

VILLAGE HYDRAULICS: EXCLUSIVE MANAGEMENT STRUCTURING THE PROTEST OF LOCAL ACTORS IN THE COMMUNES OF ATHIÉME AND BOPA IN SOUTHWESTERN BENIN

Abstract

In Benin, the public policy of recentralizing water management in rural areas has transformed the configuration of managers and limited the control of local actors pushed into the category of protesters. Based on the hypothesis that the social exclusion embedded in the management by leasing of village hydraulics fuels protests among local actors, this research aims to analyze the receptivity of this non-inclusive public policy, with insufficiently elucidated issues, from the communes of Athiémé and Bopa in the Mono Department of Benin. To do this, qualitative research combined with grounded theory was adopted. Thus, the semi-structured interview, documentary research and observation were favored as data collection techniques respectively associated with the interview guide, the reading sheet and the observation grid. Using a reasoned selection process, 50 people were surveyed. Content analysis and triangulation were used to process the collected data. Comparing the results with the theory of social exclusion reveals that local stakeholders (local elected officials, decentralized structures, former management committees, members of the diaspora, rural populations, etc.) now have no control over the management of village water supply through leasing, a community asset. They are therefore excluded by the National Agency for Rural Drinking Water Supply and the OMILAYE Company, which, according to the central government, exercise exclusive management of water at the local level. This non-inclusive governance of drinking water in rural areas fosters disputes among local stakeholders. These disputes fueled by social exclusion are also based on the belonging of village hydraulics to rural areas, an aspect that governments are invited to take into consideration for the delivery of water services in a climate of peace.

Keywords: village hydraulics, exclusive management, social exclusion, local actors, Southwest Benin.

Introduction

Access to drinking water in rural areas of Benin has been and continues to be a priority for various leaders in a context where, according to C. Gauthier (2004), approximately 1.4 billion people, including 450 million Africans, still do not have access to it. To address this challenge, the Beninese government, with the support of technical and financial partners (TFPs), has been constructing water infrastructure since the 1980s for rural populations throughout the country, including the Mono Department. One of the reasons behind this initiative is to prevent health risks associated with the consumption of unsafe water. Obviously, consuming unsafe water or water from a questionable source can cause waterborne diseases such as cholera, diarrhoea, typhoid fever, etc. A. Briand and A. Lemaître (2004), working with poor populations around the world, particularly in developing countries, established a link between lack of access to quality water and all kinds of diseases. In this context, the drilling of water wells is seen as a solution to ensure the well-being of rural populations. While it is important to make water accessible in rural areas by creating drinking water points, it is just as important to consider how it is managed because, according to the European Framework Directive adopted in 2000 and according to I. Calvo-Mendieta (2005) and J. R. Morice *et al.* (2013) water is a heritage that must be protected. And its protection requires effective and inclusive governance. To ensure local control of this "common good" (E. Ostrom, 1990), the Beninese State has opted for community management through the creation of village water management committees. Here, the management committees control water sales and revenues, repair waterworks in the event of breakdowns and take care of sanitation at water points. R. Clement (2008) clearly defines the role of management committees when he states that "in rural drinking water supply programmes, the management and maintenance of water facilities are frequently entrusted to village management committees" Community management has revealed the inability of local actors to manage water facilities economically and technically. This situation observed in the field has led to recurrent breakdowns of the facilities, misappropriation by members of the management committees, and widespread suspicion among the population, who contest community management through rumours, denunciations and conflicts within the villages. With a view to reform, the State will proceed with the leasing¹ of village water systems, entrusting management to mayors with powers conferred on them by decentralisation. The "communal mode of governance [...]" (J.-P. Olivier de Sardan, 2009, p.20) of water management has meant that municipalities have become

¹Delegated water management. Here, local councils act as delegators and, as such, recruit farmers with whom they sign contracts. These farmers pay fees to the local councils.

[...] owners of hydraulic structures. They are responsible for organising water distribution (Law No. 97-029), which were previously the prerogative of the ministry. The Ministry of Water must support and assist them in this task. The decentralisation reforms and the second national strategy for water in rural areas of 2005 maintain the principle of community participation established by the demand-driven approach for requests for the construction and rehabilitation of water points. However, this aspect will disappear from the guiding principles of the SNAEP updated in 2013 in favour of municipalities, which are now responsible for planning activities [...] (H. Valette, F. Gangneron, A. Bonnassieux, 2016, p.122).

This quote clearly shows the exclusion of management committees and local populations from village water management. From now on, "a whole range of goods and services will be provided under the responsibility of municipalities: public management, public service delegations, concessions [...]" (J.-P. Olivier de Sardan, 2009, p.29). Instead of being an effective response to the criticised and refuted community management, the delegated management of village water resources (leasing), with the town halls as project owners, will suffer the same fate. Indeed, leasehold management will dissatisfy the management committees, which will succeed in mobilising the support of local populations and even some members of the diaspora to block the national policy on drinking water management in rural areas in the era of decentralisation. Several factors give social legitimacy to the challenge to delegated management of village water resources. These include a lack of transparency (no accountability to the population for water sales), collusion between farmers and local authorities in misappropriating funds, and the politicisation of leasehold management, which gives rise to a policy of double standards and double : some villages are subject to leasehold management while others are spared. Based on this bleak assessment (poor revenue management, misappropriation, deterioration of water infrastructure, difficult access to water, etc.) of governance and water delivery in rural areas, the Beninese government decided to establish an agency to manage village water resources. This led to the creation of the Village Water Agency in 2017. From now on, the management committees that existed at the time of community water management, as well as the town halls that exercised delegated power over village water, will no longer be able to manage water in rural areas. By placing village water management under the authority of an agency, the State is excluding local elected officials from the management of a local resource that is supposed to generate revenue for municipalities. This exclusion is causing discontent among local elected officials, who feel that their governance prerogatives are being violated. They see the central government's intervention as a strategy to seize a communal resource, an "exclusive control [meaning] the exercise of a functional property right, including rights of access, extraction, management, exclusion and alienation" (E. Le Roy *et al*, 1996, p.75). Based on the assumption that the exclusion embedded in the leasehold management of village water resources fuels disputes among local actors, the investigations aim to analyse the receptivity of this non-inclusive public policy to issues that have not been sufficiently clarified in the communes of Athiémé and Bopa in the Mono Department of Benin. The work is structured around three main points: methodological approach and theoretical model, results and discussion.

Methodological approach and theoretical framework

Methodological approach

As part of our doctoral thesis work begun in the 2023-2024 academic year in sociology-anthropology at the University of Abomey-Calavi, this investigation used the qualitative research method in humanities social sciences. Using semi-structured individual interviews, 50 informants were selected based on a purposive sampling technique combined with inclusion criteria such as: belonging to the research community, being at least 20 years old, and having knowledge of village water management. These include water point users, local elected officials, farmers, fountain operators, local government officials, decentralised service agents, members of the diaspora, members of ACEP, former members of the management committee, and decentralised financial structure agents. The principles of diversification of actors and saturation prevailed in determining the size of the above-mentioned sample. Semi-structured individual interviews are used to "collect discursive data [...]" (J.-P. Olivier de Sardan, 2003, p.7) on the management of village water resources through leasing. The interview provides a space for "exchange during which the interviewee expresses their perceptions, interpretations and experiences [...]" (P. N'da, 2015, p.137). By talking to the people involved, we can get a deep understanding (E. Bédard, 2012) of why local people are excluded from managing water infrastructure. As well as interviews, which can be used to "describe the perceptions of sociocultural groups" (U. Flick *et al.*, 2009, p.14) of the delegated management of hydraulic structures, observation and documentary research are also used. In this case, observation is used to establish facts and actions and/or practices related to the management of hydraulic structures. Documentary research is used to construct the object as accurately as possible. The data collection tools associated semi-structured individual interviews, observation and documentary research are the interview guide, the observation grid and the reading sheet, respectively. Triangulation and content analysis were used to process the data. A case study was conducted to demonstrate the exclusion of local actors from village water management.

The research areas are the districts of Kpinnou and Atchannou (municipality of Athiémé), the districts of Gbakpodji and Agbodji (municipality of Bopa) in the Mono Department, located in south-western Benin. It is

bordered to the north-east by the department of Zou, to the south by a 40 km coastline on the Atlantic Ocean, to the east by a series of water bodies formed by the Couffo river valley, Lake Ahémé and the Toho River, which form the border with the Department of the Atlantic, and to the west by Togo, with a 90 km natural border formed by part of the Mono River. Figure 1 shows the administrative map of the Department of Mono.

Figure 1: Administrative map of the Mono Department



SOURCE : Carmelle ZOMAHOUN, 2024.

Theory used

The theory of social exclusion (D. Hédi and M. Xiberras 1993; P. Bourdieu and J.-C. Chamboredon, 1993; A. Sen, 1999; R. Caste, 2009) is used to analyse empirical data. According to the National Council for Policies to Combat Poverty and Social Exclusion (CNLE), the theory of social exclusion did not exist in sociology, anthropology or socio-anthropology until the 1960s and 1970s. Exclusion referred to poverty that was essentially economic, linked to the crisis and likely to disappear with a return to growth and full employment (C. Lafort, 2007). The term was popularised by René Lenoir, former Secretary of State for Social Action, in his book *Les Exclues*, published in 1974. The term "exclusion" began to appear in scientific literature and the media in the 1980s, particularly following the report by Father Joseph Wresinski to the Economic and Social Council entitled "Extreme poverty and economic and social insecurity" in 1987, in which he broadened the concept to include all aspects of social life and emphasised the lack of participation in social and civic life among the poorest members of society.

The theory of social exclusion helps to explain the marginalisation of certain social groups from accessing, enjoying and, above all, managing resources. Various authors have commented on the concept. P. Bourdieu and J.-C. Chamboredon (1993) showed that social exclusion is linked to the trajectory of access of certain individuals or groups to different forms of capital, which deprives them of the resources necessary to participate fully in social life. This theoretical perspective is highlighted by A. Sen (1999), who states that social exclusion occurs when people are unable to access education, health care and economic opportunities, and when they have no opportunity to participate in society, enjoy their freedoms and contribute to changing their social environment. R. Caste (2009), broadening his analysis, mentions that social exclusion is not just about the absence of income. It also structures the breakdown of social ties. With this author, it is clear that, social exclusion is the consequence of a weakening of the social contract and integration into precarious forms of work. The theory of social exclusion, according to D. Hédi and M. Xiberras (1993), makes it possible to understand and analyse social breakdown and the real possibilities of instrumentalising development initiatives such as the policy of leasing village water resources in the Mono Department. This theory is suitable for research-based in because it offers the possibility of analysing the situation of "[...] the exclusion of third parties [...]" (E. Le Roy *et al*, 1996, p.75) now experienced by local actors in the village water management system.

Results

The results obtained present the local actors involved in village water management, from institutional to non-institutional, in line with the different forms of exclusion experienced.

Water management in rural areas: the concept of "stakeholder"

The concept of "actor" does not refer solely to homogeneous and fixed entities, but rather to dynamic and evolving configurations with variable geometry that are reconfigured according to the issues at stake. This perspective is similar to the concept of "strategic groups" developed by Evers and Schiel (1988) and taken up by T. Bierschenk and J.-P. Olivier de Sardan (1998). Their existence and relevance vary according to local issues and the power relations that structure them. Applied to the analysis of village water management in Bopa and Athiémé, this approach provides a better understanding of the diversity and reconfiguration of the actors involved. Indeed, successive reforms of rural water management have not only transformed official administrative structures; they have also led to a reconfiguration of the interactions and strategies of local actors. While some groups, officially excluded from the institutional framework, continue to play a central role in water regulation and governance, others are seeking to reposition themselves in order to preserve their influence in a rapidly changing system. Thus, village water management in Bopa and Athiémé cannot be understood solely in terms of the formal structures that exclude certain groups (local authorities, decentralised village water services, etc.). It requires an approach that integrates the logic of adaptation, circumvention, contestation, and even practical norms (J.-P. Olivier de Sardan, 2001) implemented by local actors (management committees, water users, etc.) in a context of ongoing institutional transformation. This perspective makes it possible to identify, beyond the actors who are part of traditional management structures, other categories that are adapting to local mechanisms or practices.

Village water management: stakeholders and differentiated exclusion

This section presents the various actors involved in village water management and the exclusion experienced at the identified level. These include rural water management structures and actors who have adapted to local mechanisms or practices.

Stakeholders involved in rural water management structures

Village water management structures refer to stakeholders within the official institutional framework for the administration and regulation of water infrastructure in accordance with standards established by the government and its partners. They are presented here according to the degree of power they hold, which allows them to exclude or be excluded from water management.

✓ *The Agence Nationale d'Approvisionnement en Eau Potable en Milieu Rural (National Agency for Rural Drinking Water Supply)*

The National Agency for Rural Drinking Water Supply (ANAEPMR) is a public social, technical and heritage institution under the authority of the Presidency of the Republic of Benin. Created to address the challenges of access to drinking water in rural areas, it is now one of the pillars of the national water resource management policy. It is responsible for planning, programming and conducting studies, project management, and research and financing for the construction, operation and maintenance of water infrastructure in rural areas. The ANAEPMR therefore centralises water management in rural areas. As such, all economic, political and social decisions fall within its remit. It has the power to exclude third parties. This institutional centralisation has been criticised by those working in the field. Unlike previous management models, which involved communal or departmental structures, the ANAEPMR has no decentralised representation at the local level. This lack of local representation complicates the reporting of grievances and slows down intervention in the event of technical or administrative malfunctions. For local authorities, this configuration represents an institutional paradox: while decentralisation aims to bring the administration closer to the people, the ANAEPMR centralises water management, creating a distance between managers and users. A local elected official, expresses this frustration:

Il est difficile de remonter les plaintes. Nous jouons à la diplomatie pour calmer les populations. La société OMILAYE relève directement de l'Agence et quand il y a un souci et qu'on les appelle, ils disent qu'ils doivent d'abord rendre compte à l'Agence. Voilà que l'Agence elle-même est là-bas à Cotonou. Imaginez-vous : comment peut-elle gérer avec promptitude tous les problèmes quotidiens des nombreux villages ? C'est un retour en arrière, une contradiction avec les principes de la décentralisation qui visent à rapprocher l'administration des administrés.

Thus, although the establishment of the ANAEPMR is part of a desire to optimise and professionalise water management, its long-term effects on the autonomy of local authorities and the participation of local communities in the governance of water resources need to be debated.

✓ *The Direction Départementale de l'Energie, de l'Eau et des Mines (Departmental Directorate for Energy, Water and Mines)*

The Direction Générale de l'Eau (DGEau) et les Directions Départementales de l'Énergie, de l'Eau et des Mines (DDEEM) have historically played a central role in the governance of village water resources in Benin. They were responsible for project management, contract management and support to municipalities in the establishment and maintenance of water infrastructure. However, successive institutional reforms have gradually reduced their scope of action, leading to a redeployment of their prerogatives to the ANAEPMR. Today, the DGEau is officially responsible for integrated water resource management (IWRM). As a result, the role of the departmental directorates has been limited to providing advice and support to municipalities, mainly through projects run by technical partners such as GIZ. This institutional redefinition, although in line with the principles of professionalised management, is a centralisation that leaves an operational vacuum on the ground. This vacuum means that these structures continue to be called upon for emergency interventions and crisis management. A senior official from the DGEau reflects on this situation:

En tant que Direction de l'hydraulique, nous recevons régulièrement des plaintes. Mais le cadre institutionnel, je ne dirais pas qu'il nous exclut, mais il limite clairement notre influence sur les choses. Nous essayons même de contacter l'entreprise OMILAYE, qui a en charge l'exploitation des ouvrages, compte tenu des plaintes et contestations répétées. Mais cette dernière nous montre clairement qu'elle ne rend de comptes qu'à l'ANAEPMR.

This statement illustrates a transformation in the power relations between state actors in rural water management. Whereas the DDEEM and the DGEau once held decision-making authority over infrastructure, they are now relegated to the role of intermediaries with no real power to act or influence. However, this institutional marginalisation does not prevent these structures from remaining actively involved, continuing to act outside their new prerogatives in a spirit of "administrative tinkering" (Olivier de Sardan, 2001), where agents adapt their interventions to the realities on the ground despite the constraints or quasi-exclusion of the institutional framework. A departmental agent describes this informal dynamic:

Quand il y a un problème au niveau des AEV, ce n'est plus officiellement dans mes cahiers de charges, mais [...] les gens nous appellent. [...] Étant de la Direction de l'eau [...], je suis obligé d'intervenir [...]. Parfois, il s'agit simplement d'un problème d'électricité, et comme nous gérons aussi l'énergie, j'appelle la SBEE pour leur demander d'intervenir. La dernière fois, on a géré un cas à Dassatingo où, pendant trois mois, les habitants n'avaient pas eu d'eau à cause d'une surtension qui avait grillé la pompe. Le jour où les journaux ont relayé la situation, le Préfet [du département] m'a appelé. J'ai contacté OMILAYE et la SBEE et en trois heures l'eau était rétablie. Pourtant, ce problème traînait depuis trois mois. Si tous les acteurs étaient impliqués dans un cadre inclusif, la gestion serait bien meilleure.

This testimony highlights the limitations of a centralised model that does not take sufficient account of the necessary involvement of decentralised structures in the day-to-day management of water infrastructure. As a national structure, the ANAEPMR struggles to respond to local requests with the necessary responsiveness, and the lack of departmental or even municipal representation complicates the coordination of interventions. This situation reflects a contrast between the desire for institutional rationalisation and local governance approaches based on proximity.

✓ *Municipalities through town halls*

Before the ANAEPMR was established, municipalities owned the water infrastructure and managed it by delegating its operation to private farmers, who were usually selected locally. This model allowed local authorities to exercise control over service quality, ensure the maintenance of facilities and benefit directly from the fees generated by water sales. This income represented a strategic financial resource that was reinvested in local development projects, thereby strengthening their economic autonomy. At this stage, conflicts were already arising between municipalities and former water user associations or former management committees that had previously been responsible for managing village water resources. The transition to municipal management sparked numerous protests and resistance (A. Bonnassieux and F. Gangneron, 2011), particularly in localities where certain infrastructure had been put in place thanks to community contributions, often supported by the diaspora. In Atchannou, for example, this "forced retrocession" (C. T. Togbé, 2019) caused tensions and even crises between local management committees and the municipality.

The reform of drinking water management, with the ANAEPMR as the project owner, has now created a dynamic of exclusion in which local authorities are relegated to a marginal intermediary role. From now on, municipalities are only responsible for simple structures (human-powered pumps), while the management of more complex infrastructure, such as village water supply systems (AEV), boreholes and others, has been entirely transferred to OMILAYE by the ANAEPMR. The Agency exercises direct supervision over the private company OMILAYE, the sole operator of AEV networks throughout Benin. This restructuring means that municipalities no longer have any control over water resource management or the allocation of revenues from their exploitation. The sidelining of municipalities has angered local elected officials and technical staff at town halls, who denounce a loss of sovereignty and a break with decentralisation mechanisms. This discontent is

mainly linked to the loss of control over economic revenues from water sales, which were used to finance local development initiatives, as one local elected official explains: "Before, we could ensure that the money generated by water was used for the development of the municipality. Today, everything is centralised. OMILAYE collects the revenue and reports only to ANAEPMR. We, as the town hall, have been sidelined" (local elected official, mayor of a municipality). These comments clearly show the marginalisation of local elected officials in the management of village water, a local public good over which they nevertheless have a right of oversight. This situation means that they see the establishment of village water agencies as a return to centralisation, which is contrary to the principles of decentralisation, as another elected official points out: "This is completely contrary to the spirit of decentralisation. If we are responsible for the development of our municipality, how can we be excluded from the management of a service as fundamental as water?" (A municipal councillor). The most controversial issue is the lack of accountability of OMILAYE to the municipalities. Local authorities have no power to supervise or control the management of water infrastructure, even though they are the direct point of contact for the population in the event of water-related problems. This institutional compartmentalisation creates tensions and frustrations, as local authorities find themselves in the position of intermediaries with no power to act: "When the population approaches us about water-related problems, we can't do anything. OMILAYE tells us that they are only accountable to the ANAEPMR in Cotonou. Imagine what that means for a municipality" (a town hall official). The highly centralised management of village water resources makes local elected officials or any other institutional actor, as defined by A. Kuper (1970, p.356), an

intercalaire : le chef est un serviteur du gouvernement et doit répondre aux exigences de ses supérieurs. Cependant, son peuple attend de lui qu'il représente ses intérêts face à un régime étranger souvent incompréhensif [...]. De plus [...], ses maîtres le jugent selon des critères « bureaucratiques », tandis que ses sujets utilisent des critères « traditionnels pour évaluer ses performances.

Local elected officials are therefore in a position where they are not necessarily well regarded either within their hierarchy or by water users. Nor are they understood by the new actors the involved in village water management.

✓ *The OMILAYE society*

OMILAYE is a company formed by a consortium comprising ERANOVE (Paris, France), UDUMA and VERGNET HYDRO. Responsible for managing public drinking water services in rural areas in six departments of Benin, including Mono, OMILAYE officially began operations on March 1st 2023, following the signing of a farming contract on April 11th 2022, following the signing of a farm-out agreement on April 11th 2022. This agreement entrusts it, for a period of ten years, with the operation of drinking water production, transport and distribution facilities, as well as the management of public water services in the departments concerned. Its tasks also include maintenance, repair and renewal of infrastructure, densification of drinking water distribution networks, and bringing facilities and equipment into compliance. OMILAYE is based on a decentralised organisation comprising four regional agencies: the North Agency in Kandi (Alibori), the North-East Agency in Parakou (Borgou), the Central Agency in Dassa-Zoumé (Collines, Plateau, Ouémé) and the South Agency in Abomey (Couffo, Mono, Zou). The company has field agents specialising in infrastructure maintenance and commercial operations agents responsible for monitoring, billing and debt collection. It is responsible for managing village water supply and reporting directly to the ANAEPMR. It is not accountable to local authorities, let alone to the people who see water infrastructure as their heritage this management approach marginalises local elected officials and water users.

✓ *The ACEP*

In the past, the Associations des Usagers de l'Eau / Water Users' Associations (AUE) were the primary managers of Adductions d'Eau Villageoises / Village Water Supply Systems (AEV). They embodied community-based management, rooted in local realities, where users were directly responsible for the operation and maintenance of water infrastructure. However, with the advent of decentralisation, these associations saw their powers transferred to the municipalities, marking the first stage of their marginalisation. Today, as part of the reform of the leasing system, the AUE have been restructured into Associations de Consommateurs d'Eau Potable / Associations of Drinking Water Consumers (ACEP), whose main mission is to monitor the situation on behalf of citizens, defend consumers' interests and raise awareness among users. Although present on the ground, the ACEPs are structured differently depending on the locality. For example, in Atchannou, the association has 29 members, while in Kpinnou, it has 23. They are funded by voluntary contributions: « L'ACEP ici est mise en place depuis 2013 [...]. Nous avons des représentants dans chaque village. Nous faisons des souscriptions volontaires au niveau du comité exécutif qui s'élève à 5000 FCFA et 2000 FCFA [...] par mois » (ACEP member). Their role remains unclear, which considerably reduces their influence. While the ACEPs were initially created to strengthen citizen participation and ensure social control over water

management, the reality on the ground shows that they have been gradually marginalised, as one interviewee points out: « *au moment où la gestion était assurée par la commune, nous avions plus de facilité à collaborer. Nous étions écoutés et les plaintes étaient mieux prises en compte. Mais depuis qu'OMILAYE est venu, nous ne sommes plus écoutés. OMILAYE n'a pas cherché à nous impliquer. Nous n'avons pas de collaboration avec eux* » (former ACEP member). This statement reflects the exclusion of local actors from management through the contracting out of village water services. Before the reform, the municipalities, as project owners, collaborated directly with the ACEPs, thus enabling a more fluid dialogue between users and the managing authority. The delegation of village water management to OMILAYE has created an additional distance between users and the manager, limiting consultation mechanisms and reducing the influence of ACEPs in decision-making, as well as decreasing the financial resources derived from collaboration with technical partners. The following statements confirm this state of affairs:

Depuis la réforme, l'ACEP ne travaille plus comme avant. Il n'y a plus de missions pour nous. Avant, nous avions plusieurs partenaires qui nous sollicitaient, ce qui nous permettait aussi de payer plus facilement nos cotisations à travers des frais de mission. Tout ce qui nous intéresse, c'est assurer la permanence de l'accès à l'eau et sa qualité. Nous faisons des plaidoyers et souvent nous alertons l'opinion publique à travers les réseaux sociaux en cas de panne ou de dysfonctionnement. Mais aujourd'hui, avec le président Talon, il faut faire beaucoup attention (former ACEP member).

This testimony illustrates a dynamic of restriction and self-censorship. On the one hand, the lack of missions and active collaboration reduces their influence; on the other hand, the political and institutional climate pushes ACEP members to be more cautious, limiting their advocacy and protest actions. They thus move from being operational actors to passive observers, with limited influence on village water management. The use of social media as a channel for reporting abuses illustrates an alternative strategy for making demands, linked to the absence of a functional consultation framework involving the various actors, thus bypassing traditional institutional channels. While they were initially designed as interfaces between users and local authorities, they are now rejected on the fringes of the system, reduced to a symbolic function with no real power.

✓ Operators

Operators of village water supply systems (AEVs) are a ubiquitous category of actors in rural water management systems. Coming from local communities, they ensure the daily operation of water infrastructure: operating pumps, maintaining generators, reporting breakdowns and supervising fountain operators. For many of them, this position stems from experience gained under previous management models, particularly within Associations des Usagers de l'Eau / Water User Associations (AUE), local management committees or as the first farmers before the arrival of regional farmers. Although the reform restructured water governance in rural areas, some operators were retained in their positions due to their technical expertise and knowledge of the infrastructure and local dynamics. They are now linked to OMILAYE through service contracts. Several operators complain of deteriorating working conditions and lower pay. Whereas they previously benefited from a more inclusive system, where their work was recognised and supported by community bodies, they are now under contract with a private operator that prioritises cost rationalisation.

Avant, lorsque le comité local dont j'étais membre avait la gestion, je percevais un salaire de 20 000 F par mois et j'avais un assistant qui était également rémunéré. Nous étions organisés, et chacun avait un rôle bien défini. Aujourd'hui, avec OMILAYE, mon salaire a été réduit à 15 000 F, et toutes les responsabilités pèsent sur moi seul. Non seulement je dois m'occuper de l'exploitation quotidienne des infrastructures, mais en plus, je dois gérer les plaintes des populations qui, elles, ne comprennent pas toujours que je n'ai plus le même pouvoir qu'avant [...] (An operator under contract with OMILAYE).

One of the major contradictions in current water management lies in the responsibilities entrusted to local operators who have no room for manoeuvre. They are on the front line with users, particularly when the network malfunctions, but do not have the means to respond effectively to people's expectations. This leads to a shift in discontent from the population towards local operators, who become scapegoats for the system's malfunctioning. Caught between the demands of users and the indifference of the private operator, they find themselves in a vulnerable position, where their local legitimacy is challenged without them being able to really influence the decisions taken upstream. The comments of one interviewee illustrate this point:

[...] lorsque je signale un problème technique, la société tarde à réagir. Parfois, c'est comme si mes remontées d'informations n'étaient même pas prises en compte. Dans le même village, une partie de la population reçoit de l'eau, tandis que l'autre reste sans approvisionnement pendant des jours, voire des semaines. Les habitants, à bout de patience, commencent à me tenir responsable de la situation alors que je ne suis qu'un [...] intermédiaire. Ils me menacent, me disent qu'ils vont bloquer l'accès aux installations si rien n'est fait rapidement. Certains sont même prêts à aller plus loin et à s'en prendre directement au fermier régional, car ils ont l'impression que la société ne se soucie que du recouvrement des factures, sans jamais chercher à améliorer le service. Cette pression constante devient de plus en plus difficile à gérer (a farmer).

Faced with the perceived slowness and inefficiency of the regional farmer, some farmers are trying to adopt alternative repair strategies, mobilising former technicians or using revenue from water sales to finance urgent repairs. However, although these practices are pragmatic, they are penalised by the private operator, which imposes a bureaucratic and formal repair policy. Whereas the old system allowed for a certain degree of flexibility in infrastructure maintenance, the new system is based on rigid procedures that limit the ability of those on the ground to adapt.

Lorsque j'ai voulu régler une panne en urgence, j'ai fait appel à un ancien plombier qui travaillait autrefois avec nous. Il connaissait bien les installations et pouvait intervenir rapidement. J'ai utilisé une partie des fonds issus de la vente d'eau pour payer son intervention, pensant bien faire afin d'éviter une interruption prolongée du service. Mais quelques jours plus tard, OMILAYE m'a convoqué et m'a reproché d'avoir pris cette initiative sans leur autorisation. Ils m'ont obligé à rembourser l'argent utilisé (an OMILAYE operator).

The summons and repayment requirement imposed on this operator reflect strict financial management. However, they also reveal a denial of local realities and the urgency of the interventions needed to maintain and ensure the continuity of the water service. This situation could, in the long term, exacerbate tensions between communities and new operators by heightening frustrations linked to the system's shortcomings and fuelling a sense of injustice and powerlessness among local operators.

✓ *The fountain operators*

These local actors are responsible for distributing water from the pump and are in direct contact with users. Their work, although essential, is poorly paid. Unlike local operators, the role of fountain operators remains relatively stable. However, their daily lives are marked by a series of constraints and informal adjustments that reflect both the flaws in the new system and local adaptation strategies. Relations between fountain operators and operators are marked by a series of arrangements aimed at compensating for the system's limitations. Due to the poor condition of the facilities, water leaks occur frequently, leading to inconsistencies between the volume of water sold and the revenue collected. These discrepancies are sometimes linked to misappropriation of funds by some fountain operators or technical malfunctions in the network, for which the local communities pay the price: « *Quand nous remarquons [...] la mauvaise foi d'un fontainier, nous coupons l'eau à tout le village. Nous disons aux populations que le retour de l'eau dépendra d'elles. Quand elles nous proposeront un autre fontainier, on viendra remettre la pompe à leur disposition* » (an OMILAYE agent). This statement highlights a form of coercion exercised by the operator over local communities. Rather than engaging in dialogue to identify the real causes of the irregularities (water leaks, accounting errors, misappropriation), OMILAYE adopts a collective punishment approach, suspending water supply to the entire village, which creates disputes. While fountain operators retain their initial responsibilities, the new constraints imposed by OMILAYE limit their room for manoeuvre. They must navigate between faulty infrastructure, user expectations and a stricter and more exclusive institutional framework.

Actors adapting to the current water management mechanism

This category includes actors who, although not explicitly defined in formal institutional frameworks, play a role in the day-to-day management of village water systems. Their presence can be explained by a dual dynamic: on the one hand, resilience or adaptation to institutional changes; on the other hand, their emergence at key moments in the evolution of the "village water system". These include village management committees, decentralised financial institutions (SDF) and diaspora organisations. While some can be grouped together to analyse broad trends in action, an overly homogeneous interpretation could mask fundamental differences within certain groups.

✓ *Village management committees*

Village Water Supply Management Committees (AEV) are a legacy of the old community management model that prevailed before the introduction of the leasehold system. At a time when water infrastructure was the responsibility of Water User Associations (AUE), these committees ensured water distribution based on principles of participation, local management and collective responsibility. With successive reforms and the delegation of management to municipalities and then to regional farmers, these structures gradually lost their place in the formal institutional framework. However, in some localities, they persist and continue to exist in various forms, oscillating between social legitimacy and institutional contestation. Management committees are, in most cases, formed by the local population through assembly and appointment processes. Their composition varies from village to village, but is generally based on representatives of users, often appointed on the basis of their reputation, community involvement or membership of influential groups within the village. One informant said of a committee: « *Dans notre village, le comité est constitué de 11 membres et a été mis en place par vote. Nous gérons l'ouvrage depuis huit mois et nous avons un compte pour verser l'argent dans une institution de microfinance* » (a village committee member). This method of appointment gives the committees strong local

legitimacy, differentiating them from administrative structures imposed by the state or private operators. Their management is based on collective control mechanisms, with the funds collected generally deposited in microfinance institutions. This approach promotes community ownership of the water service, thereby strengthening users' sense of belonging and responsibility. One of the main reasons for the continued existence of these committees is the rejection of the leasing model and the perception that communities are being dispossessed in favour of private actors. The transition from municipal infrastructure management to OMILAYE was poorly received by some users, particularly due to the lack of consultation, tariff changes and service disruptions.

Lorsque le fermier a décidé d'augmenter le prix de l'eau sans consulter la population, cela a immédiatement déclenché une vague d'indignation. Les habitants ont estimé que cette décision était injuste et inacceptable. Le mécontentement a rapidement pris de l'ampleur, et plusieurs réunions ont été organisées au sein du village pour décider de la marche à suivre [...]. La population a pris la décision radicale d'expulser le fermier et de reprendre elle-même la gestion de l'ouvrage. Un comité de gestion a été mis en place pour assurer la continuité du service. Aujourd'hui, ce comité fonctionne de manière autonome et gère la distribution de l'eau selon des modalités établies collectivement, sans dépendre de OMILAYE (a committee member).

This reaction shows a tension between different ways of thinking. Leasehold management has led to a series of disputes, some of which have resulted in the forced reappropriation of infrastructure by local committees, thereby strengthening their role in water governance. In addition, the lack of effective mediation between the communities and OMILAYE has heightened the users' sense of marginalisation. The lack of dialogue and responsiveness on the part of regional farmers is pushing communities to place more trust in water management committees. Due to their exclusion, they sometimes express their dissatisfaction towards local elected officials, as illustrated by the case of the dismissal of a mayor.

Au moyen du recueil des éléments historiques qui renseignent sur la gestion par affermage de l'hydraulique villageoise croisés avec les travaux de Togbé (2019), nous avons pu faire la synthèse d'un récit qui matérialise les conséquences de l'exclusion des acteurs locaux de la gestion du patrimoine local. En effet, la gestion de l'eau en milieu rural sous l'égide des collectivités locales a amené le Maire de la commune d'Athiémé, accompagné d'une équipe, à se rendre au village d'Atchannou en juin 2014, quelques jours après la destruction de l'ouvrage hydraulique par les populations en réponse à leur écartement de la gouvernance d'un ouvrage hydraulique dans lequel elles ont investi. Associant les mécontentements accumulés à l'arrivée improvisée du Maire, les populations se sont mobilisées pour le chasser avec sa délégation pendant sa tournée de visite de l'ouvrage hydraulique. Cette manifestation spontanée a obligé la délégation du Maire à quitter le village pour éviter le pire.

The mayor's expulsion from the village with his delegation is clear evidence of the refusal to exclude local actors from the management of village water resources, a project whose completion required financial participation of the population. In such a context, it is that the double exclusion suffered (that of the municipalities and that of the ANAEPMR today) only reinforces the opposition to the leasehold management of village water resources at the local level. It is interesting to note that the local elected officials who, in the name of the powers transferred to them by the decentralisation law, had previously excluded management committees and the populations, now find themselves in an uncomfortable position of exclusion due to the institutionalisation of water management in rural areas. This situation is currently leading to a reconfiguration of the excluded into a more or less homogeneous group mobilising the population, former management committees and local elected officials with a common goal of challenging the centralisation of village water management by the State.

✓ *The services financiers décentralisés / Decentralised financial services (SFD)*

Decentralised financial services are not directly involved in the management of water infrastructure. However, they play a role by offering savings and security services for funds generated by the sale of water by management committees. Their presence in the system is therefore largely dependent on the existence and functioning of these water management committees. Changes in the institutional framework for water management therefore have a direct impact on decentralised financial services, which are losing their role of supporting management committees. With the gradual exclusion of management committees, the role of these financial structures is being considerably reduced or even eliminated, as one informant points out:

Nous leur offrons des facilités pour l'ouverture et la gestion de leurs comptes. Lorsqu'ils sont bien structurés, avec un Président, un Secrétaire et un Trésorier, il leur suffit de fournir [...] une copie de leur Certificat d'Identification Personnel (CIP), trois photos d'identité et une somme de 8 000 F pour l'ouverture du compte. Les dépôts peuvent être effectués par n'importe quel membre du comité. Mais, les retraits nécessitent obligatoirement au moins deux signatures. Autrefois, nous ne leur prélevions aucun frais d'entretien, mais à partir de 2023, un prélèvement mensuel de 200 F a été instauré. Comme les comités ne sont plus responsables de la gestion de l'eau, notre rôle dans le secteur de l'eau ne fonctionne plus. (An SFD agent).

This interviewee's comments show that the exclusion of village water management committees is also felt by the microfinance institutions that used to have them as clients. In short, water funds no longer end up in these local financial institutions, which receive them as savings but use them as loans to applicants to finance income-generating activities.

✓ *The diaspora*

The diaspora is a key player in the village water management system, playing an economic, political and social role. It mobilises financial and intellectual resources that significantly influence the establishment and sustainability of water infrastructure. Testimonials clearly illustrate its direct involvement in the financing and maintenance of water supply facilities in rural areas. The example of the Atchannou water tower, built in 2009, demonstrates this capacity for mobilisation. In response to co-financing requirements, an international civil servant from the village initiated a contribution scheme that raised the sum of 1,500,000 CFA francs. This intervention by the diaspora proved decisive in bringing the project to fruition, demonstrating that, far beyond institutional structures, informal and community networks play a central role in access to basic public services.

Beyond financial support, the diaspora also positions itself as a political actor and a counterweight to local authorities. Its influence is particularly evident in conflict resolution and decision-making, as highlighted by a member of the diaspora:

Nous avons été contraints d'intervenir en raison d'une situation de crise majeure. La population exprimait un profond désaccord face à la gestion de l'eau par la mairie et ses fermiers. Les jeunes, très remontés, avaient décidé de s'organiser pour manifester leur opposition. Devant cette contestation, le maire a voulu prendre des mesures radicales en procédant à l'arrestation de certains leaders du mouvement. Si nous n'étions pas intervenus pour calmer les tensions et négocier avec les autorités, la situation aurait pu dégénérer. Dieu seul sait quelle aurait été la réaction de la communauté si ces jeunes avaient été emprisonnés (a diaspora leader).

This statement highlights the role of arbitration and mediation played by the diaspora in contexts of emerging local tensions over access to water. Its privileged position, as an external but involved actor, enables it to intervene in crisis situations and prevent conflicts from escalating. The involvement of the diaspora varies according to local opportunities and needs. Some leaders do not hesitate to invest in community infrastructure, as evidenced by several initiatives:

L'initiative d'un professeur d'université a été remarquable. Grâce à lui, la diaspora a été mobilisée de manière exceptionnelle. Il a su fédérer les fils et filles de la région, qu'ils soient au Bénin, en France, en Allemagne ou ailleurs. Touchés par la cause, ces derniers ont envoyé des contributions financières conséquentes, permettant ainsi de concrétiser un projet salubre. C'est grâce à cet élan de solidarité que nous avons pu construire un ouvrage hydraulique dans l'école d'Atchannou, offrant ainsi aux élèves et aux enseignants un accès direct à l'eau potable (a member of the diaspora).

A similar initiative was taken in another village in the area:

J'ai appris que certains cadres de la diaspora originaires de Konouhoué avaient réussi à mobiliser une somme allant jusqu'à deux millions de FCFA pour financer la construction d'un ouvrage hydraulique destiné à la communauté. Ce type d'investissement montre à quel point les natifs vivant à l'étranger restent profondément attachés à leur village d'origine. À Atchannou, un cadre a lui-même contribué à hauteur de 700 000 FCFA, démontrant une volonté d'apporter un changement concret aux conditions de vie locales (an executive from the diaspora).

These testimonials show that diaspora investment is not limited to isolated actions but is part of a collective dynamic of local development. The diversity of contributions reflects a desire to maintain strong ties with the community of origin and to fill institutional gaps in access to basic services, particularly drinking water. The involvement of the diaspora shows that water infrastructure management goes beyond the institutional framework and is also based on solidarity, protest and negotiation. In rural areas, it is therefore impossible to isolate local populations from drinking water management and achieve it effectively. Excluding local actors means excluding the diaspora, which plays an important role that it can use to express its legitimate grievances.

Discussion

The recent reform of the rural water sector in Benin has led to the exclusion of municipalities and local management actors who were once at the heart of the water governance system. This trend towards recentralisation, observed in several African countries, is part of a drive to professionalise water infrastructure management, but often results in the marginalisation of local actors (D. Fay, 2007; G. Blundo, 2015). The creation of the ANAEPMR and the allocation of water infrastructure management to regional farmers, as in the case of OMILAYE, has shifted decision-making power to entities that are far removed from local realities. While municipalities, under the old model, retained partial autonomy in the management of AEVs, they are now relegated to managing only simple structures, such as, which has generated strong protests. This process echoes

the analyses of T. Benjaminsen and C. Lund (2002), who emphasise that the privatisation of public services in Africa tends to favour the "capture" of resources by economic and administrative actors who are distant from the populations concerned. The resulting institutional exclusion is not limited to a loss of administrative control: it creates a sense of dispossession within communities and weakens local adaptive capacities. Under the old system, local committees could intervene directly in the event of a breakdown, ensuring immediate responsiveness. Now, every intervention must go through complex bureaucratic channels, lengthening delays and exacerbating malfunctions. This situation illustrates the "perverse effects" of technocratic reforms described by J. Scott (1998), where the rationalisation of systems paradoxically leads to increased inefficiency.

One of the arguments put forward to justify the reform was to improve service quality and increase access to drinking water. However, the evidence gathered shows that centralising management has often led to a deterioration in service, particularly due to slow response times to breakdowns. This situation can be explained by the fact that the new operators, although technically competent, are often far removed from the field, lack responsiveness to local realities and collaborate very little with other actors. Under the old model, community management committees could quickly mobilise local resources and skills to resolve technical problems, whereas today, every intervention requires hierarchical approval, which significantly slows down incident response times. In addition, the increase in water prices resulting from this new organisation is another major factor contributing to discontent. As demonstrated by V. Shiva (2002), the commodification of water often leads to local resistance, particularly in contexts where access to this resource has historically been based on community solidarity. In several localities, people have refused to pay the new bills, while some local committees have taken back control of infrastructure management, arguing that the new model is unsuited to their needs. This situation echoes the observations of C. T. Togbé (2019), D. Mosse (2008) and T. Trefon (2009), who show that water reforms in Benin, Mali and Burkina Faso have sparked protest movements leading to the establishment of hybrid systems combining community management and institutional interventions.

In response to these changes, various forms of resistance have emerged, ranging from refusal to pay for services to direct takeover of infrastructure by local committees. These protests are part of a broader logic of "institutional resilience" (T. Hagmann and D. Péclard, 2010), in which local actors develop alternative strategies to compensate for the shortcomings of the new system. Some villages have revived old governance mechanisms, recreating self-managed committees or relying on influential figures in the diaspora to finance the maintenance of infrastructure. This dynamic illustrates what F. Cleaver (2012) refers to as "tinkered institutional arrangements", i.e. emerging forms of governance that combine elements of the formal framework with informal practices to ensure service continuity. Thus, far from being passively adopted, the new water management model in Benin is in fact contested, reshaped and negotiated according to local realities. This process of resistance and adaptation demonstrates that institutional reforms, when they do not take local dynamics into account, generate not only dysfunctions but also strategic reappropriations that can lead to hybrid configurations between public governance and community management.

Conclusion

The reform undertaken in the rural water sector in Benin focuses more attention on village water governance. Before decentralisation the management of water infrastructure was entrusted to rural communities through management committees appointed from within the population. However, when decentralisation was introduced, and particularly during its implementation, local authorities, by virtue of the powers they had been granted, excluded these committees from water management through a system of leasing. This initial isolation of local communities was justified by their inability to manage water infrastructure effectively, the misappropriation of funds from water sales, suspicions and rumours of mismanagement, conflicts, etc.

The continuation of reforms in the area of rural water supply has led the central government to establish village water agencies, a public policy that will result in the exclusion not only of local populations but also of local elected officials who had the prerogative of managing and supplying drinking water to their constituents. The recentralisation of water management in rural areas therefore involves less participation by municipalities, which now perform political functions, with administrative management being reserved for the Executive Secretary in accordance with the law on local government reform. This marginalisation of local authorities from village water management is taking place in a context of economic restructuring of the public administration. By excluding local populations from water management, local elected officials have, in some cases, committed the same mistakes of poor governance observed at the management committee level: inability to manage, embezzlement, corruption, etc. This situation, while justifying the exclusion of municipalities, fuels protests by local government officials, particularly in the municipalities of Bopa and Athiémé.

The two-speed policy of leasing, coupled with structural reforms, has led to the exclusion of local communities and local elected officials who oppose a public policy that is supposed to provide quality access to drinking water. Even if the approach to recentralising water services in rural areas is appropriate, it would be desirable

for the central government to create a framework for dialogue and synergy between the new water management actors and local actors with a view to sustainable resource management.

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