

Info Note

Integrating pastoralism into policy process

Enhancing pastoral adaptation and sustainable development

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Key messages

- Pastoral communities have to be strengthened for land negotiation.
- Pastoral resources have to be considered in all agricultural policies.
- Pastoral mobility is central to adaptation.

Background

In Senegal, livestock are an important part of both national wealth and for farmers' livelihoods. 28.2 % of households rear livestock and 73.9 % of them are in rural areas (ANSD 2014). Livestock also represent 4.4 % of the national GDP. In the context of climate change, addressing the challenges of adaptation becomes increasingly relevant in order to ensure sustainable development.

Climate change adaptation in pastoral systems is shaped by the ways that socio-economic and political factors mediate livestock keepers' access to pastoral resources, including water, pasture and avenues of mobility. While it is tempting to focus analysis on policies that target pastoral development or climate change adaptation, our research has found that pastoral adaptive capacity is substantially shaped by policies and development initiatives in domains such as land tenure reform, food security or economic development. We were first focused on policies interactions between environment and pastoralism.

This brief is based on analysis of how past and present policy processes affect the capacity of pastoralists to adapt to climate change in Senegal, using Ngnith Municipality in the delta of the Senegal River as a case study. Drawing on a combination of literature review and original fieldwork. Our conclusions lead us to provide some recommendations which need to be more integrated in future policy-making process in order to avoid maladaptation and social inequity.

Past policies and disruptions

Many agricultural development and national food security policies in the recent past have had negative effects on pastoralists' adaptive capacity.

For example, the construction of the Dama and Manantali dams on the Senegal River were done to control Senegal River and support domestic self-sufficiency in rice, a major national food security objective. However, these created new ecological dynamics that have negatively affected pastoral resources. Changing the water regime has led to the proliferation of inedible typha grass, which chokes up shallow waters along the edge of ponds and streams, keeping livestock from being able to drink there.



Example of typha development closing water access to the Lake of Guiers, Nder, 2016. Photo: Julien Meunier

The new water regime has also led to increased incidence of livestock *bilharzia*, what pastoralists called 'walo'. This parasitic worm which leads to cattle death or weakness and makes the liver non-consumable, is one of the most cited problems reported by herders in the area. The new water regime has led to the presence of perennial water by reducing natural flooding and water movement, as well as reducing water salinity. This in turn creates a favorable habitat for bilharzia, which has negatively affected livestock in the area, a lot of pastoralists reporting cattle death due to this disease.

The land competition has increased and strengthened consequences of droughts like species losing, for example Kelli (*Grewia bicolor*), Tiélé or Bahé bodié, two Fulbe name referring several latin name. Tiélé could refers to *Andropogon gayanus*, *Schizachyrium exile* or *Schizachyrium thollonii*. Some pastoralists speak about losing due to 70's droughts, but the new land occupation decreases the pastoral lands and further limits pastoralists' options for adaptive response.

Although agricultural development is an opportunity for farmers and urban consumers, in this case it has come at the cost of degraded pastoral resources and adaptive capacity. Due to poor pastoral tenure security and a pervasive perception of pastoral land as "undeveloped", it is not unusual for agricultural development to fail to integrate pastoralism in the planning, leading to social and ecological marginalization of pastoral livelihoods.

Present policy impacts

While analysis of past policy is instructive, similar dynamics are also currently underway. Our original fieldwork focused on specific policy process in the Senegal River delta: decentralization and POAS (Plan for the Occupation and Allocation of Land), PDIDAS (Sustainable and Inclusive Agribusiness Project), and agribusiness agreements.

Decentralization and POAS

Decentralization and POAS are two processes quite related, the first being a national policy and the second a political initiative implemented in some local communities. Decentralization devolves power over natural resource management from State to local elected representatives. Under decentralization, pastoralists' communities suffer from an under formalization of their organizations, making it more difficult to assert their interests in local decision-making spheres that are dominated by farmers.

POAS is a tool meant to help rural communes in land management by allocating specific functions to some parts of land. For pastoralists, POAS supports implementation of dedicated grazing lands that can act as a fodder reserve. POAS also formalizes cattle trails which

are essential for pastoral mobility to deal with environmental disturbances. However, despite some promising potential, implementation often favors farmers at pastoralists' expense. Cattle trails are impinged by agriculturists and POAS facilitators do not always enforce the plan due to lack of resources. While POAS provide formal rules for pastoralists to access crop residues, this access is not always allowed, and farmers are starting to sell crop residues because heavy demand is creating incentivizes for increased commercialization of fodder resources.

PDIDAS and the PSE

The Senegal Emergent Plan (PSE) is the overarching national development framework under which all initiatives must fall, and the agricultural component of the PSE is the Acceleration of the Pace of the Senegalese Agriculture Program (PRACAS). In the Senegal River Delta, the PDIDAS initiative, situated in the priorities of PRACAS, significantly extends both national and international agribusiness in the delta in the interest of increasing an agricultural-based economic growth, an important national food security objective. One important goal cited in PRACAS is to facilitate land reform and to provide a model for future reforms.

However, in the implementation of PDIDAS, local agricultural communities and individuals often lack the capacity to negotiate with agribusiness firms, and pastoralists are even more marginalized. The expansion of large scale agribusiness farming in the delta has led to further decrease and degradation of pastoral resources - pasture, water, transhumance trails - as well as pastoralists' capacity to manage them.



Example of cattle trail across agribusiness fields in Ngnith, 2016. Photo: Julien Meunier

In targeting agricultural development as framed by the PSE goals, PDIDAS is pursuing. It's an important project, both by the food security target and by its territorial influence. Nevertheless, pastoral dimension is not quite integrated.

This project has selected land to distribute to both agribusinesses and local farmers. But during this process, pastoral communities have not been able to effectively support their own interests, as there are no dedicated pastoral organizations involved in PDIDAS. Although this project aims agricultural development, the area targeted have also functions for pastoralists, for fodder and water supply.

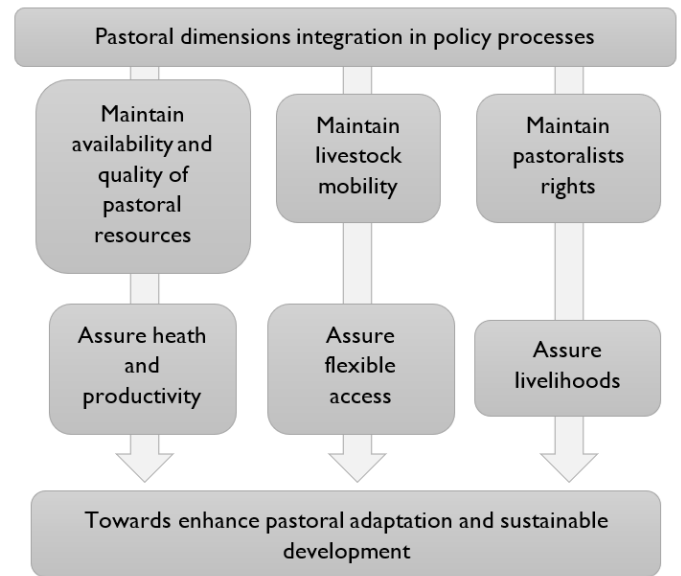
To select land, PDIDAS has initiated discussions in village which were agreed with the project. Discussions aim to collect land in local communities and gathers agreements. Then collected lands are officially allocated by the municipal council. However, the lands are treated as independent units, without taking a landscape-oriented approach, which would recognize the territory as host to both agricultural and pastoral activities. The development of collected land will not just have consequences for people who own it, but also for pastoralists living in the proximity. An official PDIDAS video (<https://lc.cx/gdtk>) speaks about “large areas of fertile land that remain unexploited”, reflecting a lack of appreciation for pastoralism as a land use. The PDIDAS program framework - designed for the goal of large scale agriculture and national rice self-sufficiency - threatens pastoralism by increasing land fragmentation and thus limiting the pastoral resource base necessary for effective adaptation to climate change.

To end, we can bring some elements from other programs which are more oriented on pastoralism and which could be interesting for some pastoralism integration options. First, the Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) has a special focus on pastoral resilience reinforcement. It works directly with pastoral NGO and targets the mobility securing, transhumance being considered as a factor of development. Second, the Regional Support Project Pastoralism in the Sahel (PRAPS) has targeted the securing of pastoral ways, the empowerment of pastoral organization, formation for forage reserve. However, these programs are entirely separate from - and lack political power compared to - previously discussed agricultural programs. However, enforcement of the design insights from BRACED and PRAPS could be useful in getting agricultural programs to improve meaningful integration of pastoral livelihood needs.

Conclusion and lessons

Our field study insights lead us to emphasize that pastoral adaptation is shaped by a wide variety of policies, including many that are not oriented on pastoral adaptation. Adaptation needs to be conceived as a part of the daily pastoral life. It's a process which deals with all the encountered changes on the pastoral territory. The territory, the place where policies are implemented need to be seen with all its component for a sustainable and

fair development. The activities in rural areas are not compartmentalized. We can also conceive the territory as a socio-ecological system where social, economic, political and environmental dimension are intertwined with various influences.



Three main pastoral dimensions recommended to be integrated into policy-making.

To avoid pastoral maladaptation and a subsequent decrease of livestock productivity and pastoral livelihoods, some issues should be stressed and integrated in policy-making processes for laws, programs and projects that affect territory but are not primarily oriented on pastoralism. Recommendations we made are:

- Conservation of water, pasture and other grazing resources should be integrated into development policies in rural areas, both by policymakers and funders designing programs because livestock systems require substantial mobility. Agricultural development initiatives need to take care about water and pastures availability and quality, because it's important for animal health and productivity.
- Pastoral mobility should be integrated into rural planning policies by protecting pastoral ways and rangelands. Mobility is a key feature of pastoral adaptation in dryland environments. Preservation of mobility through avoiding land fragmentation allows pastoralists to be flexible for resource use. Preservation of mobility is especially relevant for countries like Senegal, where land reform and decentralization policies are being implemented.
- Communities, both pastoral and agricultural, need substantially more support and strength in the negotiation of agreements with agribusiness entities. This support could be realized by state services or by a partnership with national NGO involved in pastoral issues. This support could be increased by the integration and empowerment of pastoral NGOs in

the policymaking or during the implementation of programs.

Pastoralism involves specific relations between human and environmental systems which need to be integrate in policy processes. Pastoralism practices have also benefits for farmers by fertilization, relations being traditional and official through POAS. A sustainable development with shared wealth need to have an integrative vision of the targeted area to preserve this equilibrium among pastures, livestock and people.

Further Reading

- ANSD 2014. Rapport définitif. RGPFAE 2013.

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