Platform for Agricultural Risk Management

IFAD
Investing in rural people

Financing Facility for Remittances

Managing agricultural risk through remittances. **The case of Senegal**

December 2020

A joint report by the **Financing Facility for Remittances** and the **Platform for Agricultural Risk Management**

IN COLLABORATION WITH

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Massimo Giovanola, PARM's Technical Specialist, and Frédéric Ponsot, FFR's Remittances Specialist, have also provided substantial contribution to this Study.

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Abbreviations and acronyms

AFD	French Development Agency
AICS	Agenzia Italiana per la Cooperazione allo Sviluppo (Italian Agency for Development Cooperation)
CRES	Consortium pour la Recherche Economique et Sociale
EU	European Union
FFR	Financing Facility for Remittances
IFAD	International Fund for Agricultural Development
MFI	Microfinance Institution
NGO	Non-governmental Organization
PARM	Platform for Agricultural Risk Management
RMDA	Red Mangrove Development Advisors
SFD	Decentralized Financial System

Study context

The Platform for Agricultural Risk Management (PARM)[1] and the Financing Facility for Remittances (FFR)[2] commissioned the Red Mangrove Development Advisors (RMDA) to conduct a study aimed at identifying the connection between remittances (or money transfers) and agricultural risks and appropriate approaches for optimizing their use in agricultural risk management.

This publication is the executive summary of such study, undertaken in 2017 and presented to the Government of Senegal[3].

The study, which entailed a survey of 600 households in two administrative regions in Senegal, sought to distinguish typical agricultural risk management behaviours in households benefitting from remittances from those of other types of households.

During the agricultural risk assessment in Senegal the World Bank Group and the Platform for Agricultural Risk Management identified erratic rainfall and droughts, livestock pest and diseases and illegal fishery as the main risks of agricultural sector.

Among the risk management tools and strategies that emerged from the risk assessment study carried out by PARM, three lines of intervention were prioritized in the Senegalese context :

- Increase farmers' access to information about suitable inputs, market prices and weather forecasts,
- Strengthen the capacities of public entities responsible for policy, support and agricultural advice to address agricultural risks,
- Optimize the use of remittances.

This study explores the impact of the latter as an effective tool for agricultural risk management, as outlined below.

The importance of remittances in rural areas

Out of a rural population of around 8.4 million, 2 million rural Senegalese depend on remittances from international migrants, which, for Senegalese households taken as a whole, totalled US$2 billion in 2016 (or 13.5 per cent of GDP).

While the domestic remittances sent/received are lower and less frequent than the international remittances,[4] more families receive them. Thus, according to the Findex study, in 2014 half of rural Senegalese households received remittances from other parts of the country.

1 The Platform for Agricultural Risk Management (PARM) is the fruit of the discussions of the G7 and G20 member countries on food insecurity and agricultural development. A multi-stakeholder partnership (EU, AFD, AICS and IFAD), its purpose is to integrate risk management into national agricultural policy in developing countries through a holistic approach. The PARM Secretariat is headquartered at IFAD in Rome (www.p4arm.org).

2 IFAD's multi-donor Financing Facility for Remittances (FFR) aims to maximize the impact of remittances on development, and to promote migrants' engagement in their countries of origin. Through the financing of more than 60 projects globally, and substantial engagement in key remittance-related processes, the FFR is successfully increasing the impact of remittances on development by promoting innovative investments and transfer modalities; supporting financially inclusive mechanisms; enhancing competition; empowering migrants and their families through financial education and inclusion; and encouraging migrant investment and entrepreneurship (www.ifad.org/ffr).

3 https://bit.ly/36CMKcB

4 The average amount received from other regions is around FCFA 25,000, versus FCFA 150,000 from other countries (IFAD 2015). Roughly 71.25 per cent of international migrants send funds, versus 43 per cent of domestic migrants (World Bank, CRES 2009).

The main transfer instrument used is cash payments, and the main distribution channels are rapid money transfer services, which are very widespread in the rural informal sector and account for 66 per cent of the remittances received.[5] Since the late 2010s, there has been growing digitization of remittances through mobile devices, which has accelerated the formalization of domestic transfers (primarily through Wari) and, more recently, regional transfers (through Orange, for example).

Nonetheless, the various financial service providers in the traditional money transfer market (banks, microfinance institutions, the postal service) and modern/digital providers (mobile telephone services and other digital financial service providers) have been unsuccessful in capitalizing on the omnipresence of remittances in the life of Senegalese populations, especially in rural areas, to offer recipient households financial services tailored to their needs. The respective service supply is fragmented among different service providers that offer money transfer and other complementary financial services that include savings, credit and insurance. As a result, less than one-third of households that receive remittances have a business relationship with a regulated financial institution.

While formal financial services are the most popular in Senegal in terms of usage, with 44 per cent of the adult population having received at least one transfer through a regulated institution in 2014[6] (versus 15 per cent with an account), remittances are far from being the force for increasing access to financing that they could be, especially in rural areas.

Profile of households surveyed

The study involved a household survey of a sample of 572 households, administered at the village level through questionnaires completed in thematic group discussions.

The survey was conducted in two regions of Senegal with different migration profiles:

- the Kolda region, characterized by internal migration, and
- the Louga region, characterized more by international migration.

More than a third of the households surveyed received remittances of any type.

Table 1: Percentage of households receiving remittances, by geographic origin of the transfer.

	Kolda	Louga
Percentage of households receiving remittances	**34%**	**39%**
From Senegal	87%	65%
From abroad	10%	17%
From Senegal and abroad	3%	18%

Half the sample consisted of smallholder farmers with less than 2 ha of land and 90 per cent with less than 6 ha, or within the range of the majority of Senegalese farms. While crop and livestock production are the basis for household income in these two regions, 86 per cent of households in Kolda devote more than 50 per cent of their production to subsistence, while only 47 per cent in Louga consume more than half their production, selling the remainder.

5 ESPS-II, ANSD, Dakar, Senegal, Rapport définitif 2013.

6 Findex 2014.

The incidence of poverty is higher in the Kolda region, at 76 per cent of the population, than in the Louga region, where the figure is 26 per cent] and international remittances are more common.[7]

Seventy-two per cent of households complain of climate shock, basically related to rainfall, affecting their farm every year. Given their income and production levels, which barely cover the daily expenses and food needs of eight people on average, these households are often not in a position to prepare and compensate for the impact of these shocks with their available resources and, like more than half of rural Senegalese households, find themselves in a chronic situation of food insecurity.[8]

Remittances as an ad hoc tool for agricultural risk management

In the sample surveyed, remittances appear as a "broad spectrum" tool for short-term agricultural risk management centred on covering food needs, supply procurement and the development of short cycle commercial activities. They add to and buttress the ad hoc risk management strategies observed in other rural households.

Remittances are clearly a factor that distinguishes beneficiary households from "non-beneficiary" households in terms of the ability to adopt agricultural risk management strategies. In beneficiary households, these strategies are also marked by:

- greater diversification of commercial activities,
- greater expenditures for supplies,
- a greater propensity to save and build up reserve savings to guard against agricultural risks,
- a greater propensity to obtain credit, especially among households that receive international remittances, to finance agricultural activities at the same level as households that do not receive them.

In contrast to non-beneficiary households, remittances in beneficiary households serve as a substitute for the safety net provided by the Government or non-governmental organizations (NGOs) to offset losses when agricultural risks materialize.

Table 2: Difference between beneficiary households and non-beneficiary households in the adoption of agricultural risk management strategies.

Households receiving remittances	Households not receiving remittances
73 per cent have adopted a risk management strategy.	**22 per cent** have adopted a risk management strategy.
For **40 per cent**, this strategy consists of investing in supplies to diversify their activities through small-scale sales of everyday consumer goods (cosmetics, clothing, jewellery, etc.).	For **25 per cent**, this strategy consists of waiting for aid from the Government or NGOs.
65 per cent save, 45 per cent to offset potential agricultural losses.	**33 per cent** save, 38 per cent to offset potential agricultural losses.
45 per cent obtain credit, **33 per cent** for agricultural financing.	**19 per cent** obtain credit, **33 per cent** for agricultural financing.

7 ESPS-II, ANSD, Dakar, Senegal, Rapport définitif 2013.

8 Poverty is higher in rural areas (69 per cent) and food insecurity is more widespread, affecting 54.8 per cent of households. 2014 ANSD report on poverty in Senegal.

The use of remittances by households largely dependent on their farm production for subsistence to mitigate the impact of agricultural risks is also reflected in how they use the moneys received:

- 70 per cent of the money is used for current expenses (including health and education).
- Around 20 per cent is used for expenses linked with production (agricultural supplies and commerce).
- The rest is used for social events and savings.

Compared to the average consumption structure of rural households that devote 70 per cent of their income to food consumption and the rest to current expenditures (housing, water, transportation) and social expenses,[9] the surplus resources provided by remittances appear to be used mainly for production expenditures.

Savings from remittances are at a residual level of around 3 per cent of the moneys received (7 per cent of the moneys received in the Kolda region, 1.3 per cent in the Louga region). The bulk of the savings of receiving households is built up after the harvest, using their own resources.

Contrary to popular belief, remittances are thus more a support for consumption than a productive investment and are a counterpoint to the savings built up by beneficiary households.

Differential effects on agricultural risk management strategies by the geography and frequency of remittances, but a general trend toward better resilience to shocks

The degree to which households can rely on remittances, and on their frequency and amount, varies widely depending on the household and the geography of the migrations/remittances. Generally speaking, around half of households regularly receive these funds several times a year and the other half relies on a migrant only for occasional transfers.

Domestic remittances differ from international remittances in terms of their regularity and amount: occasional transfers are generally less frequent and the amounts for emergencies are lower.[10]

Households that receive international remittances are more inclined to develop and implement agricultural risk management strategies, resorting to savings and loan services more often than those that receive domestic remittances.

Nevertheless, a common trait among beneficiary households is the fact that in an emergency, half of them can count on a migrant for funds of around FCFA 50,000 FCFA (US$90). These are substantial sums in rural areas, given the annual income of around FCFA 300,000 (US$540) for 5-6 ha[11] farms, and represent a tangible guarantee of income to deal with emergencies and avoid having to sell assets or become over-indebted.

The table on page 9 summarizes the migration profiles, common traits and differences linked to regular and occasional remittances for beneficiary households in the two regions studied.

9 Enquête de Suivi de la Pauvreté au Sénégal (ESPS-II), exécutée par l'Agence Nationale de la Statistique et de la Démographie (ANSD), Dakar, Sénégal, Rapport définitif 2013.

10 Occasional remittances are quite often sent in response to a family emergency (basically funeral, birth, baptism and wedding ceremonies) or to farm damage (caused by brush fires, floods, drought). From the standpoint of agricultural risk management, emergencies are related to this second category.

11 Ba et al., 2009, Résultats de l'enquête Ruralstruc concernant 253 ménages du Centre Nord Bassin Arachidier (CNBA).

Table 3: Profile by region of beneficiary households with regular or occasional remittances.

	Koulda region (domestic remittances)	**Louga region (domestic and international remittances)**
Geographic origin of the remittances	90% from Senegal	2/3 from Senegal 1/3 from abroad or both
Regular remittances and amounts received	**46% regularly receive them** 3 to 4 times a year (5% every month) Amounts received: < FCFA 50,000 (US$90) by 64% of households	**50% receive them** 3 to 4 times a year (25% every month) Amounts received: < FCFA 50,000 (US$90) by 70% households
Occasional remittances in emergencies	**54% rely solely on their migrant in emergencies.** Amounts received: < FCFA 50,000 FCFA (US$90) by 70% of households	**50% rely solely on their migrant in emergencies.** Amounts received: < FCFA 50,000 (US$90) by half of households > FCFA 100,000 (US$180) by 25% of households with international migrants

Regardless of the domestic or international origin of the remittances, however, the general risk management behaviour of beneficiary households clearly differs from that of non-beneficiary households, as seen in the table below.

Remittances are therefore an instrument (and migration, a strategy) used by farm households to minimize the impact of production and/or price shocks on their food security (mitigation strategy) and to consolidate/diversify their production activities (prevention strategy).

Table 4: Risk management behaviour by receipt of remittances and their geographic origin.

Agricultural risk management behaviour	**Household category/receipt of remittances**		
	No remittances	Domestic remittances	International remittances
Existence of an operational risk management strategy	22%	69%	80%
Investments in supplies and agriculture	13%	39%	44%
Propensity to save	33%	59%	78%
Access to credit	19%	40%	57%

The potential use of remittances as a risk management tool is hindered by limited access to financial services and local agricultural support

Households that receive remittances state that they are better off in the short term and less vulnerable to production/price shocks associated with the weather events that mark each agricultural season and can diversify their activities. Their resilience and independence do not appear to improve in the long term, however; less dependent on government aid, they still produce essentially for their own consumption (two-thirds of households consume more than 50 per cent of their production without increasing it in the long term).

These merely short-term effects have several explanations:

- Excluded from the services of banks and microfinance institutions (MFIs), which do not always offer integrated money transfer, credit and savings products tailored to their situation, farm households do not have a one-stop solution to meet their various financial needs and, when necessary, must resort to several, often distant, institutions:
- Due to lack of information, advisory services and access to suitable quality inputs, household investments to reduce vulnerability to agricultural shocks have limited effects.
- After selling their harvest (most often at a very low price) or receiving remittances, households enjoy a period of excess liquidity but are hard-pressed to identify the best options for parking or investing their funds.

> Finally, despite greater capacity to implement agricultural risk management strategies and greater financial capabilities, households that receive remittances encounter the same constraints to implementing effective long-term strategies as other households. This is especially true for access to financial services, which are dominated primarily by informal arrangements.

More than two-thirds of households benefitting from remittances obtain financial services through informal channels

> Among the sample surveyed, the financial behaviour of households that receive remittances is dominated by recourse to informal financing from relatives, friends or merchants, almost to the same extent as households that do not receive them.

Almost two-thirds of remittances are received informally, keeping households from establishing relations and a transaction history with a financial intermediary and preventing the development of a formal financial culture built on households learning about the advantages of opening a residual savings account for the receipt of remittances as a precaution and point of entry for access to credit.

Some 90 per cent of savings are held outside the financial system, half in kind and half in cash, while nearly two-thirds of the credit is obtained from close relatives or merchants.

The main access barrier to all services is the distance to financial institutions and related transaction costs, added to which, for credit in particular, are the eligibility criteria of tangible security and previous savings, as well as misunderstanding of loan conditions, distrust of financial institutions and religious precepts prohibiting usury, as well as the failure to tailor disbursement and reimbursement schedules to the agricultural production cycle.

Agricultural insurance remains a product that is largely unknown, with only 1 per cent of the households surveyed familiar with it.

The table below recapitulates the level of recourse to informal channels and the main obstacles hindering access to formal products for receiving money, savings, and borrowing and their effective use.

Table 5: Level of recourse to informal channels and obstacles hindering access to formal financial services by households benefitting from remittances

	Level of recourse to informal channels	Obstacles hindering access to formal services and their use	
		Accessibility	Adaptation of products
Remittances	**63%** of funds received through informal channels (directly with no intermediary, informal network)	Distance of branch offices of formal institutions. Transaction costs.	
Savings	**>90%** half in kind (small livestock), and cash kept at home or in tontines	Low deposits – withdrawal discourages travel (less than FCFA 5,000 for 50% of households except post-harvest).	Fees discourage the opening and maintenance of an account.
Credit	**62%** of loans are from the informal sector (friends, relatives, merchants)	Absence of previous savings and tangible security. Negative perceptions of credit risk and bank/MFI debt recovery procedures. Religious precepts prohibiting usury.	Product maturity and reimbursement schedules not tailored to agricultural cycles. Credit needs and length of approval process out of sync.

On the supply side, lack of appropriate and sufficiently integrated services for transforming the potential of remittances into longer term strategies

From the supply side, the mapping of financial service providers and agricultural support services has brought to light both a series of limitations that generally hinder the provision of services to rural households and the absence of niche strategies that could capitalize on the financial characteristics of remittance-receiving households.

- Traditional financial intermediaries (banks, Decentralized Financial System (SFD), postal service) view services to remote areas as an extra cost that the limited capacities of rural households will not render profitable. Their model continues to be based on brick and mortar agencies and products geared primarily to merchants and salaried workers.
- “Modern” digital financial services based on mobile phone systems have a heavier rural footprint, but their financial services are confined to payment and they only partially meet the needs of rural households.
- Financial services and non-financial information/agricultural support services are not integrated.
- Households that receive remittances are not necessarily considered niche clientele whose economic potential would have a domino effect, making interventions to households that do not receive them profitable.

In sum, each stakeholder category (traditional or digital financial service providers, agricultural research and support agencies) has its own constraints and fails to profit from better integration of financial services and agricultural value added, using money transfer products as a vector for making services to rural households a viable undertaking. Nevertheless, current options for digital financial and information services in Senegal and other African countries are opening up opportunities for lifting some of the constraints that weigh on each stakeholder.

Pathways for increasing the role of remittances in agricultural risk management

In order to lift the constraints that limit remittances' potential for better agricultural risk management with a long-term vision and reach both households that receive remittances and those that do not, three lines of intervention appear to be necessary:

- **Increase access to formal financial services and information in rural areas by aggregating and digitizing existing services.** This can be accomplished by:

    - Encouraging traditional operators such as banks and certain MFIs to digitize operations and develop more decentralized distribution methods, enabling them to offer money-transfer, savings, credit and insurance services.

    - Expanding the range of services offered by mobile payment platforms that have rural networks beyond simple payment and transfer services.

    - Creating professional directories of input suppliers and intermediaries, resellers and buyers to facilitate networking among value chain stakeholders to benefit farmers by giving them remote access to information via mobile device.

    - Encouraging discussions on amending the regulatory frameworks applicable to banking institutions and mobile phone companies to develop combined services. In particular, amending the conditions under which non-banking entities are authorized to provide international money transfer services and rely on agents.

- **Develop new financial products tailored to conditions in rural areas and new combinations of services that reduce the credit risks to financial operators and agricultural risks to farmers.** This could take the form of:

    - Digital agricultural credit and insurance accessible to remote areas.

    - Models combining savings or insurance products that could be sustained by remittances or digital credit, including remittances in the calculation of credit risk.

- **Strengthen the culture of rural populations, whether or not they receive remittances, in the areas of savings and climate risk management.** This is a cross-cutting activity necessary for accelerating adoption of the aforementioned solutions.

Appendix

Simulation of remittance flows to households and potential gains for transfer agencies

Based on the findings on remittance behaviour obtained by the study and other research, the calculations below reveal business opportunities for financial intermediaries to serve rural households that receive remittances in the Kolda and Louga regions through money transfer fees and the mobilization of savings.

The model first indicates the amounts received according to the type of remittance (domestic or international) and the regular or occasional nature of the remittances (in the case of emergencies). On average, a household benefitting from domestic remittances receives FCFA 75,000 per year, while a household benefitting from international remittances receives FCFA 350,000 per year.

		Domestic	International
Regular receipt (50% of beneficiary households)	Amount (FCFA)	**25 000**	**150 000**
	€	**38**	**229**
	Frequency	**4**	**4**
Emergency (50% of beneficiary households)	Amount (FCFA)	**50 000**	**100 000**
	€	**76**	**152**
	Frequency	**1**	**1**
Number of transfers received (annual average)		**2.5**	**2.5**
Amounts received per household (annual average)	FCFA	**75 000**	**350 000**
	€	**114**	**534**

With these assumptions and considering a 2.5 per cent margin on the volumes received, the fees total FCFA 51.5 million for the Kolda region and FCFA 127 million for the Louga region. Concerning just the savings related to remittances,[12] the potential savings obtained total FCFA 144 million for the Kolda region and FCFA 66 million for the Louga region.

In light of this, it is up to the financial service providers operating in these regions to determine whether developing transaction services simply by targeting beneficiary households would make the hiring of payment agents to provide all rural populations with transaction and other financial services a profitable undertaking.

12 It should be recalled that, according to the study questionnaires, the basis for savings, even for households receiving remittances, is household activities, not the remittances.

Kolda region (rural population: 492 818)		
Distribution of rural beneficiary households, by origin of remittances	Domestic	87%
	International	13%
Average amount received per household, all origins of remittances combined	**(FCFA)**	**110 750**
	€	169
	Number of rural households	54 758
	Percentage of rural households benefitting from remittances	34%
	Number of rural households benefitting from remittances	18 618
Amount of remittances received regionally in rural areas	**(FCFA)**	**2 061 912 490**
	€	3 143 365
Estimated fees received (2.5% of the volume)	(FCFA)	51 547 812
	€	78 584
	Savings from remittances	7%
Estimated savings from remittances received in rural areas	**(FCFA)**	**144 333 874**
	€	220 036

Louga region (rural population: 684 511)		
Distribution of rural beneficiary households, by origin of the remittances	Domestic	35%
	International	65%
Average amount received per household, all origins of remittances combined	**(FCFA)**	**171 250**
	€	261
	Number of rural households	76 057
	Percentage of rural households benefitting from remittances	39%
	Number of rural households benefitting from remittances	29 662
Amount of remittances received regionally in rural areas	**(FCFA)**	**5 079 656 888**
	€	7 743 887
Estimated fees received (2.5% of the volume)	**(FCFA)**	**126 991 422**
	€	193 597
	Savings from remittances	1.3%
Estimated savings from remittances received in rural areas	**(FCFA)**	**66 035 540**
	€	100 671

This percentage is based on the survey result and represents the formal savings deposited in regulated financial institutions. As mentioned in the document, most of the savings are made informally and, due to access issues, savings in regulated financial channels are limited.

This conservative figure is kept as such to reflect the reality. However, the potential of collecting savings from remittances for financial service providers is much higher since 90 per cent are informal savings, while other surveys covering urban and rural populations show that 10 per cent of remittances are set aside.

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