

# Info Note

## How can effective dialogue be established between researchers and policy makers on climate change adaptation in Mali

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### Key Messages

- Mali has an adequate and coherent institutional framework to implement an effective climate change adaptation policy.
- However, there is a problem of lack of human resources and skills, as well as lack of communication between institutions and between researchers and policy makers.
- To achieve effective dialogue between researchers and policy makers, researchers need to present their research results in a format that can be understood and used by policy makers.
- The National Climate Change Committee of Mali (CNCCM) would be an appropriate forum for such dialogue.
- Within CNCCM, the national science-policy dialogue platform on climate change, agriculture and food security in Mali (C-CASA Platform) could provide impetus for operationalizing the component on “adaptation to climate change, including risks and disasters”.
- Transforming Malian agriculture into climate-smart agriculture requires adequate financing. Such financing will be possible through more rational management of existing resources and stronger partnership of the various State organizations and departments identified in the study.
- Mali needs such a sustainable dialogue forum for experts and policy makers to agree on a shared vision of the challenges (research priorities), and translate the evidence brought by researchers into policy decisions.
- Farmers, through their representative farmer organizations and NGOs, need to be stakeholders in this dialogue forum.

This briefing note summarizes the main conclusions of the study conducted within the context of the national science-policy dialogue platform on climate change, agriculture and food security (C-CASA Platform created in 2012) (Fig.1) on the importance of dialogue between researchers and policy makers and any avenues for improvement.

The conclusions are based on an interview of 17 key climate change adaptation institutions, collectively selected from members of the National Climate Change Committee in Mali.



Fig. 1. Meeting of representatives of National C-CASA Platforms in 2012, including Malian researchers and policy makers involved in adopting climate change adaptation policies© CCAFS

### Mali must act quickly and in a concerted manner to cope with climate change

#### An economy heavily dependent on the agricultural sector and vulnerable to climate hazards

Agriculture is a key sector for the economy and social stability of Mali, representing about half of the national GDP, while three in four people work in this sector (FAOSTAT, 2013). The agricultural sector accounts for nearly 30% of export earnings. The main agricultural exports are cotton, live cattle, hides and skins, fish, fruits and vegetables, and gum arabic.

About 95% of Malian agriculture is rain-fed (5% of the land is irrigated), and thus depends on the abundance and distribution of rainfall during the monsoon season from May to September. It is particularly sensitive to climatic variations, impacts of weather extremes, and continuous extension of the desert to the south over several decades. Even though Malian farmers are already vulnerable due to the high variability and harshness of the Sahel climate, they could suffer greater stress in the coming decades as a result of climate change.

## Climate change will certainly have a strong impact on agriculture

### What climate in 2050? Warmer, especially in the North

Climate modeling predicts minor changes in rainfall, but regular warming that will accelerate up to three times faster than now. The North Sahel belt, more arid than the South, is likely to warm faster: rise from +0.41 to +0.6 degrees every 10 years in 2050 (Fig 2).

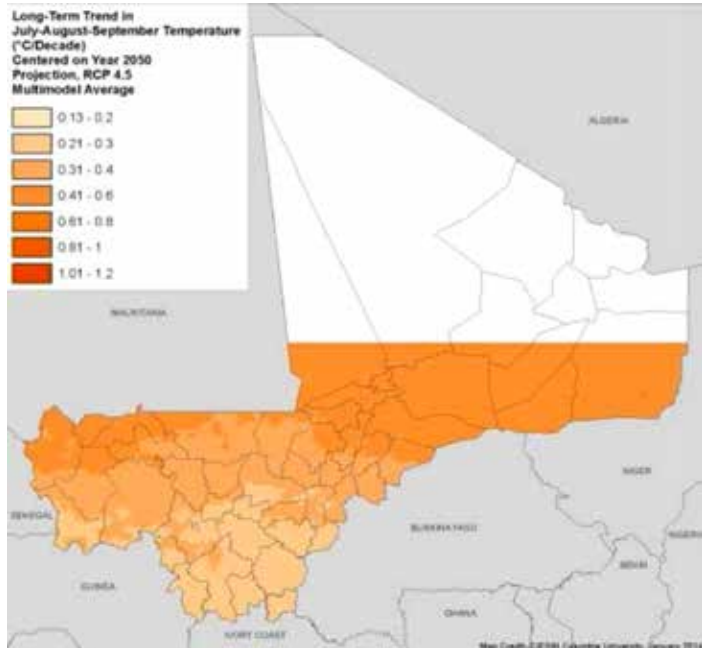
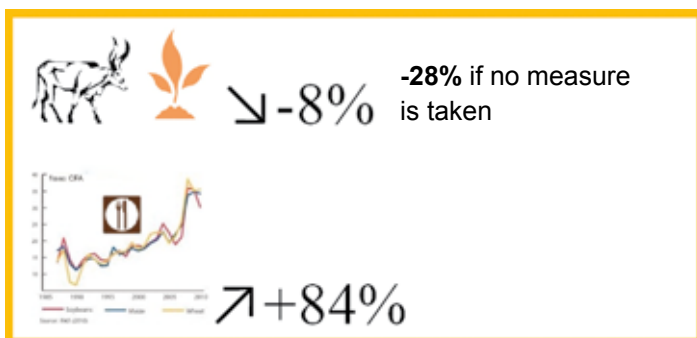


Fig 2. Ten-year temperature trends in 2050. Source: USAID, 2014

### Already a climate change impact in agriculture

For example, the northern limit of the rainfed millet-sorghum growing zone has shifted by about 50 kilometres to the South since 1950, most likely due to rising temperatures (USAID, 2014). The shift will most likely continue because the forecasted rising temperatures will lead to increased evapotranspiration and therefore reduce the quantity of water available for agriculture. Extreme temperatures could go beyond the biological limits of some crops.



Impact on the agricultural sector in sub-Saharan Africa (GIEC, 2014).

In general, warmer climate will sharply reduce animal and plant production if nothing is done to make Malian agriculture “climate-smart” (-28% as against -8% according to recent GIEC studies). Consumers will also be affected because there will certainly be an upsurge in food prices.

Climate change will affect all rural families: farmers weakened by the unpredictability of rainy seasons, and therefore of the best sowing period; graziers affected by the early drying-up of water points and disappearance of pasturelands; fishermen affected by the repercussions on the ecosystems... The frequency of climatic incidents, such as droughts, will likely exacerbate conflicts in the use of common resources, such as access to water, pasturelands, and forests. Investing against climate change and reinforcing the resilience and adaptation capacity of rural populations will also be a key factor in sustainable development policies in Mali.

However, can Mali develop effective and wise strategies for climate change adaptation? In particular, how can researchers and policy makers work together?

### **Current situation**

#### A coherent and adequate institutional framework

The Government of Mali has for several years taken into account climate change with, since 2007, a National Action Programme for Climate Change Adaptation. However, the challenges and vulnerability to climate change vary according to socio-economic sectors, regions and population groups; for example, between graziers and farmers, as mentioned above. **Sector management** of adaptation and mitigation issues is therefore necessary, as in the case of agriculture and food security, as well as **inter-sector collaboration** with water, energy, health and other areas affected by global warming.

A vision shared by the various stakeholders and a clear roadmap in which priorities are set, and synergies and complementarities identified between sectors and institutions, are necessary today (National Climate Change Policy, 2011).

Mapping and analysis of the missions of State actors and civil society organizations involved in the management of climate change in Mali show that there is a satisfactory institutional framework required for each sector of activity to be supported towards more sustainable development. No less than twenty organizations have been identified as vital for issues relating to adaptation of the agricultural sector climate change.

#### Implementation is still a problem

**Operational problems and capacity of institutions:** Most institutions lack adequate qualified human resources to understand all the issues, develop appropriate responses, and cover the country in a satisfactory manner. They fail to adequately own their missions because of limited skills, as well as lack of formalized communication between institutions to look for synergies and share existing knowledge.

Funding for the definition of priorities and the role of national coordination are often underlying issues; for example, the weak leadership of the National Scientific and Technological Research Centre in directing a climate change research

policy, as the centre has limited influence on bilateral funding from major research institutes such as the Institute of Rural Economy (IER).

Finally, there is **difficult communication/interaction between policy makers and researchers** due to different perspectives. While politicians want certainty and impact with figures, scientists talk about a variety of possible future trends.

Many politicians do not have wide knowledge of issues relating to agricultural adaptation to climate change. On the other hand, researchers do not provide research findings that can be easily transformed into pragmatic actions. Scientific information is not widely disseminated and distributed. This could explain why policy makers do not consider the presence of researchers as indispensable and as a useful source of information for formulating a policy or development plan against climate change.

Formalized forums for dialogue between researchers and policy makers are rare or non-existent: for example, since its creation in 2002, the High Local Authorities Council, which is key driver of decentralization, has only rarely invited IER researchers.

#### Building on successful consultation experiences

- The Environment and Sustainable Development Agency (AEDD), which is responsible for coordinating all climate change activities, has a network of national carbon experts from various institutions to advise on and monitor the implementation of the Clean Development Mechanism of Mali. This shows that it is possible to bring together experts from various horizons.
- Some projects, if replicated at national level, could serve as model for effective consultation between climate change experts and policy makers. For example, the capacity building pilot project for adaptation and resilience to climate change in the agricultural sector in Mali, implemented in six (6) municipalities, brings together all structures involved in rural areas and the impact of climate change, particularly rural communities. The local development plan should therefore contain this “climate change” dimension. The final project evaluation will show whether this approach is feasible and therefore can be replicated in the 703 Malian municipalities.

### **From scientific data to political action, what recommendations?**

It is necessary to have a **forum for sustainable and formal dialogue** where researchers and policy makers can meet regularly to define a shared vision, as well as take concrete policy decisions based on scientific evidence. This will entail training policy makers to understand all dimensions of climate change (how to define vulnerability, for example). Researchers will work to produce useful research results for

policy debate: impact assessment, costs and benefits of an adaptation solution, etc.

Because it brings together all relevant sectors, the **National Climate Change Committee of Mali (CNCCM)** is the ideal candidate for enhanced dialogue between researchers and policy makers, through its five working groups. AEDD, which serves as secretariat for CNCCM, would be better off obtaining an institutional status that would make it multi-sector.

The national science-policy dialogue platform on climate change adaptation (C-CASA), created in 2012, could be responsible for the component on “adaptation to climate change, including risks and disasters.” Relevant analyses will revitalize and boost existing partnerships between some institutions. This will therefore demonstrate the operationality of CNCCM working groups.

**The opinions of farmers, who are most concerned with climate change, should be taken into account.**



Fig 3. An adaptation strategy - Bouyawere farmers have adopted a millet variety that has a shorter maturity period than Toronion (© Peter Casier/ CCAFS)

The land problems of graziers, fishermen and farmers are not adequately taken into account when preparing research programmes. It is necessary to include farmer organizations and non-governmental organizations dedicated to sustainable development issues (for example, through RESO Climat Mali) in this dialogue forum for climate change adaptation because these organizations can draw attention to grassroots concerns.

Several other interesting dialogue forums have been identified and should be used. Within the High Local Authorities Council and the Municipalities Association of Mali, researchers could guide municipalities to include climate change in local development plans. The National Agricultural Research Committee is the ideal forum for defining agricultural research priorities in climate change, which could then be submitted to CNCCM.

Scientific research in climate change should be presented **in good style and format** to be understood by non-experts, and lead to concrete and immediate policy action. For example, researchers could help DNA to become or once

more become a source of proposals and information on the impact of climate change for the weekly meeting of the Minister of Agriculture and close collaborators. This could, for example, be an assessment study on the shortfalls of lack of access by farmers of drought-tolerant crops. This could influence the formulation of project ideas, or at least the implementation of innovative projects, as well as the upscaling of conclusive results.

This effort to disseminate and communicate challenges and solutions to the largest number of people is essential for ensuring that climate change issues are taken seriously in the policy debate. C-CASA platform and the network of journalists on climate change need to help in this respect. This is vital for Mali, which is one of the countries most vulnerable to climate change.

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