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**Africa – Mediterranean – Europe**

## Towards sustainable and shared food security and sovereignty

Theodore Mada Keita, head of the village Boula Tene, in Senegal, showing the fonio grains with which he feeds his family. His community works towards a better transformation of this nutritional cereal. PHOTO: R. Nyberg, USAID.

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INTRODUCTION

**T**HE RIGHT TO FOOD is recognised by the United Nations Universal Declaration of Human Rights of 1948. Today, it is part of sustainable food and food and nutrition security issues defined by the FAO between 2010 and 2012. This right is implicitly present in most of the 17 sustainable development objectives 2030 adopted by the United Nations General Assembly at the end of 2015.

According to the Committee on World Food Security (CFS, 2012): “Food and nutrition security is a condition when all people, at all times, have physical, social and economic access to sufficient, safe, and nutritious food

which meets their dietary needs and food preferences for an active and healthy life, while benefiting from adequate health environment and services, education and care”.

If we accept this definition, sustainable food and nutrition security is still out of reach with, according to recent estimates, nearly 40% of the world’s population being malnourished, half by deficit and half by excess.

In the macro-region of La Verticale “AME” (Africa, Mediterranean, Europe), food insecurity is also worrying, to various extents in the different sub-regions.

# Africa, the Mediterranean and Europe facing triple food insecurity

## An increasing qualitative insecurity

**T**HEREFORE, ACCORDING TO THE FAO, , 19% of the Sub-Saharan population (151 million people) is in a condition (2014-2016 average) of dietary energy malnourishment (insufficient average daily calorie intake), among which 11 countries - that is 85 million people - in severe shortage amounting to 30% of the daily requirements. On the contrary, North Africa and Europe do not feature undernourishment conditions (rate inferior to 5%) and the Middle East has 8% of individuals with a calorie deficit. If we adjust food requirements to physical activity, the calorie deficit is significantly higher (tabl.1).

Undernourishment is actually much higher than these figures, for it must include unmet nutritional requirements in micronutrients such as vitamins, minerals (iron, zinc, iodine), fatty acids and essential amino acids. These deficiencies are sometimes called “invisible hunger”. Although we do not have thorough figures on these dietary deficiencies, we can estimate that nearly a quarter of the African and Middle Eastern population (that is over 300 million people) is concerned. Europe, generally considered as exempted from this scourge, has at least 25 million undernourished people. Besides, dietary deficiencies striking children in the crucial period of their “one thousand first days” (from conception to age 2) lead to irreversible physical and intellectual developmental delays.

As the issue of food and nutrition security has a lot to do with access to drinking water, we must add that in Africa and the Middle East, 337 million people (25% of the total population) do not have access to drinking water, according to the United Nations.

TABLE 1 Dietary energy shortfall in Africa and the Middle East, 2014-2016

Area	Total population (Million)	Food inadequacy* (* total population)	Food inadequacy (million people)
World	7 324	17 %	1 230
North Africa	177	3 %	5
Sub-Saharan Africa	949	29 %	279
Middle East	229	12 %	27
<b>Total Africa and Middle East</b>	<b>1 355</b>	<b>23 %</b>	<b>312</b>

\*This indicator measures the percentage of the population with a risk of non covering their dietary energy requirements in relation to physical activity.

Source: Estimations according to FAO, FSI, 2016

In developing countries, we often talk about the double burden of malnutrition. In addition to calorie deficits, people are also struck by diseases due to an unbalanced diet with too much sugar, fat and salt consumption, such as cardio-vascular diseases, type 2 diabetes and some cancers. This phenomenon is directly linked to a continuous decline in oil and sugar prices at the international scale for over 40 years, as well as to the new lifestyles due to urbanisation, with a better access to food, but also a significant decrease in physical activity. Besides, the situation is often worsened by the overconsumption



of a few agro-industrial products (especially sodas, snacks and fast foods, often called junk food). Mass consumption made them cheap products providing a lot of calories, but containing few or no nutrients useful to the organism. This is what caused the overweight pandemic everywhere in the world, and especially in urban areas. Obesity, which is an aggravating factor of nutrition-related chronic diseases, is quickly growing in Mediterranean and African countries. According to the WHO's statistics, mortality due to nutrition-related chronic diseases is now higher in Mediterranean countries than the global average (54% of deaths against 50%). This is a worrying paradox as the Mediterranean diet is praised by nutritionists everywhere in the world.

For instance, the production and consumption of white sugar, made from imported brown sugars, are constantly increasing in North and Sub-Saharan Africa, mostly because sugar has become the main cheap source of dietary energy in these countries. This industry has a productive efficiency rate (energy, logistics, labour cost) among the highest in the world. Refined sugar is added to other basic products, such as beverages, coffee, cocoa and derived cereal products, to meet the demand of people whose taste has progressively changed. This growing and profitable agribusiness activity - just like the production of corn isoglucose - has less enviable consequences on people's health.

Although we do not have any statistics on the scope of nutrition-related chronic diseases in the world, we can assert that at least 20% of the population suffers from them in developing countries, that is 270 million people in Africa and the Middle East, which

are particularly exposed. In Europe, as in most high revenue countries, this rate is much higher. The following estimation of the theoretical overnourished population provides an idea of the pathological risks (tabl.2).

**TABLE 2** Estimated overnutrition in Africa and the Middle East, 2014-2016

Regions and sub-regions	Prevalence of overnutrition	
	(% total population)	(Million people)
World	30,8	2 256
Africa	27,5	321
North Africa	54,0	96
Sub-Saharan Africa	22,4	213
Middle East	44,6	102
<b>Total Africa and Middle East</b>	<b>30%</b>	<b>410</b>

Source : Estimations according to FAO, FSI, 2016

THE DIAGNOSIS OF FOOD INSECURITY in this region is quite worrying, with 55% of its population being theoretically malnourished, by excess or deficit (720 million people). The absence of an adapted diet and the rise of a unique and fractioned agro-industrial consumption model, disconnected from the products' cultural roots and fabrication methods, lead to a loss of references and a disintegration of the social link. In the end, they contribute to a feeling of ill-being, for the consequences of a bad diet are not only biological but also psychosocial.

In Africa and the Middle East, in addition to food insecurity, food safety is also an issue. Foodborne infectious diseases remain common due to insufficient hygiene in industries and households. Besides, chemi-

cal residue is still present in food and the environment, sometimes at a high rate, with serious consequences on agricultural workers' health (10% of pesticides used in Africa belong to the 1A or 1B class, which are the most dangerous

for human health). Generally speaking, the health situation in rural areas is mediocre (more cases of tuberculosis, malaria, etc. for instance).

However, the priority is to develop agriculture and related industries in order to create economic activity and jobs, to get people out of poverty. Rural challenges and food challenges are therefore closely related.s.

**Rural challenges and food challenges are closely related**



## External dependence of Africa and the Middle East, a potential lever for cooperation?

THIS DISASTROUS HEALTH SITUATION leads to a decreasing production capacity, which has a major negative socio-economic impact. This impact has not been assessed precisely yet, but it is likely to weight several million euros, and it keeps increasing the food bill of the AME region. Thus, according to the International Food Policy Research Institute (Ifpri), the cost of undernourishment is of about 10% of the GDP of the concerned countries.

**The average external food bill** measured by importations for the 2011-2013 period amounted to USD 129 billion for the Middle East and North Africa and (ANMO) and to USD 46 billion for Sub-Saharan Africa, that is 176 billion for the whole region, which corresponds to 13% of global importations of agricultural products and an increase of over four times in 12 years (tabl. 3).

**TABLE 3** External agricultural and food bill in the AME region

Region	2011-2013 average (billion USD)	Market share	Evolution M2000-M2012 (x and %)
World	1386	100	3,2
EU - 28 (included intra-zone trade)	522	38 %	2,7
Sub-Saharan Africa	46	3 %	4,6
North Africa + Middle East	129	9 %	4,0
Africa + Middle East	176	13 %	4,1
Agricultural products/Total trade Africa + MENA	11 %		-2 %

Source : Faostat, 24<sup>th</sup> oct 2016

Within the great region “Africa - Mediterranean - Europe”, African and Middle Eastern agricultural and food trade balances are in a substantial deficit position: respectively -10 billion for Sub-Saharan Africa, -29 billion for North Africa and -60 billion for the Middle East (only Turkey is a net exporter in this region), that is a deficit of nearly USD 100 billion for Africa and the Middle East, while UE-28 has a surplus of 13 billion (source: Faostat).

In 2009-2011, the external dependence of Africa and the Middle East (importations/national needs ratio) for cereals was of 27%, with a maximum of 50% for North Africa, followed by the Middle East (41%) and Sub-Saharan Africa (20%). These figures can be explained by the significant part played by common wheat, durum wheat and barley in the first two regions, and by rice - to a lesser extent - in the last one. Prospective exercises carried out by the Cirad, the Inra and Ipemed show that this dependence can only increase in the absence of a voluntarist macro-regional policy. Besides, it destroys local crop and livestock farming.

We can observe a complementarity between the North (EU), which is a net exporter of foodstuffs, and the South (Africa and the Middle East), which has a heavy deficit (mirror effect). However, the market shares of the EU in “La Verticale” keep decreasing for the benefit of Americas, the Balkans and Asia, according to the products. The current negotiation of the European Partnership Agreement (EPA) between the EU and 79 States of Africa, the Caribbean and the Pacific (ACP) is likely to worsen these deficits by dismantling ACP tariff protections and by threatening their food-producing activities. According to the NGO SOL, ECOWAS (Economic Community of West African States) countries would immediately lose 26 billion of custom benefits and part of their local agri-food industries would shut down because they would not be able to match the prices of importations coming from Europe. This kind of agreement, in the framework of the WTO, clearly does not aim at regional food security

Although international trade is essential for a vertical AME partnership, geopolitical, humanitarian and security issues in relation to emergency migratory



flows are also crucial. It is indeed necessary to engage two actions in this field. On the one hand, boosting local economic development (especially in rural areas) to slow down these flows by offering decent living conditions to populations who suffer from po-

verty and need to leave their country. On the other hand, making human exchanges easier by granting long-term authorisations to people who go abroad for professional, academic and cultural reasons.

## Sustainability of agricultural and agri-business models - a challenge

THE FOOD PRODUCTION METHOD is also an issue, be it specialised, intensive, centralised and financialized as in the agro-industrial model, or fragmented, with a low productivity and a weak organisation of agri-food industries, as in the traditional model. Since this model has been deployed on a large scale, the technical and economic methods used in the agri-business system (which currently feeds half of the humanity if we add the

inhabitants of high-revenue countries and urban middle classes of emerging countries) had significant negative impacts in terms of depletion of basic natural resources (soil, water, biodiversity), of chemical residue in soils, water and food, of greenhouse gas emissions (at the global scale, it is responsible for over 25% of these emissions, for a contribution to the GDP of about 8%), but also of unemployment (in Europe, the agricultural active population decreased from 50% of the total active population to less than 5% in 70 years) and acculturation (destruction of local food heritage).

In African countries, over 60% of poverty is located in rural areas, with an endemic food insecurity. Soils are subject to wind and water erosion due to climatic conditions and to the strong anthropogenic action that destroys vegetation. Over the past decades, livestock farming evolved very little. The new breeds imported to improve production are confronted to hostile ecological and climatic conditions, thus preventing their genetic potential to express itself. Besides, industrial livestock is dependent on corn and soy importations.

**In African countries, over 60% of poverty is located in rural areas, with an endemic food insecurity**

African farmers do not have access to the means they need to make the most of agriculture: improved seeds, good health protection of plants and animals, fertilisers, sufficient water provision, cartography of agricultural potentials, ignorance of technological opportunities and innovations, etc. They also lack information on the markets and technologies that would enable them to get a better revenue from agriculture and to capitalise to invest. In many African countries, many perishable raw materials are lost because there are no intermediary or final outlets..

According to the FAO, at the global scale, a third of the food production dedicated to human consumption in the world is lost or wasted, amounting to 1.3 billion tons per year. Nevertheless, waste is much higher in Europe and in North America (about 100kg/year/inhabitant) than in Sub-Saharan Africa (about 10 times less). For low revenue countries, great amounts of resources directly necessary to food production are lost.

At the same time, there is a reduction of available arable land, a scarcity of agricultural land, a parceling out of farms and a lack of investment in processing and marketing activities of agricultural raw materials.

Therefore, the effects of the “green revolution” of the 1960’s - which remains the reference of many agricultural policies in the world - are still limited regarding productivity and negative regarding social and environmental issues and, in any case, incapable of solving the problem of food insecurity.



### Food and agricultural crisis in the “Africa - Mediterranean - Europe” region - A systemic crisis?

IF WE THINK ABOUT THE FUTURE, if we must also take into account external factors to the food system that must be added to the internal factors we just identified. These exogenous constraints are linked to the triple social, environmental and economic crisis that has been facing the world since the end of the 20th century.

The social crisis is due to demographic and economic factors. According to the UN demographics department, the population is going to keep growing in the coming years. The great region AME will grow from 1.9 billion inhabitants in 2015 to 3.3 billion in 2050. The African population will more than double, while the Middle Eastern population will increase by 58% and the EU-28's will decrease by 1%.

The active population will follow these trends with a massive increase of young people looking for jobs in the South and an ageing population in the North. Another “vertical” complementarity factor must be

noted. The expected mutations of the economy are such that the conventional industry will not be able to absorb the demographic shock as it did during the post-war period in occidental countries. Two sectors will create employment: the service sector, for sure, and the bioeconomy sector (that is all the activities linked to the re-use of biomass, among which the food system), probably. Besides, demographics is a crucial element because rural areas (where most of the biomass will be created) will keep hosting, in Southern countries, a numerous population. The rising urbanisation and “megalopolisation” (which mostly happens on coastlines) present many environmental and social risks. In 2015, the AME region was home to 1 billion rural people, but this figure should increase by nearly 300 million, to reach 1.3 billion in 2050, of which 90% in Africa and the Middle East (tabl. 4).

TABLE 4 Evolution of the rural population Africa, Middle East, Europe

Areas	2015	2050	Evolution 2050-2015	
	Million	Million	Million	%
World	3 367	3 212	-155	-5%
Sub-Saharan Africa	590	938	348	59%
North Africa	105	117	12	11%
Middle East	77	78	1	1%
Total Africa and Middle East	771	1,132	361	47%
Europe	196	128	-68	-35%
Africa - Mediterranean - Europe	967	1260	293	30 %

Source : United Nations, 2015. World Population Prospects: The 2015 Revision, Medium Variant

The above trend scenario shows that in spite of a probable strong urban growth, 41% of the total population, that is over 1.1 billion people (+360 million in relation to 2015) will live in rural areas in 2050 in Africa and the Middle East. This confirms that the development of the rural space will remain a major issue for decades to come. Besides, this scenario is based on a massive rural exodus which is not acceptable as it would generate labour deficits in ru-

ral areas, unemployment, the development of slums and massive emigration.

In addition to this social issue, the environmental one must also be taken into account. It is indeed necessary to preserve or restore soil fertility, to reduce soil pollution as well as river and sea pollution, and to limit greenhouse gas emissions. The impacts of these various factors on agricultural yields, added



to the current climate change, will be significant in many areas of the Verticale AME (scientific studies expect a potential decrease in productivity of 30% on cereals). It will also be necessary to give priority to agriculture for available lands.

Finally, the economic challenge lies in a good management of agricultural and food markets, which

are very volatile, with price variations from 1 to 3 or 4 over short periods, thus leading poor households (of which over 50% of the revenues are dedicated to food) into food riots when prices rocket and bringing misery upon Southern and Northern family farms when prices drop.

## Towards a renewed cooperation for sustainable and shared food security and sovereignty in the macro-region “Africa - Mediterranean - Europe”

### It is urgent to act...

SINCE THE BEGINNING OF THE 21ST CENTURY, food security has regularly been on the agenda of high-level meetings of the African Union and of the International Centre for Advanced Mediterranean Agronomic Studies (ICAMAS):

- » Maputo declaration in 2013 aiming at reducing hunger, poverty and malnutrition on the continent in the context of the Comprehensive Africa Agriculture Development Programme (CAADP);
- » Pan-African conference of Kampala in 2004 on “Ensuring food and nutrition security in Africa by 2020”, with the proposition of an annual African Day of Food and Nutrition Security;
- » Launching of the New Alliance for Food Security and Nutrition in Africa (NAFSN) in 2012, under the authority of the G8, aiming at mobilising private investments in agriculture;
- » The African Union Commission (AUC), the FAO and the Lula Institute in Brazil announced, on 21st November 2012 in Addis-Abeba, a rapprochement in order to help eradicate hunger and undernourishment in Africa;
- » 23rd summit of the African Union, in Malabo (Equatorial Guinea), on 26th and 27th June 2013, that gathered about forty Heads of State on the issue “agriculture and food security in Africa”, a topic that was chosen for the 2014 summit;
- » For 20 years, several meetings of Ministers of Agriculture of member countries of the International Centre for Advanced Mediterranean Agronomic Studies (ICAMAS) had food security on their agenda.

All these international meetings show the relevance of food security, but their results are insufficient. Therefore, it seems legitimate to implement a voluntarist action plan towards more sustainable systems to ensure the food security of the 3.3 billion inhabitants of the AME region in 2050, and to do so through South-North and South-South co-development, with a 2030 objective, in keeping with the United Nations’ SDGs.

### ... on behalf of the principles of food sovereignty and solidarity

THIS ACTION PLAN COULD RELY ON 2 levers:

- » Reconquering internal markets through a better managed food sovereignty;
- » North-South, South-North and South-South solidarity via the Mediterranean interface, through strategic devices of co-development and secure supplies.

**According to the principles of food sovereignty,** peoples must be able to choose the way they produce and consume their food. In every country, food has very old historical and cultural roots that correspond to a balance between consumers’ biological and psychological needs and the local agricultural and climatic potentials. Preserving this culinary heritage is much more than a memory necessity, it is an opportunity to develop new markets, on the condition that some WTO rules evolve. Besides, the increase in local production in keeping with the food culture enables to develop new economic activities in rural areas and therefore jobs, while reducing the external food bill and opening exportation perspectives. Indeed, agri-food products from local industries

enable to keep the value created on site (as opposed to the “cash crops” exporting raw commodities) by differentiating the products and to find clients via partnerships with the booming eco-tourism (rural holiday cottages and restaurants).

The transition scenario relies on sustainable and responsible food, as well as short and fair production cycles, with a territorial governance. According to the principle of food sovereignty, territories must increase self-supply. In this scenario, agriculture gets back to its nourishing, social and environmental specificities, based on multifunctional family farms connected to agri-business micro-enterprises and SMBs and short marketing cycles. This way, agriculture plays its part in the development of rural spaces which, without agricultural activities, would be deserted by their populations. The technological strategy will include agroecology, artisanal and industrial eco-design, circular bioeconomy and digital networks. Here, the aim is to improve agricultural yields through ecological intensification and diversification, but also by securing the land for farmers, to develop the use of agricultural raw materials through transformation via simple and adapted technologies with business creation, to facilitate products marketing via improved infrastructures and logistics, and via short cycles.

In the North and in the South alike, the development of “territorialised food systems” contributes to consumers’ health, to the good use of natural resources and to employment. Such a perspective implies strong national food public policies, an adjustment of rural investments, urban-rural solidarity, an evolution of bilateral and multilateral commercial and financial institutional frameworks (especially WTO) and a good international coordination - this is a deeply renewed approach of rurality.

**The “three-way vertical solidarity”** is built on strategic agreements of territorial co-development and North-South, South-North and South-South commercial exchanges. Co-development means that scientific, technical and cultural cooperation are redirected and strengthened in the field of sustainable food systems in view of creating and exchanging knowledge and passing them on through adapted training, from design to R&D projects and on-site projects, which requires the organisation of AME equal international teams. As regards industries’ organisation, they

will adopt the concept of coproduction developed by Ipemed, enabling to create and fairly share value between partners over the value chains. In this two-way approach, co-development may concern North=>South and South=>North cooperation (crossed material and immaterial investments).

For instance, in the context of climate change, the creation of coproduction cereal seed industries or oil protein crops industries in the South will serve as a laboratory and a mutually interesting production foundation. In order to succeed in this phase, significant investments in R&D and training are necessary.

Multi-annual commercial contracts aim to ensure the stability of basic foodstuffs supplies that can be affected by climate instability or market volatility. In the South, the food sovereignty approach will improve countries’ self-sufficiency rates, but because of agricultural, climatic and political constraints, self-sufficiency will not reach 100%. To secure this rate, a complement through international trade will always be necessary. The contracts will aim to guarantee sufficient flows as well as negotiated price ranges between the parties for 3 to 5 year periods.

The solidarity dynamic will help stabilise both parties and will concern North-South flows (cereals, oil protein crops and milk powder for instance), as well as South-North flows for stimulating plants (coffee, cocoa, tea), fruits and vegetables. In addition to this commercial approach, co-investments will be made in territorial coproduction and logistics (transport, storage, management) in the South.

Such a project of “shared food security and safety” should lead to a geopolitical AME framework agreement that will define its legal and financial objectives and tools.

The South-South dimension must also be taken into account. A study carried out by the NEPAD shows that the demand of regional and local urban food markets in Africa will increase from USD 50 to 150 billion by 2030. Farmers could therefore generate a revenue of USD 4.5 billion on exportation markets, and of nearly USD 30 billion on national and neighbouring markets.

**Such a project of “shared food security and sovereignty” should lead to a geopolitical AME framework agreement that will define its legal and financial objectives and tools.**



# Propositions of projects showing the benefits of “shared food security and sovereignty” approach

**C**ONCRETE ACTIONS should be quickly launched in 3 fields in order to legitimate the AME policy of food sovereignty and of vertical solidarity:

## 1. “Consumer food information and education” programme

THE “FOOD” KNOWLEDGE AREA has disappeared from school programmes. Yet, it has been shown that malnutrition was inversely related to the level of consumers’ revenues and education/information. Here, the objective is to integrate, from primary school to university, an education in terms of food (production, processing, consumption) and of its impacts on health, well-being and sustainable development.

This training will include a heritage part on local food and expertise, which requires preliminary scientific research, in the manner of the “invento-

ries” promoted by Jack Lang in the 1980’s in France, leading to an educational publication in printed and digital versions.

This educational programme will come with information campaigns for the public carried out by the media. Indeed, today food information is mostly provided by private advertisers, which can be prejudicial to consumers’ choices. We must recall that a good diet generates, through its prophylactic effect, substantial savings on health spending and prevents productive capacity losses.

## 2. “10 projects of territorialised circular bioeconomy - BEST” programme in each country

IN ORDER TO CHANGE THE INDUSTRY PARADIGM of food production-processing-marketing, it is necessary to set an example and be pro-active on the field. To do so, it has been suggested to launch in each AME country 10 projects of territorialised circular agri-business bioeconomy (or territorialised systemic bioeconomy - BEST).

This concept relies on a triple proximity. It is firstly a proximity within the ecosphere, via the diversification of agricultural productions, by “reconnecting” crop, livestock and forestry industries according to the principles of agro-ecology. The second proximity relates to the association of agriculture and food industries, by supplying in priority processing units with agricultural raw materials from the same region. The third proximity concerns the redirection of food demand towards a more varied and abundant local offer, which quality can be identified more easily, as more and more consumers require. The circularity relates to recycling in view of producing energy or co-products of fabrication and consumption losses and waste. Finally, multifunctional agri-food industries must have a strong territorial foundation.

Each **BEST project** will have agricultural, artisanal and/or industrial, as well as marketing and services components enabling them - in the framework of a participative governance associating all the stakeholders - to fairly share the value created through the

purchase of the final product. The BEST foundation will be made up of an agro-sylvo-pastoral and fish pilot farm (which can be that of an agricultural school, but with autonomous management), with a processing workshop, a direct sale shop and a management and digital sale tool. Farms can follow the example, and even establish a partnership with the “Songhai Leadership Academy” recently founded by Godfrey Nzamujo with the help of the AFD, based on his experience of the “mother-farm” created in 1985 in Benin and followed by 13 similar centres in Nigeria, Liberia and Sierra Leone. In Europe, many innovating experiences are currently being tested and could be developed in partnership with the South, for example the GartenCoop of Fribourg-en-Brisgau in the German Bad Wurtemberg, or the “Fermes de Figeac”, a multi-purpose agricultural cooperative of 650 members in the South West of France, or the LDC Microalgae cluster of Plouguenast in Brittany.

A company incubator will be created along with each BEST centre and the two will work in close collaboration. The incubator will host project holders willing to create units in the agricultural, artisanal, industrial, commercial and service (especially green eco-tourism) fields. This incubator will be related to relevant R&D national organisations and that of AME countries. It will provide business creation training for project holders. It will provide facilities and will make access to land and financial resources ea-

sier. It will be the core of a future bioeconomic cluster that could lead to the creation of a multi-purpose cooperative in view of sharing resources, purchases and sales of its members. The “PROIntensAfrica” initiative on agricultural sustainability gathering 8 African and 15 European scientific institutions in the framework of the strategic EU-African Union agenda could be mobilised in this regard.

### 3. “Three-way solidarity supply” programme

THIS DESIGN AND LAUNCHING PROGRAMME of international trade multilateral agreements among AME countries raises legal issues for the signatories of the WTO agreements and because of the implication of private actors. It concerns diplomatic negotiations and public-private partnerships.

Firstly, it has been proposed to create an observatory of AME food systems in charge of establishing a historical report of food supply for each country over the past 20 years. The aim is to better understand products production and use (especially human food consumption), to precisely identify the relevant commercial flows (importations and exportations in terms of quantity, value and unit price) and national investment flows and FDI (foreign direct investments) in food systems. These tools will enable to make assumptions on potential flows by integrating the results of the food sovereignty programme.

Simultaneously, a solidarity supply charter will be drawn up with a multi-actor participative approach. It will define the rights and obligations of commer-

The third pillar of this programme is a digital platform for experience exchange and partnerships between project holders in each territory, at the national and AME levels.

cial partners, such as social and environmental responsibility criteria, contract terms and mechanisms of fair price definition. An “AME solidarity supply” label will be created. This device aims at making easier North-South, South-North and South-South commercial exchanges.

This knowledge basis and this charter will facilitate the market approach of private operators and business partnerships boosted by the food sovereignty programme and label. In this regard, some institutions might be helpful, such as the Network of Universities of Science and Technology of the Countries of Africa (RUSTA), which has been training its students for years to agriculture, agri-business, industry and services, and the African Council for Entrepreneurship and Innovation (CAEI).

At the same time, bilateral and multilateral diplomatic negotiations will be launched in order to reach international agreements to structure and strengthen economic exchanges related to food security.

## Implementation of the “AME food security and sovereignty” project

THE METHODOLOGICAL WORK and the concrete implementation propositions should be carried out by a work group of AME scientific, professional and political actors. It will start by working globally on the whole area, and then the framework will be developed and adapted in each country by tripartite national teams.

As soon as the global conceptual phase of the project is launched, it will be necessary to start raising funds. PPPs (public-private partnership) proved to be very efficient. It has been proposed to create an “Alliance for AME food security and sovereignty - ASSAAME” combining public authorities (States

and territorial communities, via decentralised cooperation for the latter) and private actors (companies and foundations). To do so, we could follow the example of the practical and efficient method implemented by Bill Gates in the GAVI (Global Alliance for Vaccines and Immunization) programme which enabled, in 16 years, to vaccinate 580 million children and prevent 8 million deaths. PPPs must be implemented in collaboration with intergovernmental organisations (especially the FAO and the WTO) and NGOs.

Besides, it is necessary to plan the adaptation and implementation of the propositions in development strategies at the national and regional scales.





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