

Reducing conflicts around water points



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List of acronyms

COGEPE	WATER MANAGEMENT COMMITTEES
FCFA	CFA FRANCS (CURRENCY USED IN SEVERAL COUNTRIES OF WESTERN AND CENTRAL AFRICA)
GARDL	GROUPE ACTION RECHERCHE POUR LE DÉVELOPPEMENT
MDM	DOCTORS OF THE WORLD
OFDA	OFFICE OF U.S. FOREIGN DISASTER ASSISTANCE
SI	Solidarités International
SOLISA	Solidarité pour le Sahel
WASH	WATER, SANITATION AND HYGIENE
WASH IN NUT	WASH IN NUTRITION

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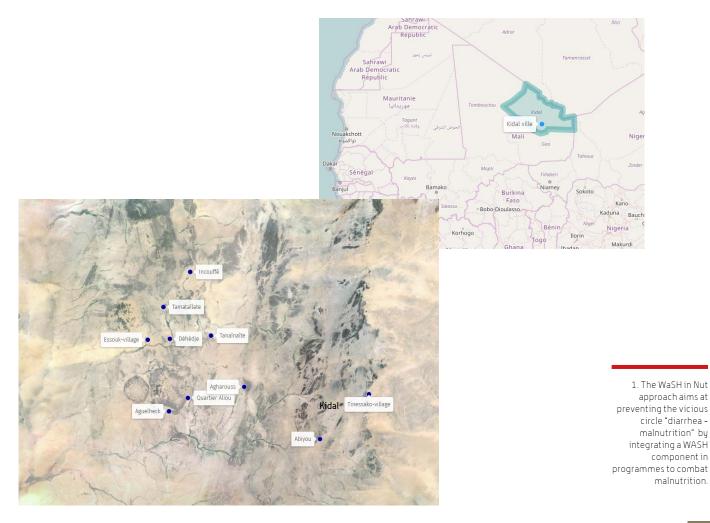
1 INTRODUCTION

1.1 SOLIDARITÉS INTERNATIONAL in Mali and in the Kidal region

Following the political and humanitarian crisis that started early 2012, SOLIDARITÉS INTERNATIONAL deployed a response team in the country in May 2012.

The organisation intervened in the Kidal area as early as 2013 together with Médecins du Monde Belgium in health centres with funds from UNICEF for an integrated intervention in health (MdM Belgium) and WaSH (SI). After MDM-Belgique left the area in 2014, SOLIDARITÉS INTERNATIONAL continued WaSH activities in other health centres, resumed the Severe Acute Malnutrition screening and treatment component through a WaSH in Nut approach¹, and also began considering agropastoral activities linked to issues of access to water at community level. SOLIDARITÉS INTERNATIONAL therefore reoriented its intervention in the area towards community WaSH, this being a particularly vital need in this **agro-pastoral context**, in which the whole population depends on this resource to live and survive.

Today, SOLIDARITÉS INTERNATIONAL is the only WASH actor working in the region and the only NGO continuously present since 2013. It has acquired a good understanding of the main issues and challenges at stake.



The present project intended to "**improve agropastoral activities and support malnutrition treatment through the implementation of WaSH activities in the Kidal region**" and was funded by OFDA for a period of 16 months (from June 2015 to September 2016). It was essentially structured around two components, the first concerning the improvement of agro-pastoral activities through the rehabilitation of ten water points, and the second on the improvement of the treatment of Severe Acute Malnutrition (WaSH in Nut).



> Water point in Tanaînaîte, 2016 © SOLIDARITÉS INTERNATIONAL

1.3 Learning methodology

This case study is part of a larger learning from experience process, in relation to the project fore-mentioned. It focuses on its first component, which aims at **enhancing community water supply systems in order to lessen the tensions pertaining to the use of this resource**.

We compiled in this document several good practices that were identified during the project. A lessons learned workshop was also organised in September 2016 with the project team in Kidal. It gathered:

- the partners SOLISA (partner on the agro-pastoral and water supply component of the project) and GARDL (partner for the WaSH in Nut activities);
- a dozen community leaders and other key resource persons;
- 20 beneficiaries from the infrastructures and the water management committees (COGEPE).

This meeting with all project stakeholders enabled us to collect their opinions and feedbacks, especially concerning the role of the project in attenuating tensions linked to the access to water. On the basis of these experience feedbacks, we were able to draw conclusions that we will expose in this case study.

This learning from experience document is not a simple assessment of the project in question, but rather **an analysis of the practices that were implemented and their impact on the issue of water scarcity and consequent tensions**. We will present and analyse **five good practices** by underlining their key success factors, listing certain difficulties encountered during their implementation and making recommendations for duplication or for a following phase of the activities.



 > Lessons learned workshop, September 8th 2016 in Kidal
 © SOLIDARITÉS INTERNATIONAL

2 THE PROJECT

2.1 A context of agro-pastoralism characterised by nomadism in the Kidal region

To understand the issues at stake in this project, we need to delve into the context.

The Kidal region is located in the north-east of Mali on the southern side of the **Adrar des Ifoghas mountain range** that culminates at 890 meters. The region is part of the **Sahelo-Saharan area**. Rainfalls are very low, ranging on average from 75 mm during the driest years to 150 mm during wetter years. Temperatures variations, including during the day, are very high. The year is split into three seasons:

- A hot and dry season between February and July, with very dry and hot winds (from east to west), and temperatures above 45°C (113°F);
- A rainy season between July and September, with irregular rainfalls and hot and humid winds (frequent sandstorms);

A dry and relatively cool season between
 October and January, with temperatures
 fluctuating between 5°C (41°F) during the
 night and 30°C (86°F) during the day.

In this context, temporary streams and rivers (*wadis*) are ever more precious: water flows depend on rainfalls. However, there are numerous wadis and catchment basins in the Adrar des Ifoghas mountain range, which includes the Kidal region in its lower part; this facilitates the access to the groundwater table, which, moreover, provides relatively safe water (no major issues of pollution). However, groundwater recharge is irregular and surface water is subject to high evaporation, which further limits the natural water supplies available, especially during the dry season - **numerous wells run dry**. Finally, global warming tends to aggravate the situation in terms of temperatures (average temperatures augment)



> Aerial view of the Kidal region during the "winter" season (October to January), 2016 © SOLIDARITÉS INTERNATIONAL

and water (decreasing rainfalls and air humidity, more frequent droughts). All in all, **the quantity of water available is generally insufficient, which is a great source of tension, especially during dry seasons**. Still, apart from a few brackish groundwater tables, the initial quality of the water in the region is acceptable.

In the Kidal region, goat, sheep and camel rearing are key agro-pastoral practices; they represent 95% of the sources of income. Yet, these practices are tied to water resources, their irregularity and their location: wadis that undergo great interseasonal or inter-annual irregularities, zones with varying vegetation cover, more or less numerous and functional water points... The conditions to access this vital resource have shaped agro-pastoralism and impelled nomadism. Transhumance is a breeding strategy particularly adapted here to the environmental conditions, as it enables the exploitation of pastoral and water resources scattered in space and time. Livestock breeders move around with their herds for a few months at a time to search for uncertain and variable water and pasture resources. They thus depend on local water resources, insofar as they exist and are available.

To these very rough climatic conditions are coupled other factors that impair agro-pastoral practices: other than climatic changes that lead to a reduction of pasture surfaces and to overgrazing, veterinary inputs, equipment and modern livestock breeding techniques are sorely needed.

The **politico-military crisis of 2012** that affected the northern regions of Mali contributed to aggravate this situation. The persisting insecurity disrupted transhumance routes and made access to water even more problematic. Adding to this, social and economic disruptions, linked to the fact that a number of livestock breeders joined the armed groups, further weakened this sector of activity, but also the structures in charge of managing and repairing water points. One last challenge remaining is that of **dealing** with the competition between breeders and local populations for access to water. In a context of overall shortages, wells refill slowly as groundwater recharge takes time, especially during the dry season. And yet, the quantities of water needed by livestock breeders are such that they greatly shorten the volumes remaining for local populations, whose needs are also constantly increasing (high population growth) and shifting depending on the movements of population caused by local insecurity. Finally, when animals are gathered in large numbers, they can deteriorate and contaminate the infrastructures, particularly water points without appropriate livestock watering systems.

2.2 Why study this issue?

The subject of this case study is therefore linked to the contradictions and tensions caused by this context of water scarcity, of fierce rivalry for access to the resource and of low technological capacities to maximise this resource. Such a combination of problems and constraints obviously leads to local tensions, which is why this issue is at heart of the project.

The elements afore-mentioned, to which can be added the impoverishment of the population

and social disruptions, are the reasons why inter- (between various Arab, Fula and Tuareg communities) and intra-community conflicts (between breeders, farmers and local populations) are centered around water points. By rehabilitating water points, not only do we improve access to water, we can also have an impact on the tensions that this access engenders.



> Water point in Tanaînaîte, 2016 © SOLIDARITÉS INTERNATIONAL

Different activities of this component of the project were implemented in the framework of a partnership between SOLIDARITÉS INTERNATIONAL and SOLISA, a local NGO. The collaboration with SOLISA brought clear added value to the project for several obvious reasons:

- Its members are from the targeted community: they have a good knowledge of the zone, its populations and the contextual issues;
- SOLISA brought its expertise in managing and prevention intercommunity conflicts during issues with local water supply and shortages;
- Being present in the area since 1988, the NGO is accepted by the communities.

These factors have facilitated SOLIDARITÉS INTERNATIONAL's intervention and the communication with other stakeholders in the project: community leaders, COGEPE, livestock breeders and water points users.

The collaboration with SOLISA was a factor of success, encouraging a **more participative community approach** insofar that specific modalities of partnership and the roles and responsibilities were clearly defined beforehand, leading to a memorandum of understanding.

With this partnership framework accepted by all, SOLIDARITÉS INTERNATIONAL supported the training activities that SOLISA members conducted with the beneficiaries on the themes determined by the project.

All in all, the implementation of the project and its success were strongly supported by:

- the acquaintance and dialogue between SOLISA and the potential beneficiaries of the project;
- a satisfactory implementation of the project made possible, amongst other things, due to the respect of the modalities of intervention previously defined;
- a large implication of beneficiaries (COGEPE, community leaders and users/consumers) in all steps of implementation;
- the good commitment of community leaders and COGEPE members in searching for solutions to the tensions linked to the use of the resource.



> SOLIDARITÉS INTERNATIONAL and SOLISA discussing and jointly training community leaders, 2016 © SOLIDARITÉS INTERNATIONAL

3 GOOD PRACTICES AND LESSONS LEARNED

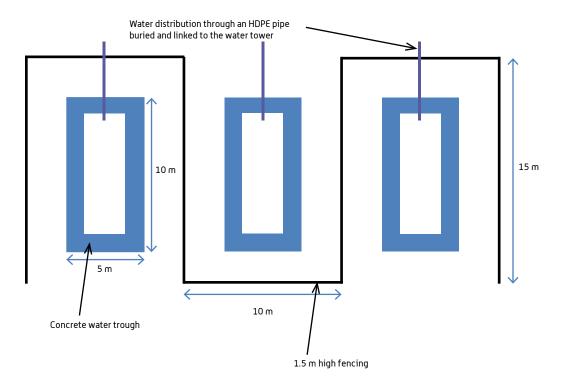
3.1 Separating the types of uses

One of the factors identified as blocking the smooth conduct of pastoral activities is the **difficulty for the livestock to access water, particularly during the dry season**. A great number of water points in the region are not adapted for this; those which are have obsolete infrastructures (inappropriate watering systems, dried up wells, failing pumping equipment, etc.). Moreover, the access to water points by the populations is not guaranteed as **the resource is not shared equally, if not at all**.

In the framework of this project, SOLIDARITÉS INTERNATIONAL spatially organised the water points in order to serve both families and **livestock**. A water tower was built, linked to both tap stands for domestic uses and to drinking troughs for the animals. This general model was presented to the service users during focus group discussions. Improvements were made according to the suggestions provided by the participants on, for instance, the number of drinking troughs, the distance between tap stands and water troughs, site security, etc.



> Water troughs were constructed near the water points, at a certain distance from the tap stands, Tanaînaîte, 2016 © SOLIDARITÉS INTERNATIONAL



> Suggested conception of the water troughs and enclosures

Factors of success

- Large implication of beneficiaries in the process of rehabilitation of the new water points. This participation was particularly effective for their specific designs;
- Spatial separation of the two types of uses that can contribute to reducing tensions linked to the access to water.

Difficulties encountered	Solutions found
Objection by several breeders of certain pro- positions for spatial adjustments: for instance, debates about the initial enclosures that were supposed to delimit the spaces around each drinking trough	Awareness campaign on the necessity to secure the troughs for a sound management of water points
The use of fences as enclosure appeared to be unsuitable as animals tried to force through to access the troughs	The discussions with the users led to consider low stone walls as a better solution

Recommendations

- Intensify the awareness campaign on the new spatial organisation of the water points;
- Integrate the new suggested arrangements (stone walls).

3.2 Improving water availability

To improve water accessibility, boreholes and wells were rehabilitated, cemented, and equipped with a lid and a runoff channel. A submersible pump was installed, supplied by solar panels and a generator in case of insufficient solar power supply. The pump is connected to a water tower with a capacity of 5 to 10 m³, which ensures the regularity of the water supply at all seasons. This tower is placed 6 meters high in order to provide water by a gravity system. The construction of this water tower was essential as it acts as a "buffer" between the time needed for the well to refill and the distribution to the users. The rehabilitation works confer greater storage capacities via the pumping system to manage the resource in a rational and sustainable way.

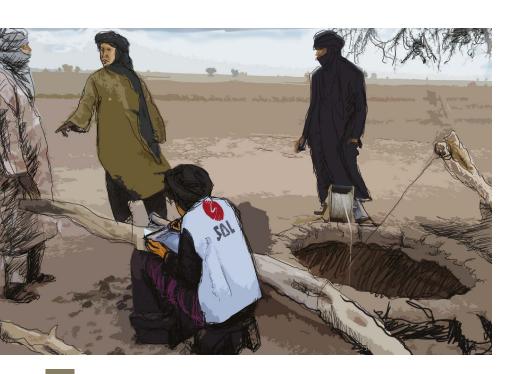
The targeted water points were selected according to the following criteria:

Groundwater recharge capacities and depth (pumping tests and a hydrogeological survey were carried out to assess their initial capacity and to ensure the sustainability of the water resources);

- The public status of the water point (community wells);
- The water needs according to the different types of users;
- High level of attendance by both pastoralists and local populations;
- Accessibility by all to the water point;
- Community demands;
- Zones which have not yet beneficiated from previous interventions by SOLIDARITÉS INTERNATIONAL.

The water tower and the material separation of the two kinds of uses ensure **better sanitary quality water**: neither domestic users nor livestock breeders can pollute the well or borehole. The tensions linked to the direct access to the well by users who are too numerous are greatly reduced, especially since simultaneous water availability for all is made possible.

The infrastructure is secured by a fence that helps lessen deteriorations.



> Assessment of a well, 2016 © SOLIDARITÉS INTERNATIONAL, Toussaint Dembélé Klémagha

OFDA GUIDANCE NOTE FOR SOLAR-POWERED WATER PUMPING SYSTEMS

A few key guidelines:

- 'Hybrid' design, with a solar panel and a generator;

- Systems must include elevated storage tanks with sufficient capacity to store a minimum of one-half of the population's daily water needs;

chlorination system in place for bulk treatment with security guards. of water;

- All interventions must account for ongoing operation and maintenance activities and associated costs;

- All interventions must include, at minimum, a one-year service contract witha qualified contractor in order to perform regular operation and maintenance;

- All water pumping system must have a - All installations must be fenced and staffed

Factors of success

- The rehabilitation of the water points have increased the volume of water without modifying traditional spatial patterns;
- Using solar panels for the pumping system: to this day, this energy supply

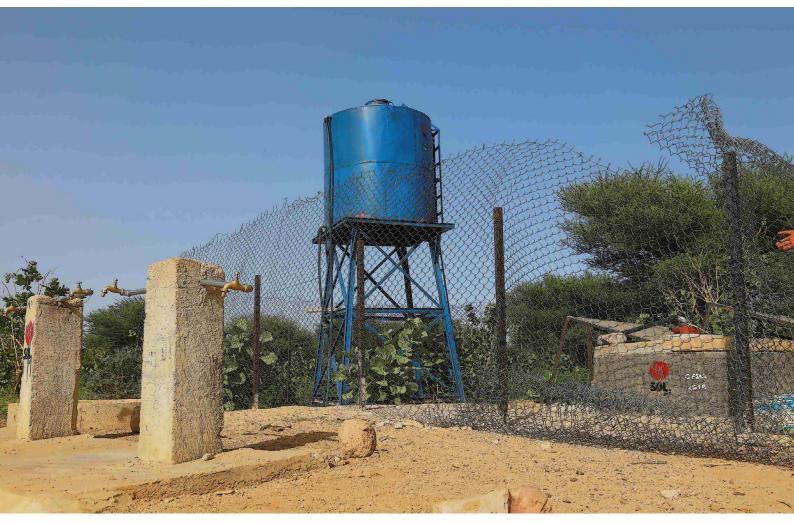
has been sufficient and the generators have not been used;

Sanitary improvement of the water points.

Difficulties encountered	Solutions found
Impact of the context of insecurity: difficulties to get the supplies for the rehabilitation works on time due to unsafe roads in the Kidal region	 Attempts at dialogue with key resource persons; Information on security issues transmitted to the coordination based in Bamako; Reinforcing advocacy for humanitarian access; Mobilising/deploying partner NGO SOLISA for mediation through a community approach.
Certain recommendations and guidelines by OFDA on solar-powered water pumping systems were too difficult to implement in such a context	Certain exemptions were granted upon presen- tation of proof

Recommendations

- Ensure a better adjustment between the seasonality of groundwater tables and the testing of their capacity;
- Check the good coherence between the quantity of water furnished and community expectations;
- Identify and train if necessary technicians to repair the equipment installed in each water point. Put them in contact with the COGEPE;
- Take good notice of OFDA guidelines concerning solar-powered water pumping systems and integrate them as early as the project proposal; appreciate the costs and logistics constraints these instructions entail.



> Water point being rehabilitated, Déhédje, 2016 © SOLIDARITÉS INTERNATIONAL, Tiécoura N'Daou

The context of insecurity linked to the political and humanitarian crisis of 2012 **disrupted the water management and regulatory structures, often already fragile**: leaving to fight the war, migrations, and absence of all traces of administrative and state authorities. Water resources can only be shared if an organisation takes charge, public authorities having failed there. SOLIDARITÉS INTERNATIONAL and SOLISA therefore took on the challenge to revitalize or to create management systems.

The objective was to **foster the ownership of the water infrastructures by the beneficiary communities** in order for them to carry out the maintenance, the protection and the repairs. The current or future members of these water management committees (*Comités de Gestion des Points d'Eau – COGEPE*) were thus prepared to ensure a **rational and responsible management** of the water resource and the subsequent reduction of potential tensions.

SOLIDARITÉS INTERNATIONAL first presented the project and its objectives to the beneficiaries and strived to implicate the communities in the implementation of the *COGEPE*.

6 to 8 members were chosen by the service users to constitute each of these committees, considering that this did not imply any financial compensation. These members are: a president, a secretary, a treasurer, a standpipe attendant to collect users' fees, a technician or maintenance officer and a hygiene promotion agent.

Ideally, these members are motivated and committed key resource persons, who live permanently in the area and who represent the different social strata. COGEPE members were trained by SOLIDARITÉS INTERNATIONAL and SOLISA on different topics:

- The role and functioning of a management system;
- Administrative and financial management;
- How water supply systems work and how they need to be maintained;
- Resources management;
- The everyday management of conflicts;
- How to sustain water points and their management systems.

As they are from the communities themselves, COGEPE members plays **a vital role in conflict prevention that access issues can generate**, through discussions upstream, informing and raising awareness about the value of this common good and the necessity to share it, working to defuse latent conflicts, etc. If the conflict was not prevented, COGEPE members facilitate the communication between the individuals concerned in order to find an

SOLIDARITÉS INTERNATIONAL and SOLISA monitored and supported the committees until they had fully understood their role and responsibilities.

amicable solution.

Moreover, the *COGEPE* had to find together with the communities a **payment system** based on the quantity of water drawn. This point is essential as it ensures the sustainability of the water point and its functioning. It must be noted that the inhabitants in the area were already used to paying for water, but that these payment mechanisms have suffered from and have been weakened by the crisis. It was therefore necessary to discuss and reactivate them. Different options were considered: dues paid in cash or in kind according to the quantity of water used, a weekly or monthly "subscription", the organisation of community works or the collection of money for specific needs (in case of repair for instance). For instance, at the Aliou water point, the modalities of payment and the costs were set according to the type of service users. 10 liter containers are charged 10 CFA Francs and 200 liter barrels cost 200 CFA Francs. Livestock breeders have to pay 50 to 100 CFA Francs per head of cattle on a month basis.

In Aguelheck, the majority of users are breeders and their families. A monthly rate common to all was defined (1,000 CFA Francs).

Finally, in the locality of Incouffé, the prices vary according to households' financial csapacities.



> Training of *COGEPE* members, 2016 © SOLIDARITÉS INTERNATIONAL

Factors of success

- Large implication of the COGEPE in the implementation process of the project;
- Proven ability to prevent and manage conflicts around water points;
- Functional cost recovery systems defined in a concerted way;
- Attribution of a generator only if a policy of sustainability and a payment mechanism exist;
- Effective mobilization of communities in the reinforcement of *COGEPE*.

Difficulties encountered	Solutions found
Difficulty to implement a payment system	 Close follow-up of the COGEPE by SOLISA and SOLIDARITÉS INTERNATIONAL for conducting community consultations and implementing these mechanisms; Suggestion of several mechanisms for more flexibility; Systems adopted suitable for each beneficiary community.
Evident lack of technical skills in a number of water points to repair the installations	 Thorough training of the maintenance officer; Identify and establish contact between the <i>COGEPE</i> and a private technician, with whom the committee can sign a maintenance contract.

Recommendations

- COGEPE should organize awareness raising campaigns on the modalities of sustainability of the infrastructures and their use for the service users and communities;
- Ensure that the payment system is identified and established before the rehabilitation works begin;
- Ensure that this system works well and is accepted by the users; be vigilant that the differences of mechanisms do not create tensions between communities;

- Remain attentive to the financial capacities of the most vulnerable households;
- Regularly account for the use of the fees and financial contributions to the service users.

3.4 Implicating community leaders

Community leaders are key interlocutors who cannot be overlooked if the project is to succeed, insofar that, if they accept to play an active role, they can **contribute to the cohesion of the communities of water service users**. At times, they can act as go-betweens linking the managers of the water points and users. The **role of community leaders is thus twofold: the first of awareness raising, the second of mobilising**.

In order for this role of intermediary to work in the best conditions and on the long-term, these resource persons were supported very early on in the implementation of the project. SOLIDARITÉS INTERNATIONAL and SOLISA teams presented the project to them and insisted on its objectives and on its importance for the future of their community. These leaders were encouraged to take part in the project in order to ensure the sustainability of the intervention, and to share their expectations. They were largely informed and trained on the approaches used to mobilise the communities and were invited to be active in this mobilisation.

For instance, during the training they received, emphasis was specifically placed on the water sources available in the region, their potability, the treatment and storage of water; they were put in charge of disseminating these messages and knowledge among the service users.



> Training community leaders, 2016 © SOLIDARITÉS INTERNATIONAL, Toussaint Dembélé Klémagha

Factors of success

- Considerable implication of the leaders in the implementation process, from the beginning to the end;
- Teams facilitated by the transmission and reporting of information by community leaders;
- Leaders committed to take part in the process of community mobilisation.

Difficulties encountered	Solutions found
Motivation sometimes determined by expected financial compensation; some misunderstandings can persist or reappear about this.	 Highlight the important of the role of community leaders through trainings with a certificate; Continuous awareness-raising and discussions about the voluntary nature of their implication.

Recommendations

- When launching such a project, insist on the voluntary nature of community leaders;
- Implement a process of continuous clarification of what is expected from them;
- Search for ways to enhance the increase of leaders' competencies in terms of water management and rehabilitation of water points.

The solidity of this project in the Kidal region first implies improving the **general knowledge** of populations regarding water resources in the region, their limits, how they recharge and the problem of shortages. This very large awareness-raising process should concern all stakeholders but also all members of the community, irrespective of status, function, gender or age.

Rehabilitating water points raised questions about water potability and attendant **good practices in terms of drawing and preserving water** (clean containers, washing hands, filtering and treatment, etc.). As we have seen, in this project, community leaders and *COGEPE* thus played an important role in disseminating these messages.

Secondly, the sustainability of the good practices introduced by the project had implications on agro-pastoral settings. Livestock breeding being the largest consumer of water resources, livestock management, and more specifically grazing activities, are at the heart of the challenges at stake. The project worked towards loosening the noose around water points during the dry season in order to keep the needs of all users satisfied. The team attempted to promote certain rearrangements of grazing practices during training sessions intended for breeders. It suggested **expanding the perimeters of transhumance routes during the rainy season** so that the herds can graze further away. Using these pastures would help reduce rivalry for access to water points between breeders and local populations because it would mean delaying the return to these water points, sort of a water reserve available during the dry season. Livestock watering would thus be less uncertain during this season.

All in all, the dissemination of these good practices enables the populations and breeders to better grasp the issues linked to water in this region. The idea that the resource remains viable reinforces the trust between the different types of service users and the managers of the water points. In turn, this trust bolsters the system implemented and facilitates acceptance. The preliminary definition of common rules on the attendance and uses of the water point contributes to alleviating sticking points and to calm intra- and inter-community relations.

Factors of success

 Rapid comprehension by the populations of the correlation between the sustainability and quality of the water point on one hand, and their comfort and heath, as well as the

wellbeing of the herds, on the other. This most likely played a positive part in the successful negotiations about the cost recovery systems.

Difficulties encountered	Solutions found
Changes in practices for breeders require more time than the duration of the project (these breeders being rooted in their old practices)	Support breeders for as long as is necessary for them to integrate new agro-pastoral practices
Low coverage of water points in the region by the project	Establish priorities according to the most urgent needs
Interval between the integration of water management and utilisation practices and the limited duration of the project	Promote and reinforce the intermediaries that can consolidate this learning process on the long term (<i>COGEPE</i> and community leaders)

Recommendations

- Consider the animal health component linked to water provision for all agropastoral interventions;
- Multiply the dissemination channels for a better integration of water issues in the region and of the conditions and restrictions these imply for service users.



> Hygiene promotion session, 2016 © SOLIDARITÉS INTERNATIONAL

5 CONCLUSIONS

With this project, the intervention of SOLIDARITÉS INTERNATIONAL is centered on two major and interwoven issues in this arid zone of the Sahel. **The issue of water scarcity,** of its irregularity and its availability and the threats posed by global warming is at the foundation of this project. This first issue raises a second one: that of tensions caused by water scarcity, intensified around water points.

The project was developed around the rehabilitation of ten water points in the Kidal region of North Mali. The experience capitalisation done on this project enabled us to identify five good practices implemented and which we consider they played a beneficial role in reducing tensions around water points:

1. The separation of the types of uses;

2. The improvement of water availability and of its quality;

3. The implementation of water management structures;

4. The implication of community leaders;

5. The promotion of agro-pastoral and hygiene practices.



> A livestock breeder and its herd of goats and camels, 2016 © SOLIDARITÉS INTERNATIONAL, Tiécoura N'Daou

From the overall analysis of these practices, we were able to draw conclusions. Generally, we consider that the following elements seem positive:

- Locally, considering the environmental and socio-political conditions, the project achieved legitimacy among local stakeholders and beneficiaries. It was positively received and the implications and contributions of the COGEPE, community leaders and service users regarding the rehabilitation and design of water points have been sustainable so far.
- SOLIDARITÉS INTERNATIONAL made a special effort to develop the dialogue and to train local stakeholders during the whole process, in order to foster ownership on their part in the rehabilitated infrastructures and in their proper functioning. This approach was attentive to draw on what already existed and to enhance the competencies available there, even if it meant reinforcing them.
- In this process, SOLIDARITÉS INTERNATIONAL promoted awareness raising on the specific issue of tensions and on the efforts and methods to develop to try to limit them and to soothe them as much as possible. Moreover, the project went a step further than the simple technical improvement of water points. It encouraged the dissemination of good practices for breeders and domestic users, these good practices enabling the emergence of a collective consciousness on the use and sharing of water resources, and thereby contributing indirectly to the reduction of these conflicts.

Furthermore, the project encountered numerous difficulties that we have pointed out for each good practice. In no case do these difficulties seem overwhelming, to the condition that trainings and communication with the leaders, *COGEPE* and service users be intensified. Among these difficulties, the one of having to pay for water is probably the most delicate to solve on the long term. We must first ensure that the pricing system is thought out and designed at the beginning of the project with the different stakeholders, and secondly, verify that the adopted solutions are effective over time (cost recovery, maintenance management). Surpassing these difficulties depends greatly on the success of the approach and on the benefits of the project.

However, such a project does not dissolve by itself the problem of sustainable access to water for all. The scope of the intervention was limited (10 wells and boreholes); it would be worth extending it. Moreover, climate constraints can only get worse and the system implemented in a similar future project will need to anticipate on the inevitable amplification of these constraints.



> Water point in the neighbourhood of Aliou in Kidal, 2016 © SOLIDARITÉS INTERNATIONAL



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