

## CREDIT CONSTRAINTS, SKILLS, AND SMALLHOLDERS' AGRICULTURAL PRODUCTION

Smallholder farmers play a crucial role in global food security. However, smallholders also often do not meet their production potential, engaging in subsistence-level agriculture instead of

producing excess outputs to then sell at market. Such farmers frequently do not have access to the capital they need to reach

this higher level of production, nor are they trained in the skills required to successfully manage what is in effect a small business.

A recently completed **IFPRI project** aims to address this lack of information and capital among smallholders in Senegal. The two-year program combines a large, one-time cash transfer with targeted farm management advice.

Participating farmers received monthly advisory visits and farm management advice from project facilitators; these facilitators, who were experienced farmers living in the broader study area, conducted the monthly visits and worked with farmers to establish a farm

management plan for the upcoming season. These plans helped farmers better manage their available resources and clearly map out the appropriate timing of different agricultural activities, as well as the amount and

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timing of expenditures needed to complete those activities. The advisory visits and farm plans were administered

for two years.

Randomly selected farmers also received a one-time cash transfer of 100,000 CFA (around USD 200, or 15 percent of baseline production) near the beginning of the agricultural season. Although farmers were not required to spend the transfer on agriculture, they were told that the cash was intended for investments in their farm, specifically for the implementation of their farm management plan.

To evaluate program impacts, researchers conducted a cluster randomized control trial among 600 project households, designed to disentangle the effects of the farm management plan alone

**AGRODEP** is a Modeling Consortium of African researchers living and working in Africa with research interests ranging from economic modeling to regional integration and development to climate change, gender, poverty, and inequality.

There are currently 183 members from 27 countries; our members work at top research institutions and universities in their own countries as well as various government agencies and non-profit organizations.

The benefits of being an AGRODEP member include opportunities for research grants, free access to cutting-edge economic research tools, data, and training. Members also gain access and exposure to large global networks of economic researchers and experts. [Click here to learn more.](#)

from the effects of the cash transfer combined with the management plan.

For farmers who received both the farm management plan and the cash transfers, gross value of agricultural output (GVAO) increased by more than twice the value of the transfer (322,000 CFA or \$550) after the first year of the program. GVAO per hectare also went up significantly. After the second year, these impacts on agricultural output were reduced. However, the study team found an important increase in the ownership of livestock and agricultural equipment that was four times the size of the transfer (475,000 CFA or \$800) even after the second year of the program. In other words, farmers who received both the management plan and the cash transfer appeared to

make lasting positive investments in their farms. This finding suggests that the cash transfer did, in fact, result in increased agricultural investments that could spur production and household income over the long term.

For households that received only the farm management plan, the study found only a suggestive impact on agricultural output after year one, and no impact after year two. Additionally, there was no impact of the farm plan alone on investments in equipment or livestock. However, it should be noted that while the authors did not find a large independent impact of the farm plan, it cannot be definitively stated whether or not the plan (or the advisory visits themselves) were instrumental to the success of

the cash transfer. Moreover, a companion study in Malawi does show additional returns to the cash transfer when combined with the farm plan relative to only the cash transfer.

Overall, the Senegal study shows that large, one-time cash transfers aimed at increasing agricultural investments can significantly impact smallholders' agricultural production. This finding suggests that for programs aimed at "graduating" smallholder farmers from subsistence production to more high-value, commercial production, cash transfers may be the most critical component for overcoming production constraints.

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## AGRODEP AFFILIATE MEMBERSHIP

### Affiliate Membership Still Open for Application

AGRODEP continues to accept [applications for Affiliate Membership](#) on a rolling basis. Applications will be considered for those who fulfill at least one of the following requirements:

- AGRODEP member who moves out of Africa;
- Qualified African researcher who lives and works outside of Africa; or
- Qualified African and non-African researchers working in international and CG centers in Africa.

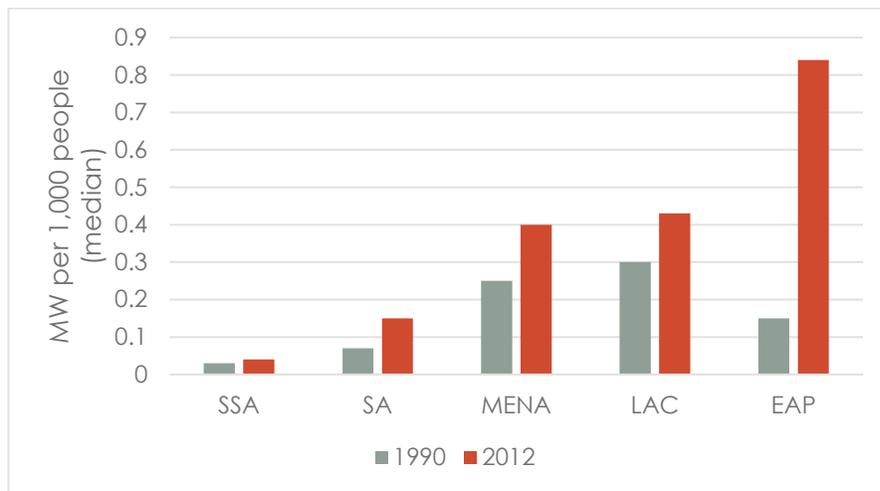
Affiliate membership brings several important benefits. Affiliate members have access to all AGRODEP resources (data and models); they can also continue to contribute to the Consortium's activities through publications, trainings, and reviews. Affiliate membership allows AGRODEP members who relocate out of Africa to continue to benefit from all the Consortium has to offer. This membership class also provides expanded opportunities for members to network and collaborate with colleagues and experts outside of the Consortium.

## DATA

### Recent statistics about Africa

The last World Bank's *Africa's Pulse* report, released in April 2017, focuses on infrastructure in Africa. The performance of Africa south of the Sahara in terms infrastructure is low, particularly in the power sector, where electricity-generating capacity per capita has been almost constant over 20 years (see Figure 1) and in the transportation infrastructure, where road density declined during 1990–2011 (see Figure 2). Africa is the only continent where this latter statistic decreased over this period. By contrast, telecommunications infrastructure on the continent has significantly improved: the number of internet users per 100 people increased from 1.3 in 2005 to 16.7 in 2015.

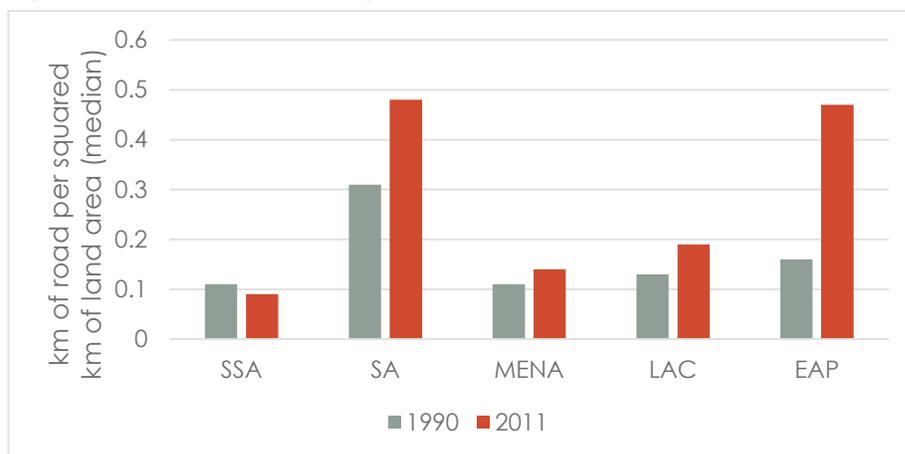
**Figure 1: Electricity-Generating Capacity, by Region**



Source: World Bank's Africa Pulse (2017)

SSA: Sub-Saharan Africa; SA: South Asia; EAP: East Asia and the Pacific; MENA: Middle East and North Africa; LAC: Latin America and the Caribbean.

**Figure 2: Road Density, by Region**



Source: World Bank's Africa Pulse (2017)

SSA: Sub-Saharan Africa; SA: South Asia; EAP: East Asia and the Pacific; MENA: Middle East and North Africa; LAC: Latin America and the Caribbean.

## AGRODEP PARTICIPATION IN RECENT NAIP CLINICS

### Seven Clinics Held from April-May

Numerous AGRODEP members have participated in a series of recent technical clinics on the appraisal and design of National Agricultural Investment Plans (NAIPs). These clinics were held from April-May in Dakar, Senegal and covered a wide range of topics.

The first clinic, held from April 18-20, was on “Gender Analysis.” Eleven people participated in the clinic, of whom 10 were AGRODEP members: **Dr. Mahyao Adolphe**, **Dr. Kassa Alemu**, **Dr. Johannes Tabi**, **Dr. Omer Combarry**, **Dr. Maam Suwado Sakho-Jimbira**, **Dr. Boniface Ngah Epo**, **Dr. Agnes Zabsonre**, **Mr. Frances Kemeze**, **Dr. Winford Masanjala**, and **Dr. Nicholas Ngepah**.

The second clinic, held from April 26-28, focused on “Inclusive Growth and Value Chain Development.” Seventeen people participated in this clinic, with a total of 10 AGRODEP members: **Dr. Olawale Olayide**, **Dr. Kassa Alemu**, **Dr. Lawrence Mapemba**, **Dr. Luke Olarinde**, **Dr. Abiodun Obayelu**, **Dr. Nnaemeka Chukwuone**, **Dr. Adebunola Adepoju**, **Dr. Kabir Salman**, **Dr. Epiphane Sodjinou**, and **Dr. Bernard Kiplimo**.

A clinic on “Regional Trade Analysis” was held on May 2-5 and included 7 AGRODEP members: **Dr. Albert Makochekanwa**, **Dr. Bethuel Kinuthia**, **Dr. Senakpon Dedehouanou**, **Dr. Arcade Ndoricimpa**, **Mr. Souleymane Sadio Diallo**, **Dr. Souleimane Adekambi**, and **Dr. Koffi Yovo**.

The fourth clinic was held from May 2-4 and focused on “Public Agricultural Expenditure Analysis.” A total of 5 AGRODEP members participated: **Dr. Hassen Hussien**, **Dr. Mercyline Kamande**, **Dr. Olajide Ajao**, **Dr. Denis Ouedraogo**, and **Dr. Adedayo Adedeji**.

The clinic on “Climate-Smart Agriculture” was held on May 8-10. Nine AGRODEP members participated in this clinic: **Dr. Nnaemeka Chukwuone**, **Dr. Oluwafunmiso Olajide**, **Mr. Mathieu Ouedraogo**, **Dr. Chokri Thabet**, **Dr. Somlanare Kinda**, **Mr. Frances Kemeze**, **Dr. Lawrence Mapemba**, **Dr. Charles Nhemachena**, and **Dr. Carren Pindiriri**.

Six AGRODEP members participated in the clinic on “Overarching Agricultural Growth and Poverty Reduction,” held from May 8-10: **Dr. Nimenya Nicodeme**, **Dr. Henry Okodua**, **Dr. Joseph Francois Cabral**, **Dr. Miriam Omolo**, **Dr. Lulit Mitik Beyene**, and **Mr. Souleymane Sadio Diallo**.

A final clinic was held on May 22-26, focusing on “Food Security and Nutrition.” A total of 5 AGRODEP members participated in this clinic: **Dr. Senakpon Dedehouanou**, **Dr. Souleimane Adekambi**, **Dr. Jules Medard Nana Djomo**, **Dr. Damien Mededji**, and **Dr. Mahyao Adolphe**.



### WHAT IS AGRODEP?

The African Growth and Development Policy (AGRODEP) Modeling Consortium is an initiative led by the International Food Policy Research Institute (IFPRI). The goal of AGRODEP is to position African experts to take a leading role in both (1) the study of strategic development questions facing African countries as a group and (2) the broader agricultural growth and policy debate, which traditionally has been dominated by external actors and concerns.

### CONTACT INFORMATION

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