COSTEA
ENSEMBLE POUR RELEVER LES DÉFIS DE L'AGRICULTURE IRRIGUÉE

AFEID

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POLICY BRIEFS

Structuring Action: WAIDMAs (West African Irrigation Development and Management Agencies)

Project: Review and development strategy for value chains in WAIDMA areas

The WAIDMA, a legitimate structure for facilitating dialogue within value chains

In their role as public bodies participating in agricultural development, WAIDMAs are responsible for providing the water service but also services useful to improve irrigated production on their territory. WAIDMAs are specific to West Africa and their action is essential for the development of irrigated agriculture and to achieve food security and sovereignty in their respective countries. They have several thematic areas in which they can intervene to support value chains.

KEY MESSAGES

1/ By virtue of their history and purpose, the WAIDMAs can play a greater role in the service of producers, with a view to developing value chains towards more efficient agriculture (sustainability and resilience).

2/ The WAIDMAs have a legitimate role to play as facilitators of inter-professional dialogue within value chains and to position themselves as 'quality assurance' for production factors, a guarantee of more sustainable and resilient agriculture.

3/ As facilitators, the WAIDMAs should be able to intervene as fully-fledged actors in value chains by playing a cross-cutting role in the ecosystem of support for the operation of value chains and market access.

4/ The WAIDMAs could intervene directly in three thematic areas to support the development of value chains: developed facilities; value chain performance; market access.

5/ In order to support the WAIDMAs in deepening their reflection on the evolution of their missions within value chains, it is recommended that the West African Network of WAIDMAs (ROA-SAGI) formalise a specific working group within the network to follow up on this project and establish a link with the results and recommendations of the other WAIDMA projects (land tenure, transfer to irrigators and project ownership).

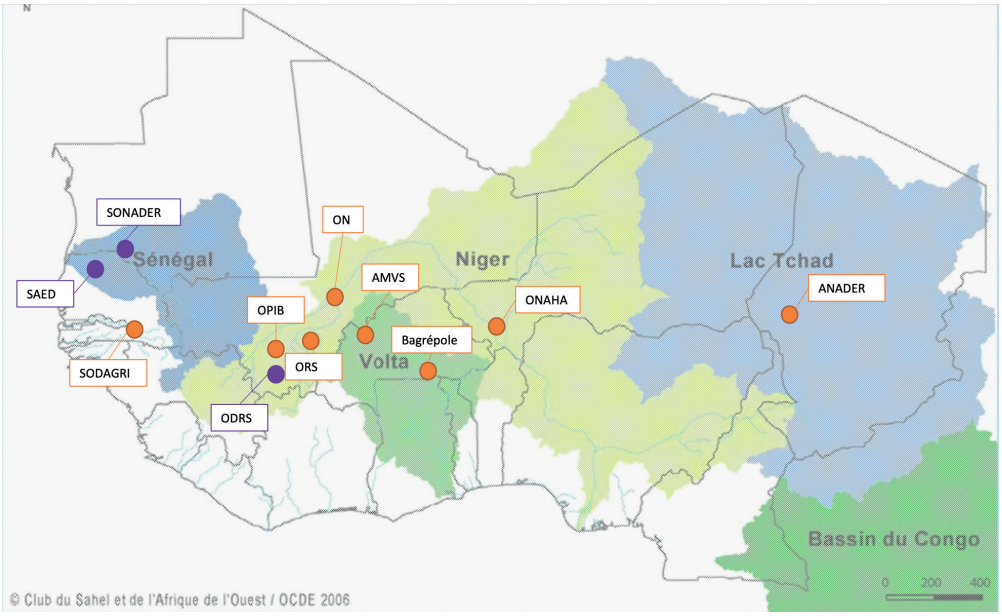
ISSUES AT STAKE AND OBJECTIVES OF THE ACTION

Providing support for agricultural value chains was traditionally one of the key missions of certain WAIDMAs in their scheme(s). Now, following the WAIDMAs withdrawal and the refocusing of their missions on water services, other local and national organisations and institutions are taking on this objective more specifically. However, the smooth running of WAIDMAs and of irrigated agricultural value chains are closely interconnected, and the WAIDMAs, both from an operational point of view in their day-to-day management and in their long-term strategic vision, need to take account of changes in agricultural production on their territory and its outlets for several reasons:

(i) diversification (on rice-growing schemes) leads to changes in irrigators' needs in terms of calendar, flow rate, frequency of watering and security of the irrigation water service, and the WAIDMA that provides this water service needs to anticipate and adapt to this;

(ii) the ability of farmers to finance the water service (and therefore the financial equilibrium of the WAIDMA that provides this service) is correlated first and foremost to the income they derive from their production, which is certainly influenced by the institutional environment, marked by price and import policies, but also depends on marketing, which is conditioned by the structure of the value chains.

These points are leading the WAIDMAs and their partners to rethink their role in supporting the agricultural value chains in their territory and the nature of the links they need to forge with the (new) actors in the value chains. They need to ask themselves how they can best carry out their missions and contribute to achieving the objectives set for them by public policies on food security and self-sufficiency.



Map of the WAIDMAS in ROA-SAGI. In purple, the WAIDMAs that were the subject of case studies in the value chain project

The specific objective of this COSTEA study was to assess the potential added value of WAIDMAs in their area of intervention, in complement to other value chain actors. In particular, this potential added value was to be analysed in terms of support for agricultural development, adding value to production, diversification, structuring value chains, labelling, building and managing storage and/or processing infrastructure, and promoting aggregation and pooling to reduce transaction costs in marketing.

PRESENTATION OF THE METHODOLOGY AND CONTEXTUAL ELEMENTS

The value chain project of the WAIDMA action concerned six countries and 11 WAIDMAs (Burkina Faso: AMVS and Bagrépôle; Mali: ODRS, ON, ORS and OPIB; Mauritania: SONADER; Niger: ONAHA; Senegal: SAED and SODAGRI; Chad: ANADER).

The study was carried out by a team of international experts working in collaboration with contributing experts (CEs) employed by the WAIDMAs concerned. It was based on the study of three irrigated value chains that are widespread in the sub-region: rice, tomato and onion/shallot. Despite their differences, these value chains were selected both for the important role they play in meeting food needs (particularly rice) and for their economic weight. Furthermore, they mobilise a significant number of producers in the countries concerned by the study. Finally, these three value chains are highly dependent on water resources. They are thus emblematic of the agricultural value chains dependent on irrigation, whose development could be steered by the WAIDMAs.

The project, which spanned over 24 months, took the form of a sequenced analysis process comprising three main phases:

- **The first phase consisted of capitalising on the data available** at WAIDMA level, but also in the environments of the target value chains. This stage resulted in: (i) the creation of a database that made the information useful for the analysis easily available; (ii) the preparation of syntheses (WAIDMA/country/value chain) through which an initial documentary analysis was carried out to establish the historical, strategic and operational situation of the WAIDMAs as part of a diagnosis of the value chain at national level, accompanied by a sub-regional analysis. This documentary analysis made it possible to **establish the first working assumptions** for the preparation of in-depth field studies, in particular with regard to the WAIDMAs' current roles in value chain management.

- In **the second phase, in-depth field studies were carried out in Senegal** (SAED/tomato value chain), Mauritania (SONADER/rice value chain) and Mali (ODRS/onion/shallot value chain). This phase made it possible to combine a participatory

Main value chains concerned by the different WAIDMAs/countries

	Burkina Faso	Mauritania	Mali	Niger	Senegal	Chad
WAIDMAI Value chain	AMVS, BAGRÉPÔLE	SONADER	ODRS, ON, ORS, OPIB	ONAHA	SAED, SODAGRI	ANADER
RICE	X	X	X	X	X	X
ONION	X		X	X		
TOMATO			X		X	

diagnosis of the value chains involving the various actors, with an in-depth evaluation of the WAIDMAs in order to identify the key factors that influence the performance of the value chains and over which WAIDMAs have leverage (areas in which the WAIDMAs can intervene legitimately and credibly). While the first phase was carried out by the CEs within their own WAIDMA, in this second phase, the team sought to encourage the cross-involvement of the CEs in the three selected fields in order to bring out a collective approach to common problems.

- Finally, in the third and last phase, the cross-reviews of the case studies and a regional workshop enabled the WAIDMAs to **share experience** based on an analysis of the in-depth studies, and **recommendations to be prepared** on the evolution of the WAIDMAs in terms of value chain management.

Beyond the final output, the project's interest also lay in the emergence of the CEs' capacities to collectively develop and test a participatory analysis approach based on broad consultation with value chain actors in their respective countries. By involving them very early on in the process and engaging them in giving their opinion on this approach according to the context of their WAIDMA and their value chains, it was expected that they would adopt an approach that they could subsequently adjust and renew with a view to more systematic application.

The analysis of the contexts revealed that within the value chains, the WAIDMAs are subject to different constraints in carrying out their missions that are often common to all six Sahelian countries, but which take on more or less importance locally. It is therefore necessary to be specific in order to address the question of their role in the development of value chains given the great diversity of situations. Some contextual elements are presented in relation to the three thematic areas in which the WAIDMAs could intervene.

In terms of developed schemes and facilities

In some countries, **access to land as a production factor** appears to be a major constraint for developing production through investment promotion. Either the plots allocated are too small, preventing profitable work, which is most often the case, except in Chad, or land security can be hampered by a customary system with limited flexibility or by public policies that are not inclined to favour private ownership (the case of Mauritania). Taking into account access to land for small-scale producers in local master plans appears to be a solution to be explored to better manage land and water resources (case of Senegal).

The planning of schemes and facilities should enable the development of competencies in relation to soil capacity and water availability, taking into account climate change and the disruption of rainfall patterns. The WAIDMAs could play a greater role in feasibility studies upstream of development projects.

New developments require the **application of recognised standards** from the outset, starting from the design stage and then during the monitoring of execution. In Mauritania and Chad, the lack of consistency in the assignment of delegated project ownership responsibilities between different public agencies has led to a significant deterioration in the quality of the developments.

The introduction of new technologies/techniques for the management of developments and irrigation, weather stations or soil analysis, is likely to encourage the application of good practices (particularly in the face of climate change) and the control of irrigation costs. This is a weak point of the WAIDMAs across the six Sahelian countries, even though this promotional role is most often part of their mandate.

The transfer of the technical management of developments (fees, infrastructure maintenance) **to producers' organisations/ cooperatives** should be accompanied by the strengthening of production planning capacities on the schemes. This transfer has been initiated in several countries, with mitigated results.

In terms of value chain performance

It is necessary to **structure and organise value chains**, particularly with a view to providing a better production service (access to inputs, seeds, mechanisation) and the concerted planning of productive investments that improve efficiency. Although support for structuring is a mission that can be found in almost all the WAIDMAs, the situations vary greatly in this respect between countries and value chains.

Adapting technical itineraries to local conditions and market needs could help make value chains more competitive to the benefit of the actors in the chains. To ensure this periodic adaptation, the value chains need research input. In Senegal, the technical itineraries for tomato production are not differentiated according to zones, even though the Senegal River Valley has a high diversity of soils. In Burkina Faso, the technical itinerary applied to onions is traditional and perpetuated endogenously among producers without significant intervention from technical agencies. The WAIDMAs invest little in coordination with research to guide work in relation to local conditions. Their role in the extension of new cultivation techniques resulting from research is minor.

There is **an agro-environmental issue** linked to the intensity of cultivation carried out on the schemes and to climate change: decrease in water reserves, flooding, pest resistance to phytosanitary products, salinisation of soil, etc. However, these problems are still very little taken into consideration by value chain actors, especially producers, despite the risks to their production capacity. The WAIDMAs do not have an early warning system for diseases, pests or insects. Nor do they have a monitoring system enabling them to anticipate problems related to water services. In Mauritania, a number of solutions such as diversification are mentioned, but the majority of actors are more focused on continuing intensification under the impetus of public policies.

The quality and reliability of the statistics produced by the authorities, particularly those related to production, are not

sufficient, which has an impact on the ability of value chain actors to steer their investments and take management decisions. This situation is widely shared among the WAIDMAs, whose production statistics are generally rarely updated and not very consistent with each other.

In terms of market access

Better planning of production according to conditions (quantities, prices, seasonality) and market requirements (quality, specifications, etc.) needs to ensure that it is competitive and meets demand. This reality applies to all value chains, but is rarely taken into account collectively at the value chain level. On Africa's agricultural markets, this failure to adapt to and understand demand too often leads to significant losses and marketing difficulties. Mauritania is a good example of planning that has produced positive results in the rice value chain.

Better communication (or in some cases, the beginning of communication) is necessary between the WAIDMAs and downstream economic operators. The issues of seasonality, competition with imports, and quality for conservation cannot be addressed without establishing a dialogue with these actors. This dialogue is enabled by the tomato interprofessional organisation in Senegal with strong involvement of SAED.

The WAIDMAs could also become involved in promoting dialogue to **facilitate contracting** between producers' groups and buyers (collectors, traders, processors). This is the case of SAED, for example, which is a member of the tomato committee that acts as a platform for consultation and exchange bringing together the main actors of the value chain.

Infrastructure for improving access and post-harvest management (storage, conservation, primary processing, etc.) are structuring investments that have a significant impact on the functioning and competitiveness of a value chain. In Mali, for example, the OPIB notes that the lack of adequate onion storage capacity explains the significant post-harvest losses in the value chain.

Finally, the WAIDMAs could support **producers' organisations in developing advocacy in relation to decision-makers** to promote public policies that are more favourable to the development of value chains: financing of infrastructure, subsidising of inputs, loan guarantees, etc. Defending the interests of value chain actors could also include access to institutional purchasing mechanisms, as in the case of Mauritania, where the State purchases 20 to 30% of the national production of white rice annually). It then sells this rice at a subsidised price through its network of shops spread throughout the country as part of a social programme designed to fight food insecurity. In Senegal, the interprofessional organisation of the tomato value chain and SAED have enough weight to incite the State to impose local purchasing quotas on industries.

RESULTS OF THE STUDY, KEY MESSAGES AND LIMITS OF THE APPROACH

The analyses resulting from the WAIDMA value chain action have enabled COSTEA to formulate a number of messages and recommendations. These are intended to encourage the WAIDMAs to contribute to the economic and social development of their irrigated territories and to support them through change by proposing innovations, particularly at institutional level (positioning of WAIDMAs within the value chain ecosystem).

1/ The role of the WAIDMAs in value chains always depends on the mandate received from their political supervisory authority. However, due to their history, the WAIDMAs have the legitimacy to intervene more **in the service of producers** in the perspective of value chain development. Their initial aim was to ensure that the countries concerned were self-sufficient in food, and the primary function of these schemes was family rice-growing. The WAIDMAs originally performed a number of functions that went beyond the construction of irrigation works, their maintenance and water management, and could also cover agricultural advisory services, land management, support for the development of value chains and the supply of inputs. In the 1990s, the functions of these structures were refocused on water management and development, with the establishment of more or less formalised contractual relations with users and the payment of fees to cover all or part of the service. At the same time, other structures - public, private or mixed - developed to provide advisory and support services. The WAIDMAs could, however, support and strengthen the capacity of producers to understand and adapt to market demand, identify buyers and negotiate contractual terms. They would also have a role to play in extending new cultivation practices in conjunction with research.

2/ The objective at the level of the value chains is to **increase the quantity and quality of production** to better meet market requirements and ensure an enhanced value of irrigated production. This intensification of production **needs to be reasoned in the framework of more sustainable and resilient farming** and to be supported by a **better structuring of value chains by encouraging dialogue between actors: the intervention of the WAIDMAs could structure the development of value chains around these two main themes.**

3/ Whatever new roles the WAIDMAs may be attributed to improve their services to value chains (in particular that of **facilitating dialogue between actors), these latter need them to fully invest in facilitating dialogue between actors, as part of their real integration in value chains, by becoming fully-fledged actors situated transversally in the ecosystem** of support for the operation of the value chain. It is not the WAIDMAs' role to build inter-professional organisations, but they can lead a process, facilitate relations between the different levels of a value chain and provide technical support.

4/ Historically, the irrigation development and management agencies have refocused their role on water services. However, while retaining this specificity, the WAIDMAs could intervene in three thematic areas to support the structuring of value chains:

(i) **At the level of developments** through their role in **irrigated land management** (production factor); **the planning** of developments and **the application of recognised standards** guaranteeing the good design of the structures (feasibility studies and project ownership role); **the introduction of new technologies/techniques** for the management of developed schemes and irrigation; the transfer of management to producers' organisations (support and capacity building);

(ii) **In terms of value chain performance**, through their role in the **structuring and organisation of value chains** (support for making actors more responsible and role as facilitator); through the information that they can provide on adapting **technical itineraries** to local conditions and market needs (coordination with research; consultation framework, extension); at the level of taking account of **agro-environmental problems** (monitoring and alert systems); by working on the quality and reliability of the data and statistics produced in their zone of intervention (collection and processing of production data) which are very often lacking;

(iii) **In terms of market access**, through their role in **better production planning** in line with the conditions; **better communication** between the WAIDMAs and downstream economic operators; consultation to **facilitate contractualisation** between producer groups and buyers; setting up **infrastructures to improve access and for post-harvest management; support for POs to develop advocacy** in relation to decision-makers (promoting public policies that are more favourable to the development of value chains).

5/ To support the WAIDMAs in deepening their reflection on the evolution of their missions within value chains, it is recommended that ROA-SAGI **formalise a specific working group** within the network to take over from this project based on the case studies. This working group was initially planned in the project but was not formalised. However, the exchanges between the CEs and members of the Network of Farmers Organizations and Agricultural Producers of West Africa (ROPPA) in the final workshop showed the interest of such a group. The objective would be to maintain the group dynamic through discussions on the role of the WAIDMAs and by sharing experience on technical solutions to the constraints encountered (developed schemes, technical itineraries, etc.). In particular, ROA-SAGI could support the WAIDMAs that were not the subject of a case study during this project by helping them to find the budget necessary to carry out such a study and by providing technical assistance for its organisation: documentary review (use of the database and enrichment), field visits and participatory diagnosis, involvement of value chain actors through a value chain working group, etc. Subsequently, ROA-SAGI could support the national WAIDMAs by investing in the following themes at regional level:

(i) Pooling of research and development of extension syllabuses, for example on pest management;

(ii) Developing concerted advocacy in relation to regional governments, for example, on harmonising subsidies and market protection or financing and insurance solutions adapted to the national contexts;

(iii) Strengthening monitoring and evaluation systems and data reliability (at the irrigated scheme or value chain level).

Limits of the approach

When it comes to taking stock of this project, it should be pointed out that the study process nevertheless had some limits.

With regard to the final output of the study, it is necessary to indicate that the variety of WAIDMA situations did not allow sufficient progress to produce finalised proposals for services that they could possibly be assigned, or that they could strengthen where they already existed, in order to contribute to the development of agricultural value chains. Under these conditions, the recommendations took the form of identifying areas of work to explore further.

With regard to the consultation process, the format of the initially planned missions limited the team's ability to widely mobilise the various actors in the value chains. The consultation was thus reduced to a number of interviews and workshops in the context of the in-depth analysis. No real replicable consultation process, which would have allowed the CEs to maintain regular exchanges with the stakeholders, emerged. At the end of the project, it is therefore not possible to claim to have 'debated the relative positioning of the various actors in the construction of successful value chains' as initially requested in Terms of Reference of the action.

With regard to the method, the constraints resulting from the CEs' capacity of commitment and mobilisation in a project that was mainly carried out remotely and which suffered delays in connection with COVID, should be noted. Given their responsibilities within their WAIDMA, the CEs sometimes lacked availability, which had an impact on the quality of their analyses and on their contributions to the final output. However, it is important to emphasise the value of the collective and cross-cutting approach that enabled the CEs to look at the situations of neighbouring WAIDMAs, while at the same time questioning their own cases.

COSTEA OUTPUTS IN RELATION WITH THE STUDY

- Inception report (www.comite-costea.fr/actions/sagi)
- Country syntheses (www.comite-costea.fr/actions/sagi)
- Analysis and synthesis of the participatory diagnosis by case study (www.comite-costea.fr/actions/sagi)
- Final synthesis with recommendations (www.comite-costea.fr/actions/sagi)
- Comparative analysis of large-scale irrigation management structures in West Africa, Morocco and France (www.comite-costea.fr/actions/sagi)
- Comparative diagnosis of 11 WAIDMAs (AMVS, ANADER, BAGRÉPÔLE, ODRS, ON, ONAHA, OPIB, ORS, SAED, SODAGRI, SONADER) www.comite-costea.fr/production/diagnostic-compare-de-11-societes-damenagement-et-de-gestion-de-lirrigation-en-afrique-de-louest-amvs-anader-bagrepole-odrs-on-onaha-opib-ors-saed-sodagri-sonader
- Documentary database (www.comite-costea.fr/base-documentaire-eau-et-agriculture)