A preliminary List of Innovative Financing Mechanisms for Agriculture, Food Security and Nutrition

- Value Chain Financing
- Risk Management Tools (index base insurance on crops)
- Advanced market mechanisms (to promote research in agriculture)
- Remittances matching programs for agricultural development

Other mechanisms, and ideas may be identified.

- **Value Chain Financing**

From the farmer to the consumer, food is produced through a series of activities that are part of a value chain. Farmers produce food which is then processed, marketed and finally sold to consumers. When credit or other financial services flow through actors along these chains, it is called value chain finance, and may or may not include support to formal financial institutions.

A value chain approach is to provide financing at lower risk and lower transaction costs to all parts of the value chain, from input suppliers, producers to processing and marketing companies. Since cost and risk are the two major bottlenecks limiting agricultural finance, the approach opens up the potential for much investment to agriculture.

Value-Chain Financing has two basic financing models within the chain that involves an institution external to the chain, namely: 1) warehouse receipts; and 2) contract farming.

**In Warehouse Receipts**, Producers and/or traders deposit their produce at the warehouse and are, in turn, issued a receipt certifying secure and safe storage of the goods for a specified period of time. The warehouse receipts serve as collateral or pledge for securing loans from banks or other lenders with the condition that proceeds from the sale of the produce should first be used to repay the loan.

**In Contract Growing Arrangements**, a large agribusiness firm (or the “buyer”) enters into a contract with organized small producers for the large-scale production of a certain commodity with specified standards of quality and quantity that the latter must meet. The buyer facilitates the financing and distribution of inputs to farmers on the condition that the produce will be sold to them upon harvest. Since the loan is tied to a purchase agreement, the risk of loan default is greatly reduced since buyers have a ready market for the produce. Financing for input supply is not the only service provided by the buyer. Producers also receive technical assistance.

This model allows producers or traders to: i) reduce postharvest losses (e.g. due to spoilage and pest infestation), thereby increasing yield; and ii) sell their produce some time after the harvesting season (during which prices are lower due to abundant supply) and get a higher price.

- **Risk Management Tools such as Farmers’ and Weather-Index Insurance**

Farmers face a variety of market and production risks that make their incomes unpredictable from year to year. Farmers, rural communities, financial service providers, input suppliers, private insurers and relief
agencies each have strategies for coping with chronic and catastrophic risk. But the difficulties and costs involved in managing covariate risk (those risks that affect large numbers of people at the same time) are especially challenging.

Index insurance, based on an independently-verifiable index, is a financial product that is linked to an index highly correlated to local yields. Pay-outs on the insurance policy are triggered by pre-specified patterns of the index, as opposed to the actual yields of the crops. This reduces the occurrence of moral hazard and adverse selection and eliminates the need for in-field assessments, all of which can raise premium costs and delay pay-outs. Given the consequences of global climate change, index insurance may also play a role in supporting adaptation strategies in developing countries.

**Operational aspects of Value Chain Financing (VCF) and insurance mechanisms**

The State would set up a national solidarity fund with multiple funding sources including all farmers’ contributions and potentially financial assistance from international development donors. With that fund, the State pays the premiums to the primary insurance industry, which has to provide the basic agricultural insurance coverage for all smallholder farmers who have bought the insurance policy through the purchase of farm inputs.

For financial institutions, it combines some of the traditional financial instruments with new or innovative uses of them. Examples of some of those instruments that can be applied in agricultural VCF are shown below.

Examples:

**Value chain financing**
- Warehouse receipts lending
- Lead firm contract farming or out grower financing
- Trade finance (suppliers, traders company finance)
- Receivables finance (export and domestic receivable finance, factoring, repurchase agreements)
- Joint ventures

**Risk reducing instruments**
- Forward contracts and futures
- Index-based weather insurance
- Guarantee schemes

**Credit delivery structures**
- Linkage banking
- Wholesale lending by big banks
- Use of information and communications technology

- **Advanced Market Commitment (AMC) and agriculture pull mechanisms**

Long term changes in the patterns of temperature and precipitation, that are part of climate change, are expected to shift production seasons, pest and disease patterns, and modify the set of feasible crops, livestock and fisheries production affecting, prices, incomes and ultimately, livelihoods and lives.
Preserving and enhancing food security requires agricultural production systems to change in the direction of higher productivity and also, essentially, higher resilience in face of climate risk and risks of an agro-ecological and socio-economic nature. More productive and resilient agriculture requires transformations in the management of natural resources (e.g. land, water, soil nutrients, and genetic resources) and higher efficiency in the use of these resources and inputs for production.

The G20 Seoul Summit of 11-12 November 2010, with the strong support of Canada, requested FAO and the World Bank to examine and recommend potential innovative results-based advance market commitment mechanisms such as those successfully experimented for health.

If applied to agriculture, advanced market commitments would lead to a financial commitment by donors to subsidize a product with certified characteristics (crop, fertilizer) at a set price for a set period responding to an identified demand in developing countries markets. They can therefore be considered as innovation in the use of ODA and as public-private innovation.

To explore the possibility of innovative pull mechanisms such as an AMC to focus private sector resources on agricultural innovation in developing countries, Canada, France and United States, together with a group of interested donors, such as the Bill & Melinda Gates Foundation, have started the process of developing recommendations regarding target, design and partners for a proof-of-concept pilot project in agriculture and food security. The World Bank provides Secretariat and technical support. The goal is to set effective incentives for private sector innovators to research, develop, produce, and deliver market-based goods and services that have broad and significant social benefits for the rural poor. The objective is to Scope a pull mechanism pilot project by end of 2011 for implementation in 2012.

The First and second Steering Committee meeting were held in Brussels March 1st, and in Washington 18 April, respectively, both with the participation of FAO.

Some potential applications for an AMC in agriculture were considered by the Steering Committee and are listed below

1. **Improved seeds.** To address the limited availability and adoption of improved seeds, especially in Africa, pull mechanisms could provide incentives to private companies to develop tailored seeds and seed “adoption” packages, and to foster better cultivation practices. Seed producers have little incentive to develop self-pollinating improved seeds, and prefer hybrids that users cannot regenerate. At the same time, farmers are often credit-constrained and risk-averse, and unable or unwilling to pay the full discounted value of self-pollinating improved seeds.

2. **Environmentally friendly fertilizers.** Pull mechanisms could provide incentives to private companies to develop new types of more environmentally friendly fertilizers, and help farmers improve the management of existing fertilizers. Markets do not reflect the harmful effects of traditional fertilizers. A pull mechanism would need to impact a market with limited competition (production is concentrated among a small number of producers, with high barriers to entry) and limited incentives to avoid the use of environmentally detrimental fertilizers.

3. **Reducing post-harvest losses for smallholders.** Post-harvest losses are detrimental to farmers and to the environment. Pull mechanisms could be designed to reward better post-harvest management, and/or to develop new technology in drying and storage.

4. **Tackling malnutrition.** Malnutrition remains widespread, with market failures due to lack of competition and poor information, despite the fact that solutions are available to address the
problem. A pull mechanism could expand the markets for Ready to Use Therapeutic Foods (RUTFs) and possibly Double Fortified Salt (DFS).

5. **Aflatoxin biocontrol** in Africa. Aflatoxin exposure is highly toxic and affects 25 percent of world food crops. A pull mechanism could provide incentives to adopt aflatoxin biocontrol.

6. **Food price volatility** affects developing countries through recurrent shocks, with significant human development losses. There are high entry barriers for risk-management market makers as well as substantial information asymmetries. Pull mechanisms could foster the use of risk insurance, improve the dissemination of information on food stocks.

7. **Livestock management** presents opportunities for results-based pull mechanisms, for example the development of new vaccines or use of artificial insemination.

- **Remittances matching programs for agricultural development**

Mechanisms to promote the investment of remittances in agriculture may have several innovative aspects. First, the vast majority of remittance flows (80% approximately) is spent on basic needs of recipient families such as food, clothing and shelter. Investing the remainder (between $30-60 billion), in developmental activities in agriculture would be innovative for this sector. One important characteristic of remittances is that, though the total volume is massive in aggregate, actual transfers take place in small amounts to large number of people. Such amounts often do not form a critical mass for sustainable livelihood generation. The innovative challenge is therefore to promote collective investments in agriculture by Diasporas. Second, remittances matching programs on a large scale, combining ODA funds with migrants’ remittances, also represent an innovation in use of existing funds, both private and public, increasing their efficiency, effectiveness and overall impact within both the public and private sector. This combination of public and private funding is even more important during times of financial difficulties which call for an efficient use of resources. Remittances can be combined with climate change adaptation and mitigation agricultural practices and with carbon and biodiversity funding.

Financing Mechanisms using remittances may therefore be innovative in terms of sources, if it is accepted that they represent fundraising of incremental capital either from new funders or existing funders in new ways, or leveraging private capital, and mobilizing public resources. They can also be considered as innovation in uses, changing the way in which existing capital is deployed or spent.

Considering that the Leading Group has already indicated remittances as major potential source for innovative funding, it is suggested to dedicate innovative funding coming from taxes or ODA to remittances matching programmes in agriculture, food security and nutrition. These must go along with the adoption by governments of economic and agricultural policies to create an environment conducive to the investment of remittances in agriculture, nutrition and food security.