Info Note

Assessing the Climate-Smartness of the West Africa Agricultural Productivity Programme (WAAPP): What can we learn from Benin, Guinea, Niger, Togo and Chad projects?

Findings from participatory assessments of the climate-smartness of the World Bank funded "West Africa Agricultural Productivity Programme (WAAPP)"

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Key messages

- Assessing the level of integration of Climate-Smart Agriculture (CSA) into agricultural projects is needed to optimize interventions towards an increased resilience of rural communities in West Africa.
- The CSA Programming and Indicator tool developed by CCAFS in collaboration with the USAID Feed the Future is a relevant method for assessing the mainstreaming of CSA into development projects.
- The five country WAAPP projects have mainstreamed CSA dimension at differentiate levels.
- The WAAPP is more oriented towards productivity in each country, as reflected in the project title.
- Despite WAAPP was designed to respond to the challenges of increasing agricultural productivity, the implementation of the program has a potential to deal with the other pillars of CSA such as adaptation/ resilience and mitigation.

This info note summarizes the findings from participatory assessments of the climate-smartness of World Bank funded West Africa Agricultural Productivity Programme (WAAPP)".

This activity was implemented by CCAFS West Africa regional programme in partnership with CORAF under the Capacitating Stakeholders in Using Climate Information for Enhanced Resilience in the Agricultural Sector in West Africa (CaSCIERA-WA) project to strengthen the capacity of country stakeholders of WAAPP to mainstream and implement CSA in their activities in West Africa.

Introduction

Agriculture is the most important sector of the national economies in West Africa. However, the agricultural sector is faced with numerous challenges (declining soil fertility and land degradation, adverse climate change manifestations, demographic pressure, market instability and incidence of crop pests and diseases, etc.), compromising its ability to be a driving engine out of food insecurity and poverty. With the growing challenge of climate change and variability in West Africa, the agricultural production and food systems must undergo significant transformations to meet the interlinked challenges of achieving sustainability, increasing food security and responding to climate change. Climate-smart agriculture (CSA) is proposed as a solution to transform and reorient agricultural systems to support food security under the new realities of climate change.

West Africa Agricultural Productivity Programme (WAAPP)

The WAAPP is a World Bank funded project, implemented in West Africa by CORAF through the national agricultural research systems (NARS) to support the provision of appropriate agricultural innovations and technologies and their dissemination in West Africa. The project is designed to make agriculture more productive and sustainable, to improve the conditions of life of consumers through the provision of agricultural products at competitive prices and

to support regional cooperation in agriculture in West Africa in accordance with action plans for agricultural policy managers of ECOWAS/ECOWAP and the NEPAD/CAADP. Its aims to generate and accelerate the adoption of improved technologies in key priority areas of agricultural sectors involved in WAAPP, technologies that align with f the main agricultural priorities of the sub-region. It also aims to provide producers with technologies to enhance and improve the competitiveness of the main speculations in each country. The WAAPP is a ten years program implemented in two phases of 5 years each. The objective of the first phase was to generate and disseminate improved agricultural technologies. The second phase focused on the intensification of the dissemination and adoption of improved technologies in the priority agricultural sectors of the beneficiary countries.

Capacity building for assessing climate-smartness of WAAPP

In line with the need to capacitate country stakeholders with relevant CSA tools and approaches for the effective mainstreaming and implementation of CSA in their activities, CCAFS-WA organized two training sessions to benefit countries' specialists involved in the WAAPP and Climate Resilience Agriculture and Productivity Enhancement Project (ProPAD) project implementation. The first workshop took place in Ouagadougou, 4-5 Dec 2018, targeting 3 specific objectives:

1. Strengthen the knowledge of project stakeholders on the challenges, causes, manifestations and impacts of climate change on the farmers' livelihoods;
2. Reinforce the knowledge of project stakeholders on the concept, approaches, tools and implementation technologies of Climate-Smart Agriculture;
3. Identify specific CSA training needs as capacity building activities of WAAPP and ProPAD actors to be undertaken as part of the collaboration between CORAF and CCAFS-WA.

A second training workshop was then organized in Lome, Togo, 15-17 May 2019, with the attendance of the same actors as for the first workshop, to put emphasis on key selected CSA tools that were found relevant by the country actors. This was an in-depth training session with practical exercises on applying the CSA tools to countries specific projects or activities.

Picture1: Participants to the training workshop in Burkina Faso

Assessing the climate-smartness of WAAPP: Methodological approach

During the training workshops, group work was carried out by country project teams to apply the tools. The results of the evaluation were presented in plenary and the assessments made on the projects in the working groups were revisited by all participants.

The assessment of the projects was done in two stages. The first focused on the relevance of the objectives of the projects with regard to the CSA pillars using the CSA programming and indicator tool developed by CCAFS program in collaboration with the Feed the Future - USAID. The results of this evaluation are summarized and visualized using a set of indicators related to CSA.

The second stage focused on agricultural practices and technologies generated or promoted by WAAPP using a matrix of CSA indicators broken down according to the three pillars (productivity, adaptation / resilience, mitigation) as presented in Table 1.

CSA pillars	Categories	Indicators
Productivity	Food security	Yield
		Post-harvest loss
	Income	Income
Adaptation	Water	Water availability
		Water use efficiency
		Water quality
		Ecosystem function
		Soil water retention capacity
	Soil	Soil disturbance
	Risks management	Climate risks management
		Climate risk forecasts
		Agricultural diversification
		Local and indigenous knowledge
Mitigation	Energy	Use of energy (fossil)
		Use of energy (renewable)
	Carbon	Biomass (on ground)
		Biomass (underground)
		Stock de carbone du sol
		Methane emission (livestock)
		Organic manure management
	Nitrogen	Nutrient use efficiency

Table 1 : Indicators for the assessment of CSA-related project related

To what extent WAAPP is climate-smart?

The CSA Programming and Indicator Tool helps to examine the scope of a given program or intervention through the three-dimensional lenses of CSA (Productivity/Income, Adaptation/resilience and Mitigation).

This tool applied to WAAPP showed that the program addressed the three pillars of the AIC at differentiated levels in each country.

Results showed that the WAAPP is addressing 35 to 47% of questions (or outcomes) related to productivity pillar of CSA, 31 to 35 % to adaptation/resilience and 26 to 32% to mitigation in the 5 countries.

The contribution of WAAPP to productivity pillar is higher in all the countries (0.81 to 1) meaning that the programme is more oriented towards productivity in each country (Figure 1-5). This is not surprising as the WAAPP was designed to respond to the challenges of increasing agricultural productivity. Although this strong productivity

orientation, the WAAPP has a potential to deal with the other pillars of CSA such as adaptation/ resilience and mitigation with intentionality indexes varying from 0.50 to 0.82 for adaptation/resilience and from 0.40 to 0.65 for mitigation pillar.

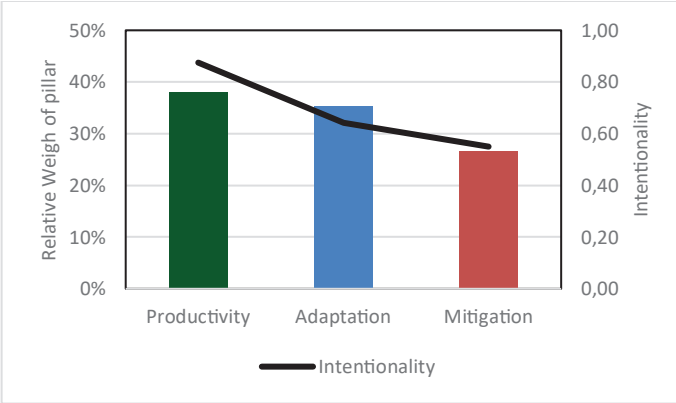

Figure 1 : WAAPP-Benin

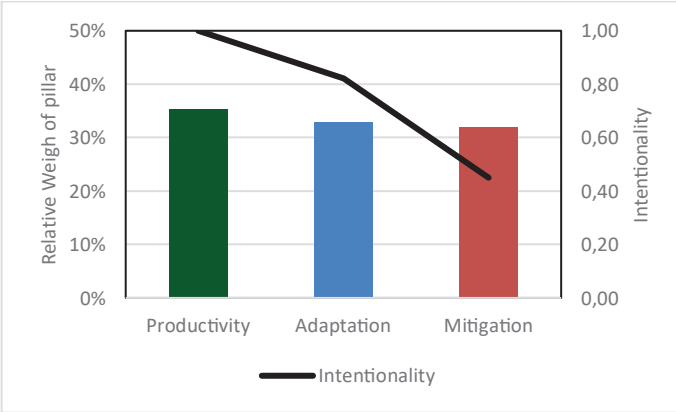

Figure 2 : WAAPP-Chad

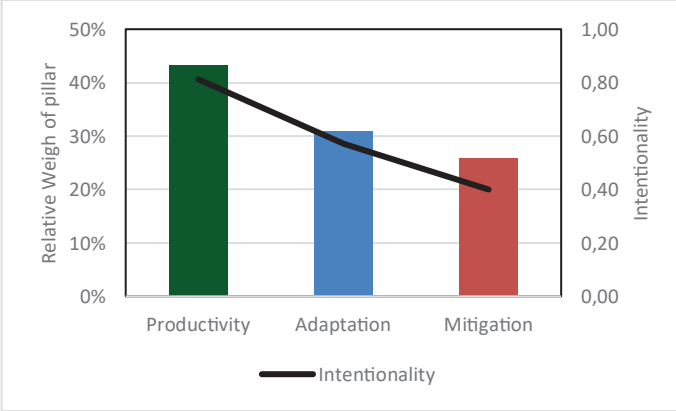

Figure 3 : WAAPP-Guinea

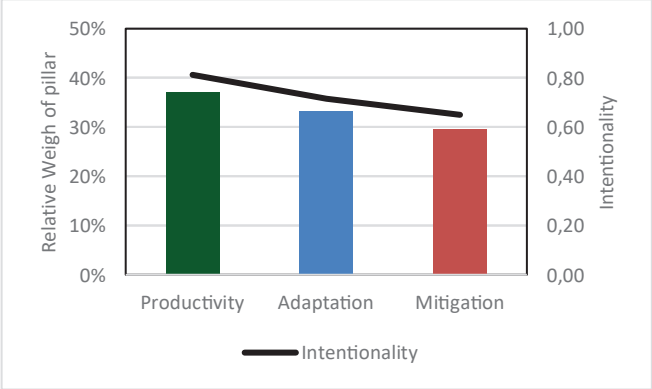

Figure 4 : WAAPP- Niger

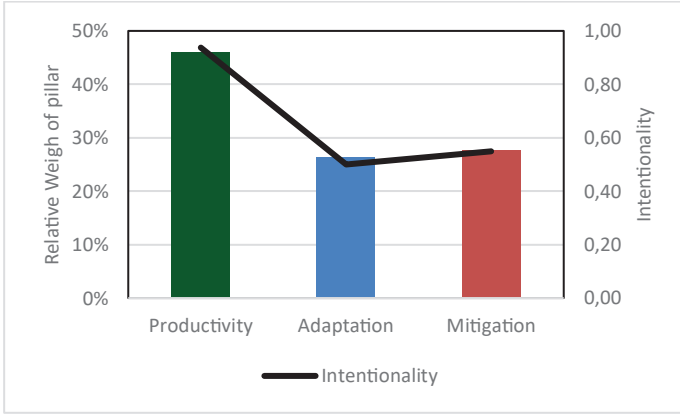

Figure 5 : WAAPP-Togo

Climate-smart technologies and practices promoted by WAAPP

Ten (10) agricultural technologies and practices have been analyzed for each country. This evaluation examined each technology regarding its contribution to the three pillars of CSA through 21 indicators for productivity, adaptation and mitigation. The top five CSA technologies/practices are presented in the Table 2. The System of Rice Intensification was ranked the first CSA practice in Benin and Togo while, the micro-dosing of inorganic fertilizer and Drought tolerant variety of cowpea were the first ranked in Niger and Chad respectively.

Togo	Niger		Guinea	Benin	chad
System of Rice Intensification	Micro dose		Development & dissemination of cultural calendars	System of Rice Intensification	Drought tolerant variety (cowpea)
Agroforestry	Compost		Improved varieties of rice	Steam cooker for *Ablo*	Crop rotation (egumes - Cereals)
Mycotri based compost	Farmer Managed Natural Regeneration		Micro dose	Use of Polyethylene film for pineapple production	Organic manure (compost)
Direct sowing of maize under vegetal cover	Use of improved stove		Arabica coffee nurseries	Fattening (chèvre rousse de Maradi)	Drought tolerant varieties (cassava)
PICS bags	Zaï		Improved varieties of cassava	Production of cashew grafted plants	Protected forest

Table 2. Top five CSA technologies/practices promoted or generated by WAAPP per country

Conclusions and recommendations

The participatory assessment of WAAPP country projects has shown that the program has already integrated CSA dimensions at differentiated degrees in the implementation of its activities in all the five countries. The WAAPP is more oriented to productivity pillar. However, the project has a potential for adaptation and mitigation. The analysis also revealed that there are technologies and practices in all the five countries which effectively contribute both to improving the resilience / adaptive capacity of the populations as well as to mitigating climate change. These technologies include system rice intensification in Benin and Togo, micro-dose and Farmer Managed Natural Regeneration in Niger, improved crop varieties in Chad and Guinea. These findings suggest that efforts should be made to scale these top CSA technologies and practices for a sustainable agricultural development in West Africa.

Further reading

- Quinney M, Bonilla-Findji O, Jarvis A. 2016. CSA Programming and Indicator Tool: 3 Steps for increasing programming effectiveness and outcome tracking of CSA interventions. CCAFS Tool Beta version. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). *CSA Programming and Indicator Tool*
- Houessionon P, Ouédraogo M. 2019. Atelier de recyclage et de formation approfondie des spécialistes des pays du financement additionnel au WAAPP 1C et du ProPAD du Tchad sur les approches et outils d'intégration de l'Agriculture Intelligente face au Climat dans les projets de développement agricole. CCAFS Workshop Report. Wageningen, the Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). *Rapport formation AIC Lomé 15-17 mai 2019*

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