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## CapEx in supporting pastoral development

# Maintaining pastoral water structures

Guihini Dadi Mahamat, February 2016

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### Key messages

- Maintenance of pastoral water structure is at two levels: routine maintenance and major repairs. Generally speaking, there are no locally appropriate solutions for the major repairs. In some countries such as Kenya and Mali, where devolution is more advanced, funds have been set up for maintaining water structures; although not perfect, these are examples to be emulated by others.
- Entry points for setting up such a waterpoint-maintenance fund are the actors at the grassroots, platforms or technical ministries accompanied by development agencies.
- Traditional institutions play a key role in mechanisms for maintaining pastoral water structures.
- Maintenance mechanisms still need to be piloted as sources of learning.



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## CapEx series on pastoralism

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*Pastoralism is practised on a quarter of the globe's surface and provides a source of food and livelihood for millions of people, especially in areas that are too dry or high for reliable production of food crops. For the Swiss Agency for Development and Cooperation (SDC) work in the Sahel and the Horn of Africa, pastoralism is a key domain. Having recognised the value of learning from experiences in development cooperation across countries and regions, the Subgroup Pastoralism in the SDC network for Agriculture and Food Security undertook an internal learning process called "Capitalisation of experiences in supporting pastoral development" (CapEx Pastoralism for short). The Subgroup members identified issues about which they wanted to learn more, so as to be more effective in supporting the development of pastoral economies and livelihoods. During the CapEx process, they compiled information and formulated texts on selected topics. This brief is one of a series of briefs that came out of this process. The briefs are intended primarily for SDC and its partners at country and regional level, particularly in West and Eastern Africa, and SDC staff in Switzerland, but also for other development practitioners and donors engaged in pastoral development.*

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### 1. Introduction

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Traditional pastoralists are in essence mobile, always seeking water and pasture – resources that are available simultaneously only during the wet season. Waterpoint construction enables pastoralists and their herds to access water in grazing areas, thus reducing the need to move and consequently reducing conflicts that occur most often during transhumance periods. Multiplication of such water sources also aims to avoid concentration of livestock in the few areas with easy access to water, which can lead to pockets of desertification. However, pastoral water structures are scattered and insufficient, and their maintenance is essential to ensure sustainable use. Maintenance of the structures is just as important as their construction.

This CapEx brief on maintenance of pastoral water structures is based mainly on the specific case of Chad, where the context is characterised by a weak presence of public services in decentralised administrative units. However, this is complemented by cases in Mali and in Kenya, where decentralisation is more advanced and there is stronger presence of local government.

#### Key terms

##### Types of water structures and management modes

In Chad, several types of water sources have been constructed to facilitate the access of pastoralists and particularly their livestock to water:

- **Micro-dams and ponds** are natural depressions used for watering herds during the dry season. They are put in place by the government and/or donors. Access to the water is based on a consensus made upon completion of the work that these water sources remain public property.
- **Weirs** are structures built in low-lying areas by the government, in collaboration with development partners, to facilitate water infiltration, recharge the aquifer, reverse degradation and foster formation of ponds. These are put in place by the government, but local management bodies formed at the time of construction are responsible for routine maintenance.

**Mechanised water-pumping stations** are not numerous in pastoral areas and are constructed only by the government, sometimes with support from financial partners. Like in urban areas, the water from mechanised stations is sold and management is ensured by special bodies set up for this purpose.

- **Pastoral wells** are drilled by the government, donors and non-governmental organisations (NGOs). Their management depends on the mechanism agreed at the time of construction. They are public property even if management and priority access are granted to local populations.

- **Traditional wells** are dug by the pastoralists themselves and are managed and maintained entirely by them. These wells are shallower than public pastoral wells and can be owned by private persons, families or communities. The construction is subject to customary / traditional rules for managing land/ territory or resources, or sometimes according to Islamic law. Water is never sold, and maintenance remains the responsibility of the owners.

#### **Types of maintenance of pastoral water structures**

- There are basically two types of maintenance of pastoral water structures, especially for wells:
- Routine maintenance is usually the responsibility of the users and does not require skilled staff.
- Major repairs require skilled staff and appropriate equipment; the users cannot do this type of maintenance.

#### **Types of waterpoint management**

- Traditional management, where all structures – particularly pastoral wells – are managed in a traditional way in pastoral areas.
- Joint management initiated by the technical partners and/or projects in agropastoral areas, where a consensus is reached and shared responsibility between sedentary and transhumant pastoralists is defined to facilitate access to the wells.
- Management by a committee set up by a project, where a team is chosen to mobilise the communities and maintain the waterpoint.

In general, it can be noted that, in Chad, micro-dams and ponds are poorly maintained by the users if the State, i.e. the owner, does not intervene. Management and maintenance of mechanised water-pumping stations (with a parapublic status) are mainly in the hands of the management committee, which also depends on the State to undertake major repairs. Traditional wells are maintained only by the users who own them and only with locally available materials; when they break down, the process starts all over again. If well organised, pastoralists can handle the routine maintenance of pastoral wells and weirs, but they are not in a position to repair large-scale damage. It is thanks to the pastoralists' lobbying initiatives that some major repairs have been undertaken by public authorities or the central government.

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## **2. Specific cases**

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The following two cases provide examples of i) a waterpoint-maintenance mechanism based on traditional management, and ii) a local committee for management and maintenance that collaborates with local authorities in Mali. Both types of management show the importance of involving beneficiaries to ensure regular maintenance and the importance of government intervention (at the local, regional or national level) to finance major repairs.

### **Case 1: Waterpoint-maintenance mechanism initiated by local NGOs in Chad<sup>1</sup>**

APIDEL (Association pour la promotion des initiatives de développement local / Association for Promoting Local Initiatives) and PDR-WF (Association – Programme de Développement Rural de Wadi Fira / Association Wadi Fira Rural Development Programme) are Chadian NGOs operating in northeastern Chad (Wadi Fira and Ennedi). Transhumant pastoralists and sedentary agropastoralists live in this area.

With the support of traditional and religious leaders, the two NGOs initiated and rebuilt a mechanism for well maintenance based on traditional management practices. Instead of the traditional leaders being the sole managers of the wells, the NGOs – with and around the traditional leaders – set up a structure referred to as (depending on the locality) a committee or body charged with the responsibility of maintaining wells built in their area. The traditional leaders are members of the overall management team without taking on key positions such as treasurers. The leaders and elders ensure respect of the

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<sup>1</sup> Sources: APIDEL NGO (2010–2015); PDR-WF NGO (2010–2015).

rules. The management team comprises about ten women<sup>2</sup> and men, representative of all users, and is responsible for local mobilisation, carrying out routine maintenance and/or lobbying for repair of major damage. When it is set up, the team is supported by the NGOs both on technical and strategic levels to develop a local network to lobby the administration to carry out major repairs. This opening up of the management permits the traditional leaders to maintain their supremacy (without competition) and to involve others in organising the routine maintenance (food, equipment or materials). Access to water is open and free for pastoralists, while agropastoralists have more limited access and must pay. Nevertheless, the pastoralists can fairly quickly mobilise the means and people, if necessary. This rebuilding of the well management mechanism has helped ensure a better maintenance, although there is still much to be improved. Notwithstanding the community contribution, government intervention is still required to undertake major repairs. It should also be emphasised that this form of management has significantly reduced conflicts between transhumant and sedentary pastoralists.

### **Case 2: Mechanisms for maintaining waterpoints in Mali<sup>3</sup>**

With the advent of devolution in the late 1990s, a conducive institutional environment was created in Mali, with laws governing access to and control over agrosylvopastoral areas, the transfer of responsibilities to local authorities to manage natural resources, pastoral charters etc. The local authorities (municipalities, local councils/prefectures and regional councils) supervise the water infrastructure and organise its management and operation, implemented together with the direct beneficiaries, or they delegate the management (authorising a private entity that manages the structures on a contractual basis).

For structures intended primarily for watering livestock, the majority of the members of the management committee are livestock keepers/pastoralists. Prices for livestock watering as well as the formula for allocating funds are determined through negotiations with the municipality concerned. As is the case for access to drinking water, fees to be paid per animal or per herd differ depending on whether the animals are from the locality or come from elsewhere. It should be noted that the direct beneficiaries always contribute to building the structures (in kind, equipment/materials or money – at least 10% contribution).

The management committee is responsible for routine maintenance and small repairs, while the municipal authorities undertake major repairs. If costs of major repairs are very high, the Regional Council intervenes on the basis of an agreement with the municipality. Major repairs fall under the



**Drawing and carrying water (Credit: Guihini Dadi Mahamat)**

<sup>2</sup> In each committee, there are often 3–4 women.

<sup>3</sup> Source: Helvetas (2007), Dembélé (2008), SDC (2012), AIMAEP Mali (2015).

rural development services (rural engineering): there is a fund for maintaining and repairing pastoral water structures. However, difficulties are often encountered in mobilising these government funds.

### **Case 3: Experiences in funding the maintenance of water infrastructure (Kenya and Mali)<sup>4</sup>**

In Garbatula District in Kenya, the institutions set up for conflict prevention and management have expanded into mobilising resources for maintaining water infrastructure. Members contribute and cater for minor repairs while the funds for major repairs come from the State. In Mali, users pay water-access fees to their associations, who then pay the local authorities. If any repairs are needed, the associations and authorities agree on priorities and on the structures to be repaired. In both cases, in



Waterpoint in Chad (Credit: Guihini Dadi Mahamat)

countries where decentralisation is fairly advanced, there is a fund from the central government to finance major repairs, even if the issue of allocation has not been completely resolved.

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## **3. Lessons for development cooperation**

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### **3.1. Situation analysis**

#### Status of the various ways of maintaining water infrastructure

Regarding maintenance works, pastoralists and above all the other stakeholders working in this field (the State, donors, NGOs etc) always face the questions: who owns the water infrastructure and how to maintain and sustain it? With regard to this last question, two subquestions are: i) what mechanisms to set up to manage and maintain in a sustainable/viable way the waterpoints to be constructed, and ii) how to finance their maintenance, particularly major repairs?

In fact, each region and each community has its own way of organising access to and maintenance of wells and other water infrastructure. However, experience has shown that maintenance structures set up without reference to traditional management mechanisms have often failed because of conflicts of interest, conflict of leadership with the traditional hierarchy or inappropriate management culture. This is why it is important to set up management bodies for water infrastructure based on existing mechanisms without disrupting the community hierarchies. It is therefore essential to enhance the traditional management systems by making them more operational and participatory and/or by negotiating an arrangement with the State to ensure regular maintenance of the structures. The experience of the organisation in Garbatula (Kenya) formed around the elders working in collaboration with the government provides an exemplary case (see Box 3).

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<sup>4</sup> Sources: Roba (2014), Dheda Garbatula (2015), SDC (2012).

Regarding the financing of the maintenance of pastoral water structures, all the actors face challenges in mobilising the necessary resources. In reality, the funding of routine maintenance is transferred to beneficiaries, who can handle this fairly well if organised in a way that is adapted to their management style. Major repairs are the responsibility of the relevant ministries (in the case of Chad) or rural/regional authorities (in Mali and Kenya) with a fund dedicated to this purpose. Coordination between the different actors often constitutes the major difficulty.

In Chad, in the course of reflecting on financing maintenance of pastoral water infrastructure, a workshop held in 2013 and coordinated by the Chadian pastoral platform recommended that a maintenance fund be set up in emulation of the Kenyan and Mali experiences, ensuring that no further taxes or fees are levied on pastoralists but rather allocating some of the income from livestock for this purpose.

All the partners actively involved in constructing or rehabilitating pastoral water infrastructure should take part in defining a mechanism for setting up and operating such a fund, so that its management would be inclusive and transparent and to ensure some degree of local governance.

### Other organisations or programmes working on this topic in the same geographical area

Several institutions and actors are working on construction and rehabilitation of pastoral water structures: the French development agency (AFD), the European Union (EU), the International Fund for Agricultural Development (IFAD), the World Bank (with its new Regional Programme for Support to Pastoralism in the Sahel / PRAPS) and national and foreign NGOs. None of these institutions has been able to set up a sustainable mechanism for maintaining the structures and especially not for major repairs that require substantial resources and expertise beyond what the communities can mobilise. It is for this reason that such repairs are still a State responsibility in Chad, pending the decentralisation to rural communities. The main actors, notably AFD, EU and IFAD, are open and can become partners in cooperation and exchanging knowledge about this and are equally ready to collaborate in reflection with the Government to work out a mechanism to create and operate a fund for maintaining pastoral water structures.

### **3.2 Entry points for development cooperation**

The Chadian pastoral platform or other platforms in other countries can become entry points because they are structures that involve all stakeholders in pastoralism.

The Swiss Agency for Development and Cooperation (SDC) and other agencies/actors can encourage these platforms and the Ministries concerned to initiate reflection on setting up a mechanism for maintaining pastoral water structures like that for drinking water supply or for road maintenance, based on experiences made in other countries. This reflection can start with the grassroots actors (pastoralist organisations, local authorities, traditional and religious leaders, decentralised technical services etc) and be refined and validated at national level to become an implementation strategy.

### **3.3 Interacting with policy processes**

Development agencies need to interact in the field of pastoral development policies and strategies of intervention in their countries of operation, starting first and foremost with the relevant technical ministries. This reflection starts at the national level but, depending on the country, it is sometimes advisable that reflection begins at the local or regional level, such as in the case of Kenya.

### **3.4 Key principles to guide the development-cooperation process**

As a basic principle for success, the ministries concerned (Water, Livestock and Finance) should be encouraged to seek coherence and coordination and to collaborate to ensure that this becomes a government initiative that leads to a sustainable maintenance mechanism governed by proper laws and regulations. To this end, the process should be made participatory/inclusive through the effective involvement of all stakeholders: traditional chiefs, religious leaders, local leaders, authorities, pastoralists and their organisations, women pastoralists or leaders, regional technical services, NGOs etc. Given the current need to set up a fund, a mechanism for good management should be built in a way that ensures good governance and fair allocation, and balanced to ensure that women's roles and needs are taken into account and the activities do not become a further burden to them.

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