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# STRENGTHENING RESILIENCE IN SENEGAL THROUGH AGRICULTURAL PRODUCTIVITY AND EDUCATION

## WHY IS ACTION NEEDED?

Senegal is one of the poorest countries in the world but thanks to its political and social stability has experienced a higher economic growth compared to its neighboring countries.

**Resilience** is “the capacity that ensures shocks do not have long-lasting adverse development consequences”. It is widely recognized as one of the most powerful means to mitigate and prevent food security crises.

Senegalese population strongly relies on agriculture and livestock rearing activities: 46 percent of the workforce is employed in the agricultural sector, which accounts for 17.5 percent of national Gross Domestic Product.

Recently, agricultural productivity is facing a significant slowdown, mainly due to climate shocks, such as low rainfalls and droughts, lack of access to water irrigation and volatility of prices.

FAO, together with the *Agence Nationale de Statistique et de la Démographie* (ANSD), conducted a study which aims at understanding resilience capacity and its determinants in Senegal (see boxes).

## WHAT DID THE STUDY REVEAL?

The resilience capacity of Senegalese households is strongly influenced by safe housing conditions, good access to basic services (such as markets and hospitals) and to productive assets (land and livestock). Disaggregated analysis shows that:

**1. Households located in urban areas are more resilient than the ones in rural areas.** Urban households have better housing conditions and access to services whereas rural households are more exposed to climate risks;

**2.** As a consequence, the analysis at the regional level discloses that Dakar region is the most resilient one whereas **southern regions of the country** – mostly rural – **are the least resilient ones**; and

**3. Female headed-households are slightly more resilient than male ones.** This might be explained in part by the fact that female headed-households are mainly located in urban areas.

## MEASURING AND ANALYSING RESILIENCE

Since 2008 FAO has been measuring resilience through its Resilience Index Measurement and Analysis (RIMA-II). The tool allows to estimate household resilience to food insecurity in two steps: 1) the calculation of the Resilience Capacity Index (RCI) and the Resilience Structure Matrix (RSM); 2) the correlation between the index and shocks that might have effects on household resilience capacity.

The Resilience Index is a number that expresses household capacity to cope with shocks and stressors. It is made up of four pillars called Access to Basic Services, Assets, Social Safety Nets and Adaptive Capacity. The pillars themselves are made up of a variety of factors that are considered during the analysis. Examples of the factors are: distance to market, hectares of cultivated land, level of education, etc. The RSM is a way to weight each factor inside each pillar in order to determine the actual resilience capacity. The result can be used to rank and target households from the most to the least resilient.

In the second step, calculations are made to show the effects of different types of shocks on food security and resilience, based on the resilience capacity calculated in the first step. In this way, the model can provide clear policy indications.

## WHAT SHOULD POLICYMAKERS DO TO STRENGTHEN RESILIENCE?

Concrete policy actions can be put in place, building up on what already ongoing in the country:

**1. In rural areas**, facilitate access to basic services such as schools, hospitals and public transportation, reinforce infrastructure by building asphalted roads, and invest in education;

**2. Focus the action on the most disadvantaged regions**, by diverting the majority of public investments to increase and modernize their agricultural productivity; and

**3. For female headed-households located in rural areas**, reinforce their access to education, cash transfers and, in general, basic services, with a specific focus on pregnant women and mothers of young children.

## CHANGES OF RESILIENCE CAPACITY OVER TIME

The infographic below shows the main drivers of changes in resilience capacity and food security over time. The analysis is based on two datasets provided by ANSD in 2005 and 2011.



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