

STRENGTHENING MULTI-STAKEHOLDERS INNOVATIONS PLATFORMS IN MALI

Elliott Dossou-Yovo | Jonathan Guindo | Pierre Kone |
Salif Doumbia

Activity report



AICCRA
Accelerating Impacts of CGIAR
Climate Research for Africa



Table of content

1. Introduction	3
2. Description of Activities.....	4
3. Outcomes of the MSP consultations	5
3.1. Multi-stakeholders actors and relationships.....	5
3.2 Internal functioning of the multi-stakeholder platforms	6
4. Conclusion	7
5. References	8

List of abbreviation

AfricaRice	Africa Rice Center
AICCRA	Accelerating Impacts of CGIAR Climate Research for Africa
CIS	Climate Information Services
CSA	Climate Smart Agriculture
IER	Institute for Rural Economics
IV	Inland vallleys

1. Introduction

Most of the smallholder farmers in Mali are confronted with multifaceted challenges, which include low productivity, post-harvest crop losses, under-developed markets, and vulnerability to climate change (Andrieu et al., 2017). Low productivity and underperformance of the agricultural sector in Mali are largely induced, either directly or indirectly, by factors such as the heavy reliance on rainfed cropping and livestock production (Birhanu et al., 2018). Rainfall has become increasingly variable and unpredictable, impacting water availability and quality for crop and animal production, but also bringing about invasions of locusts. This is coupled with the inadequate management of water resources, which are vital to agricultural activities and food security in the country. Losses from inappropriate management of water resources in the Inner Niger Delta are estimated at 30,000 billion cubic meters (Brockhaus and Djoudi 2008). The demand for charcoal and wood for household energy needs is assessed to be 5 million tons and likely to reach 7 million tons in the next years, which would correspond to the regeneration capacity of forest resources in Mali (Waigalo, 2020). Natural resource degradation has become a major factor for desertification in a country already primarily covered by desert and with a relatively small portion of agriculturally suitable land. There is limited access for farmers in rural areas to training, improved seeds, fertilizers, adequate equipment, and finance opportunities; which hinders development efforts and growth of the agriculture sector (Traore et al., 2015). This is compounded by limited access to niche markets, due to farmers' low capacity to add value to their products. Agriculture products are usually sold at low prices due to the lack of value addition and inefficiencies within the value chain, bringing the most benefits to the wholesalers (especially in the case of the cereal value chain). Gender inequity and unequal distribution of resources (especially land), are encouraged by existing customary laws that limit women and youth's access to productive resources in rural areas and their representation in decision-making spheres (Beaman and Dillon, 2018). Challenges faced by the agricultural sector in Mali are compounded by climate change (Traore et al., 2015). Projected changes in temperature and rainfall are expected to decrease crop yield, and land suitability for the major crops produced in the country namely rice, millet, sorghum, and maize, as well as the availability of fodder for livestock.

These problems require several interventions such as institutional reforms that facilitate efficient rural service delivery, development of markets, creation of physical infrastructure and government policies that are supportive while ensuring a stable and conducive political environment (Sanyang et al., 2015). Smallholder farmers require systems that are responsive to their needs: access to markets, market information, market intelligence and effective farmer organization as the agricultural sector in the country transforms towards commercialization.

Inland valley landscapes are widespread in the country, and are increasingly being used for agricultural production given the high agricultural production potential, due to better soil fertility and water availability than uplands (Dossou-Yovo et al., 2019). In addition to food, inland valleys provide diverse market and non-market goods and services that benefit the local communities (Dossou-Yovo et al., 2018). Inland valleys are important for local flood and erosion control, water storage, nutrient retention, and stabilization of the micro-climate, as well as for recreation and tourism, and for providing water, clay, and sand for crafts and construction. Inland valleys also provide important forest, wildlife, and fisheries resources, and contribute to biological diversity as well as local cultural heritage. Indiscriminate use of inland valleys for agricultural production often leads to conflicts between different actors in rural communities.

In an attempt to enable discussions, negotiations, and joint planning between stakeholders from the rice-based systems, and address the weak linkages among the value chain actors, the AICCRA-Mali project established three multi-stakeholders platforms (MSP) in the inland valley sites of Finkolo Ganadougou, Blendio, and Loutana in Sikasso, southern Mali. Following the establishment of the MSPs, the project evaluated their capacity-building needs and organized training sessions to strengthen the capacity of the MSP actors for optimal and sustainable functioning. This report describes the main results obtained from engagement with the MSP actors.

2. Description of Activities

Consultation workshops were organized on a biweekly basis from May to November 2022 in three inland valleys sites of the AICCRA project in Mali: Finkolo Ganadougou, Blendio, and Loutana to evaluate the functioning of the MSPs, their capacity needs, and strengthen their capacity based on needs assessment. The pictures of the relevant actors identified by the participating stakeholders were posted on a flip chart. Arrows of three different colors were drawn between the various actors to show the interconnectedness between their activities as well as their interdependency. The one-side arrow shows unilateral dependency, while the two-sided arrow shows a bilateral dependency. Green, blue, and red lines indicate strong, moderate, and weak relationships between the actors. Furthermore, participants identified specific roles to enhance the overall performance of the MSP actors. The Strengths, Weaknesses, Opportunities, and Strengths (SWOT) framework was employed by stakeholders to define restraining and driving forces that affect the optimal functioning of MSPs.

3. Outcomes of the MSP consultations

3.1. Multi-stakeholders actors and relationships

The MSP actors described their roles and responsibilities, the challenges that they are facing in their activities, and the relationships that they have with other MSP members. Based on that description, the ideal linkages to reduce the challenges faced, while considering the individual expectations of each member were assessed and are summarized in Table 1 and the network mapping (Fig. 1).

The analysis of the network mapping revealed that farmers form the central part of the network, and were well connected with agro-dealers, processors, and traders. However, farmers were weakly related to mechanization services and extension agents. Consequently, strengthening the relationships between farmers and mechanization, and extension services, while building trust between the value chain actors was identified as a key requirement.

Table 1. Stakeholders' roles and responsibilities in the multi stakeholders' platforms of Finkolo Ganadougou, Blendio, and Loutana in Mali

Stakeholder	Role
Farmers	Farmers will follow agreements with landowners to keep rented lands for long periods. Farmers will purchase inputs from MSP input dealers and sell rice product to collectors and retailers.
Agro Input Retailers	Agro-input dealers will make available to farmers all recommended and necessary herbicides, fertilizers, certified seeds, etc.
Processors	Processors will process paddy rice into the required and desired quality grains for platform members. Processors will inform farmers about the quality of paddy rice to avoid disagreements about the rice mill plant's output (milled rice).
Mechanization Service Provider	Mechanization services agents will provide services to farmers at reasonable prices and on time by local service providers. Spare parts will be made available to local service providers by major machinery dealers.
Traditional heads	Traditional heads must protect farmers' land under their jurisdiction Farmers will be offered favorable land lease agreements. Farmers should be asked to provide reasonable returns on their land.
Traders	Traders will purchase rice products from farmers Farmers and processors should be given information about consumer preferences. Traders will provide financial assistance to farmers for them to adopt CSA practices and ensure the production's liability.
Extension Service Agents	Extension service agents will inform and support farmers in CSA and CIS implementation.
NGOs	NGOs will inform and support farmers in CSA and CIS implementation
Researchers	Researchers will co-design, co-implement, and co-validate with farmers alternative practices to mitigate the impacts of climate change on farming productivity and income

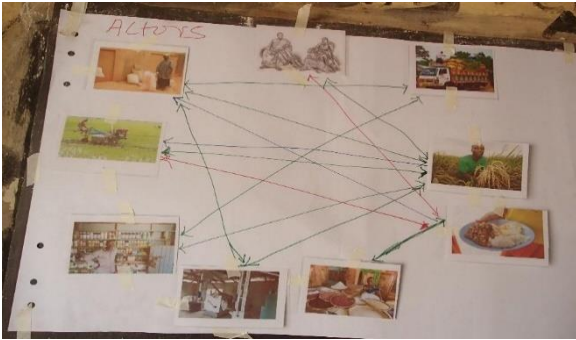


Fig. 1. Net mapping of actors of the multi-stakeholder platform

3.2 Internal functioning of the multi-stakeholder platforms

The MSP actors proposed indicators that would enable monitoring the functioning of the platform. These indicators are frequency of meetings, punctuality to meetings, availability of leaders and selection criteria, facilitation of platform activities by leaders, documentation of platform activities, presence of written constitution, and discipline of members.

From the SWOT analyses, participants identified two major issues facing the MSPs: i) lack of access to input, information, and finance and ii) competition over the use of the inland valley resources. Consequently, participants identified training in contract farming, trust building, and consensus building over the use of the multiple inland valley resources as required to ensure the adequate functioning of the MSPs, and were subsequently trained by the project team.

General information about the driving and restraining forces that can either aid the platform or thwart efforts toward achieving platform objectives are presented below. Before the SWOT analysis, the following vision and objectives were set by the MSP members.

- a. Vision: Enhancing the adoption of CSA and CIS interventions for improved food and nutrition security under climate change
- b. Objectives for the platforms:
 - Increase crop yield per given area
 - Increase income
 - Enhance adaptation to climate change
 - Reduce greenhouse gas emissions from rice-based systems
 - Improve market access while reducing transaction costs
 - Ensure availability of recommended agro-inputs and mechanization services at affordable prices
 - Foster stakeholder learning through information sharing amongst platform members

- Improve actors' access to quality seeds, and fertilizer
- Enhance platform members' access to credit

Table 2. Strength, Weaknesses, Opportunities, and Threats to the platforms

Strengths:	Opportunities:
Good moisture and availability of fertile soil in the IVs Active participation in the platform activities Readiness to adopt innovations by platform members Willingness to establish a learning platform to improve their production	Availability of vast arable land Increase in local rice consumption Policy support: Subsidies for fertilizers Availability of CSA technologies for rice-based systems Availability of micro-finance institutions
Weaknesses:	Threats:
Limited availability of power tiller and tractor Limited availability of labour and high labour cost Limited availability of fertilizer and quality seeds Poor packaging of milled rice Poor quality of paddy rice due to the presence of stones, high moisture content, and fungi development Low yield due to the use of poor management practices Uncoordinated activities of the value chain actors Poor management of pests and diseases Poor water management	Competition over the use of the inland valley's resources between pastoralists, farmers who have a large land and are interested in agricultural expansion, and farmers who have small land, and depend on inland valleys for protein sources such as birds, frogs, etc. Lack of trust between MSP members Increased rainfall variability, and longer drought spells Lack of access to a ready market Poor land tenure system Emergence of pest and diseases Heat stress

4. Conclusion

This study assessed the performance of three MSPs established by the AICCRA-Mali project in the inland valleys of Finkolo Ganadougou, Blendio, and Loutana, identified capacity-building needs, and conducted training sessions to strengthen the capacity of MSP actors for optimal and sustainable performance. MSP actors were dealing with issues such as a lack of input, information, and finance, as well as competing for the use of inland valley resources. As a result, participants identified contract farming training, trust building, and consensus building over the use of multiple inland valley resources as necessary to ensure the MSPs' proper operation. Based on a needs assessment, capacity building was provided to MSP actors. To ensure that MSPs function optimally and sustainably, actors defined indicators that are used to monitor MSP performance. The framework used in this report can be employed to inform MSP planning and adaptive management, as well as to demonstrate performance and inform the design of new interventions.

5. References

- Andrieu, N., Sogoba, B., Zougmore, R., Howland, F., Samake, O., Bonilla-Findji,...& Corner-Dolloff, C., 2017. Prioritizing investments for climate-smart agriculture: Lessons learned from Mali. *Agricultural Systems*, 154, 13–24.
- Beaman, L., Dillon, A., 2018. Diffusion of agricultural information within social networks: Evidence on gender inequalities from Mali. *Journal of Development Economics*, 133, 147–161
- Birhanu, B. Z., Traoré, K., Gumma, M. K., Badolo, F., Tabo, R. & Whitbread, A. M., 2018. A watershed approach to managing rainfed agriculture in the semiarid region of southern Mali: integrated research on water and land use. *Environment, Development and Sustainability* 1–27
- Dossou-Yovo, E.R., Zwart, S., Kouyaté, A., Ouédraogo, I., Bakare, O., 2019. Predictors of Drought in Inland Valley Landscapes and Enabling Factors for Rice Farmers' Mitigation Measures in the Sudan-Sahel Zone. *Sustainability*, 11(1), 79.
- Dossou-Yovo, E.R., Badgie, I., Djagba, J., Zwart, S.J., 2017. Diversity of inland valleys and opportunities for agricultural development in Sierra Leone. *PLoS ONE* 12(6): e0180059.
- Djoudi, H., & Brockhaus, M. (2011). Is adaptation to climate change gender neutral? Lessons from communities dependent on livestock and forests in Northern Mali. *International Forestry Review*, 13, 123–135.
- Huat, J., Fusillier, J-L., Dossou-Yovo, E.R, Lidon, B., Kouyate, A.M., Toure, A., Simpara, M.B., Hamadoun, A., 2019. Benefits and limits of inland valley development to enhance agricultural growth: a farmers' perception approach in southern Mali. *Environment, Development and Sustainability*. <https://doi.org/10.1007/s10668-019-00466-6>
- Sanyang, S., Taonda, S. J. B., Kuiseu, J., Coulibaly, N. T., & Konaté, L. (2016). A paradigm shift in African agricultural research for development: The role of innovation platforms. *International Journal of Agricultural Sustainability*, 14(2), 187–213. <https://doi.org/10.1080/14735903.2015.1070065>
- Traore, B., Van Wijk, M.T., Descheemaeker, K., Corbeels, M., Rufino, M.C., Giller, K.E., 2015. Climate variability and change in southern Mali: learning from farmer perceptions and on-farm trials. *Experimental Agriculture* 51, 615–634. doi:10.1017/S0014479714000507



AICCRA
Accelerating Impacts of CGIAR
Climate Research for Africa



About AICCRA

Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) is a project that helps deliver a climate-smart African future driven by science and innovation in agriculture.

It is led by the Alliance of Bioversity International and CIAT and supported by a grant from the International Development Association (IDA) of the World Bank.

Discover more at aiccra.cgiar.org



AfricaRice

