

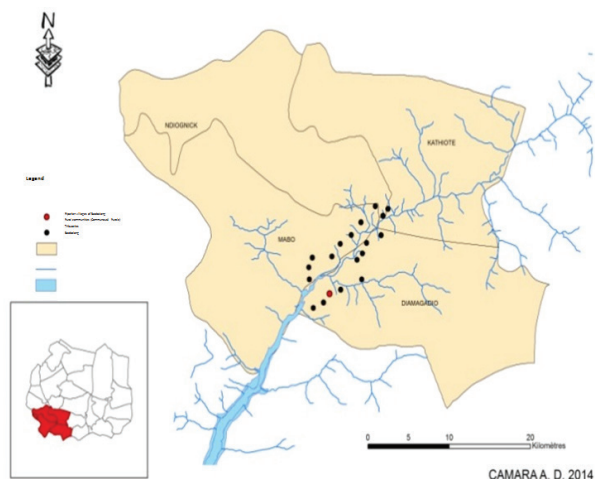


Climate change adaptation, an assessment of governance institutions in Baobolong, Senegal

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Kaffrine is a region located in the groundnut basin of Senegal where an abundance of scholarly literature shows consensus on the occurrence of climate change (Mbow, C. et al 2008; Pachauri, R.K. et al. 2007). This brief summarizes a study of institutional dimensions of climate-change adaptation in Kaffrine, in an area comprising several villages that use the resources of Baobolong, a water body that feeds several villages (Camara and Fall 2015).

Map 1: Rural communities in the riparian villages of Baobolong, Kaffrine.



The black spots are the villages covered in Camara and Fall (2015) case study.

Salinization, deforestation and erosion: Principal effects of climate change

The main challenge facing stakeholders in these villages is salinization of the water body, even though it does not affect the entire Baobolong area. Horticulture and rice farming on the banks of the water body were made possible by the presence of an anti-salt dam upstream of the Ndiao Bambaly. However, this dam is dilapidated and no longer fulfils the function of trapping salt progressively encroaching on nearby farmlands. Farming activities are gradually being replaced by salt harvesting, not a very good business opportunity, which in turn favours the advancement of salt into certain areas.

The gathering of baobab and jujube fruits, honey, game meat and other fruits sold in Kaffrine and elsewhere provide extra income for men and women farmers in the area. However, the deforestation process exerts pressure on the Baobolong forest, reducing the food resources available for animals.

The gaps in public development interventions designed to strengthen the governance of the Baobolong ecosystem weaken the capacities of farmers, pastoralists, fishermen and harvesters of forest resources to adapt to change. One such important gap is the fragmentation of responsibility among several administrative and devolved entities. For instance, the government of adaption to the new increased levels of salt in the water body and surrounding land can only be managed with the involvement of the

conseils ruraux (rural councils) which are responsible for planning interventions in their areas of jurisdiction. They act as points of contact between central government, non-governmental organizations (NGOs) and other development partners. However, local development plans of these rural councils make little or no reference to salt encroachment.

All governance mechanisms for these issues are the initiative of 'time-bound institutions'. They are either NGO projects of organization such as Coopération pour le monde en développement (COMI), L'Union pour la Solidarité et l'Entraide (USE), World Vision or development projects, such as Programme de Gestion Durable et Participative des Énergies Traditionnelles et de Substitution (PROGEDE); but they are all short-term interventions. In fact, all these interventions ended in 2014; while others are about to begin.

The association, Association des villages riverains du Baobolong (AVRB) operates almost alone. The water and forest service also intervenes, but only in a sporadic manner on reforestation issues through the provision of seedlings to AVR. Consequently, AVR is the only permanent institution which makes an attempt to respond positively. Governance of adaptation to climate change involves many actors. However, in the Baobolong area, AVR is the only permanent governance mechanism focused on the community's most urgent needs. This mechanism operates in a context characterized by gaps and institutional dysfunctionality as summarized in the table below.



Photo by Camara, Baobolong, May 2014

Table 1: Summary of governance issues for adaptation

Challenges	Governance issues
Salinization	Withdrawal of the state and transfer of jurisdiction to 'collectivités local' which are unable to respond to certain environmental problems
	A lack of financial resources for different mechanisms
	A failure on the part of the rural council and the local government to recognise the seriousness of salinization (the issue of salinity hardly appears in local development plans of the three rural councils in Kaffrine)
	A lack of maintenance of the current dam
Deforestation	A lack of resource sharing between the various entities.
	An absence of a policing and supervisory authority over resources.
	A lack of enforcement of the local forest management agreement.
	A lack of measures deterring the improper use of resources.
Erosion	A lack of awareness on the part of certain members of the community.
	Weakness of the measures advocated by actors in the struggle against erosion.
	A lack of capacity among communities in anti-erosion techniques.
	Negligence of communities.
	A delay in mobilizing local actors.



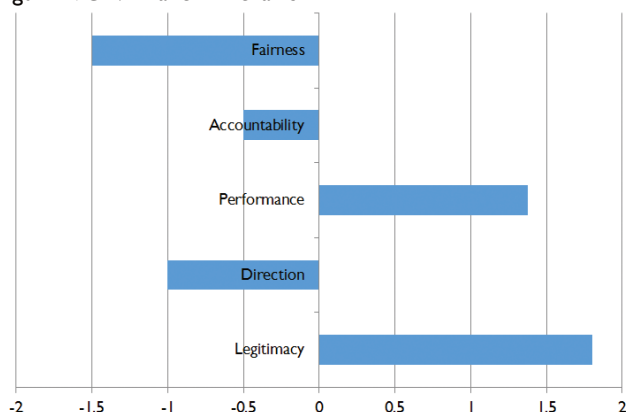
Photo by Camara, Baobolong, May 2014

A forsaken governance mechanism

The analysis of institutional dimensions of governance using a framework developed by the International Livestock Research Institute (Robinson et al. 2013; 2014), based in part on the work of Gupta et al. (2010), shows that effectiveness of AVR in facilitating adaptation to climate change is moderate. AVR has positioned itself by setting broad objectives (environment, health, finance, agriculture) without having undertaken any strategic planning. Moreover, it does not have the competence, resources or

the necessary commitment of different actors involved in the process to achieve these objectives. This governance mechanism has ambitions far beyond what its resources (financial, management, operational and communication) can achieve.

Figure 1: Governance mechanism



As Figure 1 indicates, a lack of fairness and of clear direction of the mechanism is at odds with the relatively high scores received for legitimacy and performance. This raises questions as to whether a governance mechanism can perform well without being fair and having clear objectives.

A low-performing institutional system

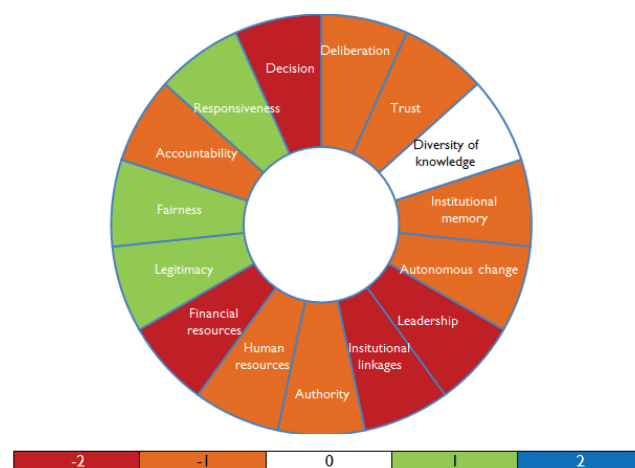
At the level of Baobolong, the system of governance reveals lack of harmony between territorial subdivisions of rural councils and the harmony of the landscape of riparian villages of Baobolong. The sectorial structure of government institutions and their administrative boundaries do not correspond to ecosystem dynamics or local social conditions, resulting in what environmental governance theory refers to as a lack of institutional fit. In theory, Senegal's framework for devolution assumes that environmental issues are to be handled at rural council level, but it does not define how rural councils can work together on these issues. The main environmental challenges are today tackled by several actors in a disjointed manner, which instead of solving the problem, suffocates the social arena through uncoordinated, haphazard actions. Institutional relations should be established at different levels. First, between rural councils sharing the Baobolong and AVR to help them work together to respond to the adaptation needs of riparian villages of Baobolong. Secondly, rural councils should find the means to coordinate all initiatives operating within their territories. The logic of harnessing resources leads the central authority to accept all financed initiatives without demanding coherence of actions and consolidation of resources. Instead of reinforcing adaptation capacities of communities, it places them in a situation of uncertainty as far as development aid is concerned.

The governance system at the level of the Baobolong ecosystem does not meet the needs of stakeholders concerned with resources. The governance criteria are almost all negative apart from legitimacy, diversity of views, fairness and responsiveness which have received average scores. However, if the governance system is

not addressed to make it more inclusive, the dimensions that are positive today may become negative tomorrow. Institutional linkages should be reinforced to influence a consolidation of resources, institutional memory and social learning.

Some dimensions of governance play a determining role in the effectiveness of a governance system. The resource mobilization capacity and institutional relations are paramount in ensuring that the system supports climate change adaptation.

Figure 2: Scores obtained following an analysis of the governance system.



The establishment of a governance mechanism of resources related to Baobolong exposes the weakness of the current institutional system in handling environmental problem at the level of the watershed. The magnitude of environmental problems in the face of ineffective governmental and local authority initiatives leaves local actors discouraged. The lethargy of collective community action is a clear sign of this phenomena.

The analysis of institutional dimensions to climate change in the Baobolong ecosystem raises questions primarily of central governance which are particular to almost all rural councils in Senegal and which need to be probed. The current devolution reform in Senegal which transfers power and resource management from the state to local authorities needs to be assessed to reveal the problem posed by its application and the way local communities receive it.

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