leading to violence and resource driven conflicts with an increased pressure on the developing states of the world, (McDonald 70).

The benefits involved in climate change however falls disproportionately, as wealthy countries can achieve benefits from newly accessed areas in the High North through shipping channels that have minerals, gas and oil deposits revealed by retreating ice flows. Ironically the poor countries that have contributed the least to greenhouse gas



emissions will not be able to utilize these benefits (McDonald 74).

In conclusion, it is important to reduce the greenhouse gas emissions (GHG) that drive climate change, and promote sustainable development. Governments and their societies need to adapt and manage their systems of combating climate change in order to reduce these emissions. This involves converting to new technologies with mitigation and implementing new policies and substituting old methods of agricultural production.

The UN Earth Summit, the UN Conference on the Environment and Development (UNCED) in 1992, was a major landmark in the discussion on climate change, producing the UN Framework Convention on Climate Change (UNFCCC). This year a conference, Rio+20, will be held in order to assess the situation 20 years later.

### **Impact of Biofuels Production on Food Security**

FAO has expressed its concern regarding the production of bio fuels in connection with food security and tackled the issue in the June 2008 High Level Conference on Food Security: The Challenges of Climate Change and Bio Energy. A FAO Fact sheet on the issue states: "Demands for bio-energy, which may divert food and feed crops to biofuel production, and the associated price effect, can threaten food security."(FAO *State of Food and Agriculture*)

In his book Bryan L. MacDonald deals with the issue of biofuels, which is basically fuel produced from biological products such as corn. The production of such fuel is considered to be an alternative to the production and buying of fossil fuels, even if the production of biofuels is still only a fraction of the production of fossil fuels.

Macdonald speaks of a "...global promotion..." (McDonald 118) of biofuels, since several governments have made concentrated efforts to encourage the production of biofuels through trade policies and taxing policies, as well as having set targets or mandates for the biofuels production and use as a part of the overall use of fuel. One can say that biofuels have gained a positive publicity since this production is considered renewable and thus sustainable and important in strategies to reduce greenhouse gas emission of agriculture and food production and reducing dependence on fossil fuels. MacDonald, quoting an FAO source, says that "FAO finds "there is a growing appreciation of agriculture's positive contribution to climate change mitigation through carbon sequestration and substitution of bio fuels for fossil fuels" (McDonald 114).

There is, however, an important aspect of this production to consider, namely, that in many cases fertile land, previously used for the production of food, is now being used to produce fuel. This can be seen as a serious challenge to food security and food production, given that only increased production of food can bring us nearer to feeding the hungry and the malnourished. MacDonald speaks of the "...unintended impacts from efforts to promote biofuels..." as a contribution to rising food prices. (McDonald 61) He brings up some negative aspects of biofuels production. Firstly, while biofuels production from some crops can lead to substantial reductions in GHG emission compared to fossil fuels, recent studies have found out that "...especially with biofuels made from crops such as corn, the total impact of GHG emissions from biofuels can be higher than GHG emissions from fossil fuels"(McDonald 119).

## **Need for Increase in Production in Agriculture**

The FAO has argued that only an increase in agricultural production could save hundreds of millions of people from hunger. This increase will have to be by 70 percent if compared to the average use in 2005 - 2007 triennium. It is alarming that growth in agricultural productivity is slowing with the rate of growth in yields of major cereal crops declining steadily from 3.2 percent in 1960 to 1.5 percent in 2000. (*FAO State of Food and Agriculture*)

The International Fund for Agricultural Development (IFAD) has pointed out that in the long term; there must be a focus on the role of smallholder farmers in providing food security. Four fifths of the developing world's food is produced on about half a billion small farms and two billion people live and work on the world's small farms. IFAD's Governing Council Concept Note in 2012 states that farmers "...must produce 70 per cent more food by 2050 to feed a growing more urbanized population and they must do so facing the likelihood that arable land in developing countries will increase by no more than 12 per cent" (*IFAD Sustainable Smallholder Agriculture: Feeding the World, Protecting the Planet*)

The Economist published an article in the July 4th 2009 issue called "Whatever Happened to the Food Crisis?", which reported that the available food in the developing countries will have to double by 2050, equivalent to a 70% rise in world food production. The article also mentioned that between 2007-2008 the food conflicts caused riots in more than 60 countries and "... set of a controversial worldwide land grab – a rush by rich food-importers to buy swathes of Africa and South-East-Asia on which to grow

food”(53).

The article quotes Dr Alexander Mueller, Assistant Director General of FAO, on the need for farmers in poor countries to boost their yields, especially in Africa. “At the moment, cereal yields in Africa are around one ton per hectare, compared with three-to-four tons in Europe and rich Asia” (Whatever Happened to the Food Crisis? 53). Unfortunately, this had not been the case. In the developing countries harvest increased 11 per cent, but in the poor countries in Africa the harvest increased only by 1%.

### **Need for Investments in Agriculture**

Both FAO and IFAD have frequently pointed out that ODA funding of development cooperation projects in agriculture and food production has been neglected. A FAO brochure on world food today 2011 states: “In the thirty years from 1980 the share of Official Development Aid (ODA) which the OECD marked for agriculture dropped 43 percent. Official development assistance has been defined by the Organization for Economic Co-operation and Development (OECD) and its Development Assistant Committee (DAC) as

Flows of official financing administered with the promotion of the economic development and welfare of developing countries as the main objective, and which are concessional in character with a grant element of at least 25 percent (using a fixed 10 percent rate of discount). By convention, ODA flows comprise contributions of donor government

agencies, at all levels, to developing countries (“bilateral ODA”) and to multilateral institutions (“Official Development Assistance (ODA)”)

Basically this is the money from official sources that OECD countries put into development assistance for poor countries. Under-funding of agriculture by rich and poor countries alike is probably the main single cause of the food crises we face today.”  
(*FAO Global Governance of Food Security*)

IFAD’s Information Paper of 2012 states: “Some of the roots of today’s food insecurity can be found in declining public investment in developing country agriculture. In 1979, official development assistance (ODA) aid to agriculture was 18 per cent of total ODA. By 2009, it was just 6 per cent. In developing countries, government investment in agriculture also fell in this period, by one third in Africa and by as much as two thirds in Asia and Latin America”.

During the food crisis, the above mentioned Economist Leader “How to Feed the World” from November 21st 2009 argued for the need for increased investment in agriculture and, in line with the magazine’s free trade policy, improvement of the operation of food markets. It states that investment has indeed increased but this improvement is threatened by growing distrust of markets. According to the article, in 2005 most developing countries were investing only around 5% of public revenues in farming. The share of Western aid going to agriculture fell by around three-quarters between 1980 and 2006. “This disinvestment laid waste to productivity. During the green revolution of the 1960s, staple-crop yields were rising by 3-6 % a year. Now they are rising by only 1-2% a year; in poor countries yields are flat” (“How to Feed the World” 13). The article stated that this situation had shocked governments out of a quarter-

century of neglect and that that the World Bank and many rich countries have doubled the money put into poor countries' farming.

### **Land Grabs**

The much contested issue of the Economist "Whatever happened to the food Crisis?" published July 4th 2009, focuses on land grabs as a "... set of a controversial worldwide land grab – a rush by rich food-importers to buy swathes of Africa and South-East-Asia on which to grow food" (13). Land grab is a relatively new issue or problem and has been associated with neo colonialism, and mainly in connection with China and its activities in Africa. But there are other countries involved as well, such as Saudi Arabia and South Korea. These countries buy or lease land for agricultural production, which mainly serves their own domestic needs and do not in the long term consider the needs of the developing countries lending or leasing the land.

### **Conclusion**

In this chapter I have dealt with many serious threats and challenges to the world's food security and how the international community and FAO in particular have approached the problem of one billion people going hungry to bed every day. Most of these problems are of global nature, such as population growth, price volatility, the

effects of climate change, but others issues are specific and routed in investment in agriculture, biofuels production and land grabs. All these issues, however, pose an alarming threat to humankind and cannot be solved unless there is a global cooperation across borders. In the next chapter I will deal with food security threatened by famine and emergency situations, as well as war and conflict.

### **3 Conflict and Emergency: A Case Study Related to Famine in the Horn of Africa**

#### **Introduction**

In this chapter I deal with food security threatened by famine and emergency situations, as well as war and conflict. The famine issue gives me an opportunity to illustrate an important player in the food security system, the World Food Programme (WFP), and take an example of its activities in the conflict zone of Somalia. It is of importance to briefly explore the work of the WFP as it is FAO's sister organization but unlike the FAO which concentrates on development the WFP provides emergency food assistance and relief. They are in constant cooperation as part of three Rome based Organization dealing with food security. The famine in the Horn of Africa has drawn attention to the issue of the link between emergency food aid and traditional capacity building in development cooperation and the need for building up resilience in vulnerable communities to disasters and shocks. Sometimes, disruptions, such as drought, lack of water, famine and refugees can result in conflict and war. Food security can therefore be closely linked to what we generally consider a security and peace situation. A fight over water rights in one province can have ripple effects all over the country and can result in a large-scale conflict. It can be safely said that there are only few missed meals between a peaceful society and riots and conflicts, as demonstrated by the food riots that broke out



in 20 countries during the world food crisis in 2008.

### **Famine and Emergency**

The situation in Somalia is an extreme one to say the least. For the last 20 years the country has been plagued by tribal and religious warfare, resulting in a so-called “failed state” status in the international community. The result is that the hunger situation cannot be classified since no data exists on the situation. The WFP, the largest food aid organization in the world, provided food assistance to more than 1.2 million people in Somalia in the months after the crisis began. The number of people in need of food relief due to drought, conflict and high food prices in Somalia this winter is thought to be approximately 4 million. In January 2012 the WFP was providing a critical lifeline to hundreds of thousands of Somalis. The visibility of the WFP food donations has made food assistance an easy target for militants. This calls for a less visible way to distribute aid to the people via the cash and voucher system and cash for work activities. The crisis has brought unlikely players to the relief operation, since the delivery of humanitarian assistance and the movement of aid workers called for naval escorts for ships carrying WFP food into Somalia. These escorts are currently provided by the European Union (EU) Crisis Management Operation, Atalanta, and the North Atlantic Treaty Organization (NATO).



Figure 4 Somalia

<http://www.lonelyplanet.com/maps/africa/somalia/>

### Response by the International Community

The international community responds to such situations in various ways. The UN and its specialized agencies activate a mechanism in order to bring relief to the suffering people. Several agencies are involved in relief operations, but in the case of famine, the World Food Programme (WFP), with headquarters in Rome, plays a crucial role in bringing food and relief to the hungry people. The UN has made a concentrated effort to establish an effective coordination of all agencies involved. The Office for the Coordination of Humanitarian Affairs (OCHA) was established to be the focal point for emergency operations. In 1992 the General Assembly, with Resolution 46/182,

established an Inter-Agency Standing Committee (IASC) on strengthening the coordination of humanitarian assistance. All major UN organizations working on relief and food security, such as the WFP, OCHA and FAO, are represented in the IASC (FAO Information Sheet on World Summit on Food Security 2009: Global Governance of Food Security).

After 2005 there was adopted the so-called “cluster approach”, which aimed at increased efficiency, such as securing human resources and expertise, responsibility and division of labor, communication lines and policy decisions. The WFP and the FAO have the lead role in the Global Food Security Cluster, which was established in 2011 to improve the coordination of food security responses in humanitarian crises. According to the FAO website:

Food security clusters already coordinate food security responses in more than 25 countries worldwide that have been affected by large-scale natural disasters, conflicts or protracted crises. ... From now on, country-level food security clusters and their members will be able to draw upon support in five crucial areas: tools and guidance on how to coordinate responses more effectively; filling gaps in human resources in acute emergency situations; capacity building and training to build the skills of food security stakeholders in countries so that they can coordinate more effectively.

The situation in Somalia has brought up serious questions on whether it would have been able to avoid famine. Oxfam and Save the Children maintain that the international community failed to take decisive action on early warnings. Between 50 and

100 thousand people are believed to have died because of the famine. The report asserts that too much emphasis was put on food aid rather than preventative measures. The crisis has left 1,5 million people displaced within Somalia and driven almost one million refugees across the borders to Ethiopia and Kenya. The drought was the worst for more than half a century. Oxfam and Save the Children maintain that too much emphasis was put on food aid instead of preventive measures and building resilience to disasters. This situation has therefore brought attention to the necessity to focus on resilience, as well as drawn attention to the “negative” long-term aspects of food aid, such as destabilization of local markets and the locking of families into dependency.

### **War and Conflict**

The situation in the Horn of Africa, which resulted in famine being declared in July 2011 by the United Nations, is closely linked with the issue of war, conflict and governance. This situation is, unfortunately, all too familiar. In several countries and regions, such as the Congo, recent large-scale civil wars have disrupted the lives of ordinary people. Long term guerilla wars, such as in Uganda, have terrorized the countryside and caused much destruction. People have fled the warring armies and left their farms and livelihoods. Farmland has fallen into neglect and production has fallen, with many of the male population being killed or drafted into the various armies. The women and the children are the largest group among the refugees.

The United Nations Children’s Fund (UNICEF) and the Red Cross have in particular been active in bringing relief to the refugees and the internally displaced people

of Somalia. These organizations are also drawing attention to the hunger problem, such as in the Red Cross' "*World Disasters Report*" 2011 which focuses on hunger and malnutrition. The same goes for the report "*A Life free from Hunger*", issued by the Save the Children relief organization in February 2012.

## **Conclusion**

Regularly, the food security system is severely tested by natural disasters, such as floods and droughts, resulting in famine. The latest example of such a situation is in Somalia and the Horn of Africa, where the situation is closely linked to conflict and war. War and famine demonstrates the vulnerability of food security. The issue of building up resilience in weak communities against such situations is becoming more prominent on the international agenda. I have now in this chapter and the previous discussed some serious challenges to food security in this chapter and the previous chapter. In next chapter I will discuss how to implement food security.

## **4 Implementing Food Security in the 21st Century**

### **Introduction**

In this chapter I begin by discussing globalization and the concept that globalization begins at home, with individual countries and their governance and policies. The FAO Committee on World Food Security is a body in which the UN system has given a wide responsibility to make recommendations for a global food security governance structure. The new director general of FAO, Mr. Graziano Da Silva has made food security governance a priority. Market solutions and GMO's have strong advocates when it comes to food security and I will mention efforts to combining emergency relief with the building up resilience to disasters in vulnerable societies. Furthermore, I will conclude with the impact of FAO in the Rio+20.

### **Governance and Food Security in the Age of Globalization**

Today we live in an increasingly interconnected and globalized world. Globalization has led to many great advancements and contributed to many political and social changes such as; toppling dictatorships during the Middle East spring, as was the case with globalized information technology. In the 90's and the first years of the 21<sup>st</sup> century, globalization seemed to be the key word in development cooperation and the

solution to most global problems.

Robert L. Paarlberg, one of the foremost authorities on food security governance, wrote an extensive discussion paper for the International Food Policy Research Institute (IFPRI) in 2002 on *Governance and Food Security in the Age of Globalization*. His main conclusion is that solving the problem of hunger and food insecurity must begin with a national rather than a global focus. Beginning with governments in developing countries there is a need to provide so-called public goods, civil peace, rule of law, transport infrastructure, clean water, electrical power, and funding for public research in order to develop technology. Governments need to be able to have this infrastructure in order to reap the benefits of globalization. Paarlberg focuses mainly on Sub-Saharan Africa and South Asia, in his analysis on the effects of globalization on developing states and comes to the conclusion that the agricultural sector is usually protected against foreign intervention and globalization. LEDC's food and farm production systems and development policies are usually shaped by national government authority. Most South Asian and Sub Saharan African states have shielded themselves from the effects of globalization and not participated properly in the international markets. Governments, therefore, need to change their central control on the food production sector. Countries suffering from violence and war have less ability to give aid to their people. Hunger persists in nations and regions suffering from inadequate national governance.

The Second half of the 20th century marked a dramatic increase in the number of intergovernmental organizations such as the United Nations and European Union, as well as private institutions. Private markets expanded sometimes at the expense of public state owned enterprises under the pressure of politics and the market. The World Bank and

IMF have advised LEDC's to lift national controls on internal commodities, put in supply markets, relax restrictions on foreign currency exchange, privatize state owned enterprises, and weaken the role of state over food and farm sectors.

The author maintains that food security and farming is less globalized, and there is a more national political dominance and farm subsidy programs both in weak and strong states. In industrial countries food production patterns and practices continue to be shaped by national agriculture trade restrictions, national farm price support and income subsidy policies. A contrast between poor and rich countries regarding food governance is portrayed by the example that in the wealthy countries farming is subsidized generating surplus but in poor countries farming is taxed. The Uruguay Round of 1986 - 93 on multilateral trade negotiations did not bring about reform in the agricultural sector. The paper is, however, optimistic about the role of globalization, as something that could improve the situation if the right measures are taken on the national level.

### **The Role of the Committee on World Food Security (CFS)**

The FAO Committee on World Food Security (CFS) continues its role in the food crises. Through the CFS the UN system has built up a global food security governance structure. In the 35th CFS Session in 2009 members agreed on a wide-ranging reform to make CFS the foremost inclusive international and intergovernmental platform involving all stakeholders dealing with food security and nutrition acts as a central component in the evolving Global Partnership for Agriculture, Food Security and Nutrition. The CFS, which was established during the food crisis of the 1970s, upon recommendation from



the 1974 World Food Conference, has been the UN's forum for reviewing and following up on policies concerning world food security, strengthening linkages at regional, national and local levels and basing decisions on scientific evidence and knowledge. In addition to member countries, participation in the Committee is made up of a wider range of organizations working with food security and nutrition, such as organizations and agencies like IFAD, WFP, World Bank, IMF, WTO and the UN Secretary-General's High-Level Task Force on the Global Food Security Crisis. It also includes civil society and NGOs, particularly organizations representing smallholder family farmers, fisher folk, herders, the landless, urban poor, agricultural and food workers, women, youth, consumers and indigenous people. The Committee is open to representatives of private sector associations and philanthropic foundations. Another important part of the new Committee is that it will receive advice from a High Level Panel of Experts (HLPE) on the subject of food security and nutrition in order to ensure that effective solutions are based on scientific and knowledge-based analysis. It also has an Advisory Group. According to the CFS Information Note the tasks of the committee are the following:

- Coordinate a global approach to food security.
- Promote policy convergence.
- Support and advise countries and regions.
- Coordinate at national and regional levels.
- Promote accountability and share best practices.
- Develop a global strategy framework for food security and nutrition

*(FAO Committee on Food Security Information Note).*

The last CFS session (37<sup>th</sup> Session) was held 17<sup>th</sup> – 22<sup>nd</sup> October 2011. The Committee agreed upon a set of recommendations: investment in smallholder agriculture and gender. Reducing food price volatility at the world market level by enhancing transparency and information-sharing and strengthening the coordination of responses. The Committee urged major food producing and consuming countries to participate in the new Agricultural Market Information System (AMIS), established by the twenty largest industrial countries, G20, and collaborate towards providing the international community with high-quality and timely market information products. The CFS recommended that governments play an increased role by developing stable, long-term national social protection strategies and safety nets, aimed at vulnerable populations in particular (Committee on World Food Security (CFS) Information Note (FAO Website)).

The CFS addressed issues like biofuels and investments, linking the growth of the biofuels market with food price volatility. The CFS noted that biofuels should be produced where they are socially, economically and environmentally feasible. Where appropriate, governments should review biofuels policies with an eye on the opportunities and challenges they may present for food security. The CFS recommended an increase in stable and sustainable public and private investment to strengthen smallholder production, boost agricultural productivity and foster rural development. Agricultural policies and public investment should give priority to food production and nutrition and increase the resilience of local and traditional food systems and biodiversity. Other priority areas flagged by the CFS include reducing post-harvest losses and fostering smallholder-inclusive local, national and regional food markets

including transportation, storage and processing. The Committee called for approval of the Voluntary Guidelines for the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security.

*(See Committee on World Food Security, Thirty-seventh Session, Rome, 17 – 22 October 2011, Final Report. (FAO website) and Committee on Food Security Information Note (FAO website)).*

### **New Director General of FAO stresses Food Security Governance**

At the beginning of the year important changes took place at the FAO when Dr Jacques Diouf retired as Director General after 18 years at the helm of the organization. Dr Diouf had worked tirelessly for the recognition of food security as the most important issue in development cooperation, as well as in humanitarian assistance.

His successor, Dr Jose Graziano da Silva from Brazil had made food security governance the center of his bid for the post of Director General. He builds his policy on his work as Brazil's Extraordinary Minister for Food Security and Fight Against Hunger, in charge of implementing the "Zero Hunger Programme" in Brazil, beginning in 2002, which was thought to have been very successful and improved the food security situation in Brazil considerably.

Dr Graziano emphasized his policy in his statement at the 143rd FAO Council in December 2011 when he referred to five pillars to focus on: "to eradicate hunger; to accelerate the shift towards truly sustainable food consumption and production systems; to promote fairness in the global management of food; to complete the agreed reform

process improving decentralization; and to expand South-South cooperation in FAO”(Graziano Statement).

In his Candidature Brochure, “Working Together for the Good of Humanity,” issued in April 2011, he calls for the “... emergence of a truly effective system of global governance for food and nutrition security that can reduce and mitigate the impact of future crises; mitigation of, and adaption to, the process of climate change; and issues relating to food safety, gender, rural employment and the sustainable use of natural resources, especially fresh water, land, forests and the oceans. FAO must act decisively in the public interest in creating a global and regulatory framework that protects producers and consumers from major risks ... The huge benefits offered by the globalization of food management systems have to be matched by adequate safeguards to limit associated risks, ... Safeguards are also needed to ensure the conservation of natural resources, both forests and fishing grounds...”(Graziano, Working Together).

The same goes for the last pillar, where Dr Graziano’s ideas of South-south cooperation is of interest: “Expanded South-south cooperation, including trilateral arrangements under which one country provides technical cooperation and another financial resources...”(Graziano, Working Together).

In the above mentioned speech Dr Graziano proposed two levels of action. On one hand to scale-up the support to individual countries at the local level. In this context he said it was necessary to cut across the conventional divide between emergency interventions and development programmes, and to increase their capacity to gain resilience to future shocks. This means an increased focus on the emergency work of the FAO. For this purpose he intends to create teams to draw together FAO’s skills in policy

advice, investment planning, resource mobilization, emergency response and sustainable development, as well as deepen cooperation with international organizations and, civil society and the private sector. On the other hand, at the global level Dr Graziano called for a more efficient global governance system for food security. In this context he stressed the role of the CFS and called for a new inter-agency coordination involving the heads of FAO, IFAD and WFP.

### **Market Solutions**

There are strong advocates for market solutions. In the November 21st 2009 issue, the Economist the leader on “How to feed the world”, called for improved markets: “Lack of reliable markets is the biggest barrier to rural development, since without them farmers have little incentive to grow more.” As an example for improvement the leader mentions as diverse matters as rural road building, better price information system and building grain stores, and even temporarily subsidizing better seeds and fertilizers. However, one way of raising yields is to use genetically modified (GM) crops that use less water. The leader then warns that food security could easily turn into “food-self-sufficiency” with growing distrust of markets and trade and governments putting up protective walls. Europe is used as an example where self-reliance has led to wastefulness. The conclusion is that feeding 9 million people in 2050 requires markets and trade and “...rejecting agricultural markets would be a disaster” (Economist, 13).

Investments and markets are further explored in the same Economist issue in an article headlined “If words were food, nobody would go hungry.” The article refers to the

L'Aquila meeting in July 2009 of the G8 countries with its promise of increased spending on agriculture by 20 billion USD over the next three years. The amount is said to fall short of the 44 billion USD needed annually to end malnutrition according to FAO. In 2009 the World Bank increased its spending on agriculture by 50% to 6 billion USD. Individual governments began increasing spending on agriculture. Several African countries began to fulfill their promise from 2003 of spending at least 10% of the budget on agriculture. The article lists measures in several countries aimed at improving the situation, but warns that there is a turn away from markets which could undo the positive development, such as countries banning grain exports and the so-called "land grab" development. Countries that can afford food imports, such as China, Saudi-Arabia, South Korea, have managed to buy or lease roughly 20 million hectares of the best farmland in poor countries in order to grow food for their own imports instead of through international trade, thus undermining the food trade. The situation has also been undermined by failure of the WTO Doha Round. The biofuels issue is also a relevant factor. Several countries have done little to reduce subsidies of biofuels production which have taken large quantities of maize out of the food market and put it into the fuel production.

### **Building Resilience and Linking Relief with Development**

The issue of resilience is now more prominent on the agenda than ever before, especially improved resilience to natural disasters and food insecurity. The crisis in the Horn of Africa brought attention to the need for the so-called twin-track approach of

providing emergency access to food and to address the root causes of the famine, as well as longer term capacity building, and thus lowering the risk of famine and food insecurity following a natural or man-made disaster.

FAO has in its Information Sheet on the World Summit on Food Security 2009: Global Governance of Food Security that, “There is a tendency for short term emergency food and agricultural aid to increase and for long term assistance in strengthening public goods to decrease But what is the proper balance? How can improved global food governance enable donors and implementing agents to ensure long term aims in strengthening human and institutional capacity in developing countries is properly addressed?”

*(FAO Global Governance of Food Security).*

The FAO has programs aimed at building the resilience of households in the face of future shocks. The FAO *2012 Consolidated Appeals Process (CAP)*, which spans over 18 countries, addresses the root causes of vulnerability and increase resilience through disaster risk management. Building on local structures and knowledge is the best approach to strengthen resilience. The FAO emergency response focuses on rebuilding livelihoods, decreasing dependency on external aid and a quicker return to self-sufficiency. The FAO focuses on essential farmer’s needs, such as providing drought-tolerant seeds and fertilizers, animal feed, tools, water and veterinary care to protect the remaining livestock, and to help rebuild their herds. Cash-for-work will play a role in rebuilding the necessary infrastructure. FAO is a member of the International Strategy for Disaster Reduction System (ISDR), helping countries develop risk reduction policies and practices in agriculture, forestry and fisheries, relevant for disaster prevention and

mitigation.

### **Genetically Modified Organisms**

In the 1970's techniques began to be developed creating genetically modified organisms. By the 1980's the GMO's had become a controversial global issue. GMO in regards to food production refers to the genetic engineering of biological organisms. The process begins with the exploration and analysis of DNA molecules in order to extract specific wanted genes. The sought after gene is then transferred into a plant or animal, in order to change, gain and reproduce a new organism that carries the new DNA. For example the introduction of new genes with more protein, called novel proteins. These new proteins can allow the plant or animal to be more resistant to pests.

In the context of agricultural production the GMO can allow for a reduced time to produce crops as well as creating larger yields. A common example of a stable food source introduced to GMO's is for example rice. Since its adoption and introduction into the agricultural and farming sectors there has been much criticism of GMO's, for example the fear of the consequences of introducing it to the ecological system and the effects on biodiversity. However, GMO's have been introduced worldwide and are used widely in the agricultural sector. In the United States in 2002 GMO products made up for 66 percent of planted crops. "By 2009, genetically modified crops accounted for 85 percent of all corn, 91 percent of all soybeans, and 88 percent of all cotton acreage being grown in the United States" (McDonald 67).



## **Sustainable Agriculture and Rio + 20**

Now member countries of the UN are preparing for a participation in the Rio+20 conference. It is a common approach that the conference document should give a clear guidance toward sustainable food and nutrition security and that the only way forward is viewing agriculture as renewable and sustainable aiding smallholder farmers. The Rio+20 draft document, called “The Future We Want”(see website), includes important elements, such as the right to food, increased investment in local food production, access to food-markets, special attention to vulnerable groups, women and indigenous farmers, stability of food prices and access to resources. The document deals in Chapter V, “Framework for action and follow-up”, with the issue of food security. The text mentions important elements in relation to food security, such as the right to food, increased investment in local food production, access to food-markets, special attention to vulnerable groups, women and indigenous farmers, stability of food prices and access to resources:

64. We reaffirm the right to food and call upon all States to prioritize sustainable intensification of food production through increased investment in local food production, improved access to local and global agri-food markets, and reduced waste throughout the supply chain, with special attention to women, smallholders, youth, and indigenous farmers. We are committed to ensuring proper nutrition for our people.

65. We call for more transparent and open trading systems and, where appropriate, practices that contribute to the stability of food prices and

domestic markets, ensure access to land, water and other resources, and support social protection programmes.

66. We further support initiatives at all levels that improve access to information, enhance interactions among farmers and experts through education and extension services, and increase the use of appropriate technologies for sustainable programmes.(Rio plus 20, Draft Document)

The Rome-based agencies: FAO, IFAD, WFP submitted a paper with 10 points in connection with the Rio + 20 outcome document. These points describe the food security situation, and highlight several solutions. The first point states that the First Millennium goal of halving the proportion of hungry people in the world by 2015 will not be achieved. Potentially billions of people in the future will not be able to contribute to economic growth or invest in the sustainable management of natural resources, especially in view of the fact that growth in agricultural productivity is slowing with the rate of growth in yields of major cereal crops declining steadily from 3.2 percent in 1960 to 1.5 percent in 2000. Then the points draw attention to the view that without fundamental changes, food and nutrition security for all, will not be possible. There is an urgent need for scaling up. Agriculture can, indeed, lift large number of people out of poverty, using natural resources in a sustainable way, providing environmental services such as soil and water conservation, biodiversity maintenance and carbon sequestration, and be crucial in the transition to a green economy. There is a need for significant investments in research, technology and human capacity. And a particular need to focus on the role of women among the smallholder farmers, as well as social protection and food-based safety nets,

such as fairer trade, health, gender equity to be taken into account, and a strong leadership on national level and support by international institutions.

## **Conclusion**

In this chapter I addressed several important aspects of implementing food security in the 21<sup>st</sup> century. This will be a difficult task which is demonstrated by the statement in the submission of FAO, WFP and IFAD to the Rio plus 20 outcome document that MDG1 will not be reached in time. However, these organizations and the international community continue to strive towards implementing food security. FAO has through the CFS, put in place a structure which provides a institutional framework for solutions. The new director general of the FAO has made food security governance his top priority. Little has changed at the local level with regard to food governance in the last years. Governments tend to protect their agricultural production from outside influence and at the same time there are strong opinions voiced that the only way to guarantee food security is by creating a truly global and free market for food products. In the next two chapters I will specifically discuss two important issues, which can contribute considerably to food security This includes on the one hand to enhance the human and equal rights of women and secondly the I will discuss the importance of fisheries in the respect of food security in developing countries.

## 5 Women and Food Security

### Introduction

In the last years more attention has been given to the role of women in food security. It is now generally accepted that women play an extremely important role in the food production and the cultivation of land in the developing countries. The CFS has recognized the crucial role of women in ensuring food and nutrition security and that female smallholders should be given equal treatment in agricultural programming, both as a matter of human rights and to promote economic development. Women should be guaranteed equal access to resources, including land, as well as participation in all decision-making processes related to food and nutrition security.

The brochure “FAO at Work 2010-2011, Women-Key to Food Security” argues that “...if men and women had equal access to productive resources in agriculture, food output would increase by between 2.5 and four percent - enough to pull 100-150 million people out of hunger and help achieve Millennium Goal One”. This view is echoed by FAO, which dedicated its annual report on the *State of Food and Agriculture (SOFA)* in 2010 - 11 to the theme of *Women in Agriculture, Closing the Gender Gap for Development*. This report is a groundbreaking document, putting women in the context of food security. The findings of the report could be of vital importance to food security, if proper attention is given to it. In this Chapter I give an account of the report which

describes the situation of women in agriculture, fisheries and forestry and some important measures that are needed in order to improve the situation of women and thus improve food security.

### **The Situation of Women**

The SOFA report states that women farmers are 20 - 30 percent less productive than men because they do not have the same access to finance, land and technology. Furthermore, it is more difficult for women to gain a proper education, training, information and knowledge. If women had these resources as men they would produce 20 - 30 percent more food and their families would enjoy a better life and health. Food security would be greatly improved, as well as rural societies in the developing world in general.

However, in many developing countries there is a cultural tradition of discrimination towards women, acting as a barrier against women rights. They have less access to education and finance. Women are seen mainly as wives and mothers and this has led them to be less productive than men, since they also have the time-consuming role of homemakers and caregivers. Cooking, fetching water, child care and collecting firewood can occupy a large part of the day.

In much of the developing world there is a lack of education for women, which prevents women from achieving their full potential. Of the world's 800 million illiterates some 60 percent are women, a major problem with the increased complexity of technology used by farmers. Governments need to focus more on finding ways to

increase school enrollment for women and promoting female participation in adult literacy programs. “Of the world’s more than 800 million illiterates, some 60 percent are women” (Women Key to Food Security, 3)

There needs to be a financial incentive for creating initiatives for women and girls. A prominent reason why women produce less than men is that they have less money to invest in their farms. They have less access to credit because their lack of land tenure means they have little to offer as collateral for loans. Micro-financing programs have proven very effective in overcoming this barrier. A crucial first step is allowing equal rights for men and women entering into financial contracts.

### **Women in Agriculture**

The SOFA reports FAO provides a great wealth of information on women around the world and the conditions they live in. Women account for almost half of the world’s farmers, over 43 percent. Their contribution to the agricultural labor force is around 60% in some countries. Women are active participants in smallholder farms, yet their role in intensive production and market chains associated with large commercial enterprises has been much less documented. While pastoralists and small scale mixed farming continue to be important in meeting the needs of rural consumers, the demands of the growing urban population in developing countries is meat, milk and eggs from intensive farming chains.

It will be a challenge for female farmers to meet these demands due to limited access to land and credit. In Africa women tend to control the production of agricultural

meat for home consumption and the marketing of these products. This has resulted in poultry and small scale dairy projects being very popular as development projects in Africa, with the aim of improving the conditions for rural women. Statistics reveal that women are just as successful as men at running, and generating an income. They do tend to own fewer animals yet this is mainly due to labor constraints. Livestock ownership has become more and more attractive for women, yet there are still constraints on ownership of land.

The more limited possibility for women to be independent, the more likely these women will become employees. In recent years there has been an increase of women in the agricultural labor force. Female employment rate varies across regions, from around 15 per cent in the Near East and North Africa to over 60 percent in sub-Saharan Africa. In Asian and Sub-Saharan Africa women are more commonly working in the agricultural sector than in other sectors of the food industry in developing countries. In Latin America there is overall high women's participation in the labor force but a lower participation in agriculture than in other developing countries. This reflects the higher educational level of women in these countries, economic growth, diversification and cultural norms that support women in changing to service jobs in urban areas. Over 20 percent of Latin America's labor force was female in 2010.

The SOFA report, however, speculates on the validity of some agricultural labor force statistics. These statistics may undermine the amount of work that women do, because women are less likely than men to define their activity as work, even when they might work longer hours than men. Time-use surveys that cover all agricultural activities reveal considerable variation between different states, as within a state.

## **Women in Fisheries**

Women play a big part in the fisheries industry and comprise over 30 percent of the total employment in fisheries both in the primary and secondary sectors, which amounts to 45 million people worldwide working in the primary sector. Information provided by FAO, according to SOFA, encompasses 86 countries reveals that in 2008 there were 5.4 million women working as fishers or fish farmers in the primary sector, representing 12 percent of the total. In two major fish producing countries India and China women represented over 21 percent and 24 percent respectively of all fishers and fish farmers. However, it has been difficult for women to engage in commercial and offshore and long distance capture fisheries due to their domestic responsibilities and social norms. They are more commonly involved in commercial activities from small boats in coastal or inland waters. There are exceptions though, for example in West Africa there are the so called Fish Mama's that own capital and are very involved in all aspects of the fish trade from production to marketing and the sale of the fish. In Asia in particular women play a greater role than men in fisheries and aquaculture. Women are reported to constitute 33 percent of the rural aquaculture force in China, 42 percent in Indonesia and over 80 percent in Vietnam. The significant role played by these women is in processing and marketing, where they are very active in all regions. Furthermore, most fish processing is performed by women, either on the household level or the industrial level, or as laborers in large-scale fish processing industry.



## **Women in Forestry**

Women also play an important role in various types of forestry, agro-forestry, watershed management, tree improvement and forest protection and conservation. Forestry is an important source of income for women in rural areas. From nurseries to plantation, from logging to wood processing, however, women's roles in the forestry industry like many other sectors have not been properly documented. Their wages are not equal to that of men, and their working conditions tend to be poor. According to SOFA, "The Global Forest Resources Assessment 2010" estimates that over 11 million people are working in the forestry sector. However, there is no data presenting the number of women employed in this sector. FAO studies in Africa and Europe have shown that women are mostly stuck with menial jobs and are rarely in the position of senior or policy-making positions, rather in administrative and support roles. Professional women foresters tend to be in specialized jobs such as in research.

## **Closing the Gender Gap**

The SOFA report discusses various tactics that can be proposed in order to close the gender gap. For example, eliminating discrimination of women under the law. "Governments have a fundamental responsibility to ensure that their laws and policies guarantee equal rights for men and women to control assets such as land, and to receive services such as education, extension and credit (SOFA 61). Furthermore, governments

must guarantee that institutions are supportive of gender equality under the law. It is important to enable women to understand their rights and give them official support in claiming their rights.

Rural institutions are essential in reducing poverty, enhancing economic development and supporting small landowners and the rural poor, particularly women. Rural membership-based institutions such as producer organizations, labor unions and trade groups, are very important in this respect. "Women's groups have an important role to play but other rural institutions must be accessible to women and their needs. ...Many women are compelled to spend too much of their time in drudgery: fetching water, carrying wood, and processing food by hand" (SOFA 61).

This work needs to be done due to the lack of development in the environment, for example where there is a lack of modern water pumps, modern fuel sources, and grain mills are missing. Investing in basic infrastructure can liberate women from time-consuming work patterns. Although there are many challenges facing the gender issue, building up the human capital for women is fundamental. "General education and the ongoing transfer of information and practical skills will broaden the range of choices that women can make and give them more influence within their households and communities. Building women's human capital makes them better farmers, more productive workers, better mothers and stronger citizens"(SOFA 62). There are many ways to encourage the primary education of girls, one being school feeding programmes. Several international organizations such as FAO and WFP organize school feeding in order to bring more girls to school, since the school meals are sometimes the main nutritional intake for children in poor rural communities.

Some assets are complimentary; assistance to women therefore needs to be appropriately combined and should be considered in their broader social context. It is not enough to only address one constraint but ignore others which are equally influential. “The gender- related constraints women face due to power relations within the family and community may affect their ability to engage in economic activity and regain control over the assets they obtain. Bringing men into the process will help ensure that progress towards gender equality is broadly beneficial and sustainable” (SOFA 62).

It is harder to understand the many gender aspects for food security, such as in agricultural production, fisheries and forestry are due to inadequate data. Agricultural consensus must focus more in areas where women are active. The data must include ownership, access to land, and control of productive resources, such as water equipment, information and credit. They need to avoid gender biases. More detailed surveys as well as revaluation of past surveys can allow for a clearer picture of gender biases.

## **Conclusion**

A good agricultural policy will understand the affects it can have on the gender issue. Making women’s voices heard in all policy-making decisions at all levels is crucial. Policies must include baseline data and rigorous monitoring and evaluation, and should be flexible in order to change with unexpected developments. Closing the gender gap in agriculture and fisheries is a top priority today and for the future. Only the full and equal participation of more than half of the world’s population will set the world free from hunger. Closing the gender gap could reduce the total of undernourished people by

100 - 150 million. Governments and donors have helped revitalize many agricultural industries in developing countries; however these aims will be achieved with more velocity if gender equality would be promoted as well. It would maximize the productive potential of women. In regards to food security it has become evident that MDG1 to reduce hunger and poverty and MDG3 on gender equality go hand in hand. In the next chapter I will bring up the role of fisheries and aquaculture for food security which has not gained the proper attention, yet has enormous potential in providing protein for people in the developing countries.

## **6 Food Security in Fisheries and Aquaculture**

### **Introduction**

Fisheries and aquaculture have for a long time been underestimated as an important part in the solution to the hunger crises. These sectors demonstrate in many ways the multifaceted nature of food security governance, which varies considerably according to countries and regions. There are artisanal and small-scale fisheries, as well as industrial fisheries. In some countries fisheries are mainly a source of protein for the people living from fishing. For others it is a source of cash and currency generated by trade in fish products, both local and international. Governance and sustainability are key words in fisheries, as well as expanding on issues related to gender and the impact to the environment. As is the case with agriculture, there must be a clear infrastructure on the local level and a mechanism that provides for participation in internal and external markets, for the sector to fulfill its role in food security.

### **Contribution of FAO**

Through the Code of Conduct for Responsible Fisheries from 1995, FAO covers the whole spectrum regarding fisheries and aquaculture issues in a sustainable way, and is a very useful guide for nations. Emphasis and practical implementation remains an issue

for the national and regional level. The work of FAO is very important for future developments in fisheries, fish trade and aquaculture. FAO, as a knowledge center, and its Committee on Fisheries (COFI), is regarded by most countries to be the appropriate global forum to address global fisheries issues. The same goes for the COFI sub-committees on Fish Trade and on Aquaculture. FAO has achieved considerable success through various guidelines, such as the “Guidelines for the eco-labeling of fish and fishery products from marine captured fisheries”, and the “Guidelines on Ecosystem Approach”.

Most large fisheries nations believe that discussion on fisheries within the UN system should first and foremost be based on the UN Convention on the Law of the Sea (UNCLOS) adopted in 1982, as well as on sustainability and the principle that management and decision-making on the conservation of the ocean ecosystems and the utilization of the living resources should lie within those states which have the greatest interests at stake and are directly affected by such decisions. The responsible management of living marine resources should be best carried out at the local level or regional level, in partnership with those who are closest to and depend upon the resources for their livelihood. This is very important if sustainability is to be preserved.

Fisheries and aquaculture are extremely important for the reduction of poverty and undernourishment, both small-scale fisheries and trade in fish products. For the coastal developing countries, fisheries can be a great source of protein if locals manage their own fish stocks properly and prevent other countries from depleting their stocks. It demonstrates clearly the high value of fish products that the earnings from these products for the developing countries exceed the foreign exchange revenues earned from any other

traded food commodity. Fish trade can thus both enhance food security and provide valuable export revenues for the countries in question. The developing countries export half of all fish exported in the world and receive 20% of fish export revenues, more than 13 billion dollars. They will gain a bigger share by developing their fisheries and aquaculture (COFI report).

### **Fisheries, Food Security and Trade: Governance A Key to Success**

Governance in fisheries is explored by Jean-Francois Abgrall, a researcher in Cambridge, USA, in his report *Fisheries, Food Security and Trade: Governance A Key to Success*. “Food security is not only about assuring adequate supply of food and of the means to acquire that food, it is also about development and people, about empowerment, gender equity and protection of the environment”(Abgrall, 1).

In the Abstract to his report, Abgrall states regarding the two main fishing sectors, small-scale and industrial, that: “The governments will have to maintain a balance between the two sectors”(Abgrall, 1). He touches upon two important elements; how the resource is managed and sustainability, calling for adequate institutions: “It means efficient governance. Most of all, it requires political will.”(Abgrall 1). Abgrall highlights the need for a proper institutional set up, including management, creating jobs and revenues, protecting fish habitat and sustainability. In other words a clear infrastructure. The primary responsibility is with the authorities in charge of managing the fisheries, particularly since UNCLOS, which in Art. 61 gives “... that responsibility to the coastal States, very specifically...”(Abgrall, 2). Management in fisheries could take on different

forms, such as licensing of territorial or stock use rights, determining fishing seasons or restricting the use of certain fishing gear.

Abgrall suggests that in fisheries the sustainability of the resource should be the first and paramount objective. He emphasizes that "...the governments must also decide on the proper balance between proteins and cash. That choice will often translate into a balance between small-scale/artisanal fisheries and industrial ones"(Abgrall 3). This balance "... is a central element of the food security policy in fisheries"(Abgrall, 3). Small-scale fisheries are largely subsistence fisheries, especially in Asia-Pacific and in Africa. Abgrall also explores gender equity and how it is becoming a better-known fact that women play a crucial role in food security, see earlier chapter.

### **Small-scale vs. Industrial Fishing**

One issue that Abgrall deals with is the conflict and interaction between vulnerable small-scale and large-scale industrial fishing, driven by market forces. The author suggests several possibilities in protecting small-scale community-based fisheries from being overwhelmed by industrial fishing with restrictions, such as on the use of certain gear, and prohibitions of fishing certain stocks or prohibition from fishing in certain areas. However, "... there is usually no reason why small-scale fishers should be immune to market incentives"(Abgrall, 5). The article explores the role of the central authority in helping establish sustainable fisheries and maintains that national governments will have to be tolerant and help with education, building up markets and encourage decentralization.



For industrial fisheries, governance and management is essential. "Estimating the stocks, allocating the rights to fish, and enforcing the rules are complicated and a costly exercise"(Abgrall, 5). He mentions the fact that "individual transferable quotas" (ITQ's) are more and more popular as a fishing management scheme. Exporting fish to international markets brings important benefits to industrial fishing and cash and foreign currency to the owners of the vessels and their communities, but there are possible negative aspects: "...it may become more attractive to sell abroad than on the domestic market depriving the local population of important sources of proteins"(Abgrall, 5). This could affect communities in the developing countries putting them at the mercy of the world fish markets. Abgrall also mentions that subsidies, mainly in the developed countries, inevitably lead to large fishing fleets and over-fishing.

Many developing countries do not have the capacity to exploit their own resources in the "Exclusive Economic Zone" (EEZ) and revert therefore to making agreements with foreign enterprises giving fishing rights to other nation's fishing fleets, sometimes at the risk of over-fishing. It is important to keep in mind that sustainability in fishing can only be carried out if the fishing rights are clearly defined.

Protecting their interests in trade negotiations is important for the developing countries. This also applies to fisheries and involves the aspects of the renewable nature of the resources and the question of property rights. Abgrall quotes Dani Rodrick in her 1997 publication: "Has Globalization Gone Too Far?", (Institute for International Economics, Washington D. C.), "...who argues that for globalization and trade liberalization to be truly successful, countries must be given the opportunity to build their own institutional support for their market economy based on their values and

norms”(Abgrall, 8). A difficult issue in the discussion on fisheries has been the issue of subsidies, which contribute to over-capacity in the fishing fleet and over-fishing. Many fishing nations have called for the elimination of trade-distorting subsidies as a necessary measure in support of sustainable development.

### **Conclusion**

Governance is the key to success for the developing countries. The fisheries sector demonstrates clearly that in order to preserve the food security governments have a clear role. The main responsibility for food security in fisheries rests with individual states themselves and the responsibility entrusted to coastal states by UNCLOS. Food security is tackled firstly by individual states, but a coalition of countries is needed in order to follow international trade talks. It is also important for national authorities to create strategies both for small-scale and industrial fishing, build up capacity in small-scale fisheries, monitoring international negotiations in the field and investing in human resources policies. There must be political commitment on the part of central authorities. This commitment must be reflected in a national policy on fisheries. The infrastructure needs to provide for resource management within a nation state and possibilities to participate in the global markets. This begins with the people in charge of policy making. There will always be a competition for the Earth’s natural resources. The living marine resources of the oceans are no exception.

## Conclusions

The international community and FAO especially, have put in place a comprehensive and complicated structure in order to fight food insecurity in the world. This has been done through FAO's normative work as a knowledge organization, as well as policy guidance. FAO has also put in place institutional mechanisms to deal with the issue in the international context, such as the CFS, and created a platform for various opinions to be discussed, such as free market solutions, state control policies, protectionism, trade policies, subsidies, biofuels and GMO's, as well as governance in general. It has also participated in international cooperation on food security, especially with the WFP on emergency assistance and with IFAD, focusing on the most vulnerable groups.

However, it is now clear that the MDG1 will not be reached by 2015. The reasons for this are the enormous challenges facing food security. There are many obstacles in the way, such as price volatility, population growth, climate change and land grabs. After the initial success of the "green revolution" in the 1960s the nations of the world lost focus and drifted slowly toward the huge problem of one billion hungry in 2012. Investment in agriculture declined considerably, and so did ODA. Agriculture was not "fashionable".

Political events in the developing countries, especially in Africa, have not been favorable. In many countries there are prevalent wars and conflicts with disastrous consequences for the populations. Regular natural and manmade emergency situations resulting in famine and flow of refugees, call for a new approach. FAO is now a vocal

advocate for linking emergency assistance and development, and thus building resilience to disasters like drought and crop failure, in vulnerable communities. There is a need for social protection and food-based safety nets, essential to support resilient livelihoods and protect the most vulnerable from falling into the poverty trap.

Governance remains a key issue. If national governments would put in place solid structures for their nation's food security it would have positive affects across their borders. Food security is not a problem that stops at borders. Governments tend to protect their agricultural production from outside influence. In a globalized world such an important society sector as food production cannot remain isolated. There are strong opinions saying that the only way to guarantee food security is by creating a truly global and free market for food products. It has, however, been an important point in this discussion by the developing countries that trade should not only be free but needs to be fair as well. The trade systems of the developing countries need to be prepared for pan border trade with powerful and experienced partners.

Closing the gender gap in agriculture and fisheries is a top priority today and for the future. Only the full and equal participation of more than half of the world's population will set the world free from hunger. Closing the gender gap could reduce the total of undernourished people by 100 - 150 million. In regards to food security it has become evident that MDG1 to reduce hunger and poverty and MDG3 on gender equality go hand in hand.

Coastal fisheries have a great potential as a part of the solution of the hunger problem and aquaculture is one of the fastest growing commercial sector in many countries, especially in Asia. FAO's role in small-scale and industrial fisheries and

aquaculture governance throughout the decades and its more recent emphasis on gender issues and the role of women in food production, demonstrates clearly the importance of governance.

The world community is now preparing for the Rio+ 20 conference. It will be faced with numerous pressures on food security and the world's ecosystems, such as the loss of crop diversity, extinction of plant species, 32% of marine fisheries which are overexploited, depleted or recovering, degradation of vegetative land surface, deforestation and the threat to freshwater resources. There is also a need to work on better storage technologies, transportation and processing techniques, and retailing to consumer. Without fundamental changes, food and nutrition security for all will not be possible. Agriculture and fisheries can, indeed, lift large numbers of people out of poverty, using natural resources in a sustainable way, and creating a green economy.

FAO and the other Rome-based agencies can be credited with numerous efforts in trying to draw the attention of the world community to the hunger situation. In spite of several summits and high-level conferences, such as the Millennium Summit in New York, the world is now faced with 1 billion hungry people and a growing population. This should be a depressing fact for all those who for years have strived to work for food security. Nevertheless, the world community has no other choice than to continue with its efforts to fight hunger and malnutrition with sustainability, green economies and governance leading the way.

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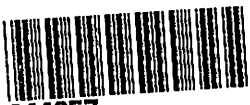
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