

Initial Market Assessment - Country Scoping Note: Senegal¹

Executive Summary

Senegal is implementing a Disaster Risk Management (DRM) framework and has established a public private agriculture insurance company. Rules, responsibilities and operational procedures need clarification, ideally guided by the findings of a fiscal disaster risk assessment. Insurance mechanisms are not considered in (sovereign) catastrophe risk transfer so far. Additional investment in and guidance with data market infrastructure would be necessary for sovereign DRM but would also benefit the spread of catastrophe property insurance for households, businesses and even low income populations who are beginning to see **flood micro-insurance**. With the public private agriculture insurance company, Senegal has a unique partner for **rural outreach** that could go beyond agriculture insurance. But the company would require technical support to achieve sustainability and find its role in the social protection framework.

There is a unique window of opportunity for micro-insurance in Senegal as specific regulation is being implemented. This has generated momentum that can significantly grow the outreach of insurance but calls for technical and financial support.

The most immediate opportunities for promising multi stakeholder interventions in Senegal are in **agriculture insurance**, where various initiatives have begun specifying the potential. **Credit linked property microinsurance** against floods could be explored.

1. Background

1.1 Senegal's exposure to natural disasters

Senegal's exposure to hydrometeorological hazards is aggravated by widespread livelihood dependence on rain-fed agriculture and urban expansion into flood risk zones.

Droughts have affected more than 3 million people since 1980. Less than 5% of the country's cultivated land has irrigation, but rainfall has displayed considerable variance, the average amount steadily decreasing between 1960 and 2001. Mean annual temperature has increased by almost one degree Centigrade between 1960 and 2006 and may increase by up to 3°C by mid-century. Climate variability is estimated to explain half of agriculture yield variations², while locust invasion and other insects account for a large part of the rest. World Bank analysis using the *Modèle d'Analyse des Risques de Cultures du Sénégal* modeled an average annual crop loss cost of 10% of national crop value and indicates a 1 in 100 year loss of 44% of the national average crop value.

¹This scoping note is part of a series of seven country scoping notes produced by WB/GFDRR and DFID, with inputs and feedback from the expert-level group (including representatives of Allianz, DFID, European Commission, GIZ, ILO, Munich Re, SECO, Swiss Re, USAID, WB, and Willis Re). This scoping note aims to inform the Political Champions Group (PCG) on potential opportunities to promote stronger partnerships between the public sector and the private sector to increase disaster resilience of vulnerable populations using market-mediated insurance solutions. The team has made every attempt to verify the contents presented, but the information should be interpreted with due consideration to its limitations resulting from the fact that indirect sources have been used where primary sources were not available. Contact: Olivier Mahul, omahul@worldbank.org.

² According to the model of WFP and the Agence Nationale de l'Aviation Civile et de la Météorologie.

Floods are estimated to affect 400,000 to 600,000 people every year, causing economic losses and significant damage to infrastructure, public assets and private property. They are caused by river overflows, a combination of heavy rainfall and insufficient drainage infrastructure notably in the peri-urban zones of Dakar, and salt-water intrusion on agricultural lands by coastal storm surges. Exposure to flood has been increasing because of rapid unplanned urban expansion into zones at risk – driven in part by loss of rural livelihoods due to drought. Almost 70% of GDP is generated in the metropolitan area of Dakar, where exposure to flooding is highest and growing. Of the estimated US\$44 billion total land value for Dakar Metropolitan, over US\$2 billion of assets are considered exposed to high natural hazard potentials³.

Climate change and sea level rise is another risk that projects substantial impact on large populations. Next to agriculture, fishing is the second largest employer and livelihood activity in Senegal. Stocks, productivity and biodiversity are already declining, and the sector faces severe challenges from changing water temperature and projected mangrove losses.

Senegal's HFAWDI Disaster Risk Reduction progress score is 2.75; its Disaster Risk Index is 4⁴. Its WorldRiskIndex is 11.76%, making it 27th in the global ranking⁵; this is driven by the country's exposure of 19% together with vulnerability: 63%, susceptibility: 49%, lack of coping capacities: 82%, and lack of adaptive capacities: 58%. A comparatively low 10% of the population has increased mortality risk due to multiple hazards⁶, and other natural hazards such as earthquakes, volcanoes or windstorms are insignificant.

1.2 Economic, financial and fiscal impact of natural disasters

All sectors in Senegal are at risk of disaster losses, which are driven by direct impacts on crop and livestock production, direct damage to stock, buildings and infrastructure, and loss of personal, commercial and fiscal income resulting from these damages and from failures along the supply chain arising from the direct damage.

The contribution of the agriculture sector to GDP has been decreasing to around 20% now, but the sector still provides for the livelihoods of 60% of the population, putting an estimated 5 million Senegalese at risk for drought⁷ (the reason drought does not affect more – urban - people is the relatively high reliance on food imports).

The 2002-2003 drought cost an estimated 35 percent of national crop production, almost US\$50 million. Annual groundnut production decreased by 70%, likewise the average cash flow to groundnut farmers did. Such variability creates substantial short-term risk to rural households, which they address by relying on multiple sources of income (44% depend on three or more), thus forgoing higher profits in riskier

³World Bank. 2009. Preparing to Manage Natural Hazards and Climate Change Risks in Dakar, Senegal A Spatial and Institutional Approach

⁴ The WDI Disaster Risk Reduction progress score is an average of self-assessment scores (1-5 scale; 5=best); The Disaster Risk Index is a mortality-based index developed in order to enable comparisons of countries hit by different hazards types (7 classes; 7=high mortality)

⁵The WorldRiskIndex, as shown in the WorldRiskReport 2011, indicates the probability that a country will be affected by a disaster by combining exposure to natural hazards, susceptibility (as a function of public infrastructure, housing conditions, nutrition and the general economic framework), coping capacities (as a function of governance, disaster preparedness and early warning, medical services, social and economic security), and adaptive capacities to future natural events and climate change. The 2011 Index ranges from 32% for Vanuatu, the riskiest, to 0.02% for Qatar.

⁶ Natural Disaster Hotspots - A Global Risk Analysis; World Bank 2005

⁷ World Bank, "Managing Risk in Rural Senegal", Report No. 33435-SN, Human Development II, Africa Region, March 30, 2006.

activities; it also contributes to the food insecurity that affects an estimated 15% of them. The 2004/05 locust infestation reduced millet yields by 23% and sorghum yields by 14%⁸. Repeated droughts, along with population growth and agriculture expansion, have contributed to severe environmental degradation in wide parts of the country.

The 2009 floods, which impacted 360,000 people in peri-urban Dakar and an estimated additional 125,000 in the rest of the country, are estimated to have cost over US\$100 million, with the most affected sectors being housing, health, education and transport.

1.3 Government's strategy and commitment regarding disaster risk financing and insurance

Structures have been put in place to address DRM in the context of development and poverty reduction, but there is room for improvement in respect of a consistent DRM specific strategy and assignment of responsibilities. The **High Commission for Civil Protection**, chaired by the Minister of Interior, is the consultative organ in the field of civil defense, especially for disaster prevention and management that advises the minister on all civil protection issues and contributes to the coordination of sectorial activities for disaster prevention and relief organization. Its members include representatives of all ministries, and it assesses the implementation conditions of laws and decrees related to civil protection. Its decentralized branches are the Regional Civil Protection Commissions headed by the Governors, and the Auxiliary Civil Protection Commissions headed by the Prefects. The **Directorate of Civil Protection** within the Ministry of Interior is the focal point for coordination of risk and disaster prevention and management activities. It is also the executive arm of the minister of interior for civil protection matters and the secretariat of the High Commission. Chaired by the Prime Minister, a **National Platform for the Prevention and the Reduction of Major Disaster Risks** that includes representatives of all ministries has been established in 2008. Through its inter-ministerial Committee for Disaster Risk Reduction, the National Platform is responsible for promoting the sustainable integration of the prevention and disaster risk reduction into development policies and poverty reduction strategies. It is also in charge of validation and effective articulation of the **National Disaster Risks Prevention and Reduction Program** which is the medium term vision in the field.

This architecture is not fully successful due to the institutional complexity, and the weakness of the supporting legal, regulatory and operational mechanisms. The respective mandates and roles of the various existing structures and institutions within the DRM system, and the links between them, are not often clearly defined and formalized, such as the formal operational and/or hierarchical links between the National Platform and the High Commission of Civil Protection. The weakness of tools and operating mechanisms limits an effective operationalization of the institutional arrangements and mechanisms put in place. Moreover, it does not allow a clear vertical and horizontal coordination between stakeholders. In addition, lack of resources is stated in the HFA reporting⁹, for example for the delegation to local authorities.

An ongoing DRM project financed by GFDRR is supporting a review of the institutional DRM framework in Senegal and providing a roadmap for an improved institutional scheme, including a suitable regulatory framework and its dissemination.

Financing and insurance is not addressed explicitly in the DRM framework, which focuses on prevention and management of disasters. HFA reporting states that there is no agriculture or micro-insurance, and recognizes serious limitations in respect of financing, like the absence of catastrophe insurance.

⁸ Republic of Senegal Poverty Reduction Strategy Paper 2006

⁹ Rapport national de suivi sur la mise en oeuvre du Cadre d'action de Hyogo (2009-2011)

2. Government's public financial management of natural disasters

2.1 Budget instruments

According to the latest HFA progress report, no budgetary allocations are made available specifically for disaster prevention and risk reduction. The Government, however, makes some annual budgetary provision for disaster alleviation through a number of mechanisms (including the Fonds mentioned in 3.1), but funds allocated are small in the context of potential losses and rules of access to the funds are unclear. Allocations to these funding mechanisms are not informed by quantification of potential disaster losses. A number of sources cite difficulties and delays in accessing funds from these mechanisms, and a lack of clarity around rules of use. It should be noted that most special contingent funds can be accessed for multiple purposes beyond disaster response, recovery and reconstruction - so in the event of a disaster, they may be already depleted. Senegal estimates that 2% of recovery and reconstruction funds are assigned to disaster risk reduction¹⁰.

2.2 Market-based solutions

The policy discourse on DRM in Senegal does not mention insurance. ARC intends to be a continent-wide risk pool that aims to provide market-based (parametric) drought risk insurance for governments. Discussions are at initial stages in Senegal. This initiative should be integrated in a comprehensive national disaster risk financing and insurance strategy to provide the Government with (i) immediate funding post disaster through a three-tiered risk financing: domestic reserves for low risk layers, contingent credit for medium risk layers and catastrophe risk transfer solutions for top risk layers, and (ii) transparent and effective post-disaster budget execution processes.

State assets are not insured in Senegal.

3. Ex ante public interventions from government and donors

3.1 Safety net programs against natural disasters, including credit guarantee schemes and subsidy programs

In addition to historically responding directly to drought with financial support to farmers and general assistance to the rural population, the Government has implemented a few small ex ante mechanisms to expedite disaster relief. In the late 1990s, three security mechanisms were put in place to ensure agriculture lending which include some risk mitigation:

- a. The **Fonds de Bonification** that subsidizes lending rates by compensating Caisse Nationale du Credit Agricole du Senegal (CNCAS) for the difference between market rate and the mandated 7.5% charged to borrowers,
- b. The **Fonds de Garantie** that reduces lending risk by compensating CNCAS for up to 75% of agriculture (50% of livestock) loan default, and
- c. The **Fonds de Calamite** that provides disaster relief to borrowing farmers primarily by waiving CNCAS loans.

Between 1998 and 2005, US\$99 million have been allocated to these funds (45% to the *Fonds de Garantie* and 21% to the *Fonds de Calamite*). Between 2005 and 2012, the funds were budgeted but the moneys were then re-appropriated, but in 2013 the commitment has been renewed and US\$6 million have been budgeted for the three Fonds. However, there is consensus that these mechanisms are not working as intended, payments often being late and non-transparent; furthermore, CNCAS only

¹⁰ Global Assessment Report on Disaster Risk Reduction 2013

provides lending to a lower risk subset of all farmers, generally those with irrigation, while other lenders such as the Credit Mutuelle MFI networks don't benefit from these *Fonds*.

Of the many social protection schemes in place in Senegal targeting children, handicapped, elderly etc., the Fonds de Solidarité Nationale's Programmed'Assistance en Situation de Crise et d'Urgence is the only one focused on disaster response. And in general, the current social protection system is fragmented and inefficient in responding to the needs of the most vulnerable.

The annual cost of existing social safety nets varies between 0.2% and 0.5% of GDP, with substantially more money having been spent on shock response interventions via indirect tax cuts or general subsidies. There is consensus among the government and key international partners like the World Bank and the IMF that a better targeted safety net system is preferable to continued reliance on general subsidies. Also, there is desire and potential to considerably increase food production in Senegal, and marked development of agriculture outputs and value chains will demand more insurance. While it aims at making Senegal more food independent, it will if successful make more people vulnerable from insurable food shocks.

3.2 Public investment in market infrastructure for disaster risk insurance (data, models, subsidies, delivery channels, education campaigns)

A variety of public efforts have been made related to disaster risk, albeit seldom focusing on insurance; proper public investments, however, are not numerous. Given the high vulnerability of agriculture in Senegal, various reports have been produced that identify and quantify agricultural risk¹¹.

In line with the Government's vision of modernizing agriculture promoted in the 2004 Loid'Orientation Agro-Sylvo-Pastorale, the Compagnie Nationale d'Assurance Agricole du Sénégal (CNAAS) was set up in 2008 as a public private partnership, where the Government holds 52% and the insurance industry and other stakeholders (including farmers' organizations) hold the remaining. Its mission includes to protect farmers against agricultural risks (weather-related and other), contribute to food security and agricultural income, and facilitate access to rural credit. Although not an official monopoly, it is de facto the only company providing agricultural insurance in Senegal. US\$7 million government premium subsidies were budgeted for agriculture insurance in the third year as per original business plan, but only a fraction of that has been used due to very low sales (see section 6 for more details).

Another example of public sector investment in insurance is the Societe Senegalaise de Reassurances (see section 6 for more details).

The Agence Nationale de l'Aviation Civile et de la Météorologie is the national provider of weather data, generated from satellite (Meteosat), rain radar, and a network of weather stations that the government plans to vastly increase (to one station per village) with funding from donors such as China. The EC funded Global Index Insurance Facility (GIIF) project contributed 20 automatic rain gauges.¹²

¹¹ Among the most important are :

- Climate risk and food security in Senegal: Analysis of climate impacts on food security and livelihoods; Agence Nationale de l'Aviation Civile et de la Météorologie with World Food Program and Columbia University, 2012
- Index-based Crop Insurance in Senegal - Promoting Access to Agricultural Insurance for Small Farmers; World Bank, 2009
- Consolidated national assessment: Senegal; R4 Rural Resilience Initiative, 2012
- Etude sur l'évolution du secteur agricole, des conditions de vie des ménages et de la vie chère au Sénégal; MoA 2009

¹² The Global Index Insurance Facility (GIIF) is a program aimed at reducing the vulnerability of populations, mainly in the Africa, Caribbean, and Pacific (ACP) region, to external shocks and vulnerabilities caused by weather and

Statistically selecting 7 households in every rural district, the Direction de l'Analyse de la Prévision et des Statistiques Agricoles within the ministry of agriculture conducts 6,300 yield samples including pre-harvest samples (partly funded by USAID's Economic Growth Program). Currently the results take 4 to 6 months and are contentious, but a project with the Michigan State University hopes to accelerate the process using satellite data.

But Senegal does not have adequate monitoring systems for the prediction of the likelihood of extreme events occurring, or the assessment of possible changes in weather patterns; this is an obstacle to the development of disaster mitigation and adaptation strategies, which will require detailed vulnerability impact assessment studies. The country-wide spatial coverage of weather data has potential for improvement; the same is true for suitably detailed forecasts, risk zone maps, methods for flood vulnerability assessments, and systems of data collection before and during floods crisis phases.

Risk assessment and mapping, building codes, land-use & urban planning activities are expected to be developed through World Bank and GFDRR projects at national and local levels, as well as early warning systems, educational programs for the public / decision makers, emergency response planning, drills, real-time operational emergency response and rescue operations. The development objectives of Phase I of the GFDRR Disaster Risk Management and Climate Change Adaptation Project are to strengthen the capacity of the Directorate for Civil Protection for supporting the Disaster Risk Reduction platform and coordinating preparedness and response to floods. By the end of the first phase (2014), the government is expected to have set out a roadmap for a fit-for-purpose DRM institutional framework and will have set up coordination mechanisms for early warning, preparedness and response.

Senegal's project funding for National Adaptation Programs of Action measures per capita per year was in the lowest (US\$0.1 to 0.7) quintile¹³.

4. Post disaster public interventions from government and donors

The Climate Change and African Political Stability Program's 2013 research brief *Institutional Capacity for Natural Disasters: Findings from Case Studies in Africa* highlights Senegal as an example that disaster response activities are perceived to provide greater electoral benefits than disaster preparedness: "The Senegalese government is more likely to invest directly in response and often does so in the wake of public outcry about a flooding situation. In contrast, in those areas where there is little media attention to floods, such as in the slum areas of Dakar, floodwater often remains present for months at a time with no government assistance." It also argues that Senegal provides evidence for the electoral incentives of disaster spending, with the example of the decentralization of flood management responsibility to local governments after the 2009 municipal election that was predominantly won by the opposition. This might explain why the Government has invested very little in disaster preparedness relative to international actors such as the World Bank.

Ex post bailouts (e.g. credit) and ad hoc social transfers (including respective roles of government and donors)

Although some structures are in place to respond to disasters, the stakeholders' roles vary from case to case. Between 3% and 6% of GDP in transfers and subsidies have been mobilized each year since 2000, mostly to alleviate fuel and food price shocks which resulted from global crises and only partly reflect national agriculture shocks (since imported products wheat, rice and milk have been

catastrophic risks through index insurance. The European Commission is the largest donor (committing 24.5 million EUR). The program is implemented by the International Finance Corporation (IFC) with support from the International Bank for Reconstruction and Development (IBRD).

¹³WorldRiskReport 2011

substantially subsidized). The targeting and administration are challenged and thought to contribute to market distortions, and welfare effects are suboptimal.

Illustrative examples of specific ex post interventions include the 2004 locust infestation, the 2009 floods and the 2012 floods. In 2004, West Africa faced its worst desert locust infestation in 15 years, and Senegal suffered significant crop damage. At the outset of the infestation, the Government disbursed US\$8 million from its budget to start locust-control operations, and committed participation of the army to coordinate operations, but this was insufficient. The World Bank's US\$60 million Africa Emergency Locust Project that helps seven West African countries reduce their vulnerability to current and future locust infestations provided US\$10 million for Senegal, which was complemented with funds from other donors including USAID, Agence Française de Développement and the United Nations Food and Agriculture Organization.

In response to the 2009 floods, the Government launched the Organisation de la Réponse de Sécurité Civile (ORSEC) plan and unlocked a US\$4.5 million emergency fund, which was complemented with several other funds from development partners. Through the ORSEC plan, the Government sent 1,500 firemen to flooded areas. The Fonds de Solidarité Nationale and the Dakar Regional Council complemented the ORSEC Plan with material and donations totaling US\$800,000 to affected districts. At district level, a solidarity fund was housed in the Agence Régionale de Développement to reduce vulnerability to future disasters. Assistance from the World Bank totaled US\$4 million through the Participatory Local Development Program Project, WAEMU provided US\$500,000, while bilateral assistance from various donors totaled US\$700,000.

In response to the 2012 flooding, a governmental delegation led by the Ministers of Sanitation and Water, of Infrastructure and of Armed Forces visited Touba to assess the damages. That same day, the Prime Minister organized a crisis meeting, activated the ORSEC, and supplied resources totaling US\$2 million for the emergency response in the affected areas. National appeals from the President and from the Ministry of the Interior resulted in solidarity from the population that allowed the increase of budget available for emergency response to US\$3 million. The Khalife of Touba pledged US\$2 million to support the Government in financing water sanitation efforts in that city.

5. Potential donor overlap

There are a number of donors active, and Senegal may benefit from a more coordinated support from development partners regarding DRM and CCA.

World Bank DRM and CCA related projects and programs are:

- Storm Water Management and Climate Change Adaptation Project (IDA US\$56 million, Senegal US\$13 million, Nordic Development Fund US\$4 million, Japan considering US\$15 million; 2012–2017)
- Sustainable Land Management Project (GEF US\$5 million; completed 2012)
- African Emergency Locust Project (IDA US\$10 million; completed 2011)

World Bank agriculture insurance projects are:

- EC funded GIFF,
- Agriculture Insurance Development Program

GFDRR funded DRM and CCA related projects and programs are:

- Disaster Risk Management and Climate Change Adaptation (US\$1 million; 2012–2015)
- Post-Disaster Needs Assessment (US\$400,000; completed 2009)
- Spatial Analysis of Natural Hazard and Climate Variability Risks US\$100,000; completed 2009)

With funding from USAID, World Food Program has initiated a Senegal pilot of its R4 Rural Resilience Initiative, a collaborative program that it developed in partnership with Oxfam America, and with support from Rockefeller Foundation and Swiss Re. Its name reflects the four R's: risk reduction (through resource management), prudent risk taking (supported by microcredit), risk reserves (in the form of savings), and risk transfer (with insurance), and it builds on the experience of the HARITA project¹⁴. Insurance is not as advanced as the other components in Senegal; an index insurance product designed with the International Research Institute for Climate and Society of Columbia University is currently being tested in dry run before being properly launched next planting season. The initiative's "Senegal National Policy Engagement Plan" seeks to build synergies between Oxfam and WFP programs and public policy initiatives, including the facilitation of an actionable government strategy for food security and rural resilience policy.

Supported by the EC and implemented by the World Bank Group, the Global Index Insurance Facility has been piloting index insurance for groundnut farmers in Senegal since 2011, testing new distribution partnerships, contributing to the necessary weather data infrastructure, reaching out to and insuring thousands of smallholder farmers. At the same time, the project has obtained regulatory recognition of index insurance and has contributed significantly to the development of a new microinsurance regulation also addressing index insurance.

Between 2008 and 2009, UNDP supported the Government of Senegal for the development of a National DRR program and National DRR platform. The DRM country plan funded by GFDRR will support operational implementation of these outputs.

In addition to the World Bank, the principal donors and agencies currently supporting DRM are:

- United Nations Development Program (UNDP),
- World Food Program (WFP),
- Food and Agricultural Organization (FAO),
- Office for the Coordination of Humanitarian Affairs (OCHA),
- Economic Community Of West African States (ECOWAS),
- Nordic Development Fund,
- Caritas,
- Oxfam,
- GFDRR Donors European Union (EU), Japan, Norway.

6. State of domestic non-life insurance market

Property insurance and reinsurance is well developed in Senegal, but although there are no regulatory obstacles, catastrophe insurance is underdeveloped.

6.1 Legal and regulatory environment

The insurance industry in Senegal is governed in the first instance by the regional insurance law imposed by the Conference Interafricaine des Marches d'Assurances (CIMA) under the 1995 treaty, which makes no mention to catastrophe insurance nor includes reserving or capital adequacy requirements for the risk of catastrophic accumulations. Senegal is not member of the International Association of Insurance Supervisors, nor is CIMA.

¹⁴Horn of Africa Risk Transfer for Adaptation; see e.g. http://unfccc.int/secretariat/momentum_for_change/items/6636.php

6.2 Property risk insurance

The non-life insurance market is dominated by Allianz and Axa who combine one third of market share, with 13 other insurers accounting for the rest. Operating expenses in property insurance are 55% of earned premium but the non-life market has been reasonably profitable.

Property insurance incurs a tax of 20%, by far the highest of any line of insurance business (other non-life being predominantly 10%).

Flood cover is provided as part of package covers for homeowners or commercial and industrial assets, and may be subject to separate policy terms to limit insurers' exposure as a 'special risk' (although catastrophic events don't seem to be generally excluded in policy wordings). Penetration is very low, especially in the homeowners market: the rapid growth of informal urban settlements has generated large amounts of uninsured exposure, and the absence of land-ownership excludes a large proportion of exposed households from insurance.

In partnership with microfinance institutions, insurers have developed micro-insurance packages that add fire and flood cover to credit life for street merchants, but no figures on uptake are available.

Parametric insurance is not mentioned in the CIMA insurance code, but the new micro-insurance regulation will allow non-agriculture parametric property micro-insurance for specific perils or events readily measurable on a regional scale.

6.3 Agriculture insurance

Article 55 of the CIMA insurance code defines agriculture risks as those affecting people working in agriculture and their families, as well as their agricultural goods. Parametric insurance is not mentioned there, but will be permitted for agriculture micro-insurance under the new MI regulation – making Senegal one of the few countries where index based insurance will be properly regulated. Various agriculture index insurance pilots supported for example by the EC funded GIIF and the WFP are yet too small to have noticeable impact on the financial management of natural disasters.

Currently, only CNAAS offers agriculture insurance with a variety of products including Multi-Peril Crop Insurance, Specific Risk Crop Insurance as well as accident only livestock mortality, and several weather index insurance pilots that the supervisor authorized by exception.

Despite ongoing government support in form of premium subsidy (around 50%) and an exemption from insurance tax (as well as donor support for the index pilots), CNAAS has not achieved its objectives in terms of outreach, insuring only 30,000 heads of livestock heads (3% of the projected number) and 4,600 ha of agriculture surface (2% of the projected area) in 2012. The principal reason for this modest scale is the predominantly voluntary nature of agriculture insurance, which requires considerable efforts towards individual or small group sales. The company's rural infrastructure is not equipped for that, and its business model will probably require significant revision in order to flourish. A key proposal by management is that CNAAS be allowed to also sell other lines of insurance business to rural populations. If approved, the company could become a key stakeholder in property catastrophe insurance.

The EC funds the work of the Global Index Insurance Facility in Africa, the Caribbean and Pacific regions. In Senegal, groundbreaking progress has been made both in the implementation of weather index insurance pilots and the evolution of all technical aspects, as well as on the regulatory side, leading to one of the first insurance regulations worldwide to explicitly allow index insurance.

At the request of the ministries of finance and of agriculture, the World Bank's Agriculture Insurance Development Program (AIDP) intends to conduct assessments of agricultural risks, and of the impact of existing initiatives to protect rural livelihoods, to stimulate policy dialogue that will lead to a

reassessment of the best instruments to achieve government objectives, expected to include insurance mechanisms delivered by public private partnerships.

6.4 Reinsurance

The local state reinsurer SocieteSenegalaise de Reassurances SA is a public private partnership set up in 1988 with 50% state capital and 50% capital from local insurers. Subsequent capital increases brought in other shareholders such as the Moroccan SocieteCentrale de Reassurance (20%) and reduced the state's share to 27%. Its gross premium income in 2009 was US\$24 million, half of it from compulsory cessions. The CIMA regional CICA-RE and Africa Re are also considered local and entitled to compulsory cessions of 15% and 5% respectively. Under the CIMA Code, no more than 75% of a risk may be reinsured abroad without the authorization of the regulator, but as the local reinsurers have good reputation this has not been an issue. Reinsurance cessions assumed by primary insurance companies are insignificant (1% of premium in 2009).

With 140%, reinsurers' loss ratios for property were substantially higher than for any other line in 2009. Apart from aviation, property insurance provides the bulk of reinsurance cessions with 57% of premium income.

There are no regulations for reinsurers under the CIMA Code.

Catastrophe reinsurance is available, including the services of the African Centre for Catastrophe Risks organized by the African Insurance Organization and managed by SocieteCentrale de Reassurance in Casablanca; but take-up is reported to be modest¹⁵.

Alternative Risk Transfer mechanisms or captives are not used by Senegalese insurers.

6.5 Demand for insurance

With the advent of regulated micro-insurance, there is renewed interest in scaling up inclusive insurance, primarily among microfinance institutions but also among the insurance industry. As everywhere, there are different opinions on the predominance of supply side or demand side constraints, but insurance penetration in Senegal is evidently low (less than half of African average), and there is widespread consensus that the lack of the population's understanding of insurance in general is as serious an obstacle as their limited purchasing power. Micro-insurance experience in other countries shows that intangibility¹⁶ is a major obstacle to embrace insurance, and given the infrequent payouts of catastrophe insurance (and the fact that in normal years, no one may experience payout in the whole country, so positive experiences - even if from others - will not reinforce individuals' purchase decisions) imply that the demand for catastrophe property insurance is low in Senegal. Similarly, the experiences of CNAAS and of the EC funded GIFF show that the demand for agriculture insurance is far below anticipations, even with substantial premium subsidies.

Current distribution doesn't help the outreach to wider populations. Half of all non-life insurance and virtually all property insurance is placed by brokers, including the international Ascoma, Gras Savoye and Marsh. Bancassurance and direct marketing are incipient. The new CIMA micro-insurance regulations allows for a wide variety of intermediaries such as cooperatives, mobile network operators, microfinance institutions and supermarket chains, but is yet to be implemented in Senegal.

¹⁵ AXCO Insurance Market Information: Non-life (P&C) 2012

¹⁶ Meaning that emerging insurance clients fail to perceive what they get in return for their premium payment unless insurance claim payouts are made to them or to someone they know; or unless some other ancillary services are provided by the insurance along with the risk transfer, such as access to discounted outpatient services or pharmaceuticals, or agriculture-related meteorological information

The reputation of the insurance industry among the population is somewhat tarnished by adverse experiences with claims settlement in the mandatory third party liability motor insurance (the line of business with most penetration).

7. Opportunities to be financed under this initiative

- **Help the Government's work to establish a national integrated DRFI Strategy.** This strategy will build on and incorporate the National Platform for the Prevention and the Reduction of Major Disaster Risks along with the **development of the catastrophe insurance market** and well as the **development of a comprehensive sovereign DRFI plan.** The sovereign DRFI plan will give the Government immediate access to funding and transparent and effective budget execution processes post shock events, enhancing the proposed work of the ARC.
- **Support agricultural insurance programs through in the Compagnie Nationale d'Assurance Agricole du Sénégal** if an expansion of its mandate can be agreed with government, to make it a strong provider of various lines of insurance and other social protection mechanisms in rural areas.
- **Explore opportunities for flood micro-insurance in urban areas (e.g., Dakar).** The 2009 floods in Dakar demonstrated the high vulnerability of urban low-income households. Catastrophe micro-insurance products for floods, linked with credit, could be explored.
- **Establish a Technical Support Unit, in partnership with public and private stakeholders,** to develop domestic market infrastructure and allow insurance to play the appropriate role in an effective, efficient and sustainable disaster and social protection framework. To ensure the desired results, the various initiatives underway in respect of agriculture insurance, microinsurance and disaster risk insurance will benefit from the leadership and ownership of a dedicated agency with the right expertise and appropriate funding. By housing all the expertise under one mission and lead, it can transcend boundaries between rural protection, social safety nets, inclusive and sovereign insurance, and implement solutions across sectors and ministries. With appropriate governance, it will attract the private sector to make public private solutions the default in risk transfer, and partner with all existing agriculture insurance pilots.

List of Acronyms

ARC	African Risk Capacity
CCA	Climate Change Adaptation
CIMA	Interafrican Conference of Insurance Markets
CNAAS	National Agricultural Insurance Company of Senegal
CNCAS	National Bank for Agricultural Credit in Senegal
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EC	European Commission
ECOWAS	Economic Community Of West African States
EU	European Union
FAO	Food and Agricultural Organization
GFDRR	Global Facility for Disaster Reduction and Recovery
GIIF	Global Index Insurance Facility
HFA	Hyogo Framework for Action
IMF	International Monetary Fund
MFI	Microfinance Institutions
MI	Micro-insurance
OCHA	Office for the Coordination of Humanitarian Affairs
ORSEC	Emergency plan in case of disaster
P&C	Property and Casualty
UNDP	United Nations Development Program
WAEMU	West African Economic and Monetary Union
WDI	World Development Indicator
WFP	World Food Program
AIDP	Agriculture Insurance Development Program