

Making agricultural advice work for smallholder farmers



KEY POINTS

- Matching supply to demand for agricultural advisory services around West Africa's large dams requires strengthened farmer organisations, better-functioning service providers and an enabling institutional framework.
- Investments in irrigation systems need time, budgets and expertise to build capacity among farmer organisations and agricultural advisory services providers, and in particular to empower farmers to articulate their needs and hold service providers to account.
- Agricultural advisory services must address diverse types of smallholder farmers' specific needs if productivity is to be raised across irrigation systems (for small and large farms, specialised and diverse holdings, and for women, men and youth).
- To promote regional food security, donors and governments should focus at least as much on these 'soft' issues as on the 'hard' investments in infrastructure.

Large irrigation dams in West Africa are not delivering on their promise to significantly reduce the US\$1 billion per year of rice imports to the region. Many smallholder farmers cultivating the land irrigated by large dams are struggling to make ends meet. Agricultural advisory services are meant to support these farmers, not just by providing technical advice, but also by connecting them with other service providers along the value chain. But there are large gaps between what is provided and smallholder farmers' actual service needs.

Why agricultural advisory services?

West African governments consider rice production in large irrigation systems an important component of their food security strategies, given the region's very high dependency on imports¹. Irrigated rice farming downstream of large dams is characterised by high state investment in infrastructure and high operational costs (requiring high productivity to ensure returns on investments) and also by rice monoculture² that is knowledge and technology intensive (requiring agricultural services so farmers have access to the inputs needed).

With the liberalisation of their economies, Mali, Senegal and Burkina Faso privatised much of their agricultural services – but state oversight for large dams remains relatively untouched (although recently 'growth pole models' and other forms of public-private partnerships, such as Bagrépôle in Burkina Faso, have been introduced). Government expenditure on agricultural services for smallholder farmers is still relatively high in large scale irrigation systems compared with rainfed agriculture. The number of farmers an agricultural advisor (who is employed by the government agency managing the dam) serves varies between irrigation schemes. But compared with overall statistics from the FAO³, each advisor in an irrigation scheme serves significantly fewer farmers than a farm advisor in rainfed parts of the same countries.

For example, there are 23 agricultural advisors employed by ODRS⁴ in Sélingué to cater for 3,111 rice farmers – a ratio of 1:135 – whereas there were only 646⁵ agricultural advisors countrywide for 3,348 million⁶ farmers – a ratio of 1:5,183.

This strong government engagement is a challenge, because government agencies tend to be bureaucratic and hierarchical, with little direct accountability to their users. But it is also an opportunity, as the relatively high government and donor investments in services for irrigated agriculture should make it possible to ensure smallholder farmers really can produce sustainably and efficiently – securing their own livelihoods while contributing to national food security.

Mismatched expectations

Agricultural advisory services (AAS) provided either by the government, the private sector, NGOs or farmer organisations should support productivity and sustainability by giving smallholder farmers technical and commercial advice, linking them to other service providers, and ensuring that the dam is managed as common property with each user contributing to its maintenance. But supply of AAS is not meeting demand around large dams in West Africa.

This mismatch contributes to keeping productivity and incomes low on smallholder

farms, forcing many farmers to seek other work (such as artisanal mining and rainfed farming) that can be complementary, but at times competes for labour and investments⁷, thus reducing productivity even further. The mismatch is also a symptom of farmers' weak bargaining power in government-managed irrigation systems and of structural and institutional weaknesses in how these government agencies manage agricultural infrastructure and services.

The result is often a blame culture, in which dam managing agencies accuse farmers of not following agreed rules and regulations (in particular on maintaining infrastructure and keeping to cropping calendars) and not being 'serious' about rice farming. Meanwhile, farmers accuse the dam managers of negligent scheme maintenance and management, disinterest or even corruption. This situation hinders any constructive dialogue that might jointly develop solutions.

What farmers want from agricultural advisory services

Irrigation dams dramatically transform agricultural and rural livelihood systems for local people (some of whom have been displaced by the dam reservoir and have resettled nearby) and for migrants arriving in search of better opportunities. Farming populations on irrigated land are normally very diverse, with varying livelihood strategies and access to, and control over, resources. Very few produce only irrigated rice, many depend also on rainfed crops and livestock.

Farmers want support on a range of topics, including: organising themselves for collective action; information on specific agronomic, technical or commercial challenges (including how to reduce expensive external inputs and use of fertiliser and integrated control for pests and diseases); and advice on opportunities along the value chain, from credit and inputs through to drying, packaging and sale.

Farmers value advisors 'in the field' who listen and offer up-to-date technical expertise. And advisors need to value farmers' own experience and 'learning by doing' as they jointly develop locally-appropriate innovations.

Farmers want advice on many topics, not only irrigated rice, and advisors should tailor support to different situations (such as women farmers with limited access to land and money, established farmers keen to scale up and

increase productivity, poorer farmers struggling to keep costs down, and youths looking for opportunities in mechanised land preparation and post-harvest operations).

Improving farmer organisations' 'agency'

Farmers in large irrigation schemes are normally organised in 'economic interest groups' or cooperatives, in turn affiliated to federations or unions. But these function poorly. They do not systematically collate and articulate their members' needs and lack mechanisms to track any commitments made. They don't have the capacity to enforce agreed rules and regulations amongst their members, let alone provide services. They often lack social cohesion (because the farming community is so diverse), have arbitrary and top-down structures⁸, and get limited support.

Overall, they lack agency – the ability to position farmers as key players, to make effective choices that advance farmers' interests, to articulate their needs to the dam managing agencies and to hold these and other service providers to account.

In some cases ethnic or political rivalries hinder farmer organisations. Many farmers distrust their representatives as much as they distrust the dam managers (several farmer organisations have had no elections for years). Women are particularly poorly represented, and therefore rarely benefit from formal AAS provided to farmer organisations. Several donor-funded interventions have tried to build capacity among farmers and their organisations, but have tended to focus on technical expertise rather than on good governance and communication.

Institutional weaknesses

Large scale West African irrigation systems are normally managed by agencies that report directly to Ministries of Agriculture. Their mandate includes managing and maintaining irrigation infrastructure, as well as ensuring the best use of irrigated land (their performance contracts usually provide production targets). Some of them (ODRS, SODAGRI) also have a regional / zonal development mandate that includes rainfed and pastoral areas. Before liberalisation, in addition to providing AAS, these agencies also supplied credit and agricultural inputs, and marketed produce. Nowadays those are private sector functions, though governments still subsidise fertilisers. It is now generally accepted by both national governments in West Africa and donors that AAS should support the whole agricultural

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value chain from inputs to marketing by playing a 'brokering' role between farmers and private service providers and traders.

The dam management agencies face common public sector challenges: in providing effective and efficient leadership, and in management and governance that ensures AAS and other staff are motivated and have the resources they need to respond to smallholder clients. While the governments provide salaries and basic infrastructure, agencies depend largely on donor funded projects for their operational budget. In some cases politics overshadows the agencies, influencing the appointment or retention of non-performing staff and poor leadership. This affects staff motivation and performance, and ultimately the services they provide to smallholder farmers.

Most dam management agencies lack a clear strategy for achieving their performance targets, and outlining how their roles and responsibilities complement others (including research, private service providers and farmer organisations). Interventions are monitored and evaluated mechanistically, focusing on production data rather than assessing what causes low productivity.

Links with research institutions tend to be *ad hoc* and dependant on projects that have money to cover travel costs. Research-led interventions have mostly recommended new fertilisers, varieties or agronomic practices but without considering different farmers' specific interests and capacities. AAS generally takes an 'advice on demand' approach, combined with seasonal planning meetings and field demonstrations. The focus is irrigated rice production rather than the farming system overall. Agencies and their advisors show little capacity or interest in helping farmers move towards a more sustainable rice production system⁹ that depends less on external inputs.

Some other service providers support rice farmers. These include entrepreneurs providing machinery for land preparation, banks and micro-finance agencies, input suppliers, traders and suppliers of transport and processing facilities. Where there are enough service providers, farmers can choose those best serving their interests, but choices for credit and land preparation services tend to be limited. NGOs have taken on some AAS roles, in particular running FAO-supported 'farmer field schools', working alongside (but sometimes only in parallel with) the dam managing

agencies. Farmer organisations in the three GWI study sites [see Notes below] are currently not providing AAS to members, but farmer organisations in other irrigation programmes do (e.g. Bama and Sorou in Burkina Faso).

Importantly, whether they are dam management agencies, NGOs or private sector, service providers are generally not accountable to farmers and there is no established way to address poor service.

Linking supply and demand

For AAS to meet smallholder farmers' diverse needs there must be changes in the roles, capacities, and management systems of both farmer organisations and dam management agencies. The challenges and opportunities call for a transformation that goes beyond technical fixes; addresses the power relations and institutional dynamic of all parties and takes into account the nature of large irrigation systems, in which farmers are linked to each other by the irrigation infrastructure and production system, as well as to the dam as a 'collective whole' with multiple uses.

To close the gap between supply and demand for AAS, interventions are required on several fronts. The following suggestions have emerged from GWI-facilitated discussions amongst stakeholders at local, national and regional levels:

- **Farmer organisations should be supported in restructuring and strengthening their capacity¹⁰** so they effectively represent their members. They need to be able to articulate different members' needs (be they men, women or youth) and to negotiate with service providers (including private sector, government and civil society). They also need sufficient credibility with members, and influence over them, to ensure adherence to the principles and rules agreed with the dam management agencies. Farmer organisations and those supporting them should also explore ways for farmers to pay for some AAS, since contributing to the cost gives them a stake in the services and an incentive to monitor quality more closely.
- **Dam management agencies need organisational reforms**, possibly as part of an ongoing public sector reform, to create well managed agencies with clearly defined structures and processes, including: strategy; incentives and career pathways for staff; meaningful monitoring and evaluation systems that monitor and assess what matters¹¹;

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and leadership that is willing to learn from and act on such assessments. The agencies should take a pro-active oversight and coordination role, connecting farmers to service providers, ensuring agricultural inputs are good quality, coordinating external projects and programmes, and supporting a coherent local development agenda.

- **AAS must take into account the multi-functional nature of small scale farming**, which goes beyond rice production. Advisors should address farmers' diverse needs so activities within their broader livelihood strategy remain complementary. To do that effectively, AAS should develop stronger relationships with national agricultural research systems in a way that supports experiential learning by farmers, researchers and advisors and that ensures smallholder farmers' plots under large scale irrigation are considered in the national research agenda.
- **Government should better integrate AAS around large dams into their national and regional strategies**, so that irrigated areas' specific needs are reflected in national AAS policies and investments, and so that they can learn from other places where institutional innovations may have been underway for some time.

- **Governments and investors should fully support AAS as a prerequisite for improved productivity**, giving it as much priority as the multimillion dollar investments in irrigation schemes themselves, and so ensuring that new physical infrastructure will indeed improve food security, smallholder farmers' livelihoods and income. For this to happen, farmer organisations and dam management agencies must proactively engage in the design process for investment programmes. Such programmes should include the creation of 'communication spaces' where farmer organisations, dam managing agencies and other service providers can negotiate roles (including farmers' and farmer organisations' roles in governance fora such as the *comité paritaire* and the *comité local de l'eau*), discuss responsibilities and develop trust. GWI's work has shown that such 'spaces' can be very effective in catalysing constructive dialogue and action, including through the development of shared 'road maps' that outline agreed objectives, the actions that need to be taken to achieve them, and who is responsible.

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Notes

This briefing is based on research carried out by GWI West Africa in three existing dam sites and their irrigated perimeters: Bagré in Burkina Faso, Sélingué in Mali, and Niandouba/Confluent in Senegal.

1. West Africa imports about half of the rice it consumes – see <http://1.usa.gov/1nHGYS>.
2. Small areas under the three dams studied are cultivated with other crops (bananas, vegetables), generally because of their unsuitability for rice.
3. For Sub-Saharan Africa overall, the FAO estimated the ratio was 2000 farmers per extension worker in 1989 and it has probably since decreased further. (FAO 1989. Report on the global consultation on agricultural extension. Rome.)
4. ODRS is the 'Office de développement rural de Sélingué', responsible for the development of the area around Selingué dam in Southern Mali.
5. GFRAS Worldwide Extension Study - Mali, accessed 8 December 2014 <http://bit.ly/1Ku9IAH>
6. For whole country: the figure refers to the total (= men and women) economically active population in agriculture in 2010, from FAO STAT.
7. Guèye B. (2014). Specialisation or diversification? Divergent perspectives on rice farming in three large dam-irrigated areas in the Sahel. GWI West Africa. <http://gwiwestafrica.org/en/specialisation-or-diversification-divergent-perspectives-rice-farming-three-large-dam-irrigated-0>
8. For example in Bagré, people displaced by the dam were resettled into 16 new villages that do not yet even have names (they are called 'V' plus a number) and that combine diverse communities without social links. The dam management agency formed one cooperative per village with about 100 members each, again without considering people's livelihood strategies or social relations. Consequently the cooperatives do not show much social cohesion or sense of common purpose
9. Such as SRI (System of Rice Intensification) – see <http://sriwestafrica.org/>. SRI is an agroecological approach that allows rice farmers to increase yields while at the same time decreasing inputs such as water, chemical fertilisers, herbicides and pesticides.
10. In some cases such processes have already started – e.g. in Niandouba through the NGO VECCO.
11. Currently monitoring by the agencies is almost exclusively focused on gathering data on area under cultivation and yield rather than on understanding and addressing the causes of low productivity, including from farmers' perspective.

GW WEST AFRICA

The Global Water Initiative in West Africa is an action-research and advocacy project. We work with family farmers and governments to shape policies and practices that support livelihoods and food security in the context of large multi-purpose dams. The project is funded by the Howard G. Buffett Foundation and implemented by IIED and IUCN.

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