


Aula Magna at Rectorate of the University of Torino  
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**1<sup>st</sup> GEOPROGRESS  
GLOBAL FORUM**  
**Food, geography and  
security policies**

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*on*

**“FOOD, GEOGRAPHY AND SECURITY POLICIES”**

*held in Torino, at University, May, 3-4 2016*

***OPENING SESSION***



## **THE GGF INITIATIVE AND THANKS**

Well, since it is already half past 2 pm, we should get started.

Can I have your attention, please?

Good afternoon!

I welcome you all to this conference and thank you for coming.

My name is Francesco Adamo, responsible for this conference which is the main component, the core, of the Geoprogess Global Forum (GGF). In fact, this initiative will continue both with the publication of scientific papers and the development of the debate over the web.

Each edition of GGF focuses on a different problem or set of problems related to territory development, from local to global scale, debates policies, management models and action proposals, with the aim to contribute to humanity progress.

In the edition 2016, the first one, GGF intends to focus on food security issues. In particular, it aims:

- to analyze current food geography, which involves great differences in nutrition problems in different territories, requires different solutions and an overall re-launch of cooperation among people for a sustainable development;
- to discuss the strategies of food security and safety for humanity and put forward new policies and regulations, nationally and internationally.

Its purpose is not only to give continuity to the debate concerning the issues of EXPO and the Charter of Milan (2015) that should be constantly in the spotlight of scholars and public decision makers; but also to try to further involve the scientific community in the hunger problem and to contribute to define the modalities of "Feeding the Planet", that was the slogan of Expo 2015, and particularly how to feed it sustainably.

Opening the work of this conference, let me again thank you all for being here, and especially all the speakers and organizers mentioned in the brochure who have made possible its realization. Among these ones a particular praise goes to prof.sa Maria Giuseppina Lucia, Coordinator of the Executive Committee and to the members of the Conference Secretariat.

I must also thank:

- DIST (Interuniversity Department of Regional and Urban Studies and Planning) as a whole, for the collaboration offered to Geoprogess;
- Compagnia di San Paolo which has financially supported this initiative, proving to appreciate it and giving confidence to our little Association;
- University of Turin, The City of Turin and the Piedmont Region which have granted their patronage and some services;

and not least

- Companies such as: MacBun, Guido Gobino Chocolate and Caffè Costadoro which have paid homage of their excellent products.

In this session, before briefly introducing the work, it is my pleasure to leave the stage to:

- the "landlord", the Rector of the University of Turin, Professor Gianmaria Ajani, whom I thank for his presence and for hosting the GGF in this beautiful and important historical site of the Turin science,
- another one of our host, the Mayor of the City, dr. Piero Fassino, whom I thank and whose presence at this meeting confirms his high sensibility to international issues and particularly to problems that look of others while being of everyone,

and to read the message of:

- the President of the Piedmont Region, dr. Sergio Chiamparino, whose participation is appreciated by all the members of Geoprogess and for which we are grateful.

## **WELCOME ADDRESSES**<sup>25</sup>

### **Mayor of the City of Turin, dr. Piero Fassino,**

I thank Geoprogess ONLUS for the invitation. I would first like to highlight how the topic of this meeting is extremely strategic: food is a fundamental condition for the existence and the survival of each individual. It seems essential to consider the quantities and the quality of food resources, necessary to feed not only individuals, but communities, nations, continents and the entire world. Through this perspective, we are not solely going to deal with the issue of food, but with the future of our planet.

I think that the subject can be addressed under different points of view.

The first one refers to the relationship between world population and food, and its relative distribution. We are currently living in a period in which food production capabilities would be essentially able to satisfy the dietary requirements of the whole world; it is not about underproduction, but about distribution. Humans would actually be able to produce enough to feed world population, but part of it, in large areas is still hungry. The lack of a proper distribution does not depend on an organizational problem; in fact all the necessary means and technologies to the transfer of goods are already available.

As we can see, the issue is strictly connected to a series of contradictions that need to be faced, redefining the relationship between production, consumption and markets.

The second point of view is instead referred to the employment of natural resources. In the most critical areas of the world, hunger is arising from the impossibility to have

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<sup>25</sup> The speeches of the guests reported in this section had been reviewed and adapted by the editors.

access to fundamental resources such as water. The issue is now deeply related to how the right to access to natural resources is managed and to the necessity to address investments, technologies and means toward a strategic direction.

The third and last point regards the authenticity and the origin of crops and goods. It is a topic that is increasingly gathering the interest of experts and communities; it is driven by associations such as Slow Food, engaged in valorizing, restoring space and strength to the authenticity of crops, lost during the last decades of the last century.

The UN agenda for the development, after the Millennium Goal strategy, is articulated in 17 key objectives, among which the points I summarized can be traced. As we can see, the topic has such a great relevance that is currently a priority of the international community, of institutions, of governments and obviously of the whole society. It is a subject to which this Forum is suitably devoted.

I thank you and I wish you good work!

**Rector of the University of Turin, prof. Gianmaria Ajani**

I cordially greet all the colleagues and thank them for their participation to this event, the first International Forum organized by Geoprogress ONLUS, which will be held in this room of the University of Turin.

The topic of this Forum had been properly selected as a continuation of EXPO2015 purpose. Food production and fight against hunger are actions that must be implemented following a scientific approach, useful to the formulation of proper policies on food and food safety.

It had been properly highlighted by the Mayor's speech, how deep is the link between food safety and the contrast between abundance (and waste) and the impossibility to have access to food resources. I would add another key point: how food safety issues are connected to the North/South division of the world.

The area of the world where production levels are higher than the actual needs, enjoy a degree of protection of the supply chain that is instead weak or absent, and far from being implemented in the poorest areas of the planet. The presence of rules and international standards does not imply a uniform and harmonized application around the world.

Nowadays, the role of chemistry and biogenetic research, applicable to food production, is subject to heated debates. The center of the issue is referred to the fact that nature itself is not capable to feed the world entire population without provisions arising from agricultural processes. Especially the modalities of this support to nature are currently the core object of the debate.

I would like to conclude addressing my best wishes to Geoprogress ONLUS for the success of its first International Forum. Finally, I express my satisfaction for the interdisciplinary approach of such an event, as University of Turin places in such an approach one of its success factors, aware that only under this perspective these topics can be properly addressed.

**President of the Piedmont Region, dr. Sergio Chiamparino**

I would first like to address to the organizers of Geoprogress Global Forum, through Professor Francesco Adamo, best wishes for the success of the event; we are pleased to award our patronage because of the commonality of our objectives.

The wish is that the forum will be a fruitful moment of dialogue and exchange of experiences between international experts, aimed at deepening the strategies applicable to food safety, local development, redistribution of resources, and at proposing concrete hints, essential to redefine policies and rules on an international perspective.

Local policies and extemporaneous initiatives are not enough. Data on food geographic distribution, hunger and availability of resources, impose an integrated view highlighting the existing differences among food related issues in different territories. This perspective should produce ad hoc solutions on a global dimension that entail new frameworks of international cooperation.

I wish to this congress of researchers ‘good work’. In addition I would invite to create a network, to work under a problem-solving, pragmatic perspective, to start from small issues, such as the elimination of weak individuals’ daily humiliations, to the application of new technological solutions on water, to renewable energies, to agriculture. These are certainties for us, but are huge changes for disadvantaged communities, necessary to ensure their own future.

I wish you good work to contribute to the process of building a better world!



## **FROM EXPO 2015 OF MILAN TO THE GGF OF TURIN 2016 ON FOOD SECURITY**

The interpretation of the world food security issues consistent with the vision of Geoprogress and mine will be understood it very soon in an introductory speech that points out some assumptions and concepts.

Now, I will only dwell once again on the aims of Geoprogress Global Forum and then point out the reason for a further initiative - after the EXPO 2015 and other initiatives - in which FOOD continues to be a leader.

With this conference, and also opening a debate through social networks, Geoprogress wants:

(1) to focus its attention on the real problems of "Feeding the Planet", the Expo slogan: on issues of world hunger and how to ensure food security for everyone, anywhere in the world. In short, the first aim is to shift attention from the delights and excellent foods (enhanced by the Expo) to how to achieve and give access to all humankind to adequate and healthy food without compromising the ecological conditions of life and production;

(2) greater involvement of the international scientific community in deepening the analysis of internal and external factors of underdevelopment and hunger in different countries, in the technical and political debate on food safety and related policies, domestic and international, and therefore necessarily in the research of new models and development policies at the local and global levels, allowing progressively to overcome the main socio-economic and ecological contradictions;

(3) to raise public awareness on the need to find new ways of development and urge movements and political parties in this research, which seems to have stopped, despite the cessation of the "communist threat," which instead should stimulate such research;

(4) to emphasize the importance of aid and international development cooperation, programs of international organizations (such as FAO, WFP, IFAD ..) and voluntary organizations, highlighting the positive results of their actions in the struggle against underdevelopment and hunger, rather than continue to "cry" on the many problems of the poorest countries, as they seem to do reports of certain international organizations. Cries and complaints do not increase by the public contribution and the one of private citizens of developed countries: in fact, if from the actions of solidarity does not derive positive results, why people from rich countries should donate money to support development projects in poor countries?

It is then true that the cooperation and development policies can and need to change, but it is another matter - which should also be widely discussed, highlighting however how to change.

(5) to highlight that natural, scientific and technical conditions to achieve the goal of zero hunger (and meet the needs of a world population which by mid-century will touch the maximum estimated of 9 billions) are existing, but the goal requires the will of States and their people, requires that the population of rich countries increase their awareness of the ecological and political risks of the current model of development and want to undertake with courage the path of sustainable development.



***INTRODUCTION***



## THE GOAL ZERO HUNGER, A MUST

Francesco Adamo<sup>26</sup>

### *Abstract*

This paper introduces some of the main world issues on food security and highlights the primary obstacles to be faced in order to reach the zero hunger objective. It starts from a brief overview on hunger geography, built on FAO's publications and data, pointing at highlighting that the current 800 million of hungry people are not depending on underproduction issues but on unequal distribution. It points out that possible future issues on food safety should not be attributed neither to world demographic growth nor to the incapability of the planet resources to feed 9.1 billion of people, but to the current soil and natural environment degradation processes, to poorly sustainable agriculture, to the distorted structure and the instability of markets.

### **1. Overview of the state and of the dynamic of world food insecurity**

#### *12.1 What is hunger?*

Food malaise or food insecurity arises, as it is known, from:

1) undernourishment or overfeeding, so from shortage or excess of food in quantitative terms, to be considered primarily as a source of "life energy", quantified in calories:

2) malnutrition, intended as deficiencies of food in terms of quality due to shortcomings of some nutritious elements (or due to excesses) in the composition of the diet – for example of proteins, vitamins and various kinds of salt – and even due to healthiness conditions of consumed foods that can be unsanitary, contaminated.

These are two often connected forms of insecurity, particularly evident in underdeveloped and hungry regions. It is especially about these regions issues, and in general about the hungry portion of population – that consumes a daily quantity of food lower than the minimum necessary for an healthy life – that here I will deal with, for two reasons.

Overfeeding brings deeply different problems and asks for largely different solutions. In addition, the concern for this food insecurity, despite growing, is incomparably lower than that for underfeeding, which is the most serious form of feeding malaise and insecurity, considered by FAO as chronic hunger. Underfeeding increases the concern for the mass of people that are suffering from this condition, and that are probably going to increase in the future, if the fight against hunger is not strengthen and implemented through new strategies.

Providing an overview of hunger geography can be essentially useful for this purpose. We can merely point out which are the mostly hit countries, basing on FAO's

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<sup>26</sup> Emeritus Professor of Economic and Political Geography, President of Geoprogess (Npo)

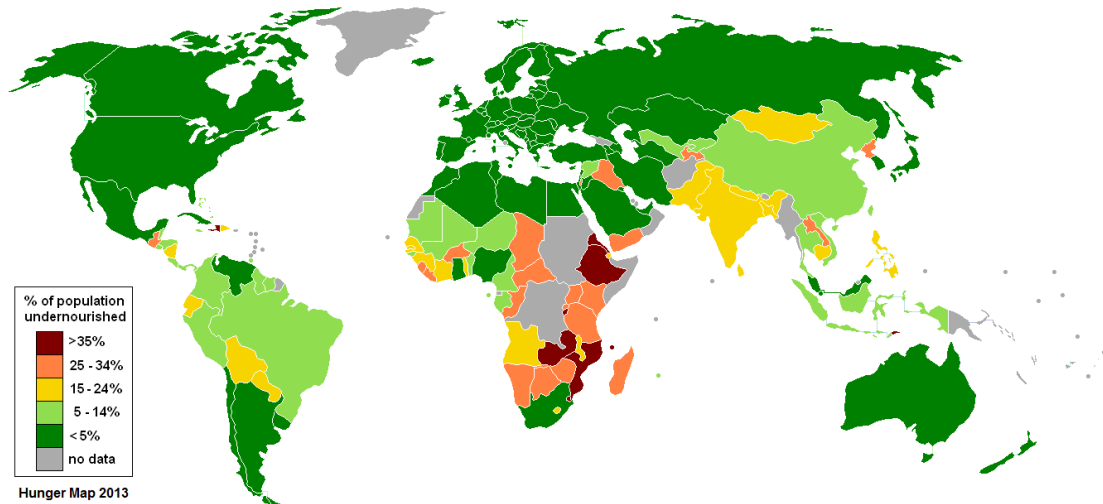
estimates, which is the only available source, and consequently assuming this UN agency hunger concept.

Referring to hunger geography, it is necessary to recall that different types of hunger are existing and they tend to involve different regions. The distinction is fundamental to deepen the subnational analysis and consequently define operational strategies. In this regard, we have to mention Josué de Castro's contribution, a Brazilian researcher who had a deep knowledge of his country and his works constituted a model for various successive studies. In his masterful "Geografia da fome" (1946) he introduced the following concepts: 1) food area, as a homogeneous region relating to specific diets; 2) endemic hunger area, as a food area in which at least 50% of population is subject to permanent nutritional deficiency manifestation (for example peasants landless, that survive working in latifundiums typical of plantation agriculture, inhabitants of traditional subsistence economy regions); 3) epidemic hunger area: area where at least 50% of population is subject to transitory nutritional deficiency (for example area subject to periods of droughts, floods, etc.)

On a subnational scale, the analysis of hunger nature and of its causes are essential and are consequently precisely implemented – by FAO, as by other international, national and subnational organs – to carry out local development projects and to defeat hunger.

### *1.2. World undernourishment and poverty*

In order to measure the degree of the phenomenon and its relative geographic distribution, on a global scale – so orienting international policies – FAO's estimates of malnutrition by country, are doubtless useful. They are the only available, continuously published. For this reason these data are most used and the ones I will report here, even if, it is necessary to highlight that the results of hunger geographic distribution arising from such estimates are not dissimilar or more useful than those of poverty which are based on per capita income (with the same purchasing power). In particular, the countries most affected by hunger coincide with those where poverty is absolute, defining such the countries where at least 50% of inhabitants has an income lower than 1,25\$ a day (line raised at 1,9\$ by World Bank on October 2015) and broadly also with relative poverty countries, defined as such those where at least 50% of population has an income lower than 2,0\$ a day.



The spatial correlation between poverty and hunger points out that the fight against hunger is one with the fight against poverty and underdevelopment, and it does not require, as we will see, just a food production level growth.

The struggle against poverty and hunger is an inevitable objective, not only on a human fraternity and solidarity perspective, but also considering the more general effects of hunger on health and on work productivity. These are highlighted by the strong spatial connection between chronic malnourishment and high morbidity (consequence demonstrated by a multiplicity of medicine studies and due both to hunger-specific diseases and others diseases to which a debilitated body, because of hunger, is more subject), high mortality (child and general) and low work productivity.

Against this struggle is impossible to give up and to face world economic crisis and increasing national and egoistic closures is necessary that the democratic political forces and the international scientific community commit themselves more vigorously.

### *1.3. Tendencies and conditions of progress in the fight against hunger.*

The number of undernourished people in the world is estimated at 795 millions of individuals, one over nine: it is still a huge amount, as mentioned. Nevertheless, this number has decreased of 167 millions of units in the last di decade, and of 216 million in respect of the period 1990-92. About 780 millions of hungry people, the largest majority, live in underdeveloped countries, where in general, the underfeeding index has fallen of 44,4% in respect of the period 1990-92, and nowadays underfeeding involve the 12,9% of the population (FAO, IFAD, WFP, 2015)<sup>27</sup>.

Underdeveloped countries, as a general tendency, have reached the hunger reduction objective set for the year 2015 by the “Millennium Development Goal (MDG), while they largely missed the goal set for the same year by the “World Food Summit” (WFS)

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<sup>27</sup> The number of underfeed people per country is estimated through complex statistical computations, starting from a prevalence index of underfeeding that assess the probability that a randomly selected individual, within a certain population, consumes fewer calories than the necessary ones for an healthy and active life. The computation that starts from per capita calories consumption (food production, plus imports, minus exports, divided for current population) should consider demographic differences and socio-economic inequalities.

of Roma (1996). Wide differences have been recorded concerning the progresses toward those targets (see <http://www.fao.org/3/a-i4674e.pdf>):

- Latin America ( except Caribbean) and Eastern and South-eastern Asia have registered large progresses and succeeded in reaching also the more ambitious WFS objective;
- Caucasian and central Asia, Northern and Western Africa reached only the MDG;
- Caribbean, Oceania, Southern Asia, Eastern and Southern Africa registered some progresses but did not reached the MDS;
- Central Africa and Western Asia reached worse positions, registering even worse percentage of underfeed people in respect of the period 1990-92.

Considering some of the common features of the countries that showed the largest improvements in the last 25 years, it is clear that the main conditions for progress rely on the political stability and on an economic growth supported by healthy social protection policies (toward more vulnerable groups of inhabitants).

In addition, it is necessary to highlight that the success in reducing the number of undernourished people have certainly been obtained, as mentioned in FAO's statement, despite of a rapid growth of the population, the volatility of raw materials prices (that for many of those countries represent a key economic base), the high prices of food and energy, the growing unemployment and the recession occurred at the end of 1990 decade and again in 2008. It is also necessary to point out that the global reduction is mainly due to poverty alleviation and lowered level of food insecurity in some large and highly populated countries.

According to FAO's interpretation, and confirmed by many studies and experiences, additional important cues have been highlighted by the results of the last 25 years:

- "In the short run, the only means to address food insecurity is humanitarian intervention.
  - In the medium and the long term, hunger eradication can only be pursued if all stakeholders contribute to designing and enacting policies for improving economic opportunities, the protection of vulnerable groups and disaster preparedness. Action undertaken at the global and regional levels should take into account country specificities and exposure to natural and human-induced disasters, especially those of small island developing states." (FAO, IFAD, WFP, 2015)

## **2. Zero hunger goal: obstacles and policies.**

Around 2050 it is forecasted that the Earth will reach the maximum level of population, that, according to ONU's estimates, will be close to 9,1 billion of people. Reducing to zero the hunger of the current 0,8 billion of hungry individuals and satisfying the food necessities related to the rise of the planet inhabitants in respect of the current (2015) 7 billion will require a food consumption growth of at least 50%. It is also necessary to consider the increase of demand for a richer diet, necessary to



overcome malnutrition, affecting also regions where underfeeding problems had been eliminated.

Will food production be able to increase to such an extent? If yes, through which policies it will be possible to reach the zero hunger goal? These are the questions that should be addressed and constitute the fundamental world food issue.

### *2.1. Fundamental issues: demographic growth and food production increase..*

Against catastrophic interpretations of the global food issue, I need to highlight that:

1) Eventual future insecurity problems are neither due to demographic growth nor to an insufficiency of resources.

2) The current 800 million of hungry individuals are not a consequence of an insufficient food production but of an unequal distribution and of food wastes.

#### The demographic issue.

Our planet counted 2,8 billion of inhabitants in 1950. In 37 years, between 1950 and 1987, the population doubled. This sharp rise slowed down: fertility has halved since 1972, from 6 children per woman to the current 2,9. If the world population will continue grow with the current trend, it will touch its maximum point in 2050 – or even sooner – and then it will start decreasing.

The depopulation phenomenon is already taking place, as known, in many countries, rich and poor, such as Germany, Japan, China, Mexico ... and Italy, where the birth rate is decreased, becoming lower than the substitution rate of 2,1 per woman, as a consequence of the standard of living improvement. As the World Bank would say “*Economic and social development is the best contraceptive*”.

During the second half of the XXI century, the problem will become the depopulation, if starting from now it is not promoted an adaptation of production to the demographic aging, that in some countries is already a problem.

Paying attention to the spatial distribution of peasantry and potential farmland, it will certainly be necessary to face the already clear problem of peasants’ migrations, in order to rebalance their relationship with the land: to convince both those who leave their land and those who welcome them.

#### Natural resources for food production issue.

Is the planet's usable land worth supporting the demographic growth and the related increase in food production? A pedo-geographer would answer that it is more than enough<sup>28</sup>, especially considering the various lands in which it is possible to increase food productivity thanks to small adjustments.

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<sup>28</sup> *The state of the world's land and water resources* Food and Agriculture Organization of the United Nations <http://www.fao.org/nr/solaw/solaw-home/en/>

Some data on agricultural production:

- Arable lands expansion between 1960 and 2010: 12%
- Increase of agricultural productivity for the same period: 150-200%
- Total arable land extension (pluvial agric. + irrigated agric.) in 1961: 1,4 billion of ha

The land area of our planet (about 15 billion of hectares) is covered for about 4 billion of ha by forests and for almost 5 billion of ha, that is one third of the overall land area, by agricultural productions (cultivation and grazing). Only one third of this agricultural area is cultivated, about 1,6 billion (including 20% of marginal lands), the remaining is employed as grazing.

The world total arable area has been determined by FAO as 4,4 billion of ha, just under three times the current cultivated area.

This global availability, here roughly computed, cannot make us forget neither the soils geography and their continual degradation, issues that demands for effective actions, nor the probable effects of climate change that require agricultural productions adaptation.

Two billion of hectares, almost the 25% of the 9 billion of hectares covered by agricultural productions and forests (4 billion), are subject to humans' related degradation, especially in regions such as Asia and Africa: damaged soils because of run-off erosion, of wind related effects, of compaction caused by excessively heavy

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- Total arable land extension (pluvial agric. + irrigated agric.) in 2006: 1,5 billion of ha
  - Irrigated agriculture cultivated surface in 1961: 139 billion of ha
  - Irrigated agriculture cultivated surface in 2006: 301 billion of ha
  - Average number of hectares of cultivated land necessary to feed a person in 1961: 0,45 ha
  - Average number of hectares of cultivated land necessary to feed a person in 2006: 0,22 ha
  - Global arable land surface: 4,4 billion of ha
  - Global cultivated surface employed for pluvial agriculture: 80% (1,2 billion of ha)
  - Total surface currently cultivated: 1,6 billion of ha, of which 20% (0,3 billion of ha) on lands partially adapted for agriculture
    - Global surface of land subject to degradation: 25%
    - Global surface of land moderately subject to degradation: 8%
    - Global surface of land subject to recovery: 10%
    - In many regions, issues related to soil quality affect more than half of cultivated areas, especially in Sub-saharian Africa, South America, South-Eastern Asia and Northern Europe
    - Total water resources took from aquifers, waterways and lakes for agricultural use: 70%
    - Global agricultural output obtained through pluvial agricultural systems: 60%
    - Degree to which irrigation improve agricultural productivity: double
    - Volume of cereal crops from pluvial agriculture in developing countries (on average): 1,5 T
  - Volume of cereal crops from irrigated agriculture in developing countries (on average): 3,3 t/ha
    - Average number of crops per year from pluvial agriculture in Asia: 1
    - Average number of crops per year from irrigated agriculture in Asia: 2
  - World population that currently lives in water poor regions: 40%
    - Number of countries that annually employ, for irrigation, more than 40% (critical threshold) of their water resources: 11
    - Number of countries that annually take 20% of their water resources (threshold that imply a serious pressure and risk of water scarcity for the future): 8
    - Renewable water resources currently consumed in Libya, Saudi Arabia, Yemen and Egypt: 100%+
  - Renewable water resources currently consumed in South America: 1%
    - Global arable located in low income countries: 22%
    - Per capita cultivated surface in low income countries: 0,17 ha; in medium income: 0,23 ha; in high income: 0,37 ha
    - The availability of cultivated land per capita in low income countries is less than half the one of high income countries and the adequacy of arable land is generally lower.
    - Per capita cultivated surface in high income countries as group (0,37 ha) is double than the one in medium income nations (0,23 ha) and that of low income ones (0,17 ha).

agricultural machine, of overgrazing, of mining and industrial pollution and of urbanization.

Being aware that this 25% is composed by 8% of degradation moderately subject lands and by 10% of lands subject to recovering, while only 7% is at high risk, should be consoling. Unfortunately this situation does not totally eliminate the problem, which is instead of wide amplitude, touching 50% of soils in some regions.

The ways to guarantee, in ecological and sustainable terms, the production of an amount of food able to feed more than the 9 billion of people predicted as maximum level of population, refers essentially to the rehabilitation of degraded lands and the increase in productivity, but also to the expansion of aquaculture.

If soils degrade faster and more than how they naturally regenerate, before discussing about this challenge and about the agricultural production sustainable growth (whose demand is constantly rising), it is necessary to highlight the aquaculture great potential; in particular the production and reproduction of food in marine waters (not in fresh waters), whose products are a more acceptable alternative (at least for Western's tastes) and ecologically more credible in respect of insects.

Moreover, as Daniel Nahon (2008) pointed out, there exist remedies to soil degradation to such an extent that, from the point of view of the agricultural economy geographer, the lands necessary to the food production growth are already sufficient, without the need to affect the forest heritage.

Finally, there exist vast regions in which are still employed traditional techniques with minimal agricultural yields. These are so low that a few, sustainable innovations would gradually but largely increase the level of output and at the same time stop the arable field expansion toward marginal lands and boost the reforestation process.

This objective, as that of avoiding affecting forests or that of stopping the expansion of degraded soils, requires an overall reduction of wastes. From the speculative plantation agriculture for products destined to the world market, thanks to the adoption of innovations devoted to reducing wastes as well as increasing productivity; to the more recent bio combustibles production agriculture, that from a certain perspective should be discouraged as it needs the use of extensive areas and shows a low ratio between the combustible energy and the relative amount necessary to produce it.

The removal of the obstacles through the previously cited ways, identified in order to increase the sustainability of food production and to transform the final zero hunger goal, "for everyone", from dream to reality, require multiple innovations in the related fields. From the production techniques to the organizations of the interventions, it is necessary to support the whole process with social innovations and the consequent reaffirmation of the primacy of politics, as it is at the various scales of social systems that the major obstacles are embedded.

## *2.2. United Nations and other entities lessons and those arising from the history of development of underdevelopment.*

On some essential policies that should be implemented, and especially on methods and techniques of intervention in poor countries, it is possible to follow the lessons that arise from the 25 years of FAO's experience, already briefly analyzed; in addition we

can look at the experiences of other organs of the United Nations, of some state agencies and of some NGOs specifically invited to this conference and engaged in the fight against hunger and the local development of poor countries (v. FAO, IFAD, WFP, 2015).

It seems useful, as a proper introduction of the debate, to highlight some of the main social obstacles that such policies are ignoring and that I think, should be necessary to remove, to reach the zero hunger goal.

In this respect, I will not dwell on events and processes of the global system that mainly constitute the causes of underdevelopment (such as colonialism and imperialism, and during the last seventy years: neo-imperialism, globalization and exchange liberalization) and that are certainly essential to understand the current geographic distribution of hunger. It is about, more or less remote, but known, facts (Adamo, 2006), that are impossible to eliminate. I consider at least useful to recall them, in order to commit ourselves to eliminate the effects that still survive and obstacle progress policies. Recalling the historical development of underdevelopment is especially useful to try to overcome, internal and international, unequal and unfair social relationships, that form the hearth of underdevelopment and to which depend poverty and hunger; it is also necessary in order to avoid that those relationships, still present in many countries, reproduce themselves as already happened in history.

The breakup of the balances between population and resources during colonialism and imperialism, had been worsened, after WW2, by the breaking of the balance between births and deaths, and lastly by the establishment of neo-imperialism, for which the 'food weapon' had been a key instrument.

This weapon, even more powerful than the atomic bomb, was held by the "wheat merchants" and led by the US policy in support of its exports (launched since 1954, with federal law 480). In some poor countries, food farming has also had even worse negative effects from the policy, associated with the former, of the "gifts" of food surpluses to the "free world". And in some regions, even food aid (from Western countries), although essential to addressing emergency situations, has produced long-lasting adverse effects. Food agriculture and food security have been more generally compromised by trade liberalization than not only will continue to benefit the rich countries, but will also have negative effects on poor countries. Consider, for example, the spread of powdered milk (more expensive and less nutritious than breast milk) and Nestlé plants, which have transformed and monopolized agriculture in entire regions; or the spread of extensive breeding farms to provide low-cost hot dog and burger meat for McDonald and similar fast-food companies (at the expense of forests and even grassland crops, reduced to pastures in central and southern America).

Food farming aimed at meeting local needs was further penalized by the tremendous growth of the foreign debts of many countries that took place in the early 1980s and determined by the sudden, large rise of US interest rates. The debts growth bit especially underdeveloped countries that got indebted (when it was convenient because of the international inflation and the low US interest rates) especially to finance their industrialization process and the exports of more industrialized countries. The foreign debt and the IMF's constraints on the debt restructuring forced such countries, as evident in major emerging countries such as Mexico, Brazil, Argentina and others of the same macro region and of Africa, to export at any cost and consequently to a continuous deforestation or to an expansion of lower intensive productions. Among the IMF's

impositions on the restructuring of foreign debt, a clear liberal inspiration for the benefit of rich countries, in 1995 it also added that of ceasing to sustain local agriculture, not much profitable, and instead specializing on tropical plantation products (sugar, cocoa, coffee, soy, peanut...), on non-food products such as cotton demanded by medium-high classes (for example biofuel to fuel car engines).

It is just in this kind of things, that I reported as examples, and especially in social relationships and policies that made them possible, that we can assess the worsening of hunger and of natural environment degradation until the 1990s, and for many countries even later.

### *2.3. Affirming the primacy of politics toward insecurity and market instability.*

A constant factor of food insecurity until nowadays, that constitutes one of the most difficult obstacles to overcome relies on the structure of the global market. This is particularly evident considering cereals, whose market<sup>29</sup>, as known, is characterized by a strong geographical and economical concentration of supply, such that a few companies control the whole market and exercise the power of increasing prices, autonomously or politically motivated. Such a rise would appear irrelevant in high income countries, but in low income ones it can even cause hunger and those "bread-reels" that seemed to us to be of old times, and also other consequences due to initiatives of countries (such as China) that are acting to guarantee their own future food safety in response to market instability.

"For Americans, who spend less than one-tenth of their income in the supermarket, the soaring food prices we've seen so far this year are an annoyance, not a calamity. But for the planet's poorest 2 billion people, who spend 50 to 70 percent of their income on food, these soaring prices may mean going from two meals a day to one". Written by Lester R. Brown in 2011, in a context in which are certainly clear the risks of the new food geopolitics, 'new' as based on a different pricing situation: of scarcity, rather than of abundance. This is a situation similar to when international prices were lower than the US internal ones and the Federal Government were sustaining exports, offsetting the gap, and promoting the increase in demand of countries with different eating habits. The American abundance made possible to face serious famines that, before the Green Revolution, took place in India, or crop losses in Russia.

Despite the green revolution, in the new context the risks did not lessen, but increased

In fact, the same companies that control the prices of cereals control even those of feed for farms without land, widely diffused during the postwar period; these firms control

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<sup>29</sup> World trade in cereals, feed and largely also of seed oils is substantially controlled by Five Big companies:

**ADM** -Archer Daniels Midland : US- based corporation, operating in 75 countries. Runs 265 processing plants; **Bunge** : founded in the Netherlands in 1818, new with its headquarters in New York state, operates in 40 countries, processing oilseeds, wheat, corn and sugar cane;

**Cargill**: based in the United States, a 150 year-old company employing 150,000 people in 70 countries. Distributes grain and oilseeds;

**Glencore International** (Anglo-Swiss multinational has about one-tenth of the grain market. Also distributes oilseeds and sugar),

**Louis Dreyfus** (French company founded in 1851, now operates in more than 50 countries).

the sale of seeds, fertilizers, fungicides and related products, on which food safety<sup>30</sup> also depends.

"More alarming still, the world is losing its ability to soften the effect of shortages. In response to previous price surges, the United States, the world's largest grain producer, was effectively able to steer the world away from potential catastrophe. From the mid-20th century until 1995, the United States had either grain surpluses or idle cropland that could be planted to rescue countries in trouble"(Brown, 2011).

### *2.3. Affirming the primacy of politics.*

Countries' governments and political forces should effectively intervene on the regulation and restructuring of markets, and in general on unequal and unfair internal and international social relationships, through ways and forms that are still to be defined. No one has a ready recipe describing how governments and political-social forces will have to intervene in sustainable and right manner in absolute terms.

However, we can and we must continue to look for new methodologies, forms of governments and tools to implement the needed changes in social relationships and in ecological solutions needed to eradicate hunger and other related shortages.

FAO, various agencies, international programs and many NGO's commitment, mainly sustained by state funds, is undoubtedly praiseworthy – and all those still believing in “zero hunger goal” utopia and willing to fight for a sustainable and fair world, should address their support to hunger reduction programs promoted by those organs.

However, such commitment is insufficient if not followed by the reaffirmation of politics primacy and consequently the role each State to govern its own territory and contribute to govern the international socio-economic system, exercising such duties in the interests of populations and peace.

On the internal perspective, the State should serve and ensure the social order (guaranteeing a decent lives, ensuring freedoms and safeties, including the food one) and a “sustainable” development (ecologically, economically and socio-culturally): in other terms, an “alternative” development in respect of the current one. The processes in place in many societies, including those of many Western countries, continue their development toward the further increase of wealth concentration, of social disparities and of ecological imbalances. In the meanwhile politics seems unable and unwilling – although the public expenses devoted to remedy to the ecological effects of firms and families and to the social effects of economic organizations – to lead the firms' system and to regulate the economy.

On the international perspective, it is necessary that States, with the support of their citizens, act to achieve a fundamental objective: a new political and economic order

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<sup>30</sup> The Big Six in the market of seeds and chemicals products for agriculture are **Sygenta, Bayer, Basf, Dow, Monsanto, DuPont**. Since the 90s have absorbed more than 200 companies and their patents. Today they have 77% of the "crop protection" market: agro-pharmaceuticals, fertilizers, insect antagonists; and 61% of the production of seed and GMOs (banned in Italy) and from genetic crosses (allowed).

It was announced (La Repubblica, February 2, 2016) the function between ChemChina-Syngenta will be one of the two supergiant oligopolists.

with the aims of ensuring political and economic stability to support a more sustainable development, of winning poverty and hunger, of intensifying development cooperation. Such a new order implies the reorganization of the existing institutions and the creation of multipolar governmental organs capable of effective decision-making and fact acting.

On both perspectives, ultimately, the fundamental problem is the realization of a fairer relation between national and international institutions and the market, especially with economic organizations, starting from credit institutions. The problem is not merely related to the definition of rules - that imply the avoidance of speculations, parasitic ransoms, dominance and exploitation positions - and to enforce them. It is crucial that State, so the international community, has the necessary tools to intervene and address the economy toward the satisfaction of general interests. To this regard it is relevant the presence and the work of social firms (of various genres), but also in strategic sectors the development of public-owned companies, which can be managed (willingly) with efficiency equal to that of private companies (and even higher, since they use public money).

Concerning methods and technical tools of governments, it is useful to highlight, referring to food development, the effectiveness in the adoption on the integrated approach promoted by the best research centers looking for positive and ecological solutions to food issues. In Italy it is for example the ENEA's case, that recognize "the possibility to tackle the issue through an integrated system based on a finite number of subsystems (agriculture, environment, food safety, water, health, energy, infrastructure, economy, etc.), to be managed in a coordinated manner, to face challenges ..." in pursuit of a sustainable production.

Such an integrated approach can only be operational if we overcome the (ideological) opposition between two only seemingly irreconcilable theses:

1) The one of the promoter of modern conventional agriculture, referring to how mechanization, irrigation, fertilizers and genetic improvements can effectively boost agricultural yields to contribute to demand satisfaction. And they are right!

2) The one of the promoter of local and biological agriculture. They retype that small farmers, all over the world, could enhance yields and be able to overcome poverty, employing techniques to improve fertility and avoiding synthetic fertilizers and pesticides. They are right too! The integrated approach, to be implemented, requires facing anti-environmentalist variants of the two theses: the one of chemistry and growth apologist and that of traditional agriculture apologist, typical of each culture.

The desirable integration of ecologically better and more productive technologies can be more dynamically pursued and best achievable through the implementation plan for food production. It should be achieved thanks to the execution of territorial developments plan: a planning process that is systemic and consequently integrates its various sides looking at determined objectives. Such a planning could lead to fully achieve the sustainability goals only if intended as continuous process and supported by constant monitoring, executed with the participation of local communities.

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**VISION, ACTIONS AND PROPOSALS**  
BY  
MEMBERS OF VARIOUS BODIES



## WHAT EUROPE IS DOING

Brando Benifei

*European Parliament*

Good Morning Ladies and Gentlemen and thank you for the invitation to this event.

Unfortunately I cannot attend this meeting on Food, Geography and Security Policies organized by Geoprogess, due to commitments here in Brussels.

Nevertheless, I would like to give my support to this initiative, on food security for humanity, which I see involving a wide panel of experts on the subjects.

I will leave all the technical aspects to the scientists and researchers present here but I wish to give you a political view of what Europe is doing in order to tackle the challenge of guaranteeing proper supplies of food to the world.

Access to food remains a challenge in itself, with 800 million people suffering chronic hunger and 160 million of children suffering from malnutrition and stunted growth.

Beyond this crucial question, ensuring that food, once obtained, provides adequate nutrition is another key point. Improving nutrition in developing countries means enabling poor people, and notably mothers and children, to adopt or maintain diets of sufficient nutritional value and to access healthcare and safe water.

Food has a strong social and cultural value and that is why it should never be used as an instrument of political and economic pressure. Nevertheless, with 1.3 billion tonnes of food produced for human consumption every year wasted or lost in the supply chain, the challenges to face are very big.

Europe, through its cooperation, has played a leading role in confronting hunger, addressing all aspects related to poverty and seeking to support access to sufficient, safe and nutritious food for all and at all times.

The first biennial report on *'Implementing EU food and nutrition security policy commitments'*, released last year by the Commission, describes the successful achievements of EU policy on food and nutrition security in the poorest areas of the world.

Many targets have been reached with funded programmes to help and support regions to prepare and put in place policies that boost food and nutrition security, such as policies that integrate markets for agricultural produce, control animal disease, set food standards and ensure food safety. To reach that purpose, we spent €151 million on 98 regional programmes to support regional agriculture and food and nutrition security policies from 2012 to 2014.

But more food is not enough: people need better food too, the right kinds of food. This is especially important for mothers and young children and that is why Europe funded projects that encourage breast-feeding, home gardens for growing fruit and vegetables, and growing and eating foods fortified with vitamins and minerals. For

enhancing nutrition, Europe has spent more than €467 million on 278 programmes in 63 countries.

So Europe plays a key role in the fight for global food security. This goal is also pursued internally through the Common Agricultural Policy - CPA -, which supports farming that secures food safety and promotes sustainable and balanced development across all Europe's rural areas, including those where production conditions are difficult.

Since its creation, the CAP has always been adapted to respond to the challenges of its time. The new agreement on CAP reform reached in 2013 is the result of three years of discussions and intensive negotiations, offering a more holistic and integrated approach to policy support. Specifically it introduces a new architecture for direct payments to farmers which are better targeted and more equitable, an enhanced safety net and a strengthened rural development.

My political group - the S&D - struggled for a far-reaching reform of agriculture: we think that CAP must guarantee that public funds are transparently used and that they are targeted on encouraging farming activities, which give benefit to society but are not rewarded by the market, such as protecting the environment, providing a proper landscape management, assuring biodiversity and employment in rural areas.

We think that funds should be based on contractual payments, replacing the current system of generalised subsidies, and they should be granted only to reach farmers whose income comes substantially from farming.

The reformed CAP goes in the direction of S&D priorities: it promotes the production of sustainable, high-quality food, durable management of natural resources and well-balanced land use, and helps combat climate change. It should be able to cope with volatile prices for food and agricultural raw material, guaranteeing the EU's role in global food security.

I agree with these principles which are also included in the Milan Charter, signed during EXPO 2015, an important step forward in order to reach the goal of eradicating hunger in 2030, which is one of the 17 sustainable goal included in the 2030 EU agenda for a sustainable development.

Such sustainable development should also include the reduction of inequalities: personally I am involved in many initiatives directed towards full employment, social equality, tackling social exclusion and ending poverty.

I think that also the elaboration of a proper strategy of food security for humanity requires a cooperation of a network of citizens, institutions, researchers, businessmen and policy makers aiming at building a better world, peace and well-being, free from hunger and other humiliating deprivations.

Well I hope I was able to offer you a panorama of what Europe is doing in order to face the problem of food security and all the current policies that deal with this issue. Still a lot has to be done, but the EU and the Parliament itself are on track. I wish you all the best and I hope you will have a very fruitful discussion.

Thank you very much.

## **AGENDA 2030: THE ROLE OF RURAL TRANSFORMATION**

### **Some key areas of focus to drive change<sup>31</sup>**

Adolfo Brizzi

*Fund for Agricultural Development (IFAD)*

The new global development agenda is a unique opportunity to refocus policy, investments and partnerships on inclusive and sustainable rural transformation. Without this, rural-urban inequalities will deepen, cities will struggle and global food security will be at risk. Conversely, rural transformation can be a powerful engine of sustainable development in all its aspects – from economic growth to poverty eradication, from a healthy environment to inclusive societies, from gender equality to food and nutrition security. There are many entry points through which it is possible to promote rural transformation. In particular, IFAD has identified four clusters of issues of universal resonance, each underpinned by five target areas. While not covering the whole rural development agenda, these provide a map of areas where catalytic action may be inspired by new goals, targets and indicators adapted to different country circumstances.

#### **What future does the world want?**

Women and men from all walks of life want a world where extreme poverty has disappeared, everyone is well fed, all children have access to quality education, economies are dynamic and the benefits from growth are equitably shared, decent jobs are available to everyone, natural resources are used sustainably and temperature increases from climate change are manageable. People want a world where they can live in peace and their voices are respected in public decisions. This future is ambitious but achievable. The challenge is to ensure that this shared ambition is reflected in the new development agenda.

#### *Inclusive and sustainable rural transformation is key to the future we want*

Achieving this future requires a fresh look at rural areas and their inhabitants. Current patterns of economic growth are often accompanied by spatial inequalities that undermine progress towards inclusive, peaceful and dynamic societies. Meanwhile, a growing urban world is increasingly in need of a range of goods and services that must come from rural areas – from nutritious food to jobs, energy, environmental services and much more.

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<sup>31</sup> This overview document represents a synthesis of 4 policy briefs produced by IFAD, complemented by joint work with the Food and Agriculture Organization of the United Nations (FAO) and the World Food Programme (WFP) in the area of food security, nutrition and sustainable agriculture. IFAD's work in Agenda 2030 is inspired by its unique mandate to invest in poor rural people to enable them to overcome poverty and to transform their lives.

A transformation of rural spaces, productive sectors and societies is needed – one that is inclusive, dynamic and sustainable. To promote this requires a new development paradigm that empowers rural people to play their economic, social and environmental roles to the full. Agenda 2030 and the 17 Sustainable Development Goals (SDGs) can encourage implementation modalities that give explicit attention to rural women and men and their role in building a better future.

#### **Four key issues around which to catalyse rural transformation**

While the entry points to promoting rural transformation will be context-specific, there are four key issues that can help catalyse the transformation.<sup>32</sup> These are:

- Leveraging the rural-urban nexus for development
- Promoting an empowerment agenda for rural livelihoods
- Investing in smallholder family agriculture for global food security and nutrition
- Promoting the resilience of poor rural households.

#### *Leveraging the rural-urban nexus for development*

Rapid urbanization is transforming the global landscape and generating new challenges and opportunities for development. In many contexts, it is accompanied by rural concentration of extreme poverty, despite the immense potential of and demands on the rural sector. Moreover, growing rural-urban interdependence often coexists with major gaps in rural-urban connectivity – in infrastructure, energy, and the smooth flow of people, goods, knowledge and finance. Going forward, the rural space needs to play a central role in creating more sustainable and inclusive economies and societies. As the rural population grows, it is imperative to boost rural economies and jobs for young people in particular. And as the world becomes more urban, the rural space has to transform to expand the efficient and sustainable supply of a wide range of goods and services.

A policy agenda around these issues requires investing in quality data concerning rural areas and rural societies. Systematic rural-urban disaggregation of data related to the new agenda is of critical importance to build a solid evidence base. The agenda needs to cover a number of key target areas, such as securing the asset base of rural women and men, addressing rural-urban gaps in quality of services and opportunities, strengthening rural-urban connectivity, and inclusive territorial and ecosystem governance.

#### *Promoting an empowerment agenda for rural livelihoods*

Many countries have made great progress in reducing poverty over the last 30 years. However, in many parts of the world poor rural people remain marginalized – socially, economically and politically. Indeed, growth processes have at times increased

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<sup>32</sup> Each of these issues is addressed in an IFAD policy brief, available at <http://www.ifad.org/governance/post2015/index.htm>.

marginalization. For example, long-standing factors limiting secure access to land for rural women and indigenous peoples have been reinforced by new pressures on the natural resource base linked to rising prices of agricultural commodities, urbanization, mining, land-use conversion and deforestation. Therefore, a broad empowerment agenda for rural livelihoods is a moral imperative. This includes fostering a range of interrelated processes that enable rural people to access and secure control over assets and to contribute to decision-making processes at all levels. In many contexts, promoting rural empowerment is also a smart strategy to boost inclusive growth. It is essential to build the capacity of rural people to drive change in key areas of sustainable development such as natural resource management and agricultural productivity.

In the context of Agenda 2030, it is important to focus attention on inclusive and secure access to land, natural resources and productive services, promoting the participation of rural people and their organizations in markets and public life, strengthening their access to decent job and business opportunities, and supporting rural women's empowerment and the rights of indigenous peoples.

#### *Investing in smallholder family agriculture for global food security and nutrition*

Agriculture is strategically important for sustainable development. It is a major employer and a means of reducing poverty. Agriculture is a key user of natural resources and a provider of environmental services (including carbon sequestration). And it is the sector on which food security and nutrition chiefly depend. In coming years, agriculture needs to change profoundly to meet increasing demands while facing harsher environmental conditions, more competitive and volatile markets, and the effects of climate change.

Small family farms have a central role in food security and nutrition from the household to the global level. While highly heterogeneous, in the aggregate they provide income and environmental services to a large share of the world's population. Growing demand for high-quality nutritious food and other agricultural goods will create opportunities for many small farms to become viable businesses. However, many of the factors underlying rural poverty and marginalization constrain the entrepreneurship of smallholder farmers, in particular women.

Critical target areas around this challenge include small farmers' (women's and men's) secure tenure over natural resources, their access to productive services, finance and markets, and balanced growth in agricultural productivity, sustainability, resilience, efficiency and nutrition sensitivity. Moreover, sustainable value chains and inclusive business models are key to leverage growing private investments and reduce transaction costs through innovative partnership approaches.

#### *Promoting the resilience of poor rural households*

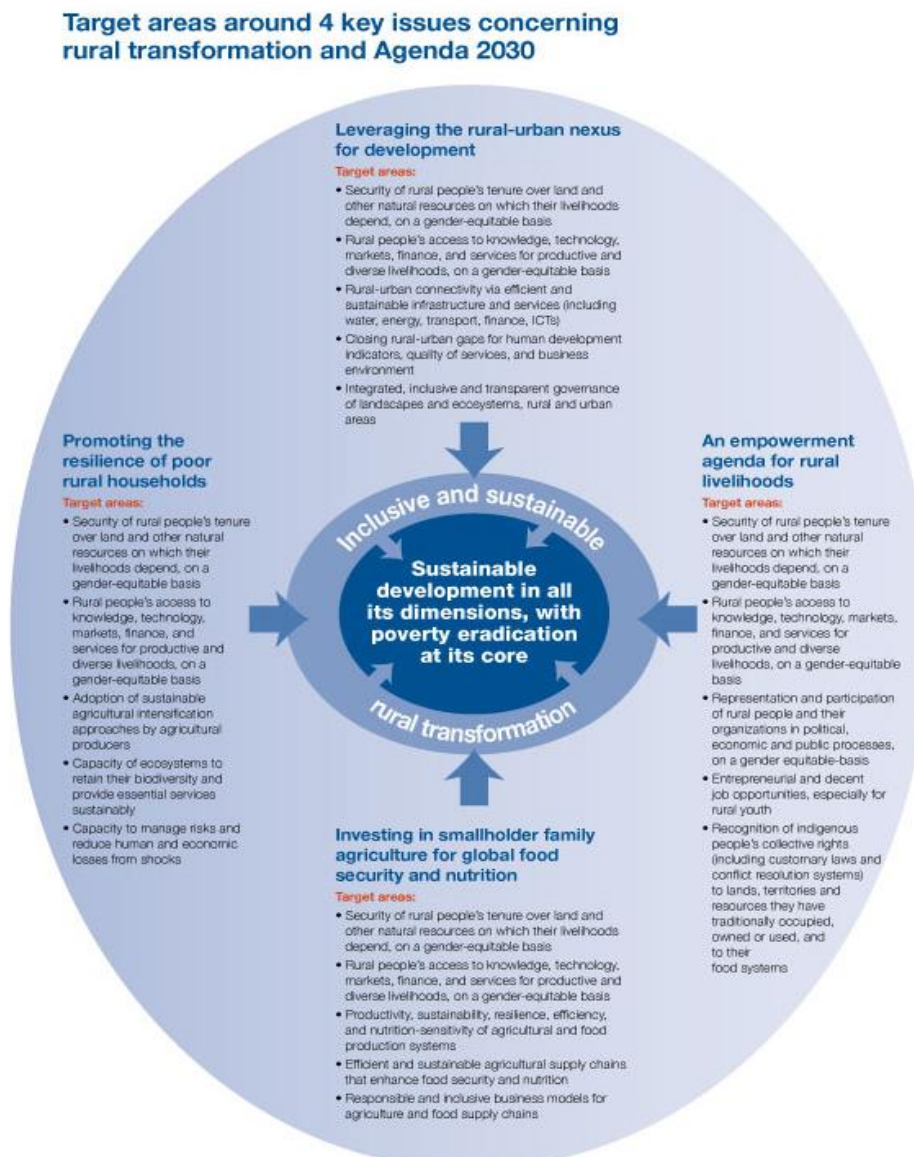
Rural people are vulnerable to a range of shocks that push them into poverty, keep them poor or prevent them from moving out of poverty, as they are unable to seize new opportunities linked to urbanization and to a growing demand for rural goods and services. Some of the risks that rural households face are long-standing, while others are new or increasing. For example, new types of market risks and sources of price volatility are emerging, the natural resource base is increasingly degraded or scarce, and

climate change has a multiplier effect on virtually all risks that rural households face. Many risks are also interlinked and reinforce each other, such as environmental risks and price volatility.

Understanding risks and shocks that affect poor rural households is a precondition for policies and investments to enable them to fully participate in rural transformation. Public institutions play an important role in realizing strategies that promote resilience, such as by providing incentives for investments that reduce vulnerability to shocks (for instance climate-proof infrastructure); providing public goods that buffer shocks or that improve risk management capacity (social protection and education); fostering well-functioning markets; and ensuring good governance.

However, developing and enforcing these strategies requires collaboration among public and private actors at all levels. Rural people's own institutions play a vital role, and their own institutional resilience also requires support.

Relevant target areas related to this challenge include secure tenure over land and other natural resources, access to knowledge, finance, services, markets and technology, adoption of sustainable agricultural intensification approaches, access to risk management tools, and healthy ecosystems.





## **10.000 GARDENS IN AFRICA TO CULTIVATE THE FUTURE**

Valentina Meraviglia

*Slow Food*

### *Abstract*

Why is Slow Food helping to plant gardens in Africa? Because a garden tended by a school or a community can guarantee food security, the protection of biodiversity and the preservation of culture. Supporting small-scale agriculture on the continent of Africa can provide poverty-stricken communities with a tool for building their own futures.

### **1. Hunger for justice**

"The shame of hunger can and must be defeated within this generation; commitment in this regard must take a political priority in all international forums, along with national and civil society" (Carlo Petrini, FAO Special Ambassador Zero Hunger for Europe)

At the 1974 World Food Conference, governments examined the global problem of food production and consumption, and solemnly proclaimed that "every man, woman and child has the inalienable right to be free from hunger and malnutrition in order to develop their physical and mental faculties". Since then, the number of hungry people, instead of reducing, has augmented. In 2008 the FAO high-level conference on World Food Security announced that instead of reducing the ranks of the hungry to 400 million, as had been projected by the 2000 Millennium Summit, hunger has increased (De Schutter, 2008).

The existence of millions of people chronically hungry and undernourished in developing countries represents a fundamental contradiction in today's world. It shows that there is something fundamentally wrong in the food production system, and the resources with which to access it. Especially when considering that there is more than enough food in the world to feed everyone. In fact, over the last 20 years, world food production has risen steadily at over 2% a year, while the rate of global population growth has dropped to 1.14% a year (Faostat).

In Sub-Saharan Africa, still one in every four people is hungry and progress in reducing the number of undernourished has been alarmingly slow (FAO, 2014).

According to the last report on the State of Food Insecurity in the World, nearly 217.8 million people in the sub-Saharan region are undernourished, while in 1990-92 they were 175.5 (FAO, 2015).

Several factors are claimed to have had an influence on this increase.

First of all this scenario reflects the region's high population growth rate: the Sub-Saharan African population has grown from 492 million in 1990 to 962 million in 2015, a 95% increase over 15 years (United Nations, 2015).

Other factors to be taken into account are: rise in food prices (for example the acute food crisis of 2007-8 and the food prices inflation of 2010-11), recurrent droughts and climate shocks, political instability and conflicts.

One element to be considered is also the impact of globalisation on Africa agriculture, such as climate change, globalisation of markets and the search for new sources of green energy (the so-called agrofuels boom).

### *1.1. African food system paradoxes.*

Africa is probably the continent where the symptoms of an unhealthy and unequal food system are much evident. Despite the abundance of natural resources in Africa food insecurity is increasingly common.

Why a continent so rich in land, where the agriculture sector has an enormous potential, is still struggling for food security?

Why today African countries are obliged to import most of the food stocks when in the Sixties, at the dawn of decolonization, they produced enough food for the domestic market and were even able to export?

These were the questions Slow Food ran in when, in 2004, started collaborating on the field with the local communities, small farmers and producers.

As an international grassroots organization working to defend the right to good, clean and fair food for everyone, Slow Food began to reflect on which were the forces driving the local food systems in Africa and therefore on who was shaping the continent's future.

The development models imposed, over the last 4 decades on African countries, by the international financial institutions and the global industrial agri-food complex (made up of multinational grain traders, giant seed, chemical and fertilizer corporations, processors and global supermarket chains) have marginalized local production, focusing on a few cash crop products.

During the Sixties, when most African states won independence from European rule, the so-called "Green Revolution" was launched throughout the continent. Its objective was to increase food production, focusing on modern agricultural technologies (intensive use of chemicals and fertilizers and hybridization of various crop to maximize the yield) and monocultures.

Since then a migration has begun: from traditional agriculture – based on local varieties and on traditional knowledge – to agribusiness that means: monocultures for exportation and the massive and systematic use of chemical fertilizers and pesticides.

This growth receipt has been based on the assumption that export crops production would have allowed Africans to pay off their foreign debt and use the revenues from a

modernized industrial and manufacture sector to import their food. The result was that African developing countries saw their only export opportunity in products like coffee, tea, cashew nuts, cotton, bananas and other crops that cannot be grown in the northern areas of the world, and have been forced to buy the cereals they need to survive on the international market, at prices which have risen considerably over the years. The World Bank reported that the global world food prices rose by 83% from 2005 to 2008 (World Bank, 2008) and in the winter of 2007, when food price inflation exploded on world market, in spite of the record grain harvests, the number of hungry people jumped dramatically to 982 million in just one year (USDA, 2008).

Another element that has influenced the African food system is the highly protectionist policy of the United States and Europe towards cereal and textile products. During the Seventies the high level of productivity achieved by European countries led to market saturation and increasing surpluses. So the European governments started to subsidize the exportations in order to dispose of agricultural surpluses. African countries were flooded with subsidized grain from the U.S. and Europe that was then sold at incredibly low prices, generated unsustainable competition for local small-farmers and producers. In this way, the western agri-business industry, thanks to the huge public subsidies, has keep on selling the surplus on the African markets at prices far below the costs of production, generating unfair competition that has ruined small-scale African farmers. This has tied Southern food security to global market dominated by rich Northern countries.

Consequently, a state of food dependence has grown, because income from exports was often lower than the amount needed to buy the cereals they no longer produced domestically. This has led to a continuous reduction in the proportion of land used for growing subsistence crops in favour of an expansion of export crops, which only benefit a few landowners and exporters.

In general, these export-oriented growth models have led to the reliance of African developing countries on imports, of primary products too, and vulnerability to the trends in the world market and oil prices. The negative externalities on the local food systems of these policies has been further exacerbated by the predatory pricing of dumping, which has driven local producers out of the local markets.

The exclusive focus on increasing production has also had severe environmental and social impacts: a massive loss in agro biodiversity, the reduction in water tables, the salinization and erosion of soils, the displacement of millions of peasants to fragile hillsides, shrinking forests and urban slums.

The loss of local biodiversity impoverishes rural communities, which are forced to abandon their lands and move to city outskirts or to replace local products with monocultures destined to Western markets, thus severely compromising their own food security. Biodiversity in African countries is also jeopardised by a new phenomenon which has been gaining ground in recent years: the contracts signed by African governments to sell out millions of hectares of arable land to governments and corporations of rich countries. Opponents denounce such contracts with the name of “land grabbing” and highlight the risks that these agreements – often signed after secret negotiations – pose to food sovereignty.

To summarize, what Slow Food found out in Africa (as in many other parts of the world) was that the twentieth century food system paradigm has turned out to be

unsustainable and that unregulated global markets, speculators and global monopolies were deciding de facto the future of continent's food system, compromising the autonomy and the cultural identity of the communities.

### *1.2. An alternative strategy.*

“For years the Westerners have explained to us that everything we were doing was wrong. They said our techniques were inefficient, that our products had to be replaced by more productive crops. Now at Terra Madre everyone says that our story is important, that we have to recover the wisdom of our ancestors, be proud of our roots, cultivate our own grains and the fruits selected by our forefathers. These are new words for us” (Cameroonian delegate at Terra Madre<sup>33</sup> 2012).

The present global agrifood system is essentially associated with the idea of the global market, of the control of nature, of the pursuit of efficiency and scale production and consumption. It is rooted in the belief that local agriculture has to serve the global market. This is the system embodied by the imposition of cash crops over subsistence crops; it has also been one of the causes of the extreme price fluctuations on the world cereal market over the last decade. Food has thus been transformed into a commodity without any regard for the cultural and social implications of this transformation.

According to Slow Food (but this diagnosis is broadly shared), the global hyper-productive food system market-driven system, shaped by industrial agriculture to maximize efficiency gains, with one billion people facing starvation today, has failed. Not only it has not fed the planet but has also demonstrated not to be affordable, given the high social, environmental and cultural costs related to its application.

“Food is not a commodity. It is a living thing and we have to learn to respect food and especially those who produce it” (Carlo Petrini, 2014).

In order to contribute to stopping this trend, Slow Food is working to revitalise local production and distribution chains, rediscover and document local know-how, and promote local food as a way to ensure food security, safeguard and support local species and breeds.

Slow Food envisages a more sustainable food system recognizing the interdependence of different aspects of food production and consumption: economic aspects, environmental aspects and socio-cultural aspects.

For Slow Food attaining a more sustainable food system means:

#### Conserving and promoting biodiversity and ecosystems

In the global scenario, the conservation of biodiversity and the restoration and protection of ecosystems must become shared priorities at policy level. Such efforts, which should be seen as an investment in terms of natural capital, require radical changes in the models and practices of economic development worldwide. The conservation of biodiversity calls for the development of different modes of governance

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<sup>33</sup> Slow Food's Terra Madre network was created in active 2004 and brings together members of the food production and distribution chain to promote sustainable agriculture, fishing and production. The network involves small-scale farmers, breeders, fishers, food artisans, academics, cooks, consumers and youth groups from over 160 countries. Every two years, the Terra Madre network meets for the global gathering of food communities in Turin (<http://www.terramadre.info/en/>).

at the global, national, and local levels. Biodiversity conservation can only be effective if public awareness and concern are substantially heightened and if policy makers have access to reliable information upon which to base their choices. Slow Food promotes the protection of food biodiversity, first and foremost through knowledge (for instance the mapping of traditional products, native breeds and local edible plant varieties and ecotypes through the catalogue known as the Ark of Taste), and then by supporting and promoting specific supply chains (cultivation, breeding, processing). One such successful model for protecting biodiversity is the Slow Food Presidia project (on-site practice), which aims to safeguard native breeds and local plant varieties, helping producers to work together (under lean association schemes) and collaborate to promote sustainable practices, as well as to protect traditional techniques and knowledge, to safeguard specific landscapes, to promote their products and find suitable markets. Slow Food believes that by protecting their own food products, plant varieties and animal breeds, local communities can thrive and provide sources for decent livelihoods.

#### Adopting sustainable production methods

A very rough distinction among the different production models distinguishes between industrial production and small-scale production. There is a tendency to associate the former with the generation of profits and development, while the latter is often perceived as an activity aimed at mere subsistence. However, such a narrow vision does not take into account the fact that, following FAO's State of Food and Agriculture 2014 report, small-scale producers are the custodians of about 75 percent of all agricultural resources in the world and produce about 80% of the world's food, if we consider the food system in its entirety (meaning in its complexity). Protecting sustainable methods of food production and small-scale food production means protecting the environment and securing a productive capacity. Natural resources are managed sustainably ensuring climate-friendly food production as well as ensuring adequate food and water for future generations. Artisanal systems do not generally cause imbalances between species and are more respectful of local resources and biodiversity.

#### Keeping food waste and losses to a minimum at all stages of the food supply chain

Forecasts all seem to agree that in 2050 there will be about 9 billion people sharing the planet. Considering that today (with a world population of 7 billion) there are already one billion people who do not eat adequately, the outlook is not good. The most disparate voices are increasingly stressing the fact that, in order to feed everyone, it will be necessary to increase productivity by 70%, with cultivated arable land decreasing in the meantime. However, there is an essential piece of information that is being ignored, namely that today the Earth already produces enough food for 12 billion people, but 40% of all food produced is wasted, never getting close to the table. Slow Food strongly believes that food waste and loss must be fought, and that to do that it is necessary to restore value to food and sacredness to the moment of its consumption. In a world where many people do not have enough to eat and resources are limited, Slow Food believes that the prevention and reduction of food loss and waste must urgently be given a key place on the political agenda.

The system in which we find ourselves as consumers, producers or intermediaries is founded on a mechanism of waste and overproduction, and on the rapid selling-off of stock to put new products on the market. In other words, waste is no accident; it is organic to the system.

#### Promoting a new consumption model where people are not merely consumers, but co-producers

The so called “consumer” is the real key to change, whether in consolidating the industrial system or bringing radical change to habits, behaviours and priorities, ushering in a new development model based on sustainability. Consumer choices have a significant impact on the entire food system and its sustainability. The alliance between producers and consumers is also key to creating short supply chains, minimizing the number of steps involved, the distance travelled by food (food miles), as well as all costs and potential losses (i.e. food losses). Consumers hold a great deal of power: with increased awareness of the value of their choices, they are in a position to redirect the market and production. Slow Food coined the term “co-producer” to highlight the power and political role of the consumer.

#### Protecting traditional knowledge

Local and global communities are experiencing a loss of traditional knowledge and values, which goes hand in hand with a decline in cultural diversity and the dilution of a sense of community. Slow Food defends traditional knowledge, as a source of wisdom and know-how that lies at the core of technical and scientific learning. If properly protected, it can become a vital element in local economic systems and help spread environmentally friendly methods of food production and consumption. The participation of farmers is an essential element in ensuring the spread of sustainable practices and, for this reason, the horizontal sharing of knowledge among farmers is of crucial importance.

## **2. Slow Food cooperation model**

Slow Food is not a traditional development agency, but with its activities it works also in this field, carrying out accompaniment, support, networking and promotion of rural development in areas in both the global north and south.

Slow Food’s vision of cooperation and development is based on food as a driving force for change.

The central role of food is the cornerstone on which to build a new political vision, a new economy and new social environment.

Recognizing the central role of food implies a belief that the right to food is a primary human right, the right to be free from hunger. We have to fight hunger because hunger is, above all, a form of injustice, of arrogance towards other human beings who have the same rights as we do.

Land rights and soil fertility, the healthiness of air and water, biodiversity, pristine landscapes, fair wages, health, knowledge and memory – these are rights, not privileges. It is a holistic approach which centres on food but encompasses other issues – biodiversity and environmental protection, promotion of local communities and their traditions and culture, fair remuneration for producers – normally viewed as separate.

Slow Food's action fits into a framework of renewed respect for the heterogeneous needs of beneficiaries. It provides cultural mediation and a bottom-up approach, activates local networks (producing social capital) and introduces an innovative management approach to projects by delegating them entirely to local networks (no expatriate staff permanently present). Slow Food determines that the main actors in this process are the food communities which, through a participative project style, can become the hub of local development.

Focusing on agricultural development means focusing on production. Focusing on food, on the other hand, means concentrating on people, culture, traditional knowledge. It means involving farmers, herders and fishers, but also chefs, students and teachers.

Slow Food believes food is tied to many other aspects of life, including culture, politics, agriculture and the environment. Through our food choices we can collectively influence how food is cultivated, produced and distributed, and as a result bring about great change.

Everywhere it works, Slow Food starts with an understanding of the place and the local community. It identifies a network of interested people and begins mapping the local agrobiodiversity (such as plant varieties, animal breeds, food products, farming and fishing techniques, traditional recipes). Only after this phase is it possible to choose how to proceed, deciding together with the communities which path to take: Prioritizing education in schools or developing *Presidia*<sup>34</sup>? Involving chefs or focusing on family consumption? Promoting the local market or seeking international sales channels? Starting with which products? Planting the gardens where? Growing which crops?

Only an in-depth understanding of the territory will allow “perceived needs” be cleared away. Without this initial research, the risk is that the same responses will be offered to everyone, giving the communities what they ask for out of habit, or what has been suggested to them by previous development projects. This is the case, for example, with the many wells, built in haste and often abandoned just as quickly. Sometimes they are truly necessary, but before building a well and buying a pump that will need fuel and maintenance, there are many other things that can be done: choosing a better-suited plot of land, growing hardy varieties in the right season, collecting rainwater, using drip irrigation systems, protecting the ground with mulch or planting shade trees to help the soil hold moisture.

The story is similar with seeds. To help people grow their own food, packets of hybrid seeds are often distributed to the communities, rather than relying on the wisdom

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<sup>34</sup> Slow Food *Presidia* support quality production at risk of extinction; protect unique regions and ecosystems; recover traditional processing methods; and safeguard native breeds and local plant varieties. Each project involves a community of small-scale producers and provides technical assistance to improve production quality, identify new market outlets and organize exchanges with producers internationally through the large Slow Food events.

(<http://www.fondazione Slow Food.com/en/what-we-do/slow-food-presidia/>).

of women, who are perfectly able to select the best seeds, adapted to the local area, and save and reproduce them on their own.

Starting from an understanding of the local area and a dialogue means avoiding careless errors and following a path that might not be perfect or swift, but has the great value of being shared.

### *2.1 The Slow Food Gardens project.*

“Now we realize that we have done much more than simply create gardens: we have created an important network that is growing and working to change Africa, to offer children a future of peace and justice, and to guarantee everyone access to good, clean and fair food” (Edie Mukiibi, 29 years old, Ugandan agronomist, Slow Food Vice President).

In Uganda Edie Mukiibi, a young agronomist, graduated from Makerere University and part of the Slow Food movement, initiated in 2010 a project involving 17 school gardens. This is because in the country young people were abandoning the countryside and contempt for farming work was widespread partly because schoolchildren were often sent to work in the fields as punishment for bad behavior. He wanted to invert this tendency and the way agriculture was perceived by children. The same year the Slow Food network launched a community gardens project in Ivory Coast, managed entirely by groups of women.

The idea was to promote a model of sustainable agriculture which is respectful of the environment, its ecological equilibrium and the culture of local communities, and it has since been enthusiastically welcomed in many other countries across the continent (at present, the Slow Food Gardens in Africa project is active in 35 countries and has created more than 2000 gardens).

The project's main objective is to build a network of informed people who are aware of the value of their own land and culture, and active in defending Africa's extraordinary biodiversity, its wealth of traditional knowledge and farming methods. These are all threatened by policies that promote farming for export, the massive and increasing use of chemical fertilizers on the soil, and foreign investors who are buying up the most fertile lands for small change.

This network is an important step towards a more sustainable future, bringing back a way of farming that is conscious of the needs of local communities, liberating them from the designs imposed by international financial institutions and foreign investors.

The Slow Food gardens are designed, created and run by the African communities, thanks to the initiative of the Slow Food members who are engaged mostly on a volunteer basis. Slow Food's International office helps the local referents to develop these activities through technical support, training sessions, the exchange of experiences among members of the international network, and through a monetary contribution to help set up the vegetable gardens.

*Slow Food distinguishes between a community garden and a school garden.* - A community garden's main priority is to provide sustenance to families, and, to some extent, allow them to supplement their income by selling products (though this should



never become the main objective). That being said, the garden is also an important school for the whole community, who learn to value the local products, to reproduce seeds, to respect the land and to better manage water.

A school garden has a primarily educational function. It is used to teach children and teenagers about local foods and recipes for vegetables and fruits, about working and playing in a group, and so on. The school garden's products are also used for school meals, but it cannot provide a regular supply. The schools are often very large (with several hundred children) and a garden's products can be used to accompany rice or millet for a few weeks or served at festive events. The school garden, then, cannot resolve the problem of how to feed the children, but serves as an open-air classroom which gives them the tools for improving the quality of life of their families (many parents replicate at home what their children have learned at school). Additionally, some children, after their experience with the garden, go on to proudly pursue a career in farming.

## *2.2. Ten essential ingredients for a Slow Food Garden*

### (1) They are created by a community

The gardens bring together and value the capacities of all the community members uniting different generations and social groups (village or school associations, local administrators or non-profit organizations). They recover the wisdom of older generations, make the most of the energy and creativity of younger people, and benefit from the skills of experts.

### (2) They are based on observation

Before planting a garden, it is necessary to learn to observe and to get to know the terrain, local varieties and water sources. The garden must be adapted to its surroundings, and local materials should be used to make fencing, compost bins and nurseries.

### (3) They do not need a large amount of space

By looking creatively at the space available, it is possible to find somewhere to put a food garden in the most unlikely places: on a roof, by the side of a footpath and so on.

### (4) They are places of biodiversity

Slow Food gardens are places for local biodiversity, which has adapted to the climate and terrain thanks to human selection. These nutritious and hardy varieties do not need chemical fertilizers and pesticides: vegetables, medicinal plants, culinary herbs and fruits trees (bananas, mangos, citrus).

### (5) They produce their own seeds

Seeds are selected and reproduced by the communities. This means that every year the plants become stronger and better suited to the local area, and money does not need to be spent on buying packets of seeds.

### (6) They are cultivated using sustainable methods

Natural remedies based on herbs, flowers or ash are used to combat harmful insects or diseases.

(7) They save water

Once again, an approach based on observation and creativity is fundamental. Sometimes it only takes a gutter, tank or cistern to collect rainwater to resolve seemingly insurmountable problems and avoid more expensive solutions.

(8) They are open-air classrooms

Food gardens offer an excellent opportunity for teaching adults and children alike about native plant varieties, promoting a healthy and varied diet, explaining how to avoid using chemicals and giving value to the craft of farmers.

(9) They are useful, but also fun

Food gardens are a simple and inexpensive way of providing healthy and nutritious food.

But even in the most remote villages and the poorest schools, Slow Food gardens are also a place for games, celebrations and fun.

(10) They are networked together

Neighboring gardens exchange seeds, while those further away exchange ideas and information. The coordinators meet, write to each other and collaborate. Twinning between school and convivia (Slow Food local chapters) from all over the world allows the creation of new gardens across the continent.

*2.3 Not just any garden: the project's philosophy*

A Slow Food garden supports and regenerates itself. It needs few external resources to get started: the decisive factor for its launch and success is the spirit of participation in the community involved. After a year or two, the garden will become autonomous, and start generating resources: It will produce seeds and compost which can be used to create other gardens, and part of the harvest and the resulting food products (jams, juices, other preserves) can be sold to supplement family income or to buy school materials.

A Slow Food gardens is:

- a concrete model of sustainable agriculture, adapted to different environmental, social and cultural contexts and easily replicable
- an agro-ecological food garden.: a balanced system in which the intelligence of man modifies nature in order to be able to utilize its products without harming and impoverishing it, sustaining the physical, chemical and biological mechanisms that regulate nature's cycles
- an instrument to safeguard local agrobiodiversity .Traditional, local varieties are preferred for Slow Food gardens. These are the result of centuries of selection by humans, and thanks to this process they are the best adapted to the local climate and terrain. They are more resilient to external attacks and require fewer inputs (fertilizers and pesticides). They are therefore more sustainable from both an environmental and an economic point of view. Choosing traditional varieties means safeguarding biodiversity, which offers the

best insurance for our future. Diversity allows plants to react to unexpected events, to adapt to climate change and to resist parasites and disease. A biologically diversified system contains the antibodies for re-acting to harmful organisms and maintaining its equilibrium. A system based on a limited number of varieties, on the other hand, is very fragile.

- a food source to improve dietary patterns with a strong socio-economic value. Slow Food gardens help to diversify and improve the daily diet by encouraging people who mainly eat cereals and pulses to eat local fruit and vegetables. The foods that are cultivated and harvested are first and foremost for eating (by the families or for school meals). In seasons where there are surpluses, these can be turned into sauces, jams, juices, flours or dried fruits and vegetables; sold (fresh or processed) at local markets or to nearby restaurants; or they can be cooked and sold at the small eateries that are sometimes started next to the gardens. The harvest from school gardens can also sometimes be sold at the local market, and the proceeds used, for example, to buy materials for lessons, or other equipment for the garden. Moreover a community garden can also assure subsistence so those cultivating it are freed from dependence on other external sources.

- an important tool for education: cultivating the garden offers the chance to learn more about local plant varieties, how to sustainably manage soil and water, how to diversify one's diet and how to cultivate food using environmentally friendly methods. In the garden, work is done in groups, and learning takes place thanks to the exchange with the whole community. Additionally, different educational activities can be held in the garden. For example, schools and communities can organize theoretical and practical cooking classes so that children and young people can get to know local products and food traditions. Tastings of produce from the garden can also be organized, as can festivals and other initiatives to communicate the importance of local consumption to the whole community.

A food garden's close links to human and environmental health offer the possibility of raising awareness about different issues among the community: the role of medicinal plants and fresh vegetables in treating malaria or helping people with HIV, the importance of disposing properly of waste and respecting the environment, the risks faced when burning land before cultivation etc...

Thanks to its interdisciplinary value, many subjects can be studied in the school garden such as history, through the spread of gastronomic traditions and crops; geography, through the origin of products; as well as mathematics and geometry, indispensable to planning the garden and calculating the expected value of its produce.

#### *2.4 Slow Food Gardens project's sustainability.*

One of the main challenges facing the project's coordinators during normal operations with the communities is maintaining the gardens' agroecological activity once the initial motivational and financial push drops off and various difficulties and obstacles might have started to emerge.

The project includes various measures to help ensure each agroecological garden is both socially and economically sustainable in the medium to long term.

*Social sustainability through the involvement of the community.* - One of the indispensable and compulsory preconditions for starting a garden is the involvement of a community. Not only in the narrow sense of the community directly involved in running the garden, but members of the community in a broader sense (people living in the village/neighbourhood/area where the garden is located) must also become participants. The project must seek to inspire each one of them to contribute all the material and immaterial resources they can.

From the very first visit to the site where the garden will be created, and then in an on-going way, all the stakeholders are kept informed, regularly consulted and invited to collaborate on the project, including official figures, religious authorities, representatives of various social and economic groups. Here, the role of the African coordinators working in the field is essential, and distinguishes Slow Food's work from that of other traditional NGOs, who often hire expats. The fact that the Slow Food gardens are designed created and managed by the beneficiary communities, means that in each individual case, the solution best adapted to the context can be identified and mediated by people within that context, who are the project coordinators.

Another fundamental element giving a greater guarantee of sustainability is "proximity." The project's local coordinators have direct relationships with all the subjects involved and seek to mediate between the different positions, thus limiting the emergence of potential conflicts that could threaten the project's success, while at the same time encouraging everyone's participation. In this way, the garden becomes a shared project, understood as belonging to the whole community, not just the initiative of a specific school or group of families.

Some best practices in regards to this, gathered from experience in the field, are:

- Schools and private individuals granting land for the project for free.
- Local authorities making specific funding lines available to give continuity to the project.
- Local livestock farmers providing organic manure for the gardens.
- Growers donating local seeds to the gardens for free.
- Parents working in the school gardens alongside their children.

*Social sustainability through a permanent training process.* - A second decisive element for social sustainability is the role played by training within the project.

The community/school receives the basic tools for starting the garden, but most importantly they also enter into a process of reflection/gaining awareness about the importance of protecting local food biodiversity and promoting and adding value to traditional food products by using sustainable cultivation methods (which respect the environment and people's cultural identity). Everyone who joins the project does so voluntarily, because they embrace the values that it promotes. Nobody is forced to accept the effectiveness of the proposed model; whoever embraces it is aware of its benefits and so the practical implementation becomes not just a "didactic application" of

techniques learned within the ambit of the project, but the acquisition of a model linked to wider ideas and values of environmental, economic and social sustainability. This voluntary adhesion to the values that the project promotes is another key to ensuring the project's continuity over time.

*Social sustainability through integration into the local Slow Food network.* - The third essential element is that each garden is not "isolated" but included within a network. Each garden depends on a Slow Food convivium (local chapter), which is responsible for its launch, training and monitoring.

The convivia are also networked together at a national level and meet both physically and virtually. The same goes for the garden coordinators, who are constantly in contact with each other. In addition to the national gardens network, there is also an international network of the various African countries involved and the donors.

The network is a strength for the project, allowing the exchange of best practices and for shared challenges to be overcome together.

The link that often becomes established between donor and supported garden (formed of exchanges of information and updates on how activities are developing) is a decisive factor that encourages the local group to engage in guaranteeing the garden's survival, just as the donor's support is valuable in specific cases where it is necessary to invest additional resources.

Work is also constantly being done so that each garden is integrated into the wider framework of the projects that Slow Food is carrying out in a specific area/region/country (like the Ark of Taste and Presidia projects promoting traditional foods). In this way, synergies are created with other initiatives and shared processes of sustainability can be developed (for example, collaborations with local restaurants, shared activities to raise awareness about the importance of safeguarding native foods at risk of extinction, etc.).

*Economic sustainability through the lowering of management costs.* - The sustainability of the garden at an economic level (meant here as the availability of material resources for its survival) is reached on the one hand through social sustainability, the foundation on which the project is built, and on the other thanks to the work carried out to create a network of people from the community around the garden project. This network commits to ensuring the garden survives, identifying local sources for the resources needed for activities to be launched and continued.

After a year or two, the garden becomes autonomous and can even generate resources, producing seeds and compost that can be used to start other gardens. Part of the harvest or processed foods (preserves, juices, jams) can be sold to supplement the income of the members and to buy school materials.

*Economic sustainability through the acquisition of specific techniques.* - In this case, once again the network plays a decisive role, because the individual garden coordinators can meet physically and virtually. They can learn about solutions put into practice by others to deal with the various adversities that arise during normal operations and also in extraordinary situations caused by particularly unfavorable environmental conditions (drought or prolonged rains, for example). The project's coordinators include many agronomists and other experts who are willing to share their knowledge with all the other subjects in the network involved in the project. As well as being able to rely on the

skills and knowledge of local experts (or people with proven experience in agronomy), they can also draw on the additional advice of two Italian agronomists and university researchers.

A food garden is a drop in the ocean compared to the problems Africa faces every day. But if the number of gardens grows from a hundred to a thousand to ten thousand, and they dialog together and support each other, their impact grows. Together, they can transform into a single voice, speaking out against land grabbing, GMOs and intensive agriculture, and in favor of traditional knowledge, sustainability and food sovereignty. And they can represent a hope for thousands of young people.

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## ANOTHER WAY IS POSSIBLE

Margherita Perino,

*M\*\*BUN*

### *Abstract*

Another way is possible. Another way of rearing and growing. Another way to relate ourselves with animals and nature, another way to feed ourselves and enjoy food.

This is the idea of M\*\* BUN, simple but revolutionary: healthy products, local food ingredients, recycled or biodegradable materials, respect for people, for the environment and even for your rhythm.

MAC BUN is born in 2009 in Rivoli (TO) from the experience of the agricultural farm of Scaglia family which produces beef since 3 generations, with a particular attention for the Piemontese steer breed, certified by the Coalvi consortium, and Francesco Bianco, an entrepreneur from Turin.

In less than six years, two POS (point of sale) have opened in Turin, with altogether 80 employees.

Mac Bun is the first AGRIAMBURGERIA SLOW FASTFOOD, because it is an innovative project, that joins the bases of the agricultural world, respecting nature, and food service.

The term SLOWFASTFOOD, other than meaning “the right time”, define also the rearing timing and the care for the preparation of raw materials, combining them with the concept of fast catering.

The MAC BUN’s world, is based on 4 fundamental points:

- Build up something different
- The quality of the product is the focus point of the project
- Desire to experiment
- Change the concept of work and the relationship with the employees

### *1. Product quality at the center of the project*

Our recipes have the flavor of our land which is inherent in all our ingredients.

To ensure the daily quality of the products we offer to our customers, as well as the strict controls both by ourselves and our suppliers, it is very important: seasonality.

Why is it so important? In our dishes is ensured the presence of seasonal ingredients in order to respect the natural time cycle.

Another very important aspect was the choice of avoiding the use of products that contain dyes and preservatives, while promoting the employment of fresh and not frozen materials.

Our "Friciulà", from Italian crops is strictly fresh: we do not use frozen ones or those pre-fried, in order to rediscover the genuine taste of potatoes. Vegetables are fresh, delivered the same day. Bread, sauces and beers are handcrafted. We offer products of high quality, and the food we serve helps to assist small local economy, making it seem even better.

Since the beginning our goal was to propose healthy food, controlled goods, reflecting their territories, and aiming at customers of all ages which have an interest in promoting our region and are aware of the necessity to respect the environment and the importance of the short chain.

Our beers, Mac Biunda and Mac Rusa are produced by a craft brewery in Lower Val di Susa using only ingredients of high level. Each month, in addition to these two types, we support other craft beer producers of the territory, to promote innovative aspects of our surroundings.

## *2. Why building something different?*

With Mac Bun idea, we wanted to bring to the table the authenticity of the short chain products by proposing a type of food often perceived as "Junk Food". The goal is to promote a new way of breeding, cultivating, relating to nature by eating healthily. We consider ourselves 'against' the concept of speed and in favor instead of a slow and healthy approach, aimed at bringing unique moments and different tastes, with an eye on ecology, on environment and livestock.

In addition to meat, pivotal point of the project, we are committed to find other suppliers in the territories that support our concept of Slow Fast Food and to promote local food.

Year after year, we have increased our sensitivity and awareness, that led us to seek raw materials of higher and higher quality and this goes even beyond what the final outcome of the product is. Our suppliers respect our fundamental belief for which vegetables, rather than meat or bread, are grown or produced by following the respect of animal production, maturation and conservation. Particular attention is dedicated to the control of the production cycles.

For example, the Scaglia farm feed its animals with cereals and fodder grown in their fields, worked in the company for a proper diet and controlled by agronomists and experts. They are fed according to their needs, ensuring them an adequate space while maintaining high levels of cleaning and monitoring at each step of the process.

## *3. Desire to experiment something new*

In a changing world it is not possible to stop: it is essential to experiment and continuously improve. Each particular of our idea has been carefully designed to ensure that in addition to the taste, there is a careful preparation, for example for the cooking process of meat.

For years our meat is cooked in special ovens of new concept: they reduce fumes (and therefore the impact on the environment), enhance taste and prevent the damaging process of carbonization, typical of grilling.

We are always looking for new materials to be in line with the environment: our forks and disposable cups are biodegradable, recyclable as damp. We have chosen to reduce wastes at every stage by minimizing packaging.

We have implemented a controlled recycling process to empower, and educate our customers to love their land, just as we do.

#### *4. Changing the concept of work and relationship with employees*

Our employees are the main actors of the project, without which, it could not exist. They are the last, not least important, phase of this chain. For us, they are not just employees, but people who interact directly with all the points of this idea. First of all, to make them aware and integral parts of this project is important to let them get in touch with a multitude of realities. We organize several trips to our suppliers, in which they can get in touch with production processes and products, taste them, so as to be fully prepared to serve our customers. In addition to these experiences, their work is integrated directly into the kitchen, sampling the various latest products or perfecting the dishes with their advice. Our training is mutual: they interact directly with their own ideas and experiences in the project. It is important to establish a rotation model of duties and tasks for our employees.

In addition to trips and meetings of training, TEAM WORKING is also very important to create direct relationships among our staff. It is a relationship made up of mutual respect and sense of belonging, not only from the professional, but also from a personal point of view. The harmony of the group helps everyone feel a fundamental part of an innovative idea.