

FOOD SECURITY TASK FORCE

Innovative financing for agriculture, food security and nutrition

Report of the high-level expert Committee
to the Leading Group on Innovative Financing
for agriculture, food security and nutrition



Innovative financing to fund development

Leading Group

International Expert Report

INNOVATIVE FINANCING FOR AGRICULTURE, FOOD SECURITY AND NUTRITION

REPORT OF THE HIGH-LEVEL EXPERT COMMITTEE
TO THE LEADING GROUP ON INNOVATIVE FINANCING
FOR AGRICULTURE, FOOD SECURITY AND NUTRITION

International Expert Report

December 2012



Members of the high-level expert Committee participated in their personal capacity. The views expressed do not reflect those of the institutions, organizations or companies to which they belong. While none of the group members disagrees with the general thrust and approach of the report, none would, either, fully support or endorse each and every specific reflection or recommendation.

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EXECUTIVE SUMMARY

➔ This report is the result of a collective work carried out by the high-level expert Committee and a writing team commissioned by the Task Force on Innovative Financing for agriculture, food security and nutrition created by the Leading Group on Innovative Financing for Development at its 9th plenary session in Mali (Bamako) in June 2011.

The report includes an analysis of the need for innovating financing dedicated to the agricultural, food security and nutrition sector, a critical review of existing and possible mechanisms and a proposed selection of avenues for the development of such mechanisms on the basis of the expertise of a high-level Committee of experts, literature review, meetings with relevant professional actors and an on-line consultation on the Global Forum on food security and nutrition (FSN Forum)¹.

The setting up of the Task Force on Innovative Financing for agriculture, food security and nutrition responds to current and future crucial challenges faced by the international community regarding food insecurity and malnutrition and is related to the achievement of the first Millennium Development Goal (MDG 1) (reduction of extreme poverty and hunger by half by 2015).

With almost 870 million chronically undernourished people in 2010-2012, the number of hungry people in the world remains unacceptably high.

Given the current trends in world population growth, particularly in developing countries, the global demand for food is expected to increase by 60 percent by 2050².

Meeting this challenge and allowing developing countries to ensure food security and nutrition imply an important investment in the agricultural sector (i.e., 50 percent more than the current level according to FAO³) and in the field of nutrition (i.e., additional annual investment of USD 11.8 billion is needed to implement at scale the priority nutrition-specific interventions identified by the Lancet series⁴ and endorsed by the Scaling Up Nutrition (SUN) movement⁵, according to the World Bank⁶). These investments need to be as well combined with efforts across cross-cutting sectors such as economic empowerment (especially women and young people), education, health, water sanitation and hygiene, etc.

Although they are progressing, budgets for food security, including agriculture and nutrition components, in developing countries are severely constrained. Regarding the agriculture side, the dedicated Official Development Assistance (ODA) has increased in recent years, with higher amounts allocated to emerging middle income countries compared to Sub-Saharan Africa and less developed countries. The challenge is all the more important in Sub-Saharan Africa, the continent where population growth will be the highest, where yields have tended to stagnate

1- FSN Forum : <http://www.fao.org/fsnforum/>

2- FAO, IFAD and WFP: The State of food insecurity in the world (SOFI) 2012: Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition : <http://www.fao.org/publications/sofi/en>

3- Idem

4- The Lancet (January 2008) "Maternal and Child Undernutrition, Special Series"

5- SUN movement: <http://scalingupnutrition.org/fr>

6- Horton and al. (2010) "Scaling Up Nutrition, What will it cost?" Washington DC: World Bank

in recent years, and where climate change may have a negative impact on agricultural productivity. Regarding the nutrition side, worldwide efforts and investments need to be stepped-up to tackle undernutrition rates, in particular in Sub-Saharan Africa and in Southern Asia where rates remain high. In 2011, an estimated 165 million children under-five years of age were stunted (i.e., suffering of chronic undernutrition) and more than 90% of them live in Africa and Asia. Considering wasting, an estimated 52 million were affected, that means they are at substantially increased risk of severe acute malnutrition and death. Seventy percent of them live in Asia, most in South-Central Asia (2011, UNICEF-WHO-The World Bank).⁷

Despite recent efforts, it is unlikely that the international community will be able to levy the needed funds out of traditional resources, which tend to be restricted and more unpredictable in times of crisis. Alternative resources such as innovative financing mechanisms, in complement to traditional ODA, are urgently needed for agriculture, food security and nutrition.

In addition to public funding to address the public good dimension of food security, agricultural development requires high levels of private investments, as most actors in the sector are private parties. There are strong indications that private investment still lags behind its potential in most developing countries (and particularly in Africa), because investors and banks show little interest for a sector associated with high climatic, price and counterpart risks, and market failures. On the small scale farmer side, efficient cooperatives are potentially relevant providers of financial services and are precondition for them to partner with investors. Some innovative tools have been piloted to address these constraints, but still need to be developed and scaled up.

Innovative financing (including innovative complementary resources to ODA and national budgets, as well as innovative mechanisms to catalyze private investment) are essential to achieve food security and nutrition objectives. To maximize their contribution to food security objectives, these innovative financing mechanisms should, as much as possible, be targeted on food production and supply, as well as family farming with a specific attention to make agriculture work for

nutrition or “nutrition-sensitive” (applying the Food and Agriculture Organization of the United Nations (FAO) related guiding principles⁸). Therefore innovative financing mechanisms fully dedicated to nutrition might be further explored. To be fully effective, such mechanisms should have a global scope, complement traditional ODA, and generate long-term and predictable financing.

Knowing that a number of agricultural development institutions are already involved in a variety of pilot projects including innovative financing mechanisms, the high-level expert Committee came to the conclusion that there is a clear need for coordination of such interventions, promotion of such tools and upscale existing projects, and for a forum where experiences can be shared and evaluated, and where new innovative mechanisms can be designed and fine-tuned. The proposal for an Innovative Facility for the promotion of innovative financing and innovating financing solutions for agriculture, food security and nutrition is then highly recommended.

In addition to this proposed Innovative Facility, the report presents two large categories of innovative financing mechanisms namely 1) Mechanisms for generating new resources 2) Mechanisms for catalyzing private investment. The idea is not to push for a single mechanism but to encourage the development of multiple options on the basis of global, regional, bilateral, national or local initiatives. While the proposed mechanisms are not necessarily global in scope, the search for international mobilization has driven the expert Committee to suggest mechanisms likely to federate largely.

Mechanisms for generating new resources

- **National taxes** (to be decided at the national level in industrialized, emerging or developing countries): for instance, the tax on financial transaction, supported by several European countries, could be partly used for financing food security in developing countries; a tax on fats and sugar products, already existing in some countries (USA) could be partially used to finance nutrition actions in developing countries and a tax on fertilizers in developed and emerging countries has also been

7- UNICEF-WHO-World Bank (2012) “Joint Child Malnutrition Estimates”.

8- FAO (2012) “Synthesis of Guiding Principles on Agriculture Programming for Nutrition”

proposed by NEPAD as a mean to develop fertilizer consumption in Africa through smart subsidies.

- **Voluntary contributions** which could be applying, for example, by consumers, by firms and employees and/or by food and nutrition correlated industries. Lotteries can also be considered (a part of the lottery proceeds in Belgium is already dedicated to finance food security projects in developing countries).
- **Allocation of funds generated by the carbon emission allowances auctions** in the European Union Emissions Trading System (EU ETS). The sale of GHG emission rights linked to the creation of carbon markets in a growing number of countries can also be partly used to finance actions aiming at increasing resilience to climate change in developing countries, which addresses a number of food security issues.
- **Migrants' remittances** represent considerable financial flows from industrialized to developing countries, estimated at USD 400 billion annually, an amount comparable to three times net ODA. Remittances can be considered both as new and renewable sources of financing as well as existing private capital that may be channeled into agriculture.

Mechanisms for catalyzing private investment

- **Risk management tools**, such as index-based weather insurance, compensate the subscriber for a production loss when a reference index, for instance rainfall level, is not reached; and guarantee funds, which reduce banking risks by granting a partial guarantee on a bank's loan portfolio.
- **Innovative credit tools**, such as warehouse receipts, which permit use of stocks as collateral for credit and prove to be an effective way to channel financing into value chains.
- **Public-private partnerships** with appropriate institutional and financing arrangements could help leverage funds from the private sector to finance the infrastructures needed for the

development of agriculture and value chains. Efforts should be focused on building resilient and inclusive financial systems.

- **Smart subsidies** on agricultural inputs required for intensification may also catalyze farmers' investment. The already mentioned NEPAD proposal considers a harmonized fertilizer subsidy scheme for sub-Saharan States, based on common good management principles and on co-financing involving individual States and an African Fertilizer Financing Mechanism (AFFM). Such a scheme is expected to increase by five the use of fertilizer within 10 years (Sub-Saharan Africa has the lowest use of fertilizer in the world), thus reversing the current alarming trend in soil fertility depletion and fostering a considerable increase in food production. Input subsidy programmes linked to financing schemes for purchasing inputs would require lower subsidies and simultaneously encourage the development of financial services in agriculture.
- **Migrants' remittances** can also be considered as existing capital that may be channeled into agriculture. The FAO rapid appraisals in fifteen countries⁹ indicate that investment of remittances in agriculture is between 3 and 10 percent. Innovative schemes are needed to create financial vehicles that leverage the existing flow of migrant remittances in order to expand investments in agriculture, food security and nutrition projects in developing countries.

There is also large scope for developing dissemination of technical innovations (a crucial factor for agricultural growth and improved nutrition) through innovating mechanisms catalyzing private investment into innovation systems: **pull mechanisms** (based on ex-post incentives to innovation linked to pre-defined objectives) and **advance market commitments**¹⁰ (guaranteeing to innovating enterprises a minimum market and thereby reducing the risk related to market failures) are promising avenues to be developed¹¹. In addition, **Development Impact Bonds (DIBs)**¹² are also an interesting tool to promote innovation in service delivery, especially for delivery of SUN nutrition-specific interventions.

9- Bangladesh, Ecuador, Gambia, The Grenadines, Guinea, India, Jamaica, Kenya, Nepal, Peru, The Philippines, Senegal, St. Vincent, Tonga, and Zambia.

10- Already successfully used in the health sector for vaccine production.

11- For example, Advance market commitments (AMC), copayment schemes and patent buyout to enhance additional, diversified and locally produced ready-to-use foods (RUFs), which also leads to delivery cost cut and development of local businesses.

12- Center for Global Development and Social Finance (May 2012) "Development Impact Bonds - Working group briefing note" <http://www.cgdev.org/doc/Working%20Groups/Development%20Impact%20Bonds%20Briefing%20Note.pdf>

To facilitate the need for coordination and benefit from the existing new initiatives, the proposed Innovative Facility would have the advantage of being an inclusive partnership whose governance structure would involve numerous interested development actors, such as representatives of partner countries, donor agencies, civil society organizations, local authorities and the private sector and private foundations. It should therefore be an important constituent part of future discussions on innovative financing mechanisms.

The high-level expert Committee also suggest recommendations to the Leading Group to be taken in order to materialize the proposals contained in the report: 1) to support the establishment of a multi-stakeholders platform for the coordination of research and dissemination of knowledge on innovative financing for agriculture, food security and nutrition, whose name could be “The Innovative Facility for Agriculture, Food Security and Nutrition” (IFAFSN), 2) to initiate the work of the IFAFSN by launching one or several work streams selected from the following *options* proposed in the report:

- Advanced market commitments (AMC) dedicated to agricultural inputs and nutritional products.
- Public-Private partnership to catalyze private investment in the agricultural and food value chain (A pilot-project could consist in finding ways to systemize an integrated scheme for school feeding with supply from small local producers).
- Structured finance and risk management tools for agriculture, food security and nutrition.
- Innovative schemes and partnerships to leverage and channel flows of migrant remittance towards agricultural investment.
- Voluntary contributions (dedicated lotteries for example).
- Taxes on fats and sugar products (for both over and undernutrition-oriented purposes) and on fertilizers.

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INTRODUCTION

Innovative financing for development

➔ Innovative financing for development is a very popular concept used by numerous actors in various ways and still subject to debates. In this report, the criteria used are in line with the definition promoted by the Leading Group on Innovative Financing for Development. According to the Leading Group, these mechanisms are innovative in three ways: (1) by their stable and predictable collection mode; (2) they are complementary to ODA; (3) by the multilateral management of mobilized resources. Indeed, innovative financing mechanisms rely on new partnerships between a wide range of stakeholders: countries of diverse levels of development, local authorities and private sectors.

The report explores how innovative financing mechanisms can benefit agriculture, food security and nutrition focusing on three points:

- How they bring new resources as compared to traditional ODA (innovating by resources);
- How they catalyze private investment through adequate catalyzing tools (innovating by use);
- And how they promote new approaches for the scaling-up of innovative tools.

The Leading Group has identified five major categories to further characterise these mechanisms:

- market mechanisms (auctioning of resources with quotas with the use of a fraction of it for development, e.g. CO₂ auctioning in Germany);
- guarantee mechanisms which influence the way resources are allocated over time (IFFIm – International Finance Facility for Immunization) or create economic incentives (AMCs – Advanced Market Commitments);

- taxes based on globalized activities generally set up by a group of countries in a coordinated way and with a joint management (air-ticket solidarity levy, financial transactions tax...);
- citizen contribution from individuals, companies or consumers (RED initiative, GAVI Matching Fund, Lotteries) with sometimes the participation of States in various ways (tax incentives, channelling of resources...);
- debt management mechanisms (debt-2-health...).

Innovative financing for agriculture, food security and nutrition: definitions

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.”

The World Food Summit Plan of Action, 1996.

➔ This internationally recognized definition from the World Food Summit in 1996 embraces the four pillars of food security, as follows:

- The **physical availability** of food focuses on the "supply side" of food security and is determined by the level of food production, stock levels and trade;
- The **economic and physical access** to food requires an adequate livelihoods allowing persons to have the economic means to purchase food (income) taking into account food prices;

- The **use** of food (or food quality) focuses on the nutritious and safe side of food;
- The **stability of supply** deals with the fact that at all times, availability, accessibility and quality should be ensured. Unfavorable climatic conditions (droughts, floods), political instability (civil unrest), economic factors (unemployment, rising food prices) could be factors of food insecurity.

All four dimensions must be applied simultaneously to achieve all the objectives of food security. Food insecurity is not only an agricultural production problem, but concerns food access and poverty alleviation. Strategies to eliminate food insecurity have to combine efforts across other sectors.

Since its introduction, the concept of food security has been constantly expanded and revised to incorporate the best observable realities at micro and macro levels, explaining that millions of people still suffer from food insecurity and malnutrition in all its forms, especially in developing countries, in rural and urban areas.

Food security should be considered in quantitative, but also in qualitative terms encompassing therefore nutrition, which is increasingly regarded as one of its important components. Nutritional issues have been incorporated into this concept, but it is only recently that the concept of nutrition security has actually been elevated to the same rank as that of food security and they finally merged.

“Nutrition security exists when all people at all times consume food of sufficient quantity and quality in terms of variety, diversity, nutrient content and safety to meet their dietary needs and food preferences for an active and healthy life, coupled with a sanitary environment, adequate health, education and care.”

FAO/AGN, March 2012.

The concept of nutrition security emphasizes these four pillars and stresses especially accessibility (physical, social and economic) and quality criteria (safe and nutritious food, in respect to dietary needs and preferences). More importantly, the concept identifies and highlights the non-food factors of nutrition.

REPORT

1. Rationale for innovating financing mechanisms for sustainable agriculture development, food security and nutrition

1.1 Why massive investment in food security and nutrition is necessary?

A challenge for developing countries to meet the demand for food supply

➔ Global food supply will have to increase dramatically in order to meet the world demand. By 2050 the world's population will reach 9.1 billion, 34 percent higher than today, in particular in developing countries. This population growth, combined with increasing per capita meat consumption, will require a 60 percent increase in global food and feed production¹³.

The 2007-2008 food crisis has led to further investigations and studies on the causes of food insecurity (transmission of price increases, prospective studies on supply and demand for food...) showing that price volatility was likely to continue, with negative effects on food security, particularly for developing countries that are net importers of

cereals¹⁴. The challenge for developing countries will therefore be considerable to avoid increasing dependency on food imports and food aid.

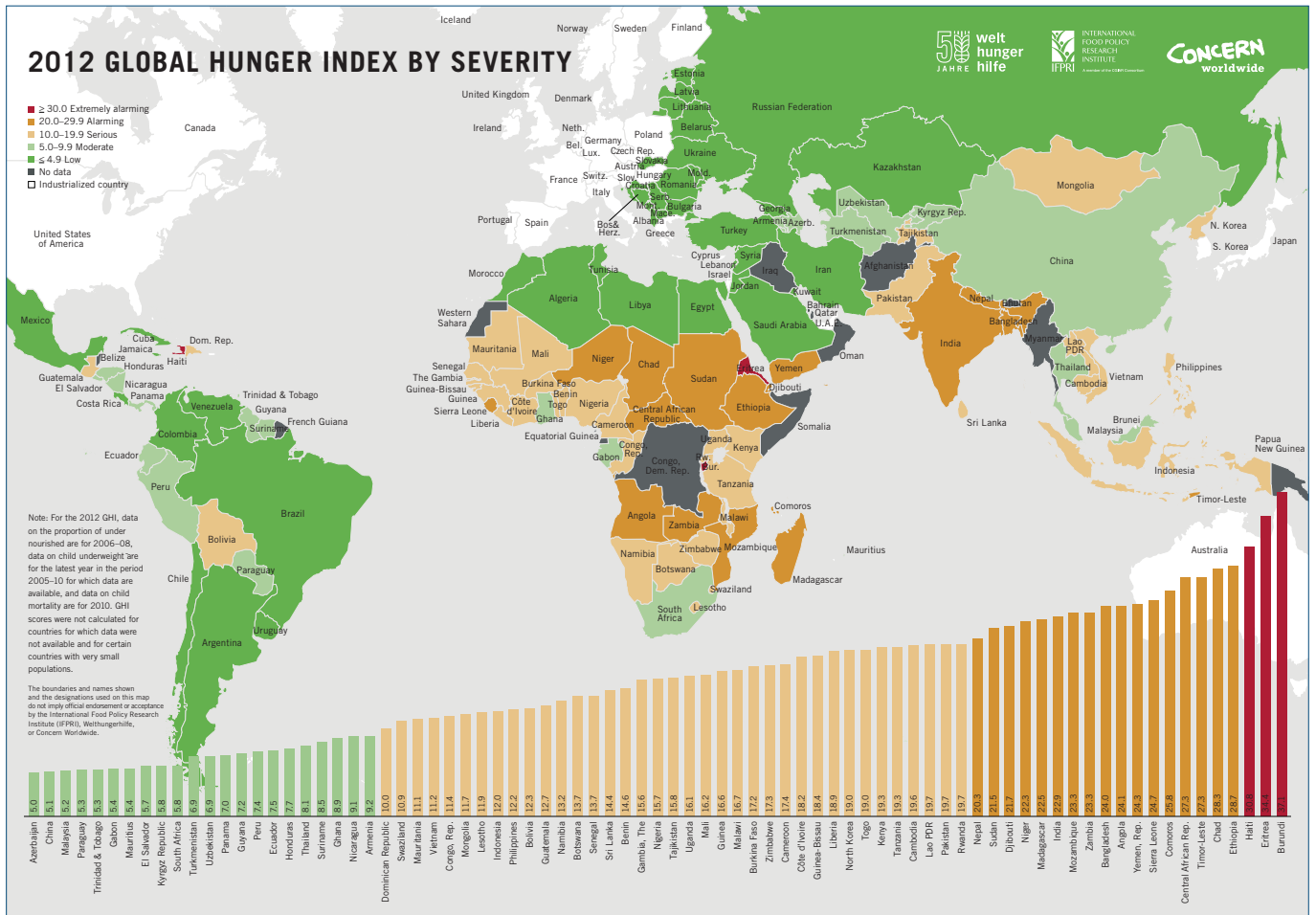
Most of the growth in food demand will come from developing countries, and this is also where the greatest production capacity potential lies. This will in particular require large scale improvements in agriculture and rural areas of developing countries. This must be guided by projections that show that 90 percent of the necessary production increases (80 percent in developing countries) will need to come from increases in yields and cropping intensity and only 10 percent (20 percent in developing countries) from expansion of arable land¹⁵.

Among developing countries, Africa is the world region where the challenge will require most efforts. Africa lags behind as concerns productivity gains on major crops and food dependency. The region is facing severe threats as concerns the maintenance of soil fertility, (already low to start with, because of the nature of the soil) because of a fragile environment, increasing land pressure and very low adoption of effective soil conservation practices. Fertilizer consumption is only 9 kg/ha/year (in nutrient content), against 140 kg in average in developed countries. Meanwhile, Sub-Saharan Africa is the region where population growth will be highest, where hunger index is alarming and which will be most likely the most affected by climate change.

13- FAO, IFAD and WFP: The State of food insecurity in the world (SOFI) 2012: Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition : <http://www.fao.org/publications/sofi/en>

14- FAO Cereal supply and demand brief : <http://www.fao.org/worldfoodsituation/wfs-home/csdb/en/>

15- FAO: Feeding the World, Eradicating Hunger, 2009



Source: IFPRI, 2012

Climate change represents major risks for long-term food security and nutrition. Although countries in the Southern hemisphere are not the main originators of climate change, they may suffer the greatest share of damage in the form of declining yields and greater frequency of extreme weather events. Studies estimate that the aggregate negative impact of climate change on African agricultural output up to 2080-2100 could be between 15 and 30 percent if required efforts to adapt agriculture to climate change are not made in due time¹⁶.

Meeting this challenge will require a considerable scaling-up of investment in agriculture

➔ In order to cope with challenge, the Food and Agriculture Organization of the United Nations (FAO) calculated that developing countries will need to invest, both for the public and the private sectors, USD 83 billion per year (net of the renewal cost of existing equipment) or USD 209 billion including this cost, as compared to a current level of investment of USD 142 billion¹⁷, i.e. a 50 percent increase.

Considering the importance and the urgency of the challenge and the existing budget constraints, it is critical to favour high-nutritional-impact investments. Malnutrition increases the burden

16- How to Feed the World in 2050: http://www.fao.org/fileadmin/templates/wsfs/docs/expert_paper/How_to_Feed_the_World_in_2050.pdf
 17- FAO: How to feed the world by 2050

of disease in developing countries, adding to the human and economic impact of diseases such as tuberculosis, malaria and HIV/AIDS¹⁸. Every year, malnutrition contributes to 3.5 million preventable deaths of children under the age of five. According to World Bank the impact of poor maternal and child nutrition is lasting with consequences reaching beyond health, as it may reduce the economic output of countries by 2-3 percent annually. Investment in nutrition is a base line to human and economic development.

Helping the developing countries, and particularly Africa, to meet this challenge, is a major and urgent responsibility for the world community.

- *First, because it is strongly linked to the Millennium Development goals (MDGs) achievement.* Nutrition-specific interventions and agricultural growth are essential to achieving MDG 1 (reduction of extreme poverty and hunger by half by 2015¹⁹), as extreme poverty is essentially a rural phenomenon: Three quarter of the world's poor live in rural areas and more than 80 percent of the poor depend either directly or indirectly on agriculture to make their livelihoods. Many studies support the evidence that agriculture can make substantial contributions to economic development and poverty alleviation in the least developed countries. According to NEPAD, the agricultural productivity must raise by at least 6 per cent a year to achieve MDG 1.
- *Second, because food security is a global public good.* Although less directly than other sectors as environment or health, food and nutrition security should be considered as global public goods: food security is clearly a prerequisite for health, which is conditioned by the eradication of malnutrition; hunger and food insecurity can be responsible for public unrest and political instability, as recently shown in a number of developing countries, and are a threat to peace; reducing hunger and extreme poverty are also a condition for limiting uncontrolled massive migrations.

Efforts should enhance agricultural models able to provide to all people sufficient, safe and nutritious food and to serve food security and better

nutrition focusing on Sub-Saharan African countries (SSA) and less developed countries (LDCs).

1.2 Why are innovating financing mechanisms needed?

Although progressing, budget resources for agriculture in developing countries are severely constrained

➔ The capacity of the poorest developing countries to fill the investment gap with their budgetary resources is limited. Member states of the African Union committed themselves, in the 2003 Maputo declaration, to increase their budget allocation to the agricultural sector up to 10% by 2008, and although progress has been made, this objective is still not achieved.

In ten years, the global ODA for agriculture, forest and fisheries rose from USD 7.5 to 12.5 billion in 2010, an increase of 66% mainly due to the crisis of 2007-08. But the increase in ODA for agriculture is much lower in Sub Saharan Africa (SSA), where it rose only from USD 2.5 to 3.3 billion (30% in ten years), while the needs are greatest. Despite recent efforts, it is very unlikely that the donors' community will be able to source the needed funds out of traditional fiscal resources, in a situation of budget crisis in most developed countries, even though the need to re-invest in agriculture is nowadays widely recognized by the donors' community as well as by developing countries. Moreover, ODA resources tend, in times of financial crisis, to be more unreliable and not sufficiently predictable for the programming of long term projects.

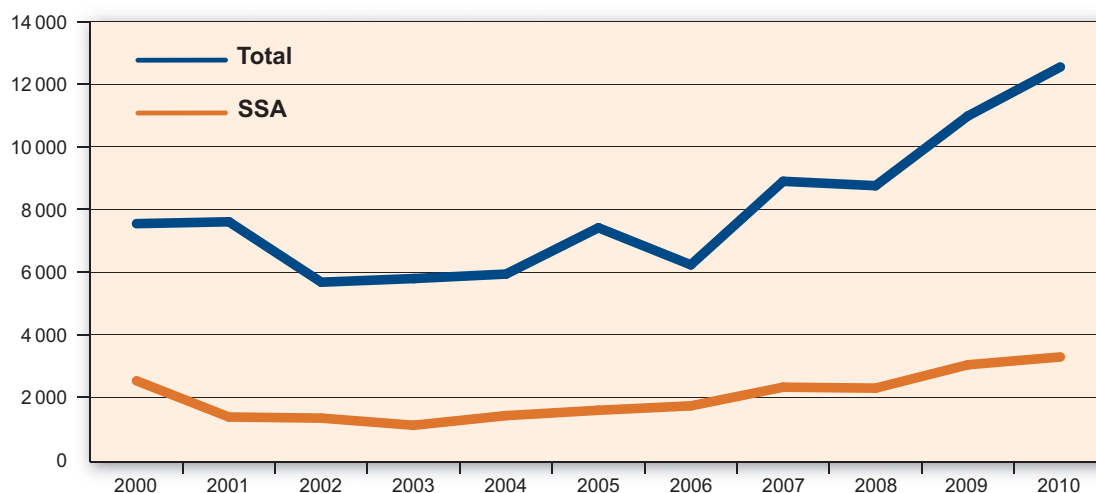
Need for a higher involvement of private investors to fill the investment gap and non traditional aid resources

➔ Private investment is key to agricultural development, but severely constrained. Unlike other sectors as education or health, which deal essentially with public goods, the actors involved in the agricultural sector (farmers, agribusiness, and service providers to agriculture...)

18- In addition, malnourished infants and young children who survive to adulthood have an increased risk of developing obesity and chronic conditions, further devastating already fragile health systems. Malnutrition magnifies the effect of every disease, including measles and malaria. The estimated proportions of deaths in which undernutrition is an underlying cause are roughly similar for diarrhea (61 per cent), malaria (57 per cent), pneumonia (52 per cent), and measles (45 per cent).

19- After 2015 the new global goals still will include food security

Figure 1: ODA for Agriculture / Forestry / Fishery 2000-2010 (millions of constant 2010 dollars)



Source: made from FAO database on FAOStat.org, 2012

are mainly private parties. Though public investment is necessary to build up a favorable environment and required infrastructure, a large proportion of the required total investment should be made by private actors. Private investment is therefore key to agricultural development. Traditional ODA through public driven projects have however shown their limits in their capacity to foster private investments, because their implementation is often too rigid, and because they are insufficiently market-driven and result-based. In order to boost private investment in agriculture, it is widely recognized that building up an environment favorable to private investment and developing catalytic tools providing incentives and alleviating the constraints to private investment is essential.

Despite the lack of reliable data in many concerned countries, there are good indications that private sector investment in agriculture in developing countries (and particularly in food production), still lays way behind its potential and what is required to meet the food security and nutrition objectives. Some progress seems to have been made in recent years in response to the global food soaring price, but this remains unsatisfactory both in size and scope. This is mainly due to a number of tight constraints: entrepreneurs and banks are reluctant to invest in this sector, which is perceived as associated with high risks: climatic risk, which affects particularly some African countries, and which will become higher and less predictable in the future, due to climate change; price risk, due to the increasing volatility of world

food price, the variability of local food production and the lack of effective buffer storage mechanisms; counterpart risks, due to the difficulty or having collaterals for credit in the traditional credit mechanisms. There are also a number of market failures, which impede private investors to receive the right market signals, due in particular to lack of information, market rigidity, and high cost of entry.

New tools, which should be considered as innovating financing, have been experimented to address those constraints (insurance schemes, innovating credit mechanisms, innovative contract arrangements between producers or groups of producers and market operators, innovating incentives for private service providers ...) and will have to be fine-tuned and developed at a large scale.

Innovative financing is essential for reaching food and nutrition security objectives through both the agricultural sector and nutrition-specific interventions. The development and the success of innovative financing mechanisms in the health sector had proven the potential of these instruments to raise new funds and to efficiently catalyze private investments.

- Innovating resources are needed to complement ODA flow to the agricultural, food security and nutrition sector, and contribute to bridge the gap between available and required investment resources.
- Innovating tools for the use of public resource are also, and perhaps more essentially, needed

to catalyze private investment and alleviate the constraints on its development, using innovating more effective delivery mechanisms (more result based and market oriented, and with a higher leverage effect on private investment) than the traditional ones.

These innovating financing tools are clearly complementing traditional financing mechanisms: while traditional resources are necessary to improve the public goods required for agricultural development and to source incentives for private investments, innovating resources and delivery mechanisms are essential to bridge the investment gap and to catalyze private investment.

In order to maximize their contribution the food security objectives, these innovating financing mechanisms should, as much as possible, be targeted on food production and supply²⁰, on family farming and nutritional issues.

2. Review of identified possible innovative financial mechanisms

➔ This section reviews briefly the innovating financing mechanisms identified by the members of the Food Security Taskforce and by the team of experts, as well as those identified in the existing literature on innovating financing, inasmuch as they seem, through a preliminary assessment, to correspond to the usual definition admitted to such financing and inasmuch as they appear adaptable to the financing of agriculture, food security and nutrition. The review identifies two types of mechanisms: those innovating by the resource (taxes, voluntary contributions, call to the financial market and migrants savings), and those innovating by the use (pull mechanisms, mechanisms for the financing of value chains).

2.1 Criteria for the selection of innovating mechanisms

➔ Among the innovative mechanisms identified and presented in annex, some may have proved their suitability, or may seem promising,

to other sectors, but do not necessarily correspond to the specific characteristics of the food security sector. Others may raise issues of acceptability, efficiency, governance, relevance or compliance to the Paris declaration principles on the effectiveness of aid. In order to select the mechanisms to be considered for recommendation to the Leading Group, an analysis was conducted on two sets of criteria: criteria for resource innovating mechanisms and criteria for innovating use mechanisms.

2.1.1 Criteria relative to resources

Criteria derived from the definition of innovating financing

➔ The Leading Group on Innovative Financing for Development created in 2006, suggested during the 2009 Paris conference a first definition of innovating financings²¹. Although this definition of innovating financings is still under discussion, it reveals some fundamental characteristics that innovating financings are expected to have:

- **Stability.** Stable financing mechanisms are essential for agricultural development because interventions are on the long run.
- **Predictability.** Financing resources must be predictable over the time frame required by agricultural development projects, so as to make possible a planning of activities. This criterion requires that resources must be quantifiable, which implies resource mobilization mechanisms clearly formulated and applied by all contributors.
- **Complementarity to traditional ODA.** Innovating financings should complement traditional ODA. Meanwhile, ODA can serve as a catalyst for attracting private resources which would otherwise not be invested in agriculture.
- **New partnerships.** This criterion calls for mechanisms implying in their management and utilization of resources the civil society and private sector as well as contributors.
- **Existence of a linkage between the source and the utilization of funds,** in order to avoid the risk for the new resources to be reallocated to other sectors than the one it was originally designed for.

20- Including fruits and vegetables as well as livestock and fisheries

21- These are resources for development “stable and pre-visible” complementary to the traditional APD, [...] based on four types of mechanisms (obligatory contributions, voluntary contributions, loan guarantee of pre-financing and market mechanisms giving room for new partnerships [...] with support of the civil society”. The definition of innovating financings is shown on <http://www.leadinggroup.org/article102.html>

Additional specific criteria for agriculture, food security and nutrition

- **Contributors' acceptability.** This is certainly one of the most discriminating criteria. Innovating financing would have little chance of success if potential contributors are not convinced of the interest of their contribution.
- **Feasibility.** The selected mechanisms must be relatively easy and fast to set up. The methods of collection and transfer of resources and the control of utilization must be transparent. This criterion remains difficult to assess when the innovating financing is only at the concept stage or when the mechanism has not been experimented in other sectors.
- **Anticipated amount of resources.** This is an essential criterion for the selection of future mechanisms, given the considerable financial requirements of the agricultural sector in the developing countries.
- **Resource mobilization cost.** The transaction cost for leverage funds should be minimized as compared to financial contributions. Currently operating mechanisms show high differences in cost efficiency (1,75% for tax on air tickets, more than 30% for some philanthropic mechanisms).

2.1.2 Criteria relative to the utilization of funds

Criteria considered for analysis

- **Impact.** Innovative mechanisms should address the constraints of agricultural development of agriculture and have a significant impact in terms of food security and income generation, in particular for the poorest populations, in a long term perspective. These mechanisms should primarily benefit the small farmers.
- **Leverage effect.** This criterion is essential for those mechanisms aiming at catalyzing local and foreign private investment to the agricultural sector.
- **Funds management effectiveness.** Innovating mechanisms are ideally expected to be more effective in terms of governance and disbursement capacity than traditional ones. The inclusion of the private sector in the management of mechanisms should contribute to ensuring effectiveness.

- **Capacity of scaling-up.** There is a need to scale-up pilot projects which have demonstrated, on a small scale, that a range of solutions were available to improve food security.

Additional criteria in conformity with the principles of the aid effectiveness stated in the Paris declaration²².

- **Ownership.** The ownership of these mechanisms by the countries and beneficiary population is fundamental and their integration in the agricultural and food security policies and agricultural development program is essential.
- **Complementarity with the existing aid mechanisms.** In a concern of aid effectiveness, it is necessary to avoid as much as possible the creation of new structures which compete with the existing ones, locally or at the international level. The risk of making the aid architecture more complex, especially at the international level, and the risk of duplication at the local level should be taken into consideration in the selection of delivery mechanisms.

2.1.3 Additional considerations for the selection of innovating mechanisms

Win-win relationship

- ➔ Some innovating financing mechanisms can have a beneficial effect for donors and beneficiaries, both through the mobilization of resources, and through their use. The robustness of a mechanism is all the higher when it has positive externalities both on the resource side and on the fund utilization side. For instance, the carbon tax, which permits to fight against pollution and which is used for environment improvement projects, is an example of such a win-win mechanism.

Innovating financing with innovating governance

- ➔ Innovative financing in agriculture will involve new contributing actors (the Northern farmers' organization, insurance companies, agro-food industry). They will be brought to cooperate with beneficiaries of these funds in developing countries, as it is fully justified that donors be parties at stake in the management

22- Ownership, alignment, harmonization, management centered on the outcome, mutual responsibility.

of the funds. This could engender new ways of governance through such co-management and collective decision making.

In the same manner, the combination of innovating tools, for example those relating to agricultural financing, crop insurance, contract farming, storage, makes necessary the coordination of different actors (bankers, insurers, small scale processing companies, producers) for the articulated use of such innovating mechanisms. Such partnerships are expected to foster new and more effective modes of governance.

2.2 Analysis of identified mechanisms

➔ The analysis of identified mechanisms (presented in appendix 1) on the basis of the abovementioned criteria is summarized on the two following tables.

Table 1 : Financing mechanisms Innovative by resources (new resources)

| Criteria | Political feasibility or acceptability by contributors | Stability and predictability of resources | Management effectiveness | Flexibility of implementation | Win-win criterion and ethical risks | Resources mobilization Capacity | Probability of effective use of resources and impact |
|---|---|---|--|---|--|---|--|
| Taxes | | | | | | | |
| Tax on fertilizers + Pesticides Small rate taxation on fertilizers and pesticides consumption in G20 countries | Weak (but remains to be assessed) possible opposition of agricultural lobbies in the exporting countries | Strong | Strong (feasibility already studied); the management organization is already existing; good control and harmonization through the co-financing mechanism | Average: can be implemented only by a limited number of countries, provided the main exporting countries adhere | Strong (reduce pollution in the over using countries; contributing States are those who benefit more from food price increment) | High (250MM) | Strong impact on agricultural income and food security (fertilizer effect) demonstrated; effectiveness of the distribution system |
| Tobacco tax Excise duty on tobacco consumption in Southern countries to finance prevention of addiction and conversion of cultivation | Weak: transfer of funds between Southern countries; targeting a small number of producing countries, possible resistance from consuming countries | Strong | Weak (importance of smuggling) | Strong (tax can be decided at the national level with specific mechanisms in each country) | Positive aspect: reduces tobacco consumption in the South; negative aspect: the payers are the poor consumers of the South; can be improved if developed countries also contribute | Weak: strong global potential, but the mobilization on food security is targeted on a limited number of producing countries | Weak (main impact on the public health; impact on food security in a few countries, but no positive impact on agricultural income) |
| Primary market on the emission rights of greenhouse gas Sales of the emission quotas instead of free distribution for countries having adopted a domestic carbon emission limitation system | Strong (but only in the EU, where exists a carbon market; depending on the climate agenda negotiations) | Weak (volatility of the carbon market) | Strong (mechanism already existing for tax collection) | Strong (each EU Member State can organize its contribution as it wishes) | Strongly win-win: contribution to a global public good; Northern countries contribute to mitigate climate change impact, which they are to a large extent responsible for, in developing countries | weak (competition with other uses of funds for environment; link required with adaptation to the climatic change) | Neutral (depending on the mechanism for utilization of resources) |

| Criteria | Political feasibility or acceptability by contributors | Stability and predictability of resources | Management effectiveness | Flexibility of implementation | Win-win criterion and ethical risks | Resources mobilization Capacity | Probability of effective use of resources and impact |
|--|---|---|--|---|---|--|--|
| Tax on fats and sugar products Applied on soft drinks (and eventually fat food) in the North for financing nutrition projects in the South | Average (support from WHO but would face strong lobbies) | Strong | Weak (difficulty to define the products that should be taxed) | Strong (tax can be decided at the national level with specific mechanisms in each country) | Win-win as it improves nutrition in Northern and Southern countries | Weak (competition with other utilizations of funds in countries where taxes are collected) | Main impact on nutrition |
| Other total taxes (financial transactions, etc.) to finance partly food security | In general, weak (difficulty to reach an international consensus and to justify targeting on agriculture) | Strong | Weak (needs relative complicated system for tax; risk of market distortion) | Very weak (taxes must be implemented at global level according to harmonized methods in order to avoid market distortion) | Win-win, in as much as the tax contributes to reduce negative externalities | Strong but risk of targeting towards other sectors more closely related to the concept of global public goods | Neutral (depending on the mechanism for the utilization of resources; no new actors) |
| Voluntary contributions | | | | | | | |
| Food security branding Food security label for brands devoting a percentage of their margin to food security projects | Strong (no foreseeable opposition) | Weak (depends on the marketing success of the brand) | Weak (high promotion cost of labels; need for a strict control of the utilization of brands) | Strong (can be implemented at the State level or among group of states) | Equitable, in as much as consumers of the North contribute to development in the South | Weak | Weak; positive aspect: new actors (so far as the holders of brands decide on their actions of development; negative aspect: risk of diversion towards marketing and visible rather than development effective actions) |
| Lottery Using national lotteries incomes for financing food security and nutrition | Rather weak; runs up against the national monopoly in many countries; | Strong, once the system is launched | Strong (if based on the existing lotteries) | Strong (can be implemented at the country level or among group of countries) | Equitable as much as the contributions comes from the consumers from the North, but risk to encourage the addiction to gambling | Rather strong (WFP estimate incomes of 400 M€ at the world level), but no insurance that the funds will not be targeted to other sectors | Neutral: depends on the mechanism for the use of resources; no entry of new actors) |
| Rounding up bank payment transactions Using the round up difference to contribute to a fond for food security | No political feasibility problem, but doubts on acceptability by banks customers | Strong, despite uncertainty on the volume of funds generated at the beginning (which will certainly be stable afterwards) | Average: need for a system for control on sums collected by the banks | Strong: works even if a limited number of banks participate | Strong: equitable as far as banks customers from the North finance projects in the South; however the mechanism is more related to solidarity than on a win-win partnership | Very uncertain but probably weak | Weak: intervention of banks ensures effectiveness in the management and the distribution of funds, but they are likely to be concentrated on sectors having most impact in terms of communication |

| Criteria | Political feasibility or acceptability by contributors | Stability and predictability of resources | Management effectiveness | Flexibility of implementation | Win-win criterion and ethical risks | Resources mobilization Capacity | Probability of effective use of resources and impact |
|--|---|---|--|---|--|--|--|
| Call to the financial market | | | | | | | |
| International finance facility Bonds Bonds guaranteed by donor countries sold on financial market for rapidly financing food security and nutrition projects | Weak to average: the mechanisms imply that donor States must make new debts (or guarantee debts) which is a problematic in the current economic situation | Strong: could plan resources on a 20 years period, if donor countries accept to commit themselves | Average: the management is entrusted to an independent institution (the GAVI for health), which adds supplementary bureaucracy | Strong (even a limited number of countries can take part) | Not relevant | Weak: no complementarity to ODA in the long term, but allow to mobilize funds more rapidly | Weak to average: food security requires long term commitment rather than quick disbursement |
| Remittances and diaspora investment in agriculture | | | | | | | |
| Diaspora Bonds Developing countries issue bonds to their emigrants for a fund dedicated to food security | Very weak; not adapted to African poor countries: increases governments indebtedness, risk of insolvency, exchange rate risk, lack of confidence in government, low contribution capacity of migrants | Weak (depend on the success of bond emissions; regularity not ensured) | Weak; the guarantee for repayment implies complex implementation | Strong, as the mechanism is implemented at national level | Less equitable: financing and risks are borne by fact of supporting the load of financing and the risk of the migrants, who constitute a poor migrants, who a poor population in the migration countries | Weak for Africa (low contribution capacity of migrants) | Neutral: Governments decide on allocation of funds; no new actor |
| Development Impact Bonds (DIB) Bonds guaranteed by developing countries and/or donors sold on financial market for financing outcome-based service delivery | Weak to average: need long-term financial commitment from developing countries and/or donors | Strong (if countries accept to commit themselves) | Strong: the management could be hosted by existing independent institution to avoid supplementary bureaucracy | Strong (even a limited number of countries can take part) | Neutral | Strong leverage capacity (return comparable to commercial ones, with the advantages of public guarantee) | Strong: the outcome-based mechanism creates strong incentives to reach result and maximize impact if the expected outcomes are adequately targeted |

Table 2 : Mechanisms innovating through their catalytic effect on private investments

| Criteria | Possible impact on production, food security and nutrition | Effectiveness of the leverage effect | Complementarity with existing mechanisms | Ownership by beneficiaries |
|--|--|--|--|---|
| Mechanisms for financing agricultural innovation systems | | | | |
| <p>Pull mechanisms and AMC Advances Market Commitments are contracts between donors and an innovating entrepreneur to secure a new market or to strengthen developing markets (minimum quantity at a given price). Pull mechanism consists in providing ex post an award to innovation dissemination based on a pre-defined target</p> | May concern innovation for agriculture, food security and nutrition; involvement of private actors should result in accelerated adoption of innovations | Cannot be known in advance for AMC (public contribution known ex post) | Strong: new mechanisms which have not yet been developed for agriculture in African countries | To reach local ownership, these mechanisms must be open to local developers or partnerships between local and international actors |
| Mechanisms for financing value chains | | | | |
| <p>Warehouse receipts Delivery of a produce in a bounded warehouse against a receipt which can be used as collateral for a credit</p> | Strong, though indirect: contributes to limit price volatility, therefore reduces price risk; facilitates development of contract farming; incentive for food crops | Strong leverage effect on bank inventory credit | There are many projects in this area, which need to be up scaled; to avoid duplications, one should work on existing mechanisms | Yes, if local existing actors are involved, if local capacities are strengthened, and if projects are integrated within national and regional development plans |
| <p>Public-private partnerships and structured funds to invest in agricultural infrastructure or services benefitting to small farmers</p> | Strong, especially for irrigated crops; contributes to develop small farmers production under contract farming with a nucleus estate; strong impact on food security of food deficit countries | Average: infrastructure cost benefitting to small farmers are partially borne by public investors | Clearly complementary: PPPs are on of the pillars of the Comprehensive African Agriculture Development Plan | Strong: increases technology transfers from new actors (agribusinesses investing in PPP). But requires well organized states which can deal at arms length with private investors |
| <p>Risk management insurance tools Index insurance for climatic hazards and reinsurance funds to reduce agricultural risk</p> | Strong: incentive to agricultural intensification, increased quality input usage; agribusiness investments | Strong: risk management helps development of bank credit and private investment in agriculture | No problem, as such tools are only developed at an experimental stage, in particular in Africa | Yes, if local actors (banks, microfinance, agribusiness) are involved and if local capacities are strengthened |
| <p>Guarantee funds for bank credit to agriculture and food value chains To reduce banking risk by granting a partial repayment guarantee to banks</p> | Strong impact, through agricultural intensification and development of contract farming | Strong: guarantee funds reduce banks reluctance to finance agriculture | No problem, as existing mechanisms are far from meeting the needs; would contribute to strengthening existing banking systems | Yes, if local actors (banks, microfinance) are involved and if local capacities are strengthened |
| <p>Smart input subsidies for small farmers Targeted on food production and poor farmers to promote crop intensification</p> | Strong and rapid impact: increasing fertilizer applications results in immediate gains in yields | Average: subsidy rates need to be high in order to impact consumption; but subsidies facilitates credit as it increases borrowers' solvency; the leverage effect can be all the more important if subsidy financed through non ODA resources | Strong, if the mechanism is harmonizing existing schemes at the regional or continental level, and if it is compatible with private input distribution | Yes, as the mechanism would be complementary to the systems already in use in some African countries |

| Criteria | Possible impact on production, food security and nutrition | Effectiveness of the leverage effect | Complementarity with existing mechanisms | Ownership by beneficiaries |
|---|--|---|---|---|
| Remittances and diaspora investment in agriculture | | | | |
| 1. Leveraging existing remittances invested in agriculture | Strong (no foreseen opposition) | Strong, given the USD 20 billion of remittances being invested currently the scope for effectiveness is high. The challenge is in finding new cost-effective mechanisms to do this at scale and/or tailoring existing mechanism to the needs and opportunities of working with remittance recipients. There are also clear illustrations of niche markets for export to the diaspora. | Builds on existing practice, but seeks to enhance its impact through capacity building and partnership. | Strong, as it builds on activities currently being undertaken by remittance recipients. The funds come from their family members, resulting in a strong social/moral obligation to use them to their greatest effect. |
| 2. Mobilizing new diaspora investment in agriculture (through such vehicles as matching funds with public resources and pooling of funds. To complement migrants remittances used to finance agricultural projects | Strong (no foreseen opposition) | Strong, this has proven to be viable and scalable with limited donor funds. When taken to scale this effect is greatly enhanced. | Strong, especially as a local-level intervention. Partnership with private institutions such as cooperatives and MFIs is essential and reaching out to financial institutions and government are essential when operating at scale. Spillover effects will enhance non migration investments as well. | Strong, remittance senders' resources are to be invested in their communities of origin, which has proven to be a key driver of interest on the sending side. On the receiving side, family members are part of the community and can monitor that funds are being spent as intended. |

3. Proposed innovating mechanisms

➔ This chapter presents the proposed innovating mechanisms selected by the high-level expert Committee for further consideration by the Leading Group on Innovating Financing for Development. It includes mechanisms for new resources, and mechanisms for catalyzing private investments in the food value chain and in innovation systems. It finally proposes the creation of a coordination entity, an Innovative Facility for the promotion of innovating financing in agriculture, food security and nutrition, as a global platform for developing new tools for catalyzing private investment.

3.1 Mechanisms to channel new resources for agriculture, food security and nutrition

3.1.1 Potential mechanisms to attract new resources

- **National taxes** (to be decided at the national level in industrialized, emerging or developing countries): for instance, the tax on financial transaction, supported by several European countries, could be partly used for financing food security in developing countries; a tax on fats and sugar products, already existing in some countries (USA) could be partially used to finance nutrition actions in developing countries and a tax on fertilizers in developed and emerging countries has also been proposed by NEPAD as a mean to develop fertilizer consumption in Africa through smart subsidies.

- **Voluntary contributions** which could be applying, for example, by consumers, by firms and employees and/or by food and nutrition correlated industries. Lotteries can also be considered (a part of the lottery proceeds in Belgium is already dedicated to finance food security projects in developing countries).
- **Migrants' remittances** represent considerable financial flows from industrialized to developing countries, estimated at USD 400 billion annually, an amount comparable to three times net ODA. Remittances can be considered both as new and renewable sources of financing as well as existing private capital that may be channeled into agriculture. In the first case, financial instruments that mobilize this type of new resources for development include; i) the securitization of remittance flows by financial institutions (i.e., mobilizing private-sector financing for banks) ii) the mobilization of diaspora resources for development through diaspora bonds, which corresponds to mobilizing new financing for governments.
- **Allocation of funds generated by the carbon emission allowances auctions** in the European Union Emissions Trading System (EU ETS). During the third trading period of the European Emission Trading System starting in 2013, it is expected that about half of the emission allowances will be auctioned, thus generating revenues for European Union member states. Member states may decide to use part of this income²³ for climate change mitigation and adaptation, including programmes for resilience to climate change in developing countries, which are the most affected although not the main actors of climate change. Such programmes could include support for climate resilient and sustainable agricultural development and food security in countries and regions vulnerable to the effects of climate change. Other countries around the world adopting emission trading schemes and auctioning allowances could opt for a similar approach.

3.1.2 Possible mechanisms from the multi-criteria analysis

➔ Among those possible mechanisms, the multi-criteria analysis conducted in chapter 2 of this report suggests that three mechanisms deserve special attention, as they obtain the highest rating: the tax on fertilizers proposed

by NEPAD, the sale of GHG emission rights and the development impact bonds.

Tax on fertilizers

A feasibility study has been made on a possible fertilizer tax, followed by a proposal for implementation carried out by NEPAD.

The source of funds would be a tax on fertilizer use in the G20 countries or in a number of them. Fertilizers should be taxed at the retail level whether the fertilizer is locally produced or imported. Since the tax will be largely if not entirely transferred to farmers through an increase in the retail price, it will have to be acceptable to the farming community. Therefore, the tax would have to be: (a) widely adopted by major agricultural countries, (b) be sufficiently small so that it will only marginally affect farm income (it should be less than 0.5% of the value of a bag of fertilizer).

According to the feasibility study, a tax of 0.1% of fertilizer consumption in G20 countries would yield USD 100 million a year, as would yield a 0.3% tax on fertilizer consumption in all OECD countries.

According to the NEPAD proposal, the tax would be used to finance partially a smart subsidy on fertilizers in sub-Saharan African countries (see a detailed description of the proposed subsidy scheme in section 3.2.3). The cost of such a program would roughly equal the annual proceeds of the tax. Other utilizations could also be considered, beyond the fertilizers subsidy scheme proposed by NEPAD.

Sale of GHG emission allocation

The EU decision to sell by auction (instead of distributing for free) GHG allocations to the energy sector from 2013 on will generate between 20 to 35 billion Euros of additional revenues for the member states of EU 15. Following the example of Germany, who decided since 2008 to sell these emission allocations and to partly use the proceeds to finance a global climate change program, including in developing countries, some member states, who can decide freely on the use of these new resources, indicated that they intend to devote up to 50 percent of these resources to climate change mitigation and adaptation, including development cooperation.

23- As Germany has done already.

A part of these resources could be used for investing in agriculture and food security projects in developing countries, as agricultural intensification, if properly managed, reduces the pressure on deforestation and participates to climate change mitigation at the global level. Projects aiming at increasing resilience to climate change in developing countries, such as irrigation projects or research on drought resistant varieties could also be considered.

Although the complementarity of these new resources to traditional ODA can be questioned, there are strong arguments in favor of such a mechanism:

- The EU ODA funds amounted in 2007 to only 0,4 percent of GDP, whereas the EU pledged to increase it to 0,7 percent by 2015, which will be very difficult, in times of economic recession, through regular tax revenues. The EU needs definitely this type of innovating mechanism to meet its pledge.
- The mechanism is fair in its principle: Northern countries are to a large extent responsible for climate change, as their per capita emission of GHG is overwhelmingly higher than in developing countries; it is therefore fair that they contribute to build up resilience to climate change in developing countries.
- The mechanism can help reaching a consensus on climate change agenda currently under discussion within the United Nations.
- The mechanism is, in some aspects, a win-win relationship: climate change mitigation in developing countries is a contribution to the preservation of a global public good benefiting also to donor countries.

This mechanism is therefore recommended for consideration by member states of the EU. In order to minimize management costs, it could also be recommended that member states pool their resources into a common fund for climate change mitigation and adaptation in developing countries.

This move could also induce other countries and regions to auction their quotas instead of giving them away for free. Australia, New Zealand, several states in the USA and Japan have also

emissions trading schemes which could be partly used for this type of financing. Other regions in the world might also implement this approach in the future.

Development Impact Bonds (DIBs)

Development Impact Bonds (DIBs) are an interesting tool to channel new resources and promising avenues to finance services delivery, especially the delivery of SUN nutrition-specific interventions. DIBs are a family of outcomes-based financing products in which social investors fully or partly pay for services to be delivered that improve social outcomes. Numerous variations are possible but the basic principle is that investors would be remunerated with a return by donor agencies and/or host country governments, if evidence shows that social outcomes have improved. This approach seeks to shift attention, incentives and accountability to results, as payments are made in proportion to the programme's success. This approach intends to strengthen incentives for the innovation and the necessary adaptation to deliver successful outcomes.

DIBs are inspired by Social Impact Bonds (SIBs), initially developed by Social Finance with the UK Ministry of Justice and officially launched in September 2010. SIBs had permitted to raise GBP 5 million from 17 social investors to fund social support to 3,000 short-sentence male prisoners. They have also permitted to explore the potential to use outcome-based funds to support a wide range of outcomes for target populations with complex needs.

Compared to traditional approaches, this innovative financing mechanism offers several benefits which have been identified and explored by the Center for Global Development (CGD) and Social Finance²⁴, including:

- Creating incentives to focus on achieving and measuring outcomes;
- Enabling donors to fund outcomes while leaving flexibility for service providers to experiment solutions that work;
- Leveraging support of the private sector to increase innovation and efficiency in service delivery

24- Center for Global Development (CGD) and Social Finance (2012), Development impact bonds, Working group briefing note <http://www.cgdev.org/doc/Workingpercent20Groups/Developmentpercent20Impactpercent20Bondspercent20Briefingpercent20Note.pdf>

- Creating mechanisms for coordinating government, private sector investors and non-government service providers;
- Transferring risk from public sector to enable earlier intervention and innovation; and
- Providing upfront funding to service providers enabling them to more easily participate in results-based contracts.

3.2 Mechanisms to catalyze private investment in agricultural and food value chains

➔ A number of tools can be identified to make investment in agricultural and food value chains more attractive and to reduce the high level of risks associated to agricultural investments. These tools are, for most of them, widely used in developed countries and have proven their efficiency for financing agriculture. They can however be considered as innovations to be adapted and developed at an extent meeting the financing needs, in most developing countries, and particularly in sub-Saharan Africa, where they still are at an early stage. Based on a review of available experiences and existing literature, the most promising mechanisms are the following:

- Risk management tools to reduce the risk on bank credit and investments in agricultural activities;
- Innovating credit mechanisms providing the lender with improved collateral guarantees, and thus facilitating the financing of agricultural value chains;
- Public-private partnerships;
- Smart subsidies for the dissemination of innovating technologies and agricultural inputs required for intensification;
- Pull mechanisms, aimed at attracting private investment into financing of innovation systems.
- Migrant remittances represent considerable financial flows from developed to developing countries, estimated at USD 400 billion annually, an amount comparable to three times net ODA.²⁵

3.2.1 Risk Management tools and innovating credit mechanisms

Weather insurance

Greater availability of risk management tools makes it easier for financiers to manage the risks inherent in agricultural finance, and will thus catalyze private sector funding for agriculture. When financing agriculture, financiers are exposed to a number of risks, in particular: the price of the crop may be less than anticipated, resulting in a revenue that is too low to permit loan reimbursement; weather events may have led to loss of (part of) the crop; there are obstacles preventing the delivery of the crop to the buyer, be it in the country or abroad (e.g., an export ban); the borrower may be unable to operate (e.g., due to civil strife) or may decide to default; the buyer may fail to pay; or government intervention may lead to non-reimbursement of loans (e.g., currency controls). There are risk management instruments for all of these risks, though their availability in developing countries is patchy. All of these instruments are worth attention, but in one area, there has been good progress over the past decade which should be consolidated and scaled-up in the future: market-based weather risk management.

Traditional crop insurance schemes, based on individual yields and field inspections, can be very costly to administer in developing countries; this problem, as well as some other problems of traditional insurance (such as moral hazard and adverse selection) can be avoided with market-based weather risk management. In western countries, a large range of instruments is now readily available. They are based on weather indices such as rainfall and temperature, rather than actual farm losses. They can be used to protect against catastrophic risks, or to protect against normal, day-to-day operational risks.

Agricultural banks can bundle weather risk management with their loan packages (for example, loans are forgiven if there is a drought, and the bank claims its money back from an insurance company), or they can insist that lenders take out weather insurance with the eventual claims payable to the bank, or they can insure their agricultural loan portfolio against weather-related default risk.

25- Surveys conducted for, and projects undertaken by FAO, the IDB, IFAD and IOM suggest that around 5 percent of these funds are directly invested into agriculture. There are probably ways to better leverage remittances investments towards food security projects, and a number of immigration countries are currently cooperating with countries of origin to develop such projects. Such process could be included into a co-development scheme, i.e., matching those funds with public resources.

Index insurance for climatic hazards (which compensates the subscriber for production loss when a reference index, for instance rainfall level, is not reached) is one of the ways explored by a number of international institutions to reduce agricultural risk in Africa, where such risk is a severe limiting constraint to intensification and food security (and indirectly, a major reason for banks' reluctance to lend to agriculture). Pilot projects have started in a number of East and Southern African countries (Malawi, Ethiopia, Kenya, and Tanzania) and are underway in West Africa. Scaling-up these pilots requires a considerable and expensive work of detailed weather data collection in all African countries with climatic risks.

In addition, the idea of reinsurance mechanism has been launched by the Thomas More Institute (report "finance development"). This report proposes the creation of reinsurance funds to cover the natural risks, in order to enhance the operating capacity of the insurance companies. The reinsured risks could concern in priority those which affect the productive capacity of the poorest countries. Reinsurance funds can be public or private. The risk coverage could be at the level of individual subscribers or at national level. Several initiatives can be considered as belonging to this type of tools: the Global Index Insurance Facility for the creation of an index insurance system for ACP countries, supported by the EU; the Caribbean Catastrophe risk Insurance Facility, to reduce hurricane risks and earthquake in the Caribbean islands.

Price risks can also, under certain circumstances, be addressed by price insurance schemes based on future markets tools. The potential scope for developing such schemes in the African context is still under study, and more analytical work and testing is still needed to design sustainable and effective tools which could be developed at a large scale.

Guarantee funds for bank credit

The reluctance of banks and other financial institutions to finance the agricultural sector, due to the perception of excessive risks, is one of the major drawbacks for agricultural development in the developing countries, and especially in Africa. The idea to reduce banking risk by granting a

partial guarantee to banks, designed to cover a portion of the risk without relieving the banks from their credit responsibility, has been tried and launched at different occasions in the agricultural credit sector in developing countries. This instrument has been widely and very successfully used by EBRD in its agricultural financing activities in transition countries. In developing countries, the existing devices (for example the ARIZ fund launched by AFD or the AGRA/Standard bank initiative for guaranteeing credit to fertilizer distributors) are far from meeting the needs. The creation of an umbrella mechanism at the regional or continental level, financed by a Fund to which could participate private investors (for example, manufacturers of inputs or agricultural equipments), and which would provide a partial guarantee to local financing institutions credit types with high impact on food security and small farmers, thus appears to be a promising way.

Credit guarantee schemes usually imply on one side commercial banks and microfinance institutions, who extend credit to farmers or agribusinesses and, on the other side, a guarantee provider (which can be a development bank, a central bank or a specialized institution like ARIZ), who takes a share of the default risk on a given portfolio, usually against a guarantee fee. The guarantee provider needs a guarantee fund to cover the possible loss in case the default rate exceeds the guarantee fee.

Warehouse receipts

Credit backed by a security in the inventory is a well known mean to secure storage and marketing credits and contributes to lower the interest rate²⁶, while being quite easy of use once the system has been put in place. This mechanism is yet developed to a very limited extent, at least for food crops, in Africa, due partly to the lack of reputable warehousing companies, the lack of sufficient storage infrastructures in some countries and the lack of financing institutions ready to finance on a large scale this activity. In its more elaborated form, the mechanism consists for the producers in storing their products in a warehouse against the delivery of a warehouse receipt. The products can be used as collateral for a credit by a bank or a micro-credit institution. The credit is repaid when the product is sold or withdrawn from the warehouse. This type of

26- In India, the developing country with the most experience with farmers using this instrument, the interest rate can drop of 1.5 to 2 percent below the usual rate.

credit can be sophisticated and combined with other financing mechanisms such as forward sales, insurance, sale contract indicating that payment has to be made to the bank which has extended a credit to the producer. Such combinations of mechanisms contribute to seasonal secure credit and make it more accessible to farmers.

Contract farming, outgrowers' schemes²⁷ and bank domiciliation

Farming contracts can link producers (usually small scale producers) and agribusiness: according to such contracts, the agribusiness provides the producers with agricultural inputs on a credit basis and with technical advises, against the producers' commitment to sell the produce to the agribusiness. This type of contracts, which is commonly used for some export commodities

(cotton, rubber...) but rarely for food crops, can be combined with other innovative tools to reduce risks and facilitate seasonal credit. In such contracts, the selling price is usually set in advance (or a price setting formula can be defined in the contract), which reduces the price risk for the farmer. The agribusiness can, for internationally quoted commodities, hedge on the future commodity market to reduce its own price risk.

For a commercial bank, extending seasonal credit to farmers through such contracts is much less risky than ordinary credit: the agribusiness can usually guarantee the credit, and the farming contract can include a bank domiciliation clause, by which the payment of the produce is made to the farmer's bank account, on which the bank can deduct the repayment of the credit.

27- An outgrower scheme is an elaborate contract farming arrangement, emanating from a nucleus – a lead farm or a processor (also called technical operator) – which provides outgrowers with technical support often including a credit component.

Examples of possible combinations of innovating finance mechanisms for value chains

Three examples, among others, can illustrate the extent to which combinations of such innovating mechanisms can facilitate provision of seasonal credit to family farmers.

Wienco's maize project in Ghana

This maize project was launched by a private input supply company, Wienco, in Ghana, in the mid 2000s: Wienco provides small farmers, grouped in associations, with technical advises and quality seeds and fertilizers, allowing yields of 5 tons/ha (as compared to traditional yields, which do not exceed 2 tons/ha). The supply of inputs is financed by a bank credit guaranteed by Wienco. After harvest, the maize is collected by Wienco (a small proportion of production can be kept by the farmers for their own use). The contract sets a minimum selling price. Through hedging on the future market, Wienco eliminates the risk of a fall in the world price of maize. The repayment of the input credit is done by deduction from the proceeds of the sales paid on the farmer's bank account.

This project is clearly a win-win operation: it allows producers to more than doubling their maize production, and, therefore, their income. Wienco makes a profit on the distribution of agricultural inputs (its core business), and on the processing and sale of maize to feed producers.

The ESOP model in Togo, Burkina Faso and Benin²⁸

This program, promoted by two NGOs, CICR and ETD, aims at linking processing agribusiness for urban supply (mainly for rice, but also for soya beans) to farmers organizations. It is implemented in Burkina Faso, Togo and Benin. The agribusiness enterprises are created as joint ventures between private individual operators and farmers groups (the share of the farmers groups in the capital is often paid by a grant of the project).

The agribusiness provides farmers, through a farming contract, with improved seeds and other inputs, on a credit basis, which is made possible by the close linkage existing between the farmers groups and the agribusiness. The input supply credit is financed by local banks, usually under specific credit lines.

The farmers are paid for their produce upon delivery at the agribusiness warehouse, eventually through a system of warehouse receipts. The selling price is set in advance. The repayment of the input supply loan takes place upon the delivery of the produce to the warehouse.

A credit operation for cotton producers in Argentina

With support from the Government of the Province of Chaco and Sancor Seguros, a local bank from Argentina, BICE has established for the 2010-2011 season a fund for cotton producers (individual farmers and cooperatives).

This fund is based on two principles: producers sell their crop to the fund under a contract specifying the date of delivery and price; crop is insured against climate risks. With this future production as collateral, the fund borrows on the capital markets, and bonds are insured against the risk of non-delivery of the crop or default of buyers.

Funds are on-lent to farmers to finance the purchase of fertilizers and seeds for the cotton season. Producers pay back their loans either by selling their crop to a third party and then using the proceeds to pay back the credit (when the spot price is higher than the contract price), or by selling their produce to the fund, which in turn sells it to a pre-identified buyer, i.e. the Union of Agricultural Cooperatives and a cotton company, Buyatti). This fund is also noted by rating agency Moody's, which increases its credibility.

28- Services Enterprises to Farmers Organisations" (Entreprises de services aux organisations professionnelles, or ESOP in French).

3.2.2 Proposal for the scaling up of innovative financial tools in value chains

Principle

In order to scale up risk management tools and innovating finance mechanisms, it is proposed to consider the creation of “regional funds for the scaling-up of innovative financial tools in value chains” (see figure 2). Each regional fund would include regional stakeholders: development banks, States, ODA agencies, REC, Development Agencies, insurance and banks companies, final beneficiaries (farmers’ and SMEs’ organizations). All stakeholders would contribute to the capital of the funds.

Objective

The objective of the Funds is to attract private investment for value chains (targeting small producers and nutrition-sensitive approach), for instance increasing the availability of locally produced, diversified, nutrient-dense and/or fortified food through:

- developing banks’ and insurance companies’ involvement in the sector;
- mitigating agriculture and price risks through crop insurance schemes and credit guarantees;
- developing already tested new credit mechanisms (warehouse receipt system, contract farming, combination of loan-insurance-forward contract ...).

Activities

The fund could provide credit guarantees and subsidies to participating banks and insurance companies:

- guarantee funds for innovative insurance products (crop insurance, weather index-based insurance...);
- guarantee (on a risk sharing or on a risk tranche basis) banks’ portfolios including innovative banking products;
- subsidies for: insurance premiums, information systems for insurance, dissemination of information on innovative banking and insurance products.

The final beneficiaries of the credit generated by the Funds’ activities would be mainly small scale farmers, farmers’ organizations, and small and medium agribusiness.

Rules

The principle is that any partner wishing to participate in the system provides a counterpart. For example:

- In return for accessing guarantees and subsidies on premiums, insurance companies have to contribute to the Fund and to ensure the dissemination of innovative insurance tools, whose list and characteristics are determined by the Fund management.
- Similarly, banks are to contribute to the Fund and to promote and finance innovative banking products according to a predefined list, in return for accessing the Guarantee Fund.
- States willing to give their country’s banks and insurers access to the Fund, commit to contribute to the Fund and to implement legal instruments required to make a better use of innovative banking and insurance products. They also commit to participate in setting up information systems required for index-based insurance.
- Regional Economic Communities commit to contribute to the Fund, to harmonize the credit and insurance legislations of participating countries, and to ensure the free movement of goods and financial flows to support regional food chains development.
- Regional banks commit to contribute to the Fund and to support the promotion of innovative banking and insurance products through financing productive investment in the agriculture sector.
- ODA would provide start-up financing for the Fund and would match the contributions of the private sector (banks and insurance) and other national and regional financiers.

Source of financing and Governance

The contributors to the Funds could be insurance companies and banks in developed and developing countries, development banks, States, ODA, regional institutions, Development Agencies. The Fund could be co-chaired by donors and recipients (POs and SMEs). It could be managed by an international organization and/or a continental or regional development bank.

Preliminary design of the operating device of a regional fund

A region with five countries wants to enter the initiative. Each country contributes USD 10 million to the Fund. ODA and development institutions each contribute USD 40 million. Each of the contributors fulfills its obligations (legislation, information systems, productive investments...).

A bank in one of the five participating countries wants to enter the Fund and contributes USD 10 million. The Fund guarantees the bank credit portfolio up to USD 35 million (multiplier effect of other contributors). The bank constitutes a USD 500 million portfolio of innovative banking products (according to the predefined list). If default reaches 25% and the Fund covers 50% of losses, the Fund will transfer only USD 35 million to the bank (guarantee limit reached). If losses are 10% the Fund will pay USD 25 million. The bank will also benefit from the Fund's technical assistance for the development of innovative banking products.

An insurance company contributes USD 10 million to the Fund. It benefits from a USD 15 million subsidy on premium. The insurance company constitutes a portfolio of innovative insurance products of USD 30 million by years (subsidy of 50% on premiums). In case of disaster, it can request the Fund for refinancing up to a ceiling or a predefined percentage. The insurance company also benefits from technical assistance funds for the development of innovative products.

In this system, credit or insurance default risks in different countries are pooled at the regional level.

The fund expands with the entry of new countries, banks and insurance companies, as well as through interests generated by the fund's capital. A contribution may be asked to final users - producers, POs, SMEs.

3.2.3 Public-private partnerships

➔ There are several innovative ways to stimulate private sector investments in rural infrastructure. One is entirely private (although government policies have to permit the mechanism): an entrepreneur can use off take contracts with foreign buyers (e.g., for fruits and vegetables with a supermarket chain) to obtain long-term investment finance from local pension funds which permits the construction of the infrastructure needed to produce, process and transport the fruits and vegetables (this has been done, for example, in Zambia). Others require a more active role of the government, in the form of public-private partnerships (PPP).

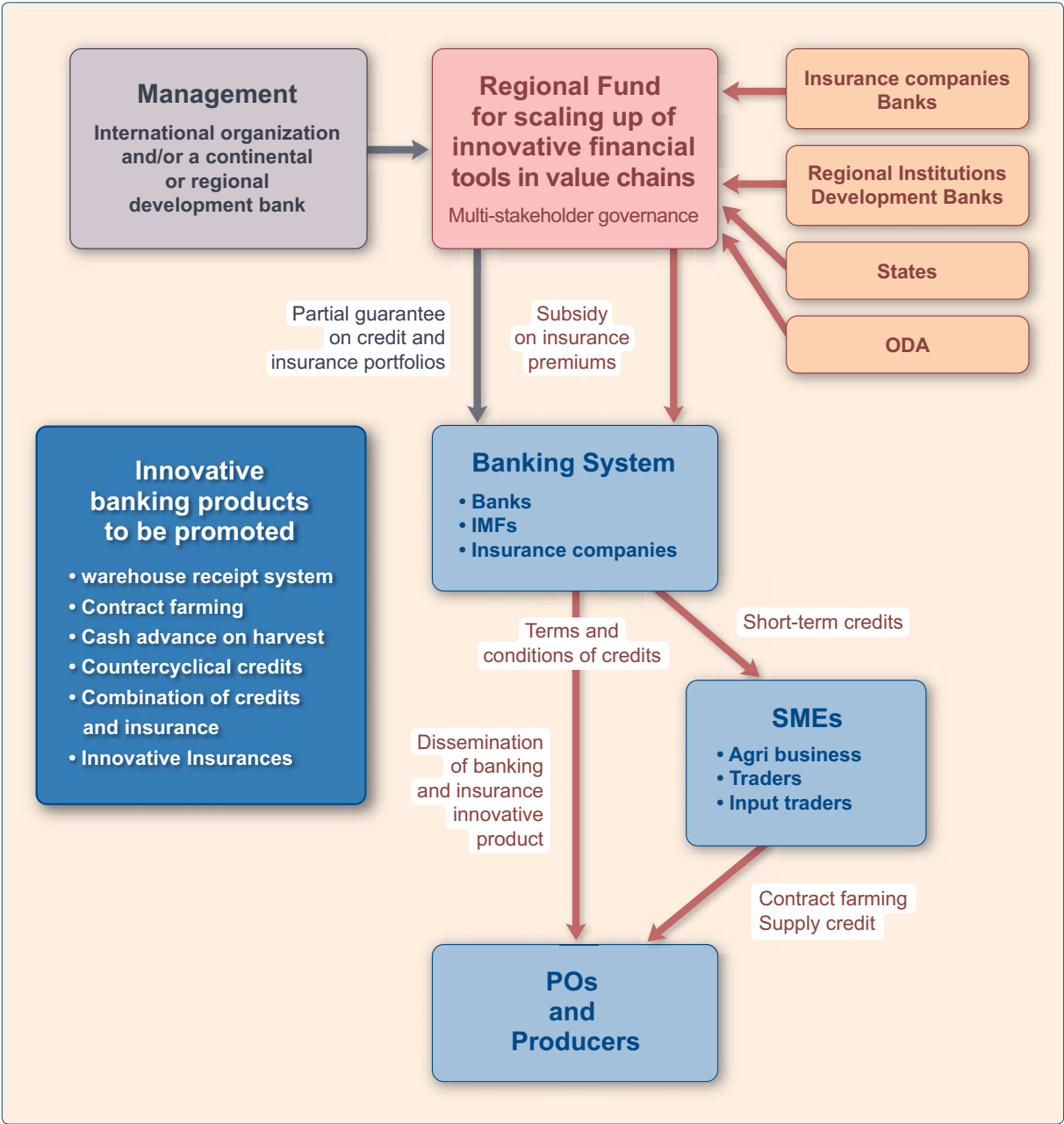
Through PPP governments can leverage funds from the private sector to invest in agricultural infrastructures or services benefitting to small farmers. The private investor, usually an agribusiness, is compensated either by subsidy or a public financial participation in his investment or by a long term lease agreement or a levy the proceeds of which pay back over time a part of the initial investment. Such PPPs can easily be used for the construction of irrigation schemes (including, for instance, a nucleus rice company and small scale out growers) or storage facilities.

It can also be used for a variety of projects: for the provision of services to small farmers by an agro-industry, within the framework of contract farming arrangements; for the construction and operation of wholesale markets.

In particular, governments and aid agencies may consider certain innovative forms of Build-Own-Operate contracts. One good example is a structure used in the renewable energy sector. Private entrepreneurs apply for the right to build the plant. Milestones and a budget are agreed on. On the back of this public-private agreement, the entrepreneur raises the necessary funds for construction. Once the construction is completed, the plant is bought by the government, permitting the entrepreneur to reimburse his loans; and then, the plant is leased back to the entrepreneur who can operate it, with possible purchase at a nominal price after some years on the condition that the entrepreneur meets pre-agreed performance criteria.

PPPs are strongly encouraged by the CAADP strategy to leverage private financing for agricultural infrastructure, but their development is severely constrained by the lack of soft loans available for such investments.

Figure 2: Scaling up of innovative financial tools for value chains



3.2.4 Subsidy scheme for inputs for small scale producers²⁹

➔ The NEPAD has recently called for the establishment of a fertilizer subsidy scheme (see figure 3) in Sub-Saharan Africa (SSA), which could be financed by a tax on fertilizers in G20 countries.

Rationale

A key component of any strategy to increase agricultural productivity among smallholder farmers in Africa must be to increase smallholder use of productivity-increasing inputs such as fertilizers through improved access to input markets. Soil

29- This scheme can be financed through a tax on fertilizers in G20 countries, as explained in section 3.1.2.

fertility is central to crop growth and fertilizers are an important way to maintain or increase soil fertility on agricultural lands. There is evidence that no country in the world has been able to expand agricultural growth rates and eliminate hunger without increasing fertilizer use. However, fertilizer use levels in Africa are the lowest in the world at 9 kg/ha, compared to the world average of more than 100 kg/ha and almost 200 kg/ha in the Green Revolution countries of Asia. Sub-Saharan Africa consumes only 0.7% of world production of fertilizers, as against 20% for northern countries and 50% for the three following countries: China, India and Brazil.

Consequently, the agricultural production increases in SSA mainly through expansion of land cultivated rather than agricultural intensification through increased use of fertilizers. African farmers are mining the soils by extracting more nutrients from the soils than they replenish through the use of fertilizers.

African governments are very cognizant of the importance of increasing fertilizer use levels in Africa. In June 2006, the Africa Fertilizer Summit was convened to identify the key constraints to increased fertilizer use in Africa and reach a consensus on an action plan. The outcome of the Fertilizer Summit was the Abuja Declaration on Fertilizers for an African Green Revolution which set a national fertilizer target of at least 50 kg/ha by 2015 and delineated measures and actions required at the national and regional level to achieve this target. Resolution 5 of the Abuja Declaration calls for African Union Member States to “improve farmers’ access to fertilizer, by granting, with the support of Africa’s Development Partners, targeted subsidies in favour of the fertilizer sector, with special attention to poor farmers.

Currently, over 10 African countries have fertilizer subsidy programs. These programs have improved smallholder access to fertilizers and had a positive impact on yields and production. However, the potential impact of these programs is stymied by inability to go to scale due to lack of sufficient funds. Furthermore, in many cases the design and implementation of these programs needs to be more closely aligned with the stated objectives. There is a need for concerted action at the highest levels to support the implementation of the continentally endorsed fertilizer policy for Africa through concrete action to catalyze its implementation with a substantive cash infusion.

There is also a need to harmonize policies, in order to avoid smuggling in neighboring countries. There is finally a need to upscale the existing schemes, in order to maximize its impact on food security.

Principle

The subsidy program proposed by NEPAD would be co-financed at the national and regional levels. Co-financing at the regional level will be relevant where regional economic institutions have adopted a common fertilizer subsidy policy. Co-financing rates should be fixed at the regional level. Co-financing at the national level should be adapted according to the budget of the individual member states to ensure that the poorest countries will be able to participate in the program.

The subsidy programs would be designed and implemented at the discretion of individual member states, taking into account their particular needs and realities. Participating countries would adhere to the following guidelines:

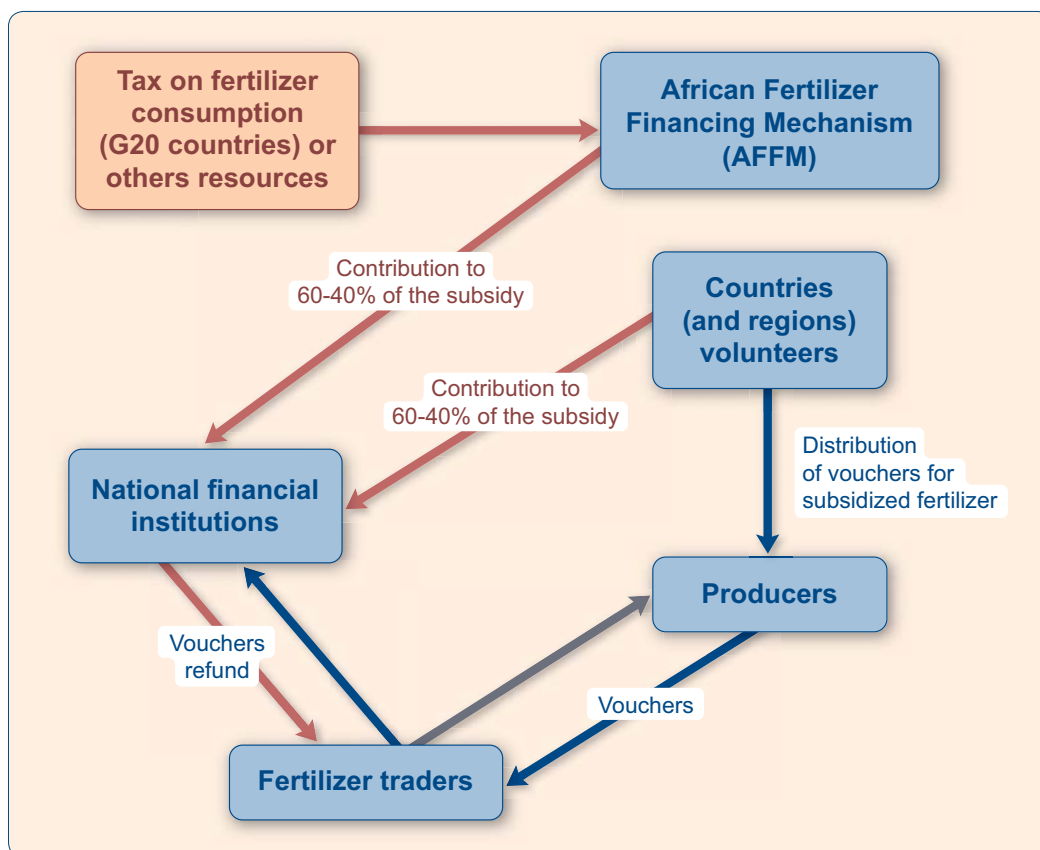
- The distribution of fertilizers for the subsidy program will be conducted by private distribution networks, not the Ministry of Agriculture or a development organizations.
- The subsidy will be designed to provide direct support to farmers to access the subsidized fertilizers from the private sector; this will be done through the distribution of vouchers directly to targeted farmers. For example, targeting should be done according to specific criteria such as areas or/and incomes to benefit only small-holders and/or poor farmers.
- To the extent possible, beneficiary farmers should be growing food crops. However, this requirement can be posed as a general rule and left to the discretion of each member state.
- A continental ceiling or upper limit for the subsidy will be arrived at by negotiation between representatives of the G20 countries and member states. The actual subsidy rate will be chosen by individual countries, but must fall below the continental ceiling.
- The subsidy will be time-bound for a 10 year period and gradually reduced over this period. Guidelines for the progressive reduction will be negotiated between representatives of the G20 countries and member states. The actual phase out rates will be chosen by individual countries, but must be aligned with the provided guidelines.

- A continental co-financing level of 60% of the cost of national subsidy programs (during the first year of implementation, but rapidly declining thereafter) is proposed for less developed countries (LDCs) in SSA and this level is 40% for middle-income countries (MICs). This level of financing is deemed necessary for the LDCs, whereas for the MICs the level of co-financing is chosen to be attractive enough to get them involved in the program. Co-financing of 40% for MICs has been assumed in the calculation of funding requirements.
- The subsidy program should utilize national financial institutions for the payment of the subsidized portion of the vouchers to the private distributors. This will provide some guarantee of professionalism and transparency, and may help to develop linkages between banks and agribusinesses.
- The distribution of vouchers will be the responsibility of national agricultural authorities (ministries of agriculture), but should be co-managed by representative national farmers' organizations.
- Member states should exhibit tangible progress in the implementation of the Abuja Declaration on Fertilizers agenda (increase in number of agro-dealers, removal of tariffs on fertilizers, establishment of national financing facilities, establishment and implementation of regulatory measures, etc.) to be eligible to participate in the program.
- Education and information programs for sustainable fertilizer use and its alternatives should be considered.

Cost

The valuation of the program is based on the assumption that LDCs (which represent 55% of fertilizer consumption in SSA) will be co-financed at 60% and the MICs 40%, and on the assumption consistent with the objectives of the program that the contractual export crops and agro-industrial crops are generally excluded. Additionally, the subsidy rate will be digressive from 50% to 25% of the price. Based on these assumptions, the total cost (which depends largely on the willingness of member states to join the program)

Figure 3: Fertilizer Financing Mechanism



would be USD 960 million over 10 years, averaging USD 100 million a year.

Governance

According to NEPAD, an adequate conduit for the disbursement and management of the funds is the African Fertilizer Financing Mechanism. Resolution 11 of the Abuja Declaration on Fertilizers called for the establishment of an African Fertilizer Financing Mechanism (AFFM) to finance the various measures and activities delineated by the Declaration. A Secretariat for the AFFM was established at the African Development Bank in 2007 and a Governing Council was established in 2009 which includes representatives from the African Ministers of Agriculture, AFREXIMBANK, AGRA, UNECA, IFA and 2 regional farmers' organizations and is chaired by the Commissioner of Rural Economy and Agriculture of the African Union Commission. However, the fund is not yet operational as it has a shortfall of USD 4.5 million below the required legal threshold (USD 10 million). However, given the amount of funds being proposed for the innovative financing mechanism for fertilizers, the selection of the AFFM as the institutional mechanism for the receipt and disbursement of the funds for the subsidy program is possible. The AFFM Secretariat could then provide annual reports on the disbursement of funds to the financiers and other stakeholders in accordance with the auditing and reporting requirements of the African Development Bank (AfDB).

3.2.5 Mechanisms for catalyzing private investment in innovation systems (AMC and pull mechanisms)

Rationale

Increasing agricultural productivity in developing countries relies heavily on the dissemination of technical innovation (improved soil and pest management techniques, more productive or better adapted varieties, improved veterinary services...). Building up sustainable agricultural value chains relies also heavily on the dissemination of technologies adapted to the local context and to smallholders' agriculture for post harvest and processing.

Fundamental and adaptive research is, in developing countries, predominantly done by public-funded research institutions: in Africa, private agricultural research accounts for only 2 percent

of the global funding of agricultural research³⁰. Public-funded research is obviously an important component of the innovation system, but it cannot by itself meet the investment gap. It often also results in a lack of linkage between research and innovation development or dissemination, and in insufficient attention to the market potential of the innovation. Private sector is therefore essential for the dissemination of innovation. Private entrepreneurs are however reluctant to venture into marketing of innovation technologies, because of a number of market and coordination failures impeding the establishment of commercial markets for agricultural innovation in developing countries:

- Failure of the market to capture the social value of such innovations;
- Imperfect information, responsible for difficulties to anticipate the market response and for delaying it, because consumers lack information;
- Coordination failures, in particular failures of individual market actors to take decisions that, if taken together, would be beneficial to all of them.

In order to address those shortcomings, agricultural development institutions have traditionally used "push mechanisms" (ex ante provision of incentives for private sector innovations), such as competitive grants linked to calls for proposals, subsidies to innovative technology dissemination or product development partnerships. By contrast, "pull mechanisms", which correspond to ex post incentives to innovation linked to expected results defined ex ante, present the advantage of being more result-based, and therefore likely to be more effective. Another option for incentives to innovation is the Advance Market Commitment, already developed for the production of vaccines, and which aims at reducing market risks. The G20 Development Working Group report to the 2011 summit in Cannes makes an explicit reference to Pull Mechanisms and Advance Market Commitments (AMC) in agriculture. It calls for an initiative in this area and for the development of pilots. Those innovating financing mechanisms are expected to leverage a maximum of private investment in innovation systems with a minimum of public funds, while ensuring a more effective use of these resources.

30- IFPRI, 2006

Scaling up the AG Results initiative

The AG Results initiative launched by a number of countries in 2012, with the World Bank acting as interim secretariat, is a response to the G20 call as regards pull mechanisms. The concept is currently under development and testing through three pilots. Once these pilots are implemented and evaluated, new funding will be necessary, beyond the USD 100 million already committed for the pilot phase, to scale up the program. The proposed Innovative Facility (see section 3.3) could take over the continuation of the program, in close cooperation with the World Bank's interim secretariat.

The AMC mechanism for vaccine production

Contrarily to pull mechanisms, the concept of AMC applied to innovation in agriculture has not yet been investigated nor tested. In its original design for the development of an anti-pneumococcal vaccine adapted to Africa, the operation principle of the mechanism was the following: a donor (or a pool of donors) signs a contract with a laboratory (GSK and Pfizer in the case of the pneumococcal vaccine). The laboratory commits itself to develop the vaccine according to the contractual specifications, to supply a given quantity on a target market at a given maximum price for a period of 10 years (both price and quantity being specified in the contract). In turn, the donor provides a market guarantee to the laboratory: if the laboratory sells less than a quantity of products corresponding to its break-even point, the donor buys the difference at the contractual price. In this way, the laboratory is guaranteed against market failures, and ensured that he will sell enough vaccines to cover its development cost. The donor's guarantee is used only if the market turns out to be smaller than expected, unstable or insolvent. The financial engineering of the mechanism is more complex than its basic principle: it includes donors' contributions, a guaranty from the World Bank on future donors commitments, subsidies for the purchase of vaccines by targeted countries and private contributions.

Possible adaptation to innovation in agriculture

Preliminary analyses show that:

- The concept, as it was designed initially for human vaccines, could be easily adapted to the development of veterinarian vaccines, provided the market is made of public veterinary services or public funded (for vaccines sold

through private channels, marketing promotion services would be needed, and the market guarantee given to the laboratory might act as a disincentive for laboratories to invest in marketing).

- The concept would have a very limited interest for plant breeding, for a variety of reasons: large-scale private plant breeders would probably not be interested as plant varieties are, in most developing countries, not liable to intellectual property rights, except GM varieties, and, in some cases, hybrids (in this regard, such a mechanism would provide a strong incentives for large-scale breeders to develop hybrids or GM varieties, which do not necessarily correspond to the needs of small farmers as it obliges them to renew their seeds every season). Public research institutes (like WARDA, which developed the new variety NERICA rice) would not either be interested, as these institutes are more in demand of pre-financing for their research work than of market guarantee (which is not relevant, as the new variety is a public good).
- The AMC mechanism would however be very useful to secure the market of a private seed producer (who has to produce seeds one year before marketing them, and takes therefore a market risk) or a company who wants to develop and market an innovative on-farm or processing equipment. AMC would guarantee the company a minimum market for a period of time corresponding to the delay required to build up a stable market for the product. Through such a mechanism, the market risk would be considerably reduced during the start up period. This would be a strong incentive for entrepreneurs to invest into innovation development. It would also considerably facilitate access to bank credit, as the firm's income during the credit repayment period is secured.

Possible architecture of AMC for innovation in agriculture

One can thus imagine the following system:

- In order to access an AMC contract, the innovation developer would be required to produce a business plan showing the initial investment cost, the production and marketing cost and the sales forecast for the innovative product over a start up period (which could be for instance 5 years).
- The selling price is determined in the contract and calculated in such a way as to cover the

investment cost at the end of the start up period.

- If the cumulated sales stand below the sales forecast during the start up period, the company is compensated for the gap (or the AMC donor buys the unsold quantity). In this way, the company's income is secured during the start up period.
- If the company sells more products than anticipated, it makes an extra profit.
- At the end of the start up period, the company is assumed to have built up its market and does not need market guarantee anymore.

Such a mechanism would most likely be less costly in public funds than traditional push mechanisms. It would also present the advantage of securing bank credit to innovation. It is all the more effective that the product developed is

really innovative and requires prior investment in research and development. It does however require preliminary testing and fine tuning. It also requires a careful assessment of beneficiary projects and close monitoring during implementation, so as to ensure that the beneficiary complies to contract conditions and that he/she is not responsible for a lower market than expected.

Possible adaptation of AG Results and AMC mechanism to the nutrition sector

The nutrition sector could greatly benefit from the adaptation of innovative AG Result and AMC initiatives to its own specific needs, through the following options:

- AG Result could be applied to increase the availability and consumption of fortified foods in selected areas. A standard or proportional prize would reward organizations that are able to demonstrate they reached this outcome³¹.

Preliminary design of a possible AMC mechanism: production and distribution of improved seeds

A local company wants to produce and distribute improved maize seeds in an African country. According to the business plan, the required investment amounts to USD 500 000 (construction, development of the farming area, equipment for sorting and packing, acquisition cost for breeder seeds and multiplication). The forecasted production cost (excluding amortization of the investment) amounts to USD 0,2/kg and the distribution cost (including marketing) to USD 0,1/kg.

After a market assessment, the company believes that a selling price of USD 0,4/kg is competitive and would open up a sizeable market. The gross margin would then be 0,4 - 0,2 (production cost) - 0,1 (distribution and marketing cost) = USD 0,1/kg. This unit gross margin would cover the initial investment cost after a period of 5 years, provided that the total volume of sales over the period amounts to 5 000 tons (T). The company believes that a market of 2 000 T per year is a reasonable objective, corresponding to a sown area of roughly 50 000 ha in the region. The company anticipates a sales volume of 500 T in year 2, 1 000 T in year 3, 1 500 T in year 4 and 2 000 T from year 5 on (i.e. 5 000 T in total during the 5 first years). The project is therefore financially feasible, but the company cannot take the full market risk,

considering the uncertainty on the farmers' response, and no bank is willing to grant a loan on this basis.

The AMC contract guarantees the company that it will cover the development cost within the five first years, even if the market is smaller or slower than expected (under the condition that the innovation is actually showing the promised improvements): it will pay to the company, each year during the start up period, the sales value of the eventual gap between the cumulated quantity sold and the business plan forecast. For instance:

If, at the end of year 2, the company could sell only 400 T (instead of 500 T, in the business plan), the AMC donor will pay (or will buy) 100 T multiplied by the unit sale price (USD 0,4/kg), i.e. USD 40 000.

If, at the end of year 3, cumulated quantities sold reach 1 400 T (instead of 1 500 T according to the business plan), the company does not get additional reimbursement, since it was already compensated for 100 T the previous year; if cumulated sales reach only 1 300 T, it is compensated for an additional 100 T.

By the end of year 5, the company is assumed to have built up its market, and does not need guarantee anymore.

31- This scheme was proposed by the World Bank (Agricultural Pull Mechanism (AGPM) Initiative pilot ideas for nutrition, 2011).

- AMC mechanism would be useful to enhance additional, diversified and locally produced ready-to-use food (both therapeutic and preventive) and to overcome the dissuasive costs of quality standards management. The mechanism would support productions which ensures numerous advantages, including:
 - pushing up the production capacities;
 - stimulating the innovation (innovative formula with local and non-allergenic components, economical and environment-friendly packaging, etc.);
 - developing local businesses and supplementary outlet for local value chain;
 - decreasing transport and delivery costs (air freight of ready-to-use therapeutic food increases the landed cost by 100 per cent and sea freight by 10 per cent³²) and reducing pollution;
 - improving delivery flexibility and facilitating the management of malnutrition at country level.

Similarly to the system for innovation in agriculture, local producers would be required to present a business plan in order to access AMC contracts.

3.2.6 Migrants' remittances

➔ As said in section 3.1.1, remittances in addition to being new sources of financing for agricultural development represent also existing capital that only needs to be channeled into this area. Interventions to promote the investment of remittances and diaspora investment consist of developing innovative models and partnerships to i) leverage the existing flow of migrant remittances to entrepreneurs and smallholder farmers investing in agriculture (approximately USD 20 billion worldwide), and ii) to mobilize new sources of diaspora investment in agriculture, food security and nutrition projects in developing countries. The impact of these funds can be significantly leveraged and their amount increased through collaboration between public and private diaspora actors, and their counterparts in developing nations both within a co-development framework (i.e., matching these funds with public resources) and through public facilitation of private investment.

3.3 An innovative facility for the promotion of innovative financing in agriculture, food security and nutrition

Rationale

The development of food production and supply, in view of improving food security and nutrition and reducing rural poverty, relies to a large extent on private investment, in complement to ODA. Alleviating, through innovating mechanisms, the constraints which hamper private investment and bank credit to agriculture and providing incentives to attract new investors are therefore crucial for the development of agriculture and the improvement of food security in less developed countries, particularly in Africa.

Although a number of institutions (the World Bank, IFAD, FAO, AGRA, bilateral aid institutions,...) are already involved in the pilot development of such innovative financing, there is a clear need for considerable additional efforts to promote such tools, upscale existing projects and develop shared approaches in the agricultural development community. There is also a clear need to co-ordinate the interventions of the various institutions interested by the development of such tools and to build up a forum where experiences can be discussed and evaluated, and new innovating mechanisms designed. The creation of an entity in charge of mainstreaming innovative financing into agriculture is therefore recommended.

Mission

The mission of the Innovative Facility would be to promote innovative tools for financing agricultural development focused on family farmers, food security and nutrition improvement projects in developing countries, with a specific focus on Africa, particularly affected by food security problems. As a first approach, the Fund could consider as innovative all financial tools aiming at reducing the constraints limiting local or international private investment in agricultural and animal production value chains or providing incentives for such investments, hence having a catalytic effect on their development. This would cover the all range of innovating tools described in the previous sections.

Activities

The Innovative Facility would have two main activities: (a) it would be a think tank for the identification,

32- UNICEF, Komrska, J. (2012), Increasing Access to Ready-to-use Therapeutic Foods.

design and evaluation and coordination of innovative financial mechanisms, and (b) would participate in projects aimed at developing innovative tools in order to attract private sector financing in the agricultural and animal production value chains.

As a think tank, the Innovative Facility would:

- Elaborate the design of identified innovative financing mechanisms which still need to be studied and tested (for instance AMC mechanisms);
- Follow up the implementation of innovative mechanisms and propose design improvements through building on experience;
- Foster a collective and coordinated approach among development institutions on innovating mechanisms for agricultural development financing, and network with all concerned institutions so as to share experiences, develop common approaches and mainstream innovative financing tools; and
- Identify, on a continuous basis, new possible mechanisms, through, for instance, calls for innovating proposals.

As a financing institution, the Innovative Facility could intervene as co-financier of innovating financing projects rather than as an executing agency for such projects. The objective of the Innovative Facility is indeed not to duplicate with those financial institutions (World Bank, IFAD, Regional development banks, bilateral financing institutions, private foundations...) which are already developing, although on a too limited scale, a number of innovative financial tools, but rather to act as a catalyst for the up scaling of innovative financing tools. In this respect, one of the core activities of the Innovative Facility could be to co-finance, with interested financial institutions, projects or project components aiming at developing innovative financial tools, thus leveraging the investments of those institutions in such tools and creating a strong incentive for these institutions to include such tools in their project portfolios. The Innovative Facility could also take participations in the capital of agencies involved in the implementation of innovating financing tools, or extent to them long term soft loans to catalyze their activities. In all cases, eligibility to the financing by the fund would be conditioned by the fact that considered investments are benefitting to family farmers.

Types of innovating projects

Although this list is not limitative, the Innovative Facility could concentrate its financing activities on the following tools (described in the previous sections):

- **Public-private partnerships:** The Innovative Facility could participate in the financing, through patient capital, in public-private partnership enterprises with strong impact on small farmers, such as irrigation schemes or agricultural corridors. The financing by the Fund could take the form of a participation in the capital of the entity implementing the partnership (with a sale back of the shares when the project starts to generate income), eventually taking on some of the mezzanine-level risks of a project (based on the concept of risk tranching), or through long term soft loans.
- **Credit guarantee:** The Innovative Facility could catalyze the development of credit guarantee schemes in several ways: it could participate in the capital of existing or new guarantee providing entities, thus enhancing their guarantee capacity; it could co-finance

Example of a possible Facility's intervention in PPP financing

A private investor plans a rice development project, including construction of a rice mill and a silo, and a 5000 ha irrigated scheme, of which 3000 ha would be leased to 1500 rice out growers. The total cost of the project is USD 100 million. The Government (eventually through an internationally financed development project) participates to the financing up to USD 20 million, corresponding to primary infrastructures, considered as public responsibility. The investor and the Government could create a public-private company in charge of developing the project. The Facility could participate to the capital of the company up to, for instance, USD 30 million, and resell its participation to the private investor after 10 years, once the project has generated enough cash to buy the capital share held by the Facility. Alternatively, the Facility could make a soft loan to the Government, in order to finance its participation in the capital. It could also finance the out growers to take a stake in the capital of the investing company, of which they would thus become shareholders over time.

credit guarantee schemes set up by development projects, through grants or soft loans, or a mix of both types of resources, depending on the beneficiary country and the level of risks. It could also finance a guarantee fund associated to a credit line financed by a development project (for instance, a credit line financed by a development institution such as World Bank or IFAD for the collective purchase by farmers groups of processing equipment could be backed by a guarantee scheme co-financed by the Facility and operated by the project).

In all cases, the credit guarantee scheme would have to comply to strict eligibility criteria:

- The beneficiary bank would have to comply to minimum standards in terms of good governance, financial soundness and technical capacity;
 - The guaranteed portfolio would have to finance activities benefitting directly or indirectly to family farmers.
- **Agricultural insurance schemes:** In conformity with its proposed mandate, the Innovative Facility could co-finance projects including the development of an insurance scheme linked to bank credit benefitting directly or indirectly to family farmers, both for the front end investment (insurance scheme engineering, preliminary data collection, setting up of pilots) and for the subsidization of the insurance premiums.
 - **Pull mechanisms for the financing of agricultural innovation systems:** The Innovative Facility could co-finance projects aimed at developing new approaches for financing innovation systems in agriculture, in particular the Pull mechanisms and Advance Market Commitment (AMC) mechanisms, which appear to be a promising tool for involving private actors and private investment into the dissemination of agricultural and animal production innovation.

Resources

The Innovative Facility could be innovating in two ways: it would mobilize innovating resources in order to promote innovating tools. Two types of resources could be considered:

- **Non reimbursable contributions:** such contributions could be granted through traditional ODA mechanisms (contributions from voluntary States, international development institutions) or they could also be collected through innovative resource mechanisms, such as a part of the proceeds of a possible tax on financial transactions, a tax on fertilizers and eventually pesticides consumption in developed countries, lotteries, contributions from the private sector.
- **Long term loans with a low interest rate** (for instance 20-to-30-year loans at an interest of 1%) from financial development institutions or private investors (patient capital). A number of global agro-industrial firms have expressed, in particular at the World Economic Forum³³, their interest in participating in innovating approaches to foster agricultural development in Africa, both on the ground of their social accountability and because they consider that Africa will become a major food market in the future. It is believed that such firms could be interested in participating in the Facility through long term soft loans, which do not impact their profit and loss accounts, provided this gives them a right to participate in the governance of the Facility, and provided their intervention has enough visibility to serve their image in the public at large.

Such a mix of resources, combining grants and borrowed capital on soft conditions, would allow the Facility to develop a wide array of financial mechanisms.

Governance and organization

The Innovative Facility would be operated by a limited staff of highly qualified officers, accountable to the governing board and to the public at large, and whose mission would be to contribute to the elaboration of new innovative mechanisms concepts, to select projects for financing by the Facility, to monitor, follow up and evaluate ongoing projects, and, more generally, to use the Facility effectively under the guidance of its governing board. The institutional status of the Facility remains open: it could be integrated into existing institutions; it could also be an independent international public-private institution with a governing board, composed, for instance, of contributors, and an advisory council, made of internationally recognized food security experts.

33- "Putting the new vision for Agriculture into action"; a report by the World Economic Forum's New vision for agriculture initiative; 2012.

Interest of the proposed Facility

The creation of such an Innovative Facility would be a very positive contribution to the promotion of innovating financing mechanisms in agricultural and food security:

- it would bring new resources for the development of such tools, allowing an up scaling from a yet experimental scale to large scale financing; it would give visibility to these tools and a clear signal of the interest borne by the development community for innovative financing in agriculture;
- it would have a strong leverage effect on other development institutions;
- it would improve the dialogue and mutual understanding within development institutions and between these institutions, local authorities and the private sector on investment strategies for agricultural value chains in developing countries;
- it would create incentives for innovation on a continuous basis by calling for innovative proposals from public and private actors;
- it would make possible a collective and coordinated approach (which is presently lacking) for the development of innovative financing, thus allowing to pool expertise and to draw shared lessons from experience.

RECOMMENDATIONS

➔ After several months of studies, the international Committee of experts confirmed the rationale for the promotion of innovative financing for agriculture, food security and nutrition and came to the conclusion that this report represents a first step in the process. The committee also discussed various ways in which new funding for such efforts could be mobilized. A list of mechanisms has been identified in the report which includes new instruments and new approaches to improve the efficiency of existing instruments. Such mechanisms may complement each other and stand at various stages of development. They also rest on different fields of expertise and would necessitate separate work streams to further explore their potential and feasibility.

In this context, in order to pursue the work initiated on innovative financing for agriculture, food security and nutrition, the international Committee of experts recommends to the Members of the Leading Group on Innovating Financing for Development:

1) To support the establishment of a multi-stakeholders platform for the coordination of research and dissemination of knowledge on innovative financing for agriculture, food security and nutrition, whose name could be the “Innovative Facility for Agriculture, Food Security and Nutrition” (IFAFSN). Beyond its coordination function, the objective of the IFAFSN would be the design and operationalization of innovative financing mechanisms. A recommended next step could be to discuss the term of reference of such a facility.

2) To initiate the work of the IFAFSN by launching one or several work streams selected from the following options proposed in the report:

- Advanced market commitments (AMC) specific on agricultural inputs and nutritional products;
- Public-private partnership to catalyze private investment in the agricultural and food value chain (a pilot-project could consist in finding ways to systemize an integrated scheme for school feeding with supply from small local producers);
- Structured finance and risk management tools for agriculture, food security and nutrition;
- Innovative schemes and partnerships to leverage and channel flows of migrant remittances and diaspora capital towards agricultural investment;
- Voluntary contributions (dedicated lotteries, for examples);
- Taxes on fats and sugar products (for both over and under nutrition-oriented purposes) and on fertilizers.

APPENDIX

Appendix I: The identified innovating financing mechanisms

1. Innovating resource mechanisms (new resources)

a) Taxes (in volunteer States, but mandatory within States adhering to the mechanism)

Tax on fertilizers

See section 3.1.2

Tobacco tax in Southern countries

The idea of the tax on tobacco which would be applied both in Northern and Southern countries (where addiction to tobacco is a growing public health problem) has been supported by the WHO. A development institution has developed a proposal on this line. The tax on tobacco would consist in an excise duty on tobacco consumption in Southern countries. The proceeds of the tax, eventually supplemented by solidarity contributions coming from Northern countries, would be used to finance the prevention of tobacco addiction and the conversion of the tobacco cultivation towards food crops in Sub-Saharan Africa. The main beneficiaries concerning conversion would be the large scale African tobacco producing countries (Malawi, Zimbabwe, Zambia, Tanzania and Mozambique).

Sale of GHG emission allocation

See chapter 3.1.2

Tax on fats and sugar products in voluntary Northern countries

This idea has been evoked by some experts. The tax could, in the first place, be applied on soft drinks in Northern countries. The proceeds of the tax could be partly used for the financing of projects meant to improve nutrition in Southern countries.

Other global taxes under consideration for the financing of international solidarity and development

In this category, one can include the tax on financial transactions, which is currently debated in international fora. The feasibility of such taxes has been studied in details by the Leading Group, to the extent that a more detailed analysis in this report does not seem useful. All these taxes could finance, inter alia, food security, considered as a global public good, as well as health or education.

Other tax options to be explored...

Shipping and aviation fuel taxes (global bunker fuel tax) as has been proposed by Bill Gates' report to the G20 (November 2011) could also be considered. Furthermore, it could be proposed a tax on internet sports bettings, and on luxury tourism, high-end hotels, cruising, catering business and/or food processing industry.

b) Voluntary contributions

Voluntary labeling

Some experts have suggested an innovating financing mechanism inspired from the RED experience, a voluntary labeling indicating that firms adhering to the label participate in the fight against AIDS. One could imagine the creation of a “food security” label: the brands (distributors brands, large agro-food brands, Fast Food brands) would commit themselves to participate in the financing of food security projects in Southern countries by devoting to it a percentage of their margin; in turn, they could use the food security label to brand their products and communicate on the actions financed through their contributions, thus improving their image (for example through socially responsible company saving scheme³⁴).

Lottery

The idea of using lotteries incomes for the financing of development or for international solidarity was implemented in the United Kingdom, and specifically for financing the agricultural sector, in Belgium. Some international organizations support the idea of creating a world lottery (global lotto) on this model. It could also be considered that existing lotteries in some countries contribute voluntarily to a fund for the development of food security, agriculture and nutrition in developing countries.

Rounding up banking transactions to the nearest currency unit

The idea is supported by the report on innovating financing in the education sector. This idea could be applied in the food security sector. Some Northern banks could, for instance, propose to their customers to round up to the nearest currency unit their expenditure paid by credit cards, using the difference to contribute to a fund for improvement of food security and nutrition in Southern countries.

c) Call to the financial market

International finance facility

This mechanism, implemented in the health sector for the financing of vaccination campaigns function as follows: a public-private institution, GAVI Alliance, issues bonds sold on the financial market. These bonds are guaranteed by long term

public aid commitment from donor countries. Repayment of the bonds is financed by ODA payments from donor countries to the Facility. This system permits developing countries to rapidly mobilize a very high amount of financing to the benefit of the GAVI Alliance. GAVI uses the funds to finance a number of selected projects.

d) Migrants remittances and diaspora investment in agriculture

Bonds for migrants

This innovative mechanism is identified in the report *2+3=8 on education innovative financing*. Governments of developing countries would issue bonds for sale to their emigrants for a Fund dedicated to educational sector development. The report estimates that emigrants will subscribe in a spirit of solidarity and patriotism. The fact the bonds interest is paid in local currency is also seen as an advantage by the report. An international institution could guarantee the repayment and the payment of interest of the bonds, and could also participate in the management of the Fund.

Financing an agricultural investment fund through loans/bonds backed by future migrant remittances

Migrant remittances involve the transfer of money to family members in developing nations. Especially when processed through a bank, the regular flow of transfers in hard currencies can be leveraged in order to “securitize” the incoming remittance flow. In this process, the local bank can raise funds on the international bank or bond market to set up a local investment fund. Securitization has been undertaken in Central America with support from the World Bank and has been used in a few African countries, e.g. to set up a USD 40 million agricultural investment fund in Ghana, but there is much scope for expansion.

34- Leading Group on Innovative Finance (May 2012) « *Comment encourager la philanthropie privée au service du développement ? Etude sur les modèles émergents* », Prospective study. http://www.leadinggroup.org/IMG/pdf/Philanthropie_BD.pdf

2. Mechanisms innovating through a catalytic effect on private investment

a) Mechanisms for financing agriculture innovation system

Pull mechanisms

See section 3.2.5

b) Mechanism for value chains financing

Warehouse receipts

See section 3.2.1

Public-private partnerships

See section 3.2.3

Alliance with private sector and venture capital

The Africa Agriculture Trade and Investment Fund³⁵ (AATIF) by KfW and Deutsche Bank provide loans, guarantees and, to a limited extent, also equity to experienced private sector enterprises and farmers located in Africa. It encourages the engagement of private investors that look for more “risky” investment opportunities.

Risk Management tools (index insurance, price insurance)

See section 3.2.1

Guarantee funds for bank credit

See section 3.2.1

Subsidies for inputs for small scale producers

(which can be combined with a fertilizers tax in G20 countries)

See section 3.2.4

c) Mechanisms for mobilizing diaspora funds for migrants' investments

Various development institutions are interested in i) leveraging the existing flow of remittances of which a significant portion is invested in agriculture, and ii) finding innovative ways to enable diaspora investors to invest in their home communities. These projects have consisted of both fully market-oriented interventions, as well as projects of a more philanthropic nature. In the food security and nutrition sector, technical assistance can be provided to remittance recipient entrepreneurs and farmers to encourage the adoption of best practices, matching funds with

public resources can help encourage diaspora investment, if the money is used to finance collective or individual projects for agricultural modernization (creation of irrigated schemes, etc.), for agro-industrial processing or for the development of services to agriculture in their village or region of origin. As diaspora investors have a strong link with their community of origin, and particularly with their family members in that community, both remittances and diaspora investment contribute significantly to poverty alleviation and community development, even during times of crisis when other investors are unwilling to invest.

They could also be collected through innovative resource mechanisms, such as a part of the proceeds of a possible tax on financial transactions, a tax on fertilizers and eventually pesticides consumption in developed countries, lotteries, contributions from the private sector.

35- http://www.kfw.de/kfw/en/KfW_Group/Press/Latest_News/PressArchiv/2012/20120111_55587.jsp

Appendix II: An overview of innovating mechanisms for a Catalytic Fund to catalyze private sector finance for agriculture, food security and nutrition

1. Innovative ways to catalyze private sector: methods

➔ There are many innovative ways to catalyze private sector finance for agriculture. Broadly, these different methods can be divided into several categories.

a) Providing guarantees

- Directly cover financing risk, e.g. by guarantee facilities that cover part of the risk of certain agricultural loans. This permits a financier to improve the returns on his money-at-risk, making more transactions bankable. Even with a fifty percent risk coverage, a fairly high leverage (5-10 times the guaranty facility) has proven possible. But while a 50 percent guarantee makes it possible for certain transactions to reach the risk-reward benchmark of banks, it does not necessarily incentivize banks to enter into areas where they feel they cannot estimate risk. For this reason, it is worthwhile to consider adding a small, revolving risk fund guaranteeing a much higher part of exposure, e.g., 90 percent. This stimulates banks to be innovative; when they are more familiar with the loan structure, they can then move it to the 50 percent guarantee facility, freeing up new capacity to innovate.
- Provide and support innovative mechanisms that remove country risks for international financiers. This would, for example, allow a local bank to raise relatively low-cost and long-term funds on the international capital market in order to create a domestic agricultural investment fund. This can be through the strengthening of existing sovereign risk insurance facilities (the power sector has interesting examples of possible modalities), but it can also be by leveraging existing payment flows, e.g. migrant remittances.
- Develop innovative Public-Private Partnerships for rural infrastructure, using structures that permit investors to raise funds from bank or the bond market for the initial risky phase of construction, while the government takes over long-term funding once the construction phase is completed.

- Create facilities through which funding automatically becomes available if certain triggers are hit (e.g., food prices exceed a certain level, or a drought occurs). Such facilities (called contingency finance, part of the “Alternative Risk Transfer” market) are used in the private sector to ensure that in case of a crisis, the company has immediate access (within a day) to extra funds without having to negotiate these with a bank. In the case of food security, a facility of this nature has been debated in the context of the “Marrakesh Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries”, to enable these countries to maintain normal levels of food imports even in the case of global price spikes.

b) Supporting market instruments

By strengthening the institutional infrastructure:

- Build and strengthen institutions that permit investors/financiers in agriculture and food security to better manage their financing risks, and thus make it easier for farmers to get access to finance. This includes commodity exchanges, electronic warehouse receipt systems, integrated value-chain-finance-linked extension services (e.g., livestock vaccination and other veterinary services integrated with the micro-finance of cattle), agricultural insurance facilities/companies (including for weather insurance), public warehousing companies (which offer the public the opportunity to store their goods and obtain a loan against this collateral), and collateral management and credit support companies (which manage risks on behalf of the financiers, e.g. by taking temporary control over a borrower’s warehouse in the field).
- Build a legal and regulatory framework that empowers farmers to create financial instruments – like the Rural Credit Note system in Brazil, where farmers can, for example, pay input providers with a “I owe you” note, secured by their future production, which the

input providers can then refinance with banks (which can in turn refinance portfolios with such paper on the capital market).

- Help structure food value chains from farm to fork. For example, there are large and fast-growing urban markets in Africa, whose food needs are now predominantly supplied from abroad. If this urban demand could be structured properly, it can provide the incentives for farmers and others to invest in increasing their production. It should also be noted that relatively large gains in food security can be achieved quite rapidly in this area, given the current exceedingly high post-harvest losses throughout the developing world. In this component, due care has to be given to the importance of optimizing the contribution of food production to nutrition; incentives may be needed so that the food that is ultimately sold to consumers provides optimal nutrition (e.g. by the widespread introduction of varieties high in vitamins and minerals).
- Support the development of financing structures that permit farmers to move up the value chain, e.g. “corporative finance”, a corporate-cooperative partnership in which farmers gradually obtain ownership of an agricultural processing or service company.
- Help restructure (by funding and backstopping guarantees) the delivery of inputs and services to farmers; e.g., rather than trying to stimulate direct demand for fertilizers, pesticides etc., these could be provided as a service by village-level companies, which are paid a percentage of the production increase above an initial baseline.
- Build institutions and mechanisms through which putative investors and those in need of funding for agricultural production and value chains can come together. This ranges from crowd funding platforms to an electronic bond market for agri-project finance to a Social Stock Exchange.

By providing incentives:

- Provide extra liquidity for agricultural finance, for example by opening discount windows with Central Banks, or with an organization like the IFC, where banks can easily and cheaply refinance properly structured agricultural loans. Discount windows of this nature were important in the development of agricultural finance in Europe, the USA and Latin America over a century ago.

- Provide incentives for innovation, such as monetary awards, for example for productivity-enhancing or risk-reducing new varieties, or for new software applications that can enhance farmers’ productivity and profitability.
- Pool mechanisms securing future demand. This can be for agricultural innovations, or if the proper institutional conditions are in place, in terms of structured demand for farmers’ crops.

2. Examples of innovative ways to catalyze private sector

➔ Several of these possibilities are further elaborated below, with a discussion of how the proposed Catalytic Fund could work towards their realization.

a) Loan guarantees for bank agricultural lending

➔ The reluctance of banks and other financial institutions to finance the agricultural sector, due to the perception of excessive risks, is one of the major hindrances to agricultural development in developing countries, and especially in Africa. The idea to reduce banking risk by granting a partial guarantee to banks, designed to cover a portion of the risk without relieving the banks from their credit responsibility, has been tried and launched at different occasions in the agricultural credit sector in developing and transition countries. The existing devices (for example the ARIZ fund launched by AFD or the AGRA/Standard bank initiative for guaranteeing credit to fertilizer distributors) are far from meeting the needs. The creation of an umbrella mechanism at the regional or continental level, financed by a Fund to which could participate private investors (for example, manufacturers of inputs or agricultural equipments), and which would provide a partial guarantee to local financing institutions credit types with high impact on food security and small farmers, thus appears to be a promising way.

The Innovative Fund could catalyze the development of credit guarantee schemes in several ways: it could participate in the capital of existing or new guarantee providing entities, thus enhancing their guarantee capacity; it could co-finance credit guarantee schemes set up by development projects, through grants or soft loans, or a mix of both types of resources, depending on the beneficiary country and the level of risks. It could also finance a guarantee fund associated to a credit line financed

by a development project (for instance, a credit line financed by a development institution such as World Bank or IFAD for the collective purchase by farmers groups of processing equipment could be backed by a guarantee scheme co-financed by the Fund and operated by the project).

In all cases, the credit guarantee scheme would have to comply to strict eligibility criteria:

- The beneficiary bank would have to comply to minimum standards in terms of good governance, financial soundness and technical capacity;
- The guaranteed portfolio would have to finance activities benefitting directly or indirectly to family farmers.

b) Social Stock Exchange

➔ A stock exchange matches supply of capital with demand for capital, in a manner that is mutually beneficial for investor and investee (the recipient of the funds), and which optimizes returns for society. Traditional stock exchanges focus on financial returns, and deal with such non-financial objectives as a secondary consideration – they enable investors to identify companies that fulfil certain social and/or environmental conditions so that they can restrict their investments to such companies. But the time may have come for a new kind of exchange, a “Social Stock Exchange”, which puts social/environmental returns at the centre and treats profits as a desirable but not sufficient condition. An

exchange of this nature would greatly contribute to providing capital for agricultural initiatives and for agriculture-related infrastructure projects.

According to indications of investors, hundreds of billions of dollars would be available for investment through a Social Stock Exchange. The Catalytic Fund could move this concept into reality – to create the world’s first genuine social stock exchange which will raise capital for social businesses globally. Most of the work involved would be to create the necessary supporting institutional infrastructure – the exchange itself can be easily created by the private sector. Such supporting infrastructure would include companies that help viable pro-poor initiatives that are of sufficient scale to restructure themselves into social enterprises which are able to meet the usual governance and financial criteria of a stock exchange; and rating agencies which would measure the “social profits” of these enterprises so that investors can make informed decisions.

c) Public warehousing system

➔ A public warehousing system allows farmers and others to temporarily store goods in a professionally-managed warehouse, and then obtain a loan against this collateral. Because the loan is secured against physical collateral which is in turn guaranteed by a reputable warehousing company, the interest rate can be low (in India, the developing country with the most experience with farmers using this instrument, it is 1.5-2 percent below the usual rate), and the procedures very light

"Social Stock Exchange" according to Muhammed Yunus in his December 2006 Nobel lecture

“By defining “entrepreneur” in a broader way we can change the character of capitalism radically, and solve many of the unresolved social and economic problems within the scope of the free market. Let us suppose an entrepreneur, instead of having a single source of motivation (such as, maximizing profit), now has two sources of motivation, which are mutually exclusive, but equally compelling – a) maximization of profit and b) doing good to people and the world.

Each type of motivation will lead to a separate kind of business. Let us call the first type of business a profit-maximizing business, and the second type of business a social business. Social business will be a new kind of business introduced in

the market place with the objective of making a difference in the world. Investors in the social business could get back their investment, but will not take any dividend from the company. Profit would be ploughed back into the company to expand its outreach and improve the quality of its product or service. A social business will be a non-loss, non-dividend Company.

To connect investors with social businesses, we need to create social stock market where only the shares of social businesses will be traded. An investor will come to this stock exchange with a clear intention of finding a social business, which has a mission of his liking. Anyone who wants to make money will go to the existing stock market.”

(in India, a farmer can deliver one or more bags into the warehouse, and without much additional procedures or even having to discuss with a bank loan officer, receive his loan the next day).

Such warehouse receipt financing services are currently mostly restricted to ports, where they are being used in the financing of export and import crops. While projects to improve public warehousing are underway in a number of countries, the Fund could catalyze and scale up this work. There are essentially three elements: create awareness among government officials so that they enact legislation, rules and regulation that permits public warehousing companies to operate properly; educate the private sector, including banks and farmers, on their benefits (with respect to banks and other financiers, the creation of guarantee and/or refinancing facilities could kick-start their involvement); and support the development of warehousing companies, so that they can build an upcountry presence. The latter can take the form of a long-term real estate investment trust that would enable the renovation of existing warehouses and if necessary, the construction of new ones; and support to specific enabling activities, such as the adoption of an electronic warehouse receipt system.

d) Collateral management

→ In warehouse receipt finance, farmers and others bring their goods to the warehouse. In collateral management, the financier uses a collateral manager (also called a credit support company) to secure the goods at the borrower's premises, and to secure the flow of goods (from inputs to the final sale) that underlies the financing. The collateral manager guarantees the transaction that is being financed, and because the collateral manager itself is either well-capitalized or has extensive insurance coverage, this permits the financier to become deeply involved in the agricultural financing cycle.

This is a potentially powerful financing instrument. It played a large role in agricultural financing in the USA in the first half of the 20th century, and in Africa it has been used to revive, for example, Côte d'Ivoire's cotton sector after it had ground to a standstill following civil strife in the late 2000s. The main obstacle to its greater deployment is the scarcity of reputable collateral management companies. The Fund could catalyze their creation and development by co-financing (probably with local banks) the creation of such companies, and by

providing guarantee and refinancing facilities for the warehouse receipt contracts which such companies issue for the goods they have under management.

e) Public-private partnerships for rural infrastructure

→ There are several innovative ways to stimulate private sector investments in rural infrastructure. One is entirely private (although government policies have to permit the mechanism): an entrepreneur can use offtake contracts with foreign buyers (e.g., for fruits and vegetables with a supermarket chain) to obtain long-term investment finance from local pension funds which permits the construction of the infrastructure needed to produce, process and transport the fruits and vegetables (this has been done, for example, in Zambia). Others require a more active role of the government, in the form of public-private partnerships (PPP).

Through PPPs, Governments can leverage funds from the private sector to invest in agricultural infrastructures or services benefitting to small farmers. The private investor, usually an agribusiness, is compensated either by subsidy or a public financial participation in his investment or by a long term lease agreement or a levy the proceeds of which pay back over time a part of the initial investment. Such PPPs can easily be used for the construction of irrigation schemes (including, for instance, a nucleus rice company and small scale outgrowers) or storage facilities. It can also be used for provision of services to small farmers by an agro-industry, within the framework of contract farming arrangements.

In particular, governments and aid agencies may consider certain innovative forms of Build-Own-Operate contracts. One good example is a structure used in the renewable energy sector. Private entrepreneurs apply for the right to build the plant. Milestones and a budget are agreed on. On the back of this public-private agreement, the entrepreneur raises the necessary funds for construction. Once the construction is completed, the plant is bought by the government, permitting the entrepreneur to reimburse his loans; and then, the plant is leased back to the entrepreneur who can operate it, with possible purchase at a nominal price after some years on the condition that the entrepreneur meets pre-agreed performance criteria.

The Catalytic Fund can stimulate the development of such PPPs by promoting awareness of the different models (including by developing blueprints), funding demonstration proof-of-concept projects, and providing long-term refinancing facilities for PPPs.

f) Structured demand

➔ Farmers' willingness to invest in raising their production, or in starting new crops, is much improved if they can be sure of a ready market for their produce, at a fair price. Without such demand in place, innovative farmers would run a large risk that they would have to dispose of their produce at an unfairly low price – if they can find a buyer at all.

Linking farmers through the market, through contract farming or value chains, is one way to reduce market risk. But there are other ways. World food programme (WFP)'s P4P scheme is one example: even if WFP were not to offer forward contracts (which it does), it would be motivating for farmers to know that WFP is a systematic, regular buyer which buys in a way with which farmers are able to relate (e.g., through warehouse receipts). But WFP is not the only large, regular buyer: different parts of the government are also in this category (e.g., the army, the prison system, hospitals, the school feeding programme, the food reserve agency...), as are large processors and organized retailers (e.g., supermarkets, retail cooperatives). If all of those buyers could be brought to make their purchases through one common platform (such as a commodity exchange), this would act as a magnet for smallholders who are able to grow for the market. Having such an organized market also improves price information, and greatly improves the bankability of agricultural producers and processors. There are successful examples of this approach in Latin America.

The Fund can play a catalytic role in structuring demand, by helping advocate the benefits of commodity exchanges to governments which now all too often put significant barriers in their way; help convince governments to route their purchases of bulk commodities through the exchange (which also would remove corruption in purchasing programmes); work with the commodity exchange(s) to bring other large buyers into the platform; then work with the exchange and farmers' groups to help them bulk their commodities for delivery onto the platform; and work

with banks (including eventually through guarantee facilities) so that they finance the production and processing of commodities which can be delivered onto the platform.

g) Risk management tools

➔ Greater availability of risk management tools makes it easier for financiers to manage the risks inherent in agricultural finance, and will thus catalyze private sector funding for agriculture. When financing agriculture, financiers are exposed to a number of risks, in particular: the price of the crop may be less than anticipated, resulting in a revenue that is too low to permit loan reimbursement; weather events may have led to loss of (part of) the crop; there are obstacles preventing the delivery of the crop to the buyer, be it in the country or abroad (e.g., an export ban); the borrower may be unable to operate (e.g., due to civil strife) or may decide to default; the buyer may fail to pay; or government intervention may lead to non-reimbursement of loans (e.g., currency controls). There are risk management instruments for all of these risks, though their availability in developing countries is patchy. All of these instruments deserve the attention of the Catalytic Fund, but in one area, there has been good progress over the past decade which could be consolidated through Fund support: market-based weather risk management.

Traditional crop insurance schemes, based on individual yields and field inspections, can be very costly to administer in developing countries; this problem, as well as some other problems of traditional insurance (such as moral hazard and adverse selection) can be avoided with market-based weather risk management. In western countries, a large range of instruments is now readily available. They are based on weather indices such as rainfall and temperature, rather than actual farm losses. They can be used to protect against catastrophic risks, or to protect against normal, day-to-day operational risks.

Agricultural banks can bundle weather risk management with their loan packages (for example, loans are forgiven if there is a drought, and the bank claims its money back from an insurance company), or they can insist that lenders take out weather insurance with the eventual claims payable to the bank, or they can insure their agricultural loan portfolio against weather-related default risk.

Index insurance for climatic hazards (which compensates the subscriber for production loss when a reference index, for instance rainfall level, is not reached) is one of the ways explored by a number of international institutions to reduce agricultural risk in Africa, where such risk is a severe limiting constraint to intensification and food security (and indirectly, a major reason for banks' reluctance to lend to agriculture). Pilot projects have started in a number of East and Southern African countries (Malawi, Ethiopia, Kenya, Tanzania) and are underway in West Africa. Scaling-up these pilots requires a considerable and expensive work of detailed weather data collection in all African countries with climatic risks.

In addition, the idea of reinsurance mechanism has been launched by the Thomas More Institute (report "finance development"). This report proposes the creation of reinsurance funds to cover the natural risks, in order to enhance the operating capacity of the insurance companies. The reinsured risks could concern in priority those which affect the productive capacity of the poorest countries. Reinsurance funds can be public or private. The risk coverage could be at the level of individual subscribers or at national level. Several initiatives can be considered as belonging to this type of tools: the Global Index Insurance Facility for the creation of an index insurance system for ACP countries, supported by the EU; the Caribbean Catastrophe risk Insurance Facility, to reduce hurricane risks and earthquake in the Caribbean islands.

Price risks can also, under certain circumstances, be addressed by price insurance schemes based on future markets tools. The potential scope for developing such schemes in the African context is still under study, and more analytical work and testing is still needed to design sustainable and effective tools which could be developed at a large scale.

In conformity with its proposed mandate, the Fund could co-finance projects including the development of an insurance scheme linked to bank credit benefitting directly or indirectly to family farmers, both for the front end investment (insurance scheme engineering, preliminary data collection, setting up of pilots) and for the subsidization of the insurance premiums.

h) Awards

➔ The Advances Market Commitments (AMC) mechanism was conceived in 2005 in the health sector, for the development of an affordable pneumococcal vaccine adapted to Africa. The principle of the mechanism is as follows: a donor (or a pool of donors) contracts with a vaccine producer to develop the vaccine and to supply it on a targeted market at a given maximum price, these two constraints (period and price) being fixed by contract. In turn, the donor secures a market for the product, through guaranteeing the producer that he will be able to sell a minimum quantity at the given price: if sales are below the threshold defined jointly by the donor and the vaccine developer (this threshold is calculated so as to allow the vaccine developer to cover his development and production cost), the donor substitutes to the market and buys himself the product. The donor intervenes only when the market proves not to be sufficiently large, constant or solvent. The financial engineering of the mechanism is complex, combining public contributions, a World Bank guarantee, subsidies on the price of vaccines and private contributions. This mechanism could be adapted to the agriculture, food security or nutrition sector.

Along the same line, the pool mechanism concept (renamed AG results) has been developed for the sector of innovation in agriculture under the aegis of the World Bank, which ensures the secretariat of an initiative supported by Canada, USA, Australia and the Bill Gates Foundation. It consists in awarding ex post to research and innovation dissemination activities a prize depending on a predefined result. The steering committee of the Initiative decided in 2012 to carry out pilot projects, concerning, in a first phase: on farm storage technology, vitamin A enhanced varieties of maize and reduction of aflatoxine contamination.

The Fund could co-finance or even initiate projects of this nature, to stimulate private sector research and development across a range of agricultural bottlenecks, from farm to fork. This could involve not just the "large" innovations referred to above, but also smaller, practical innovations such as the development of new mobile applications that can boost farmers' incomes.

Appendix III: Terms of reference of the Task Force on innovative financing for agriculture, food security and nutrition

1. Background

The Issue of underinvestment in Agriculture, Food Security and Nutrition

➔ In 2007 and 2008, the world experienced food prices spikes not seen since the end of the Second World War, which threatened the affordability of basic staples for millions of consumers. The food price crisis triggered riots in more than 40 countries. It was a stark reminder of the direct and immediate link between food security and peace and security. The world can ill afford to under-invest in agriculture as happened in the last two decades. While the food price crisis of 2007/2008 was exacerbated by short-term developments – such as crop failures in major cereal producing countries and increased fertilizer and transport costs – it was fundamentally more of a reflection of the failure of the world supply to keep pace with growing demand.

Years of disinvestment in agriculture resulted in declining or stagnant agricultural productivity in developing countries which in turn meant that food production could not keep up with increasing demand and that poor farmers could not cover their own food needs. The share of developing countries spending on agriculture declined significantly from 15 percent of national budgets in the 1980s to 3 percent in recent years. Similarly the share of ODA to agriculture declined from around 20 to four percent between 1980 and 2006.

It is therefore not surprising that while the demand for cereals rose 2 to 3 percent per annum, agricultural productivity in developing countries declined from 3 percent per annum in the 1970s to 1-2 percent in the 1990s. Since 2010, prices for basic commodities are rising again. The depletion of global agriculture stocks has removed the needed ‘shock absorber’ ‘to avoid sudden imbalances between supply and demand. As a result, any further shocks resulting from climate change or other factors can quickly result in price hikes and food shortages that threaten global food security. Future food crises could be

more severe, given current projections for population growth and the consequent growth in demand for food. On current trends, the world’s population is projected to grow from 6.8 billion to 9.3 billion by 2050. Most of the growth will take place in developing countries – Africa, Asia and Latin America. Feeding 9.3 billion will require that overall global food production grow by 70 percent.

For developing countries, meeting the growing demand for food will require that production double by 2050. This will pose a major challenge, particularly for farmers in developing countries. The investments required in developing countries to support this expansion in agricultural output amount to an average annual net investment of USD 83 billion in 2009. This total includes investment needs in primary agriculture and necessary downstream services such as storage and processing facilities, but does not include public goods like roads, large scale irrigation projects, electrification and others that are also needed.

Innovative financing mechanisms, simply defined as development financing initiatives that move beyond traditional bilateral and multilateral fundraising and spending mechanisms, are required to help meet this need for increased agricultural investment and enable farmers to raise their productivity and their own investment in agriculture through value chain approaches.

2. Objective

➔ The Leading Group on Innovative Financing for Development, during the Plenary Sessions of 22 December 2010 in Tokyo, Japan, and June 24-25 2011 in Bamako, Mali considered food security and the importance of the problems facing many developing countries was recognized by all.

The overall objective of the Leading Group Task Force for Agriculture is to explore options for designing innovative financing proposals geared towards *increasing the funding for food security,*

nutrition and sustainable development of agriculture, in other words, to substantially reduce the number of people suffering from hunger and malnutrition, as stated in the Millennium Development Goals.

3. Approach

➔ Innovative financing holds the potential to contribute to food security, nutrition and agricultural development. International financing efforts, be they “innovative” or “traditional,” however must be put in context: agricultural productivity and food security are largely driven by **national policies and private actors**, from smallholders to global commodities companies. For this reason, innovative financing can only play a **complementary and catalytic role**, and should only be deemed successful if it has an impact on the activities and behaviors of national and local actors.

Two broad types of mechanisms will be considered:

(1) Expansion/creation of mechanisms that catalyze private investment across the agricultural value chain. Given the significance of private actors in the agricultural value chain, the use of traditional ODA funding may achieve significantly greater impact by catalyzing banks and other investors, for example diasporas, to invest in smallholders and small and medium enterprises (SMEs), and to support development of national financial and crop markets and insurance.

(2) Extension of citizen contributions and solidarity taxes to agricultural development. These innovative sources of funding are most promising to support humanitarian goals associated with agriculture. A clear-cut example would be to allocate part of funds from levies on currency transactions also for innovative uses in agriculture as is proposed for the health and education sectors.

4. Specific Tasks

➔ The Task Force on Innovative Financing for Agriculture assisted by an international Committee of experts will review existing and mechanisms and new ideas with a view to allocate innovative financial resources to agriculture, nutrition and food security:

- Review of existing innovative financing mechanisms and proposals and determination of potential applicability to food security, nutrition and sustainable agricultural development;

- Identify potential innovative financing mechanisms for agriculture based on their nature, e.g. innovation in source, innovation in use, public-only innovation, private only innovation, public-private innovation;
- Verify that new innovative financing (based on proposals) are truly complementary and not simply a substitute to existing aid flows;
- Ensure where appropriate that a more direct and visible link exists between the new sources of finance and the programmes to which they are allocated;
- Prioritize innovative financing proposals/mechanisms based on thematic viability and potential impact and ensure that inter alia the following aspects are covered in details:
 1. Potential yearly financial resource mobilisation;
 2. Operational aspects and management;
 3. Focus on the most vulnerable countries and people;
 4. Accountability;
 5. Traceability;
 6. Governance;
 7. Fiscal Aspects;
 8. Legal environment;
 9. Potential partners and roles.

5. Key questions to be addressed by the international experts

- What existing innovative financing concepts might be most applicable to agriculture, food security and nutrition?
- What could be new and suitable (internationally acceptable, easy to implement) innovative financing tools for increasing funding particularly for food security and sustainable agriculture?
- What could be the advantages/benefits and constraints/drawbacks of such instruments?
- What could be the potential yearly financial resource mobilisation of such instruments?
- How to ensure that new resources are truly complementary and not simply substitute existing aid flows?
- How to establish a more direct and visible link between the new sources of finance and the programmes to which they are allocated?
- How to define the role and interaction of all potential participants, including IFIs, global funds and civil society (NGOs and private sector)?

- How to organize and manage such financial channels to ensure accountability, traceability and governance, and to make this kind of earmarking compatible with good fiscal management and the legal environment?

6. Composition of the Task Force

➔ Under Malian presidency, State members of the Leading Group, UN (FAO, IFAD, WFP), World Bank, civil society (associations of local governments, associations of NGOs, Foundations, agricultural research institutions).

7. International High-level expert Committee

➔ The Task force will be assisted by a small group of high-level experts (8 to 10). The experts will be chosen by consensus by the participating countries on the basis of their competence in agricultural sciences, agricultural economics, agricultural credit and financial services and innovative financing.

8. Budget and meeting arrangements

➔ The expenses of the Committee of experts will be covered through voluntary contributions by task force members who could eventually make available national experts, unless they are covered by their employer. Experts will liaise through electronic means and video-conference. Meetings of the Task Force and of the Committee of experts will take place in participating countries upon their invitation. The Leading Group Permanent Secretariat will ensure support to the Task Force and to the committee of experts with the involvement of interested UN agencies.

9. Deliverables

➔ The international high-level expert Committee will start activities in April 2012. A draft report is expected by July 2012. The finalized report will be presented to the Task Force in October 2012 in order to elaborate a synthesis with recommendations; the Task Force will submit both documents to the Plenary Session of the Leading Group in February 2013.

Appendix IV: Bibliography and where to read more

FAO, 2010, *Technical and Operational Review of Selected Innovative Financing Proposals for Global Food Security and Sustainable Agricultural Development*.

Banque mondiale, 2007, *La finance pour tous? Politiques et écueils du développement de l'accès aux finances*.

Ouedraogo, A., Gentil, D., 2008, Ed. CIF – Karthala, *La microfinance en Afrique de l'Ouest : histoires et innovations*.

Fonds pour l'innovation en micro-assurance, Matul, M., McCord, M. J., Phily, C., Harms, J., 2009, *États des lieux de la micro-assurance en Afrique*.

Initiative NEPAD-OCDE 2009. Dahou, K., Omar, H. I., Pfister, M., *Afrique : développer les marchés financiers pour la croissance et l'investissement*.

AECOM/FADQDI, 2010, *Étude de faisabilité pour la mise en place d'un mécanisme d'assurance récolte dans la zone UEMOA*.

OCDE, 2009, *Gestion des risques dans l'agriculture, une approche holistique*.

WFP & IFAD, 2011, *Weather index-based Insurance in agricultural development, a technical guide*.

FAO, 2011, *Background Policy Note on Innovative Financing Mechanisms for Agriculture, Food Security*.

Groupe Pilote financement innovants, 2012, *Comment encourager la philanthropie privée au service du développement ?*

World Bank, 2009, *Innovating Development Finance – From Financing Sources to Financial Solutions*.

Global forum on food security and nutrition, 2012, *Electronic consultation on Innovative financing for agriculture, food security and nutrition*.

IFAD, 2011, *Agriculture Pull Mechanism Initiative*.

IFC, 2011, *G20 Policy Report on Agricultural Finance for Small and Medium Sized Enterprises*.

World Bank, 2011, *AGPM: The Agriculture Pull Mechanism Initiative*.

IFAD, 2011, *Innovations in Financing Food Security*.

IFAD, 2012, *Conclusions of the Technical Roundtable on Mobilizing Resources for IFAD Programmes: Alternative Sources and Innovative Modalities*.

IFAD, 2012, *The FFR Brief: Five years of the Financing Facility for Remittances*.

Miller C., 2011, technical note, *Agricultural value chain finance strategy and design*.

IFAD and WFP, 2011, *Managing weather risk for agricultural development and disaster risk reduction*.

Leading Group on innovative financing for development, 2010, *2 + 3 = 8: Innovating in Financing Education*.

Épargne sans frontière, 2011, *Revue TFD n°104, Les financements innovants pour le développement*.

Institut Thomas More, 2011. *Financer le développement : comment faire après la crise? Analyse comparative de 12 financements innovants*.

AU/NEPAD, 2011, *Proposal to G20 to concretize commitments towards African smallholder producers by boosting their access to fertilizers*.

Centre for Global Development, 2005, Kremer, M., *Making Markets for Vaccines: Ideas to Action*. Website at the following link : http://www.cgdev.org/section/initiatives/_active/vaccinedevelopment/

Groupe Pilote sur les financements innovants pour le développement, 2011, *Comment mettre en œuvre aujourd'hui une taxe multilatérale et multi-juridictionnelle sur les transactions financières*.

Cahier du Gemdev, 2005, Raffinot, M., *Soutenabilité de la dette des pays pauvres très endettés*.

World Bank, 2012, *Fertilizer use in African agriculture: lessons learned and good practice guidelines*.

IDS Research reports, 2011, *The Tobin tax: a review of the evidence*.

Center for Global Development and Social Finance, 2012, *Development Impact Bonds – Working group briefing note*.

Action Against Hunger, 2012, *Aid for nutrition: Can investments to scale up nutrition actions be accurately tracked*.

http://reliefweb.int/sites/reliefweb.int/files/resources/ACF_Aid%20for%20Nutrition_Using%20Innovative%20Financing%20to%20End%20Undernutrition.pdf

Action Against Hunger & Institute of Development Studies (IDS), 2012, *Aid for nutrition: Using innovative financing to end undernutrition*.

<http://reliefweb.int/sites/reliefweb.int/files/resources/Aid%20for%20Nutrition%20low%20res%20final.pdf>

World Bank, 2010, Horton, S. and al. *Scaling Up Nutrition, What will it cost?*

The Lancet, 2008, Special Series: *Maternal and Child Undernutrition*.

FAO, 2012, *Synthesis of Guiding Principles on Agriculture Programming for Nutrition*.

UNICEF-WHO-World Bank, 2012, *Joint Child Malnutrition Estimates*.

FAO, IFAD and WFP, *The State of food insecurity in the world (SOFI) 2012: Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition*.

William R Cline 2007, *Global Warming and Agriculture: Impact Estimates by Country*.

AFD, 2011, Document de travail N° 113, *Gestion des risques agricoles par les petits producteurs : focus sur l'assurance récolte indicielle et le warrantage*.

AFD, 2012, *Creating Access to Agricultural Finance – Based on a horizontal study of Cambodia, Mali, Senegal, Tanzania, Thailand and Tunisia*.

