Tools Assessment

# Warehouse Receipt System In sub-Saharan Africa[1]:

## Making progress in finance, market and post-harvest risk management

## Policy Brief

### Key messages

1. Governments of sub-Saharan African (SSA) countries and development partners have taken considerable interest in four different types of warehouse receipt systems (WRS): community-based system; private collateral management; public regulated system; and pledge on production.

2. WRS entitle farmers to store commodities in exchange of a "receipt". These schemes have extensive prospects for farmers to manage risks because they may include services that enable farmers to access credit, well-managed storage facilities, secure inputs and better/stable market prices.

3. Sustainability is constrained by limited security of legal enforcement, inadequate warehouse infrastructure, poor local management capacities, absence of local ownership in donor sponsored schemes and financial partners' reluctance to support WRS in rural areas.

4. Responses to the challenges in WRS should focus on: enactment of a robust legislative framework for WRS, strengthening the skills and empowering community groups, farmers and service providers to assume responsibilities, stimulating investment in quality warehouse structures and building on existing local institutions.

## Context

Agricultural development in sub-Saharan Africa (SSA) is challenged by risks that are rooted at several but interlinked levels – production, markets and macro/policy environments. In Mozambique and Uganda, endemics of pest and disease are frequent in the production and post-harvest months due to inadequate use of proper inputs and poor storage facilities. In countries like Cote d'Ivoire, Burkina Faso and Niger farmers' access to structured market for inputs and major commodities such as cocoa, coffee, cotton and groundnuts, is often exacerbated by civil strife. In politically stable economies like Ghana, lack of knowledge over price trends and inadequate storage facilities lessen farmers' potential to benefit from market price changes. The impacts of these risks are not different from the cases of Madagascar and Senegal where farmers suffer competition from cheaper import.

In addressing these challenges, many governments, local groups, development partners and other stakeholders in SSA have recently invested considerable interests and resources into different WRS schemes. A **"Study on Appropriate Warehousing and Collateral Management Systems in Sub-Saharan Africa"**[2] was conducted in 2014. It forms the basis for this policy brief. The different initiatives studied in the nine case countries show the opportunities and constraints to develop sustainable WRS in SSA.

## Four types of WRS in SSA

A WRS scheme entitles farmers to deposit storable commodities in well-managed structures in exchange for a document known as warehouse receipt (WR). The receipt provides proof of ownership of stated quantity and quality of commodity in the warehouse. It could be used to secure a loan from a connected financial service provider. Depending on the legal framework, the value of the receipt may or may not be negotiable. Based on the cases studied in Burkina Faso, Niger, Senegal, Ghana, Cote d'Ivoire, Madagascar, Cameroon, Mozambique, and Uganda, four main types or modalities of WRS in SSA have been identified: the community-based system; private collateral management system; public warehouse system; and pledge on current/future production. While detailed description of the four types of WRS in SSA is given below, the **Table 1** presents a summary of the potential advantages and limitations.

**Table 1: Potential Advantages and Disadvantages of the four WRS**

| Type of WRS[3] | Advantages | Disadvantages |
|---|---|---|
| Community-based: MG, BF, NG, SG, CM | • Direct farmer involvement<br>• High accountability and repayment<br>• Improve management of local economy | • Operates with fixed calendar<br>• Depend on donor support<br>• Producers lack storage skills and market knowledge<br>• Not regulated |
| Public regulated: UG, GH, MZ, SG, CI | • Open system for all public<br>• Facilitates price discovery, trading & development of commodity exchange | • Requires regulation<br>• Require economies of scale<br>• High cost of operation<br>• Bureaucracy with quality management challenges |
| Private collateral management: UG, BF, NG, GH, CI, MZ, SG, CM | • Important component for value chain development<br>• Private activity not dependent on donors or governments supports | • High cost of operation<br>• Inaccessible to many rural clients<br>• Vulnerable to fraud<br>• Require adequate regulations, which might not exist |
| Pledge on production: CI | • Access to production finance before harvesting<br>• Facilitates contract farming<br>• Open for value chain finance | • Requires much monitoring and supervision |

Source: Adapted from AFD/CTA/IFAD-PARM, 2014, pg. 125/6[i]

### Community-based WRS

Community groups and producer organisations in partnership with microfinance institutions (MFIs) support warehouse receipt activities.

[1] This policy brief was developed by **Balikisu Osman** for PARM, IFAD

[2] A three-volume report from "Study on Appropriate Warehousing and Collateral Management Systems in in Sub-Saharan Africa" conducted by J. Coulter, Consulting Ltd and Sullivan & Worcester, UK LLP. The subject countries are Burkina Faso, Niger, Senegal, Ghana, Cote d'Ivoire, Madagascar, Cameroon, Mozambique, and Uganda. The full reports were co-published by the Agence Française de Développement (AFD), the Technical Centre for Agricultural and Rural Cooperation (CTA) and the International Fund for Agricultural Development (IFAD) / PARM.

[3] **MG**-Madagascar, **BF**-Burkina Faso, **NG**-Niger, **SG**-Senegal, **CM**-Cameroon, **UG**-Uganda, **GH**-Ghana, **MZ**-Mozambique, **CI**-Cote d'Ivoire.

At the most basic level, commodities are stored in community-owned or rented facility under a double key padlock system: the group secures one key and the MFIs secure the other. Stocks are managed with technical support from local or international development organisations, government agencies and private consultants. In some cases, financial, technical and other supportive services come from members' contributions. Community-based WRS are more decentralised in nature, but may also be centralised when producer groups merge into well-represented union or federation with institutional viability. Both centralised and decentralised activities have taken place in different forms across SSA such as the Greniers Communautaires Villageoises (GCVs) in Madagascar, and Community Warrantages (CW) in Burkina Faso, Niger, Senegal and Cameroon.

**Private collateral management system**

Collateral management companies may provide support for commodity storage activities that are far beyond the capacities of community groups. Popular among them are the ACE, Coronet, and Ballore Group, who work in a number of SSA countries. The WR operations of these companies involve tripartite agreements with producers and financial service providers. The operator handles depositors' stock in a warehouse facility rented or owned by the company or a client and administers the receipts. Farmers can store their commodities, and sell later when prices are higher. While commodities are in storage, farmers may access inputs, loans, and brokerage services from the company or other connected third parties. The system has enabled producers in Cote d'Ivoire, Senegal and Uganda to secure quality input supply from warehouse operators and benefit higher and more stable commodity market prices.

**Public Regulated WRS**

In some countries, the government establishes warehouse facilities and appoints a regulatory body to regulate public warehouses or licensed private facilities where the general public can deposit commodities. In regulated warehouses, stocks may be stored for many months. Effective pre and post storage services such as commodity cleaning, bagging, drying, stocking and pest control are rendered to maintain stock quality. Depositors may also have access to supportive services such as brokerage and value chain development. Both public and private warehouses regulated by the state serve as avenues for farmers to avoid post-harvest pest attacks, improve commodity quality and connect to potential buyers. Examples exist in Uganda and Ghana, but Mozambique is yet to progress after failed attempts.

**Pledge on Production**

Pledges are made on expected agricultural harvest rather than conventional system of stocked commodities. With this system, a farmer pledges on the current or future production and a financial provider lends against a documented security presenting the state of the pledged produce. Pledge on production is not common in SSA but a related activity is practiced in Côte d'Ivoire where banks are lending to rubber farmers based on the security of crops. The banks depend on supervisory and monitoring systems to ensure full repayments. It is expected that an introduction of legal basis for WRS will attract banks and collateral operators to promote receipts on current or future production but this might be limited by the perishability of the commodity in question.

## Legal Framework for WRS in SSA

One of the main constraints for the development of WRS in SSA is the limited legal backing for warehouses, warehouse operators and collateral management activities. At the time the study was conducted, only Uganda has a WRS Act, enacted in 2006. Ghana and Mozambique have pushed forward a drafted legislation to control future operations, if enacted. Meanwhile, WRS management and agreements are based on principles of contract law, with different means to establishing security and different degrees of law enforcement.

The Organisation for the Harmonisation of Business Law in Africa (OHADA) is a legal agreement that oversees legal norms needed to ease commercial operations. For members of the OHADA countries (Senegal, Niger, Cameroon, Burkina Faso and Cote d'Ivoire) financing and security on pledged goods is guaranteed through registration with the *Registre du Commerce et du Crédit Mobilier* (RCCM). But the enforcement of the five-country OHADA regulations at national level is not always strong. In other countries, security is enshrined under national regulations like the Securities Act of 2004 (Law No 2003-041) in Madagascar, which requires borrowers to grant full control over pledges to financiers. The progress in Ghana entails Warehouse Receipt Rules and Regulations (WRRRs) for Ghana Grain Council (GGC) regulated operators, and registration of unregulated pledges with the Collateral Security Registry. However, in Mozambique, there is neither a security act nor a registry, thus increasing risks of double pledging.

In addition to the legal framework, other opportunities and threats in WRS in SSA are presented in (**Table 2)**.

**Table 2: Opportunities and Threats of WRS in SSA**

| Case countries | Opportunities | Threats |
|---|---|---|
| Uganda | • Liberal government policy on trade | • Weak involvement of private stakeholders |
| Cameroon | • Government and donor support | • Limited involvement of local operators<br>• No certification on standards |
| Senegal | • Stakeholder driven<br>• Government and donor support | • Policy contradictions and competition of cheap imports |
| Niger | • High ownership and accountability<br>• Vision leadership | • Limited private sector involvement |
| Mozambique | • Existence of 39 silos with capacity of 200,000tons and quality control lab. | • Lack consultation of private stakeholders<br>• Warehouses are distant from farmers. |
| Cote d'Ivoire | • Government driven | • Non-performing coops<br>• Limited involvement of stakeholders |
| Ghana | • Stakeholder driven<br>• Long-term support of funding agencies | • GGC's cohesion and governance<br>• Limited scale of formal markets |
| Burkina Faso | • Stakeholder driven<br>• Visionary leadership | • Lack of experience<br>• Interventionist trend at government level. |
| Madagascar | • Strong demand<br>• Vision leadership<br>• Long-term commitment | • Poor quality management<br>• Contradictions with liberalised import policy |

Source: Adapted from AFD/CTA/IFAD-PARM, 2014, pg. 126/7[ii]

## Contributions to Agricultural Risk Management

When managed professionally, WRS schemes could extensively improve farmers' management of risks and, hence, their livelihoods. It contributes to agricultural risk management in at least three directions: access to collateral and agricultural finance; security over quality inputs and better stable commodity prices; and reduction of post-harvest losses.

## 1. Improving smallholder farmers' access to collateral and agricultural finance

Access to finance remains a key challenge to smallholder farmers in sub-Saharan Africa. Due to high costs and risks, financial service providers are reluctant to render loan services to these farmers most of whom reside in remote rural areas and lack collateral security. Through WRS activities, community groups, financial service providers, and collateral management companies can ease smallholder farmers' access to credit facilities. Cases across Madagascar, Burkina Faso, Niger, Senegal and Cameroon portray positive outcomes.

**GCVs in Madagascar**

In Madagascar, members of producer groups and federations such as FIFATA, TIAVO, OTIV and UNICECAM store commodities in home/compound-based or community-owned facilities from 3 to 10 months. Within the period, farmers could access loans at interest rates of 1.5% to 4%, from mutual and non-mutual financial service providers using the stock as collateral. The total lending from three organisations (UNICECAM, TIAVO and OTIV Tana) are estimated at USD 10.2m in 2010 and USD 20.6m in 2013. Efforts to extend services to clients in deprived areas have increased but the average loan sizes have shrunk since 2011, from USD 436 to USD 315 in 2013 due to bad harvests and competition from cheaper imports.

**Centralised activities in Niger and Burkina Faso**

The state-owned agricultural bank of Niger (BAGRI) and three MFIs (the Asusu S.A, Tanaadi and the Coopec-Kokari) dominate community warrantage activities in Niger. They provide storage credit facilities and pre-finance operations of centralised producer organisations like the Cigaba Union and Mooriben Federation. Annual loan to members of Cigaba Union in Konkorido area was €123,000 in 2008/09 season. Unlike other warrantage groups, the Cigaba Union has adopted best practices to become less dependent on donor funded warehouse and reduced loan-to-value rate for credit.

In Burkina Faso, centralised community warrantage activities have contributed to the institutional viability of small producer groups, and potentially reduced cost of services for MFIs and simplified access to financial services. Financing for warrantage activities in Burkina Faso, mainly come from members' savings. However, activities have recently attracted Coris Bank, which started financing to warrantage groups in 2014.

**Decentralised activities in Senegal and Cameroon**

The EU funded community warrantage pilot for smaller groups of maize and millet farmers in Kaolack region of Senegal. The project involved MFIs such as GRET, ENDA, PAMIF, ADAK and U-IMCEC to work NGOs and provide credit on warehoused commodities. Loans were up to 80% of the stock value, and were repaid on monthly instalments. The initiative increased income of participating farmers by 24% but failed to continue at the end of the project as MFIs were not prepared to operate without logistic support from donors.

In Cameroon, community WRS was championed through three projects – the PADMIR[4], CAMCAUUL network and APCC[5]/Credit du Sahel/SODECOTON. The PADMIR project connected about 62,000 small rural producers to 260 microfinance networks in Central, Western and Far North regions of Cameroon. The APCC, Credit du Sahel and SODECOTON partnered scheme provided production credit to cereal farmers. These developments have attracted the attention of Government of Cameroon and the World Bank to launch WRS on food crops like cassava, maize and sorghum. A major threat to the system however, is the inexistence of legal framework to control activities and perishability of some of the commodities. Security is guaranteed by elements of trust and peer pressure.

## 2. Securing quality input, and better and stable market prices for commodities

The fragile socio-economic and political landscapes of most sub-Saharan African countries trap farmers into informal, unreliable and unsecured input markets. Commodity markets are also unstable, with low prices during harvest season, and price increases in more than three months after. But not all farmers can benefit from such price rises because of lack of knowledge, poor network with buyers and inadequate storage facilities. With the WRS, collateral managing firms, community groups and state regulatory bodies, compel farmers/traders to store commodities and benefit from services that include storage securities, brokerage, input supply and value chain development.

**Receipting with ACE in Cote d'Ivoire**

Collateral management companies in Cote d'Ivoire handle exports of cashew, coffee, cocoa, cotton and imports like fertilizers. Their operations, mainly at the ports of Abidjan and San Pedro have revived agricultural inputs supply in the local market. The ACE has a WR agreement with cotton farmers on many production inputs. The company monitors stock at cotton gins, oversees government input subsidies and coordinates input supply to cooperatives. About 72,000 farmers have secured reliable access to fertilizers and pesticides from the ACE WR scheme, but it relied on 20% government subsidies that might not be sustainable. Another remarkable aspect of the ACE WRS is that it operates with an electronic system and connects farmers to exporters and buyers who offer better market prices.

**Ballore Group on USAID/PCE in Senegal**

Under the *Projet Croissance économique* (PCE), the United States Agency for International Development (USAID) championed a tripartite agreement between Ballore Group, FEPROMAS federation and CNCAS bank to increase maize production, value-chain and connections to feed millers in Dakar. For beneficiary farmers, the initiative is a great opportunity to seek reliable supply of farm inputs and equipment from Ballore Group. Through the project, Ballore Group served about 882 farmers, but was undermined with limited formalization in the collateral management procedures, inconsistency in commodity quality and a drop in international prices for maize.

**Unregulated schemes of Coronet and USAID/CFC in Uganda**

Even though private collateral management activities are not regulated in Uganda, companies are remarkably advancing farmers livelihoods. The Coronet serves cereal cooperatives with production credit on inputs, labour and pre-harvest operations. It also contracts specialist to pre-inspection, test quality, and develop value-chain for stocked commodities, but did not reach out to more rural clients for fear of cost and transactional risks. A similar scheme piloted sponsored by the Common Fund for Commodities (CFC) and USAID commenced in 2004 to link coffee and seed cotton cooperatives to warehouses managed by collateral companies. Some cooperatives later secured export licence and begAn exporting cotton seeds directly to international markets. Export increased from 460 tons of lint bales in 2008, to 1,000 tons in 2010.

**Wienco Ghana outgrowers scheme**

Wienco Ghana is a private entity that operates warehouse receipt through the GGC's regulated public initiative in Ghana. It accounts for 49% of GGC's warehouse operations where farmers deposit commodities in licenced warehouses during harvesting seasons and receive inputs for production. The client farmers of this Wienco's outgrowers' scheme receive fertilizers, insecticides, hybrid seeds, spraying machines and other farm equipment. Sometimes, the service provider contracts experts to give technical advice and trainings to farmers. It has been reported that the services have enabled clients to increase yields from 1.2-1.8 tons to 4.0-4.3 tons per ha.

## 3. Reducing Post-Harvest losses and maintaining commodity quality

With the seasonality of production and limited storage/processing facilities in SSA, farmers have to sell their produce immediately after

[4] Projet d'appui au développement de la microfinance rurale (PADMIR)
[5] Cotton producers association (APCC)

harvest. Others who store their commodities for later are faced with post-harvest losses in commodity quality and quantity due to pests, diseases, theft, damp weather and other events. However, with the WRS, client farmers/traders deposit their commodities in well-managed warehouses where stocks are properly handled, monitored and checked for quality purposes. Many public, privately licenced and community managed warehouses in sub-Sahara Africa have granted farmers with such opportunities to prevent post-harvest losses.

**UCE in Uganda**

Estimated post-harvest loss of grains in Uganda is averaged at 70%. A WRS act was enacted in 2006, followed by the establishment of the Uganda Commodity Exchange (UCE) with assistance from the European Commission (EU). Even though the UCE is mandated to oversee operations in both state-owned and licenced private warehouses, it practically focuses on public storage of grains and pulses. It has connected depositors to an e-WRS and trained them to use efficient post-harvest handling techniques to protect commodities from damp weather, pest and disease attacks. Stocks in warehouses are benefit from inspection and quality checks undertaken by warehouse chief examiners and staff. The practice improved quality of warehouse receipted stock, and attracted traders to offer better prices to smallholder farmers, especially in the Eastern Uganda. By the end of the EU assistance in 2013, stock deposits were estimated at about 22,600 tons but the quantities were small to make the project viable. Additionally, the project did not succeed to engage WFP – a dominant buyer – due to low quality standard.

**The GGC and GCX initiatives in Ghana**

The Ghana Grain Council (GGC) and Ghana Commodity Exchange (GCX) initiatives are set to revive the distorted WRS pilot for maize in the 1990s. Since inception in 2012, the GGC has certified seven warehouses with a capacity of 36,000 tons. Each warehouse has drying and cleaning facilities. Before storage, commodities are subjected to moisture and foreign matter inspections by the Ghana Standards Authority (GSA). The UCE also contracts external experts to monitor stock and check storage hygiene, commodity quality, and pest control. Deposits are expected to increase in the next five years and this would require adequate warehouse capacities.

**The BMM and SATH in Mozambique**

Mozambique attempted public warehouse receipting through two initiatives: the Mozambique Commodity Exchange (BMM) and Southern African Trade Hub (SATH). The BMM is set to assume responsibility to licence 39 silos with capacities of 200,000 tons even though most of them are not reachable, in terms of the distance from rural farmers. Operations are expected to provide better storage options for grains, and enable farmers to store their commodities for more than five months after harvest. SATH is a revived initiative that seeks to work with Export Trading Group (ETG) on USAID supports, even though it has failed in the past as a result financier's bankruptcy.

**GCVs and commodity storage protection in Madagascar**

The GCV activities bring farmers together to learn and share commodity storage mechanisms that are useful for combating post-harvest storage pest and disease attacks. In all the GCV mutual networks, family and community farmer groups are collectively responsible for cleaning, weighing, loading, stacking of commodities. They also receive assistance from management specialists such as International Monetary Fund (IMF) staff who are supporting farmers in many storage activities including preservation, grains quality monitoring, and cleanliness of warehouses. In the collateral activities of the Fund for Marketing Agricultural Products (FCPA), supervisors examine the condition of the warehouses and monitor commodity quality to ensure stock safety against post-harvest losses.

## Recommendations

The WRS has significant prospects for farmers to manage the complexities of risks that surround their livelihoods, but the full potentials have not been fetched in SSA due to challenging constraints. Enhancing the schemes' sustainability requires much effort from governments, donors, financial service providers, producer groups, individual farmers and other stakeholders. The study proposes the following recommendations:

**Enactment of proper legislative framework:** With the exception of Uganda, none of the case countries have passed a warehouse receipt law to provide legal basis for the scheme. Activities are defined based on ordinary principles of contract law and the OHADA Uniform Act (in the five case countries in West Africa). This does not guarantee enough security for actors. Appropriate legal framework is required to ensure credibility of the system. Legislation should stipulate modalities on pledges, the requirement for warehouse structures, quality standards for stock, usability of receipts and other concerned security issues.

**Enhance knowledge, management capacities and ownership from local groups:** Not all the initiatives were continued at the end of donor assistance. Increasing ownership from local communities should be prioritized in WRS project design. Donors should capitalise on local knowledge in developing the components of WRS schemes. This requires building local capacities from the inception stage, and permitting them to use their acquired skills throughout the project life-span.

**Open up for private investment in warehouse structures and schemes:** Collateral management companies in Africa are few, and community groups' depend on donor sponsored facilities, which is not a laudable solution. Governments should open up for private investment in warehouse facilities and their maintenance. They should provide incentives in form of tax rebates, utilities, flexible contract allocation, expertise training and other forms of supports, to entice private bodies into warehouse structures investments. Partnerships including farmers and private companies can enhance the development and access to more secure and efficient value chains.

**Build on local institutions:** Even though financial service component of WRS is critical for agricultural development and risk management, providers have downplayed its importance to smallholder farmers. In many cases, banks are hesitant to serve rural farmers for fear of cost and risks. Federations and cooperatives that have existed in many rural communities should be involved. Banks should work with NGOs to provide responsive savings and repayment trainings to members of organised groups. Executives of federations should be capacitated to administer loans, oversee warehouse pledges, secure commodity markets that pay better and stable prices, and lead reimbursement procedures.

[i] Volume 1 – Key Findings "Study on Appropriate Warehousing and Collateral Management Systems in in Sub-Saharan Africa".