

Building better dams by sharing the benefits

Whether or not to build dams is no longer the issue – for many developing countries, and investors, they are often the preferred solution for addressing growing energy and food demands in the context of a changing climate. The question now is, how to build better dams, with fewer negative impacts? Jamie Skinner from the Global Water Initiative in West Africa gives more details.

The Global Water Initiative (GWI) in West Africa is an action-research and advocacy project implemented by the International Institute for Environment and Development (IIED) and the International Union for the Conservation of Nature (IUCN). 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.

Funded by the Howard G. Buffett Foundation, our research and advocacy focuses on three existing dam sites (Bagré in Burkina Faso, Sélingué in Mali, and the linked Niandouba and Confluent dams in Senegal) and two sites under development in the Niger basin (Fomi in Guinea and Kandadji in Niger).

Benefit-sharing

Earlier this year, communities affected by the Samendeni dam in Burkina Faso – which displaced 40,000 people – took to the streets to demand justice. These protests were just

the latest in a long history of controversies surrounding large dam projects, which all too often have seen the reputation of dam developers tarnished, while local people lose out.

The attractions of hydropower projects are clear. Big dams provide a source of lower carbon energy that can play a role in meeting climate change targets. But dam building remains controversial across the world because the negative impacts of dam building have still not been systematically addressed.

Ensuring that everyone benefits from a dam is fundamental to its success or failure – socially and economically. But that means local people must also feel the benefit. GWI in West Africa has been working on practical ways to ensure the benefits from dams are shared with local people, providing a clear development trajectory for communities who are displaced/affected by the dam building process.

Achieving this also benefits the developers

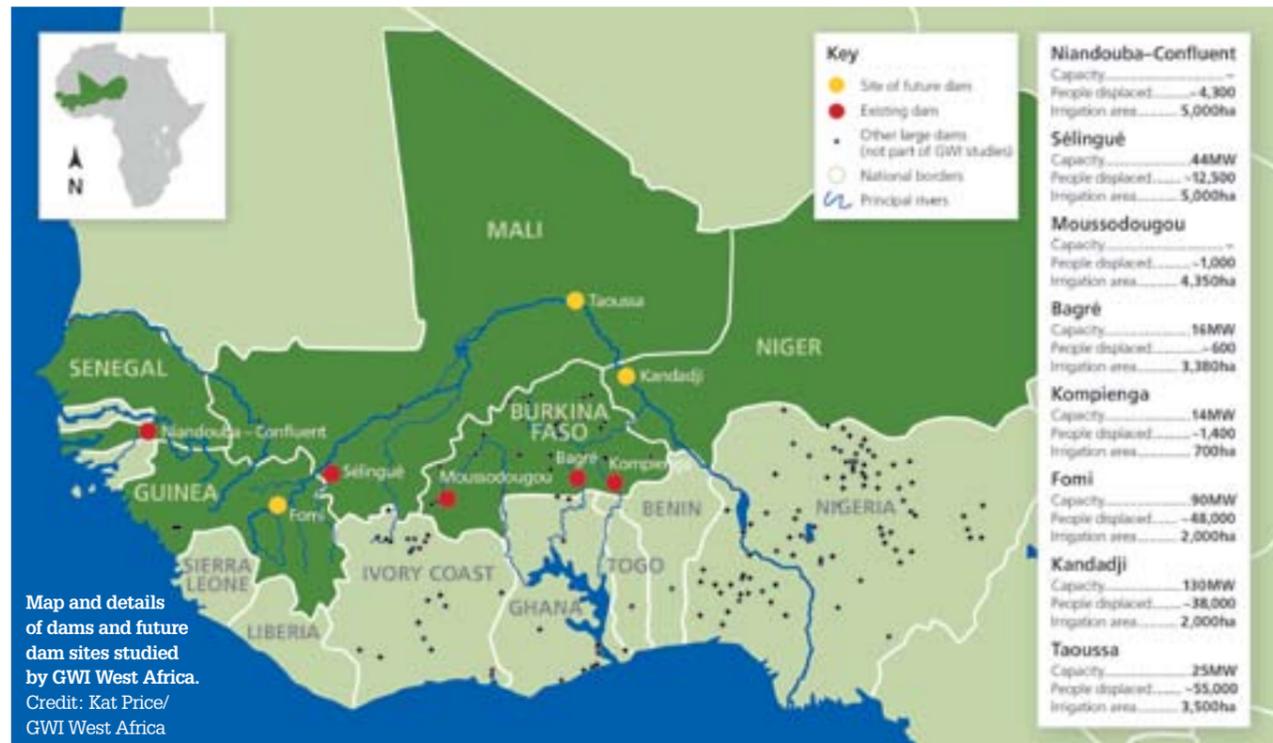
and the government – and avoids the kinds of demonstrations seen in Burkina Faso.

Our experience in the region has shown the key ways to do this include: formal agreements between government and local people; local development funds; improved livelihood opportunities for smallholder farmers; and secure access to land.

Formal agreements

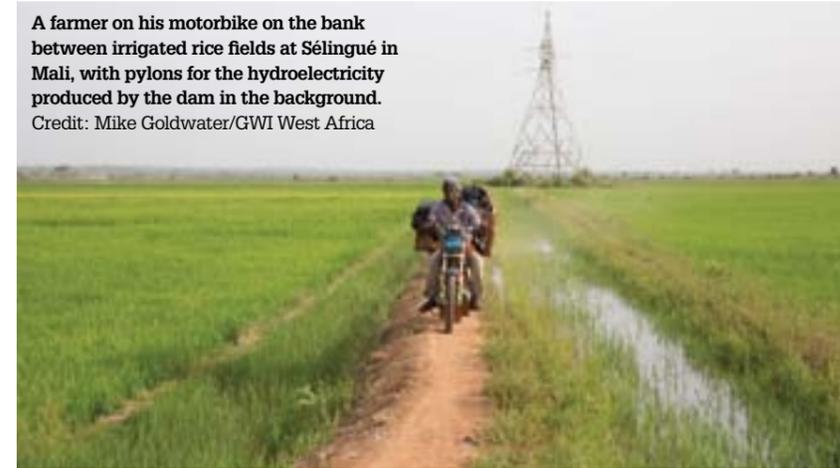
Formal agreements between governments and local populations can ensure both trust and the practical implementation of benefit-sharing. The protests against Samendeni dam in Burkina Faso showed that there is a risk for dam managers and investors – as well as the state – when promises are not kept and governments don't deliver on their commitments to local affected people.

Formal agreements help to keep both sides honest. In some cases governments are exasperated by the evolving and escalating



Map and details of dams and future dam sites studied by GWI West Africa. Credit: Kat Price/GWI West Africa

A farmer on his motorbike on the bank between irrigated rice fields at Sélingué in Mali, with pylons for the hydroelectricity produced by the dam in the background. Credit: Mike Goldwater/GWI West Africa



A smallholder farmer in Sélingué in Mali on his garden plot growing lettuce for sale to women who buy direct from him. Behind him are dam-irrigated rice fields and pylons for the hydroelectricity. Credit: Mike Goldwater/GWI West Africa

demands of affected populations. Experience in West Africa suggests that such agreements can help codify the commitments of each party, so that both State and affected populations can hold one another to account.

In line with international standards, particularly those around 'free, prior, and informed consent' (FPIC), all agreements should be written in clear and accessible language and be drawn up together with affected populations through meaningful consultation. GWI in West Africa has successfully developed agreements with local people in Niger for the Kandadji dam, using FPIC principles, including a proposal for a new type of long-term lease to secure access to what is effectively now public land. [1]

Local development funds

Large hydropower dams will become more acceptable to communities if some of the revenue is shared directly with them. This gives local people a stake in the project that is disrupting their lives, and the means to develop alternative livelihoods post dam construction. Having control of a revenue stream empowers the communities, and prevents them becoming solely dependent on government handouts. [2]

A number of such benefit-sharing schemes are already working worldwide, including through

taxes and royalties used to reallocate revenue to local municipalities or to development funds. The main challenge is good governance and ensuring that revenue redistribution is clearly and directly linked to assisting the affected communities to rebuild their livelihoods.

Mechanisms for revenue-sharing are best set out by governments in legislation. Benefits at the

Everyone benefits from benefit-sharing

Benefit-sharing mechanisms can be positive for all stakeholders. They allow populations affected by dams to become partners in projects and provide them with a stronger voice in decisions that affect them. It also ensures that they are first among project beneficiaries, not last.

For governments, benefit-sharing mechanisms provide practical policies which lead to greater social inclusiveness and which balance social, economic and environmental factors in the planning, design, implementation and operation of dams.

From a dam management perspective, benefit-sharing helps to work effectively with local communities and maintain good relations with them. This reduces the risk of project delays, increases local cooperation in catchment management and in implementing environment mitigation measures. All of which reduces reputational risk.

For potential investors, an explicit policy framework with realistic provisions for local benefit-sharing is an indicator that local affected communities and the public are more likely to support a dam project, reducing exposure to risk.

From a consumer perspective (domestic, service sector or industry) it means a greater likelihood of more secure, reliable and less expensive water and energy services.

Adapted from: Skinner, J., Niassé, M. and Haas, L. (eds.) 2009. Sharing the benefits of large dams in West Africa. Natural Resource Issues No. 19. International Institute for Environment and Development, London, UK <http://pubs.iied.org/pdfs/12555IIED.pdf>



Women replanting rice in the irrigated area around the Bagré dam in Burkina Faso. Credit: Barbara Adolph/IIED



An adviser from the Agricultural Advice Service of the Rural Development Office of Sélingué speaking to a smallholder farmer who is explaining that his crop is not very advanced because he did not add any fertilizer as he could not afford it. Credit: Mike Goldwater/GWI West Africa



Woman smallholder cutting potato leaves in her market garden near the river. The village of Kiniero and the surrounding area will be flooded by the Fomi dam in Guinea.

Credit: Mike Goldwater/GWI West Africa

local level should then be negotiated and agreed with local communities. GWI has been working with local and regional government and civil society in Niger to develop a proposal for a local development fund at the future Kandadji dam. The fund – known as the FIDEL-K^[3] – would channel 3% of the hydropower revenue from the dam to an account managed by a group of local communities, supported by technical staff in local government^[4].

Improving livelihoods of smallholder farmers

Why should dam-builders focus on smallholders? Most of those affected by large dam irrigation schemes are family farmers and agriculture is the main source of livelihood for most of the local communities affected by these projects.



The village of Gbderedou Baranama in Guinea will be flooded by the Fomi dam. This cashew farmer planted his trees 22 years ago and it's a good business. His farm is seven hectares and he also grows mangos.

Credit: Mike Goldwater/GWI West Africa

Of the 150 existing dams in West Africa, 90 support irrigation. An additional 39 dams are on the drawing board. However, irrigation systems alone do not usually produce sufficient yields to either support farmer livelihoods or provide a return on the investment in building the dam^[5].

The main reasons for the low return on investment in systems GWI has examined include:

- Over-optimistic pricing for crops.
- Lower than predicted yields.
- Slower than planned extension of irrigation areas (ie the dam is over-dimensioned).

As a result, rice is imported from Asia, and is the most important agro-food import in West Africa.

Planners often assume that when farmers are moved to nearby lands, after hundreds of square kilometres have been flooded for the dam, they

will be able to farm more intensely on a smaller area to meet their livelihood needs. But this ignores the realities of their livelihood strategy, which relies on growing a variety of crops and earning income from many different activities.

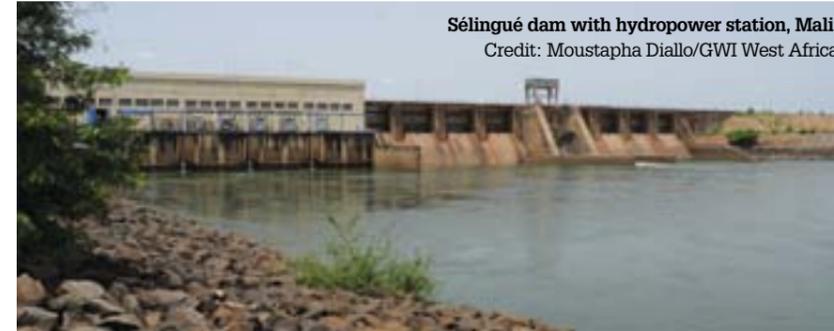
The high input-high yield intensification strategies favoured by development practitioners are not necessarily adopted by risk averse farmers^[6]. Many of these issues could be resolved by creating an environment that addresses and supports smallholders' existing farming strategies – evolution not transformation.

Agriculture in these large scale irrigation schemes needs to be made to work for both the state, in terms of economic returns and national food security, and for the smallholders whose livelihoods depend on it.



The village of Koumban in Guinea is above the proposed level of the Fomi dam and will be taking in displaced people.

Credit: Mike Goldwater/GWI West Africa



Sélingué dam with hydropower station, Mali.
Credit: Moustapha Diallo/GWI West Africa

Security of land tenure

Land tenure is at the heart of ensuring that dams benefit local people. Firstly, to ensure compensation for land lost by the thousands of people displaced by large dams. Secondly, to ensure that farmers – whether as owners, tenants or long term lease holders – can securely invest and develop their new land after dam construction.

In many developing countries with weak land tenure legislation, this is easier said than done as there is no significant stock of 'unused' land. Affected people often find themselves relocated outside their traditional village limits, living on land customarily managed by their neighbours. Sometimes neighbours are even from a different ethnic group. Where traditional land rights stem principally from historical colonisation and long term occupation of particular territories, ensuring secure land tenure can be challenging.

In Guinea, resettlement to make way for the Fomi dam – which will flood 500km² and displace 48,000 people – is particularly complex as there are only 2000 hectares of intensively irrigable land available. Rain-fed land is also being considered but this land already belongs to communities, is challenging to cultivate intensively, and the best land is already occupied. Resettlers are likely to be left with land with marginal soil quality.

This has prompted a national dialogue around the procedures for managing land expropriation and compensation to ensure that it is legally "just" as demanded by the Constitution. GWI is supporting the work of an inter-ministerial

commission to develop new policies for the expropriation of land for public use, compensation processes, and secure tenure on public land for both the state and those who live and farm on it. The legal tools developed by GWI in Niger can serve as inspiration for policy makers in Guinea.^[7] In West Africa, women in particular are at risk of losing their livelihood security in the transition process. This is due to a combination of cultural norms, which mean that women are not given the land titles, and a lack of recognition of the different revenue streams accessed by men and women when asset inventories are drawn up during compensation processes^[8].

International and regional standards

There are a plethora of standards that apply to social and environmental safeguards in dam construction, mainly linked to financing. Where multilateral banks' operational safeguards do not apply, local resettlement is guided solely by the (often lower) standards of national law. This can lead to different dams in the same country following different resettlement practices depending on the donor/financier. The trans-boundary nature of many shared river basins also means that river basin organisations do not plan and implement dams in a harmonised way.

A common framework at regional level has been developed in West Africa by the Economic Community of West African States (ECOWAS) through a regionally binding directive on large water infrastructure^[9]. This has been agreed by



Consultation meeting with representatives from communities who will be affected by Fomi dam in Guinea on feasibility studies for written agreements between the State and affected populations and for sharing revenue from hydroelectricity. Credit: Richard Sagno/CNU-Guinée

References

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- 8] Women pay heavier price for big dams (GWI/IIED blog by Jamie Skinner, 8 March 2016) <http://www.iied.org/women-pay-heavier-price-for-big-dams>
- 9] ECOWAS water ministers agree to build fairer dams (GWI news story, 15 December 2015) <http://gwiwestafrica.org/en/ecowas-water-ministers-agree-build-fairer-dams>

the Community's Water Ministers, and is due to be adopted by states later this year.

GWI has supported the dialogue process which led to the drafting and validation of the directive, but we have also sought to identify practical methods and legal tools to support implementation. This has included ways to secure land tenure for local farmers, ensuring that the benefits of dams are shared with local communities, and undertaking ex post reviews of the economic value of existing dams in order to inform more realistic planning for future ones.

Sharing the benefits of large dams with local people is not only socially just, it is also common sense for anyone wanting to build better dams which deliver for everyone. ■

Author information

Jamie Skinner is the Director of GWI West Africa and a principal researcher at IIED where he leads the Water team. He was the environment adviser at the Secretariat of the World Commission on Dams and currently chairs the social chamber of the Hydropower Sustainability Assessment Protocol.