



Research Paper

Water, power and the conflict for survival in Oases: Legal pluralism and the right to access water

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ABSTRACT

Studies on oases worldwide reveal that the natural resources scarcity in these areas is decreasing sharply. In Morocco, the ecology policies and technological evolution have led to the emergence of agriculture dynamics which in turn have resulted into the spread of modern elite owned farming lands that are encroaching on traditional oasis space. This article explains how the shift in resource use practices has led to the depletion of the waters of tradition irrigation systems “Khattaras”, but also in legitimate pluralism of access to water and exceeded the survival needs of small farmers who have been marginalized in the new agricultural land and the use of groundwater. The changes in forms of agriculture and the tough competition over resources have triggered water conflicts and stimulated the emergence of many ecology protest movements by local actors. The latter are due to the undermining of the traditional water rights governed by common property customary laws on access to water within oasis communities. This reality has had a great impact on access to water and has even led to ethnic conflicts. The results of this study first show the importance of conflicts over upstream and downstream water resources depending on the hierarchy in the space of the oasis-Aljorf; (vertical conflicts), which has led to breakdowns in social ties between beneficiaries who sometimes belong to the same tribe (horizontal conflicts). However, this also reveals that the drilling techniques have become a resources ‘ownership’ instrument for elites that contribute to the creation of a new space. These agricultural transformations have contributed to the emergence of social protest movements demanding justice, in which youth -led are involved in resisting new legitimacies laws in the management of the local resources. This ethnographic study conducted in pre-Saharan Morocco, contends that it is important to locate the small farmers' agriculture of political ecology in the larger context of the agricultural globalization, and to relate the new agricultural pattern to social equality.

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INTRODUCTION

Local norms and water resources governance

Since the 1960s, the traditional institutions of water resources management in Moroccan oases have faced a radical challenge. In public discourse, the underground

water crisis (the drying of wells, springs and Khattaras) is generally linked to external natural factors. However, we think that this is a misleading idea because, in fact, this crisis is related to transformations in the use of natural resources. In many semi-arid oases, underground water is

increasingly used because of the scarcity of surface water, increased demand for underground water (Shah et al., 2003), and the unconditional access through individual well digging. In Morocco, we believe that the new water law (law 36-15, 2016) has had no effect on the ground. It has not stopped the excessive exploitation of underground water, without taking into account the customary irrigation laws which the tribes had implemented to manage water scarcity. The state's policy helped increase agricultural production, and creating new projects for the development of oases; these projects, which were based on an "agribusiness" model, resulted in an increase in the exploitation and pumping of groundwater for the irrigation of the new large farming lands (30–50 ha) (Côte, 2002). If the State's strategy is aimed solely at increasing agricultural production, then its interventions neglected the nature of land use and the practices of the "traditional" irrigation system. This implies that water rights are not considered essential for farmers. However, open access to water through digging individual wells to serve investors' 'agribusiness' farming lands did not take into account the importance of groundwater in the survival of small farmers. It is difficult to convince policy-makers to deter the illegal use of groundwater because of the limited scientific information on the dynamics of groundwater flow (Shah et al., 2003). According to Ostrom (1999) the use of resources is characterized by conflict of interest and values; it confirms that the attempt to find an effective system of governance is like renewed perspiring due to the existing rules which only suit the economic and social circumstances of a particular group. These rules may weaken what is social and economic. For example, we refer to the crucial observation of Gertz (1972) that was very important about the irrigation system in Morocco and Bali.

The researcher contends that institutions must be closely related to the kinds of distribution problems they have to deal with. Indeed, the discourse on environmental conservation and resource management has been transformed to a decisive position that has reshaped the rules and laws of the mode of legitimacy to access water, resulting in inequitable use of resources. On the other hand, the discourse transformed about environmental preservation and resource management has become a decisive standpoint which has reshaped the rules and laws of access to water, a fact which led to inequity in the use of resources. However, it stands to reason that the pumping of groundwater knows no boundaries, because it has an invisible resource (Ostrom and Schlager, 1996). Therefore, what is at stake here is the legal pluralism (that is, customary laws which regulate access to groundwater and the new farming policies that permit unconditional access to these waters. As a result, the rights of access to water were simplified at the level of resource management policy. In addition, according to Franz (2006), the inclusion of customary law is effective in recognizing rights, as it attempted to link irrigation system management with

water users' rights and their obligations. The researcher's work also helped create awareness of how normative dimensions are interwoven with the organizational and technical-infrastructure dimensions of irrigation systems; it also illustrated how well-functioning irrigation systems co-evolve with and are part of specific socio-cultural and natural environments (Boelens, 2014; Dik et al., 460). In Hann's view (2014, 67, Dik et al., 461), an understanding nature through resource management institutions is not undertaken by anonymous individuals with a job to do (the implementation of sanctions) in a culture-free world of the kind imagined by Hardin and Hobbes, in her contribution entitled "Tragedy of the Commons" Ostrom (1992), she illustrates local societies' capacity to handle communal resources, given that people can collaborate for a collective long-term objective. She uses the metaphor of bundles of rights, which helps distinguish between rights of access, withdrawal, management, exclusion, and alienation (Ostrom and Schlager, 1996). The idea that water use is often governed by a set of norms, standards and laws that come from different sources is particularly recognized and that the shared ownership of resources makes the attention to legal pluralism essential, and stimulates the importance of water rights analysis, water conflicts and complex interactions (Boelens and Hoogendam, 2002).

The ecological conflicts around natural resources in oases, due to agricultural transformation and excessive use of resources, and the increasing use of resources try to exclude customary rule for the use of groundwater that promotes social equality and ecological justice. In the regions of India, ecological movements have emerged as a result of conflicts over natural resources and the right to survival of small farmers, with most natural resources being used to meet the needs of the majority of farmers (Shiva, 1991). This article analyzes this agrarian transformation in the Aljorf oasis. The objective is to ponder on the role of customary water and discourses of tradition institution in current ecological movement for food sovereignty and rights to access to resources (land, water) also to negotiate for use by small farmers. I argue that failing to set restrictions on the use of water and the control of individual pumping operations resulting from agricultural extension of new investors, the agricultural policy of the state is somehow encouraging race and competition over underground water. It should be noted that the new extensions of modern irrigation techniques (drip irrigation) has impacted the process of underground water consumption and encouraged the planting of a variety of high marketing value palm trees, namely 'El majhou'. The serial crises of the past decades like drought, land grabs, and other expropriation of natural resources have led to renewed focus on peasants, and agriculture in particular, as "one of the decisive battlegrounds of neoliberal globalization" (Moore, 2008:54, see, Karen), then the resources of traditional oases (land, water) which play a vital role in the survival of farmers and their families are

being transformed although it has a crucial role in the survival of peasant families. They have to endure the economic, ecological and capital-development costs, without this leading necessarily to the prosperity of many peasants and the recognition of their right to equal access to underground water for survival. The results of the study of Marx on the agricultural issue, emphasizing the final disappearance of peasant exploitation as a result of the generalization of the capitalist style of production, which makes us wonder about the ability of family farming to resist the ordeal. No one can deny the diversity of the roles of agriculture and its multidimensional characteristics, namely economic, social, food, hygienic, environmental, cultural and regional (Aksbi, 2011).

Petit (2006) refer to Marx's studies on the agricultural issue, emphasizing the final disappearance of peasant exploitation as a result of the generalization of the capitalist style of production, which makes us wonder about the ability of family farming to resistance of adversity, and the willingness of small peasant to face difficult situations. These paradoxes, in the absence of common resource governance, represent the starting point of this study. In the absence of common resource governance, these paradoxes represent the starting point of this study in other words, the study tries to show how water resources and irrigation systems represent an important point to understand the way water access requires and reinforces power at the same time, in a farming area that is increasingly oriented towards social inequality when it comes to water access rights. If the traditional irrigation system "Khattaras is part of a long historical course of the oasis, the changing of traditional techniques and irrigation channels requires that the legitimacy of this history be modified socially. Therefore, the present study draws on the paradigm of political ecology. Hence, it seems that the new techniques in the space oasis were not flexible in terms of underground water distribution practices, despite the fragility and scarcity of water in a space that has constantly been adapting to environmental conditions. The goal of the state's ecological policy was not to maintain such harmony and social organization to avoid open conflicts that have become common to the oasis since 2010, especially the water users in the oasis of Aljorf are composed of different ethnic groups with a history of settlement, land tenure and customary laws to access water.

CONTEXT AND METHODOLOGY

History of the Oasis of Al-Jorf a bit of oral memory

The first impression that comes when visiting the oasis of the Aljorf in the south-east of Morocco in the Tafilalet region is that it is a place of tranquility and harmony. This comfortable scene however soon fades away as you hear the story of the oasis in recent years: the situation has

changed, the tribal organization has collapsed and the political capitalists and contractors have dominated the field. In contrast, one of the owners of small farms, Mohammed (62 years) states: "We no longer have anything but the khattaras and they want to destroy them". His statement reflects the situation of the poor in the Oasis. The Khattaras tells the story of the oasis for over 400 years. In his view, it narrates the stories of solidarity, simplicity and adaptation to all circumstances. There was no so-called property; we try to defend it because it is our families' means of subsistence. The oasis has witnessed the establishment of several water pumping stations within large tenure spread in vast lands, as well as the construction of water-gathering basins ponds in hectares. Investors have turned them into palaces to Variety "Elmajhoul" palm trees. On the other side of the oasis, there are lots belonging to small farmers, plantations and palm trees which depend on the water of Khattaras. Here, farmers communicate and exchange news while waiting for their role in the water rations to irrigate their land. It is a limitless social fabric that meets at the water of the Saguia (canal). In fieldwork research we relied on the semi-open interview, which is particularly important and useful for obtaining as much ethnographic data as possible. Observation, oral narrative, and focus groups were also used to collect data. We identified the categories of actors those we interviewed (tribe-leaders "sheikhs", association and cooperative presidents, small-scale farmers, young investors, peasant women). Staying in the oasis for three months and participating in the daily lives, both in its upstream and down the oasis, enabled the researcher to ensure actors' confidence, collect data and understand the obstacles and constraints that these actors encounter in the oasis (participation in farming works, meetings with families, frequent visits to many families, attending meetings of the tribal leaders and sheikhs, going with families to the weekly market places,..). Aljorf oasis in Tafilalet is an integral part of the semi-arid oasis system. It is located in the south-east of Morocco a few kilometers off the town of Erfoud, which is under the jurisdiction of Errachidia. It is part of the Meknes-Tafilalet province (Figure 1).

The inhabitants of the oasis have developed advanced techniques for extracting surface water and groundwater for irrigation. The peasants of oasis depend on water use by Khattaras canals and wells that are used by human or animal energy. The Khattara is one of the most important groundwater exploitation systems. It is an underground canal that makes it possible to carry underground water in the down to the oasis and lower farmlands (Bencherifa, 1987). The social and labor costs incurred while using these waters are generally pretty expensive. Besides, it requires a high level of organization by the local community. The Khattara is an old system of underground water exploitation which has been able to ensure its long-term sustainability in the southeast of Morocco in general and in



Figure 1: The study area, Territoireoasien Eljorf.

Aljorf area in particular. It helps to discharge the underground water from the upstream of the oasis (the upstream of the Khattaras) towards the downstream (the irrigated area) through pure gravity. In the context of exploiting the water of Khattara, its owners have enacted specific laws and customary systems for water sharing. The distribution of irrigation water in Aljorf oasis is characterized by its accuracy despite the changes that have taken place in recent years. Therefore, we find that while the social institutions represented by the tribe are concerned with the distribution of water in relation to the other tribes, the community deals with the distribution of water among farmers; these institutions managed to implement techniques and methods, specially invented for irrigation and water distribution, relying on customary laws to organize water rights. Like other oases, Aljorf oasis, which has for many centuries played a pivotal role at the local economic, cultural and social levels, is a striking instance of an ecological sphere that is liable to social vulnerability and which suffers from the worrying effects of climate change. The results of the National Strategy for the Management and Development of Oases set up in 2004 by the Ministry of Land Management, Water and Environment

confirmed the disturbing environmental situation in the Tafilalet province oases in general and the oases of Tafilalet area in particular. The same conclusion was reached by the up to 2030 study on agriculture conducted by the Office of the High Commissioner for Planning, which emphasizes such factors as increasing demographic growth, drought and globalization, as well as the lack of good governance, rational management and the absence of qualified human capital inhibited farming growth.

The 2008 World Bank report stresses the importance of the role of agriculture in the fight against poverty and insisted that procedural measures be taken to make it conducive to sustainable development (Le Plan, 2008). It is obvious because the Tafilalet oases in general and Aljorf oasis in particular are currently being increasingly degraded by the excessive and irrational exploitation of groundwater. The article relates to ethnographic study of the dynamics transformations in the use and livelihoods. My questions focus on how farming families access resources (land, water). The beginning of the field research was at Aljorf Oasis in 2017. It focuses on collecting data about the extent and nature of subsistence-related changes, agricultural sector management strategies, and the forms of

competitiveness about water and land resources generated by agricultural transformations. It is also an attempt to understand the legal pluralism in water-access and the role of power in undermining the negotiating capacity of small farmers and to identify the variables related with agricultural, politics, and economics transformations. In the fieldwork, collected ethnographic data at Aljorf Oasis, where conducted semi-structured interviews with families. The aim of these interviews was to understand family conditions and life experiences in the rural oasis to collect demographic information on their social history and map the natural resources, especially agricultural lands, water sources, irrigation, among others, to illustrate social relationships based around resources in the oasis area.

The tragedy of the Oasis: Conflicts over water rights management

The results of the present research can be classified into two main axes. The first axis deals with the market of groundwater and political capital. The second axis concerns itself with the social movements, space transformations and ecological rights.

The market of underground water and political capital

Tribes in Aljorf rely on the system of Khattaras 'saguias' in their exploitation of groundwater. This is an exploitation system characterized by its vulnerability and its being impacted by climate changes. Farmers in the oasis, however, always strive to find strategies that help them adapt with the constraints and barriers that the traditional irrigation system encounters. According to the registers of the Khattara leaders in the Aljorf oasis, each Khattara helps more than 400 families in their subsistence. Throughout history, the oasis witnessed what sheikh Abdallah termed: "the Khattaras" inter-tribal war, and which concerned the conflicts over the damage caused by the distance between one Khattaras and another. These conflicts used to be managed by tribal sheikhs, and large farm owners. The custom states that the digging distance in khattaras should be the same to avoid the drying of one because of the other. This means that the social organization of traditional irrigation was governed by customary laws and conventions that tribes agreed upon to manage conflicts related the exploitation of groundwater"(69 years, 07/2017). Generally, Khattaras belonging to tribes of the oasis upstream oasis "Fazna tribes" were the most severely affected by drought during the period of colonization. To face this problem, four collective wells were dug at that time and are still used by upstream tribes. However since 1974, these wells have not been maintained given their joint ownership; farmers failed to carry out maintenance operations and many families filled up the Saguias of

Khattaras with earth and annexed them to their lands. Besides, they even built houses on them. Such was the behavior of inhabitants of the upstream oasis and the notables with Khattaras. Small marginalized farmers could not afford maintenance costs of this joint property. After independence, inhabitants of the upstream oasis relied on collective wells; however, due to conflicts between farmers about the use of water and maintenance costs, these jointly owned wells were abandoned. Therefore, farmers dug individual wells and started selling water. The main actors in the "market of water" remain those people who have power and political capital. They take advantage of their power to penetrate and control these markets, given that water can be used as pressure and lobbying mechanisms during elections, and of which the first victims are small farmers who need to practice their right to access water. Waters come from "Lghwar" (that is, gathering of owners of pumping stations), from which the water from wells of competing farmers' flows. According to Youssef, a young farmer took part in the research, people of power and notables from tribes having formed electoral alliances: "contributed in destruction of Saguias, because they had no interest in bringing them back to life or maintaining them in so that they can benefit from water selling process" (34 year, September, 2017).

Resource management upstream the oasis is under the control and power of large farm owners (local institutions), who refused to carry out maintenance operations of the Saguias; they even opposed many attempts to proceed to their maintenance despite small farmers' frequent requests in this respect. They even went further to dissolve the tribal structures or institutions which were in charge of the management of the rights to access water Jmaaa. This very fact resulted in a shift from collective property to private property. The management of irrigation systems has always been a collective matter despite the existence of private property since land owning and irrigation systems were also under the control of collective tribal management. The "Jmaaa", however, which was responsible for the process of water sharing, underwent significant and profound transformations, to which the political power were severely opposed, especially after having dissolved the tribal structures and institutions. Resources management upstream the oasis is now characterized by anarchy and chaos, although the tribal alliance imposes itself during election periods. According to Mohamed, water ownership in Aljorf oasis is dominated by large farm owners "they refused to give me a permit to dig a well because of political alliances; they wanted to scale up their efforts and tighten the noose around small farmers and marginalized immigrant women; they blurred the Saguias and ditches which go as far back as the period of colonization... Women are weak and helpless; the 'lords' and villagers diverted the Saguias towards their lands. They are sort of making a film; we belong to an agricultural commune; we are not selling drugs, but only dry dates" (45

years, 07/2017). It is important to note that it is small farmers who buy water to irrigate their small farms; these small farmers rely on the money their children working in property construction sites in other cities send them to survive and not to leave the oasis. Hassan a farmer, who decided to stay with his family in the oasis because all his brothers have migrated and work in construction in other Moroccan cities, voiced his concern about the control of political power over water distribution outlets: "...investors are the only beneficiaries from the sale of water..... their only aim is to kill people and force them to work in building sites...this is a type of colonization (we migrate and never come back) an olive tree, a variety Elmajhoul palm tree or any other thing is more important than us in their view; we have no value....Besides, they buy lands for very low prices and cause the land market to plummet" (42 year, 08/2017).

The small farmers pay 25 dirhams per hour to irrigate their farms, of which the surface area does not exceed 10m². This is very costly for the farmers, especially in summer. Because of the destruction of the irrigation Saguias and the closing of the water courses close to their lands by large farm owners (investors), small farmers are obliged to transport water through irrigation Saguias for a period that ranges between four and five hours. Even worse, they are obliged to pay the price of any extra hour. Investors stand against farmers from tribes which represent political opposition at the upstream oasis. They prevent them from digging wells and from being supplied by electricity, so that they do not compete with them on the water market and so that they can keep their firm grip on the rights to access water. Competition has led them to conflict with each other over the digging depth and resort to justice to solve this issue. The area of the "ghowar" is the water marker par excellence, since it hosts the wells of the farmers with political capital. According to Mustapha, a 4year farmer who went through a series of conflicts over digging a well with large farm owners representing the political power in the oasis, states that: "They prevented me from digging....we supplied the well with electricity after an administrative judgment. I now compete with them; I work for about 500 to 600 hours nonstop. I own a pumping station operated by 36 gas cylinders per day nonstop.... The lords' wells went dry...May God cause their hearts to get dry. We call them the criminals on earth; they are always in problems and law suits; we have no respect for big lords and we do not renounce our rights" (40 year, 08/2017).

There is no doubt that space is subject to a consensus between large farm owners located upstream and downstream the oasis with regard to flood waters (*Jamjma*). Customary rules require that the inhabitants of the upstream oasis have priority over inhabitants of the downstream oasis. That is, the former will irrigate their lands first and then comes the turn of the latter. However, in some cases, water is allowed to flow directly downstream before the inhabitants of the upstream oasis

can benefit from it for fear of high floods that can result in the destruction of houses at the upstream side of the oasis. Advance the dismantling of the tribal structures, the tribe sheikhs used to supervise the irrigation process during floods and ensure that all farmers at the upstream oasis have benefited from these waters. One should not however forget the conflicts between 'local' investors and immigrants who come back after having worked in other abroad and plan to invest in their lands. They were not allowed to supply their lands and their wells with electricity despite their various attempts, for fear of competition, especially that all projects benefit only large farm owners. Mohammed an old immigrant in Italy, expressed his concern to this effect states that: "I do not have access to electricity, the people leading the rural community prevent us to supply our well with electricity; competition over water is the main cause between local investors and returning immigrants; investors and those who own political capital, especially countryside dwellers and harratine communities" (65 year, 08/2017).

Social Mobility and Space transformations: What about environmental rights?

Usually, new technologies used in groundwater and the digging of well are closely related to the commercial Elmajhoul date palm variety as an alternative to traditional irrigation and subsistence agriculture. These new technologies have resulted in the restructuring of the oasis space. Therefore, there appeared the new extensions inside and around Aljorf oasis of which the main variety remain high value Elmajhoul dates (Figure 2). One thing that appears to be incompatible with the nature of the oasis is the existence of solar energy panels everywhere, the water holding or catchment basins which spread over hectares as well as the scattered black plastic tubes. Users of the waters of Aljorf oasis form a heterogeneous group belonging to different ethnicities and having different histories with regard to land ownership and rights to access water. Besides, conflicts between tribes have always arisen horizontally upstream the oasis and vertically downstream the oasis. The scarcity of groundwater makes it difficult to irrigate all the lands and the ongoing pumping of waters in the new extensions leads to competition over water. However, any change in the distribution and sharing of water comes as a result of the transformation in power relations between the actors around the rights to access water. It often leads to direct horizontal conflicts between marginalized small farmers and investors owners as well as between tribes upstream and downstream the oasis (Figure 2). It seems that the most serious and alarming threats in such a conflict is the very fragile and vulnerable groups in the oasis that live outside the political system and whose needs in terms of resources are relatively very minor. Their survival depends on crops that are outside the market

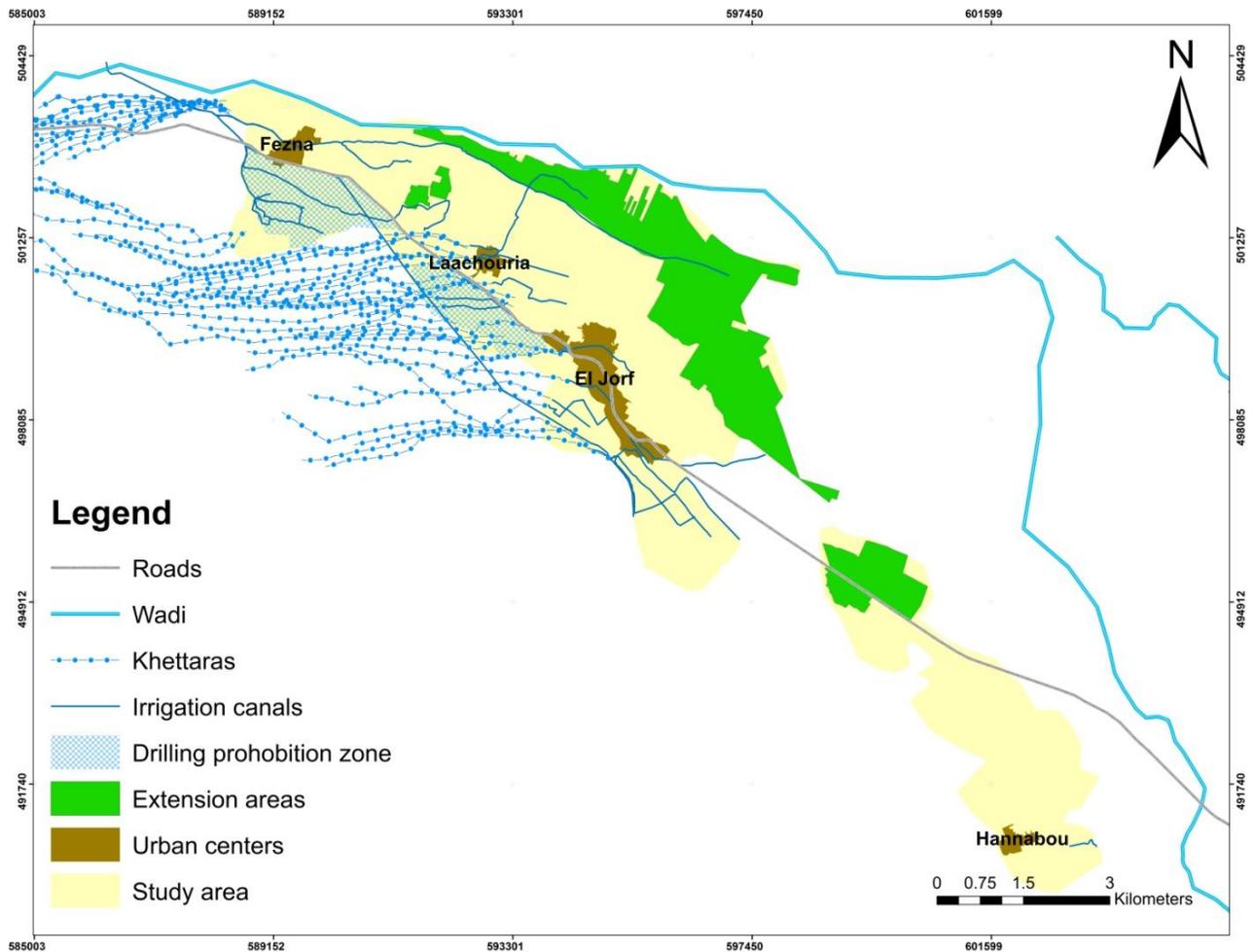


Figure 2: Waterscape of the Eljorf palm grove .

system. However, the Green plan and the changes it has brought about in terms of the use of resources has helped overcome the needs of survival in many groups. This is clear in the growing environmental awareness of environmental concerns in many farmers. For example, Mohammed, old farmer, says that: “a water pump is better than a Khattaras. What is it that a khattaras has? Even if there is a farm with variety Elmajhoul palm trees; 20 million palm tree. What keeps people here is the green space, alfalfa for the sheep and the very few palm trees they own; People are stable here; If there were no Khattaras, we, too, would go to Rabat, Fes and Meknes” (52 year,09/2017).

In 2010, the first ecological movement in the Aljorf oasis, appeared which unveiled the form and scope of conflicts over natural resources due to the new conditions on the use of resources, that is, excessive and intense exploitation through the adoption of new techniques; however, its use by the oasis community requires the preservation and conservation of resources threatened by destruction and excessive exploitation.

Therefore, these resources should be used collectively by the tribes and their management should be subject to customary laws which determine the pattern of legitimacy to access resources. All tribes downstream the oasis, ‘Aljorf tribes’, the leaders of Khattaras and “Mazarig” and the tribes at the extreme upstream oasis (Lkrayr, Boya, Hnabou, Essifa) participated in the social movement because their “Khattaras” will be harmed in the future as a result of drilling operations upstream the oasis. Their struggle requests for the feeding of the aquifer because the groundwater in the Khattaras was depleted due to the drilling operations, drilling licenses that are granted to farmers upstream the oasis and in the left side, which is considered “the red area” where drilling operations are forbidden by customary laws. According to the collective and individual interviews we conducted, when local authorities grant drilling operations, it is a step to marginalize customs and give primacy to the rule of new law. This very process also serves for the dismantling of the tribal structures and institutions. Since the 2010 protest movement, tribes were considered among the tribes

opposing the authority and the law. The ecological protest movement witnessed the participation of many actors, including male and female farmers, leaders and supervisors of irrigation Saguias as well as some associations founded by Haratine in 2007. According to Othmane a 36 year young man from the Haratine social group, women took part in the 2010 revolution, the spark of which was the drilling of a well upstream the oasis in the region of "Fazna". He added that future wars will be wars about water. Our presence and existence here is motivated by the existence of water and the 'Aljorf', which used to be a lake, has always been called "the Prophet's garden". Concerning the form and circumstances of the conflicts between the upstream and downstream tribes, Aissa claims that: "one of the farmers started digging a well upstream the oasis in "Fazna".

One of the Amazigh nomads informed us of hearing the noise of drilling at night and that this noise stops during the day. We, after having informed the Sheikh of irrigation Saguias in Aljorf, organized a week-long protest movement in the street in protest against the digging of a well in an area where customary laws prohibits digging and in order to force the authorities to open a dialogue with us. When officials responsible for farming and water came, the farmer who is digging the well and who was but one of the notables of the upstream oasis had blurred the well and tampered with the scene of the digging. When the said farmer was interrogated, he denied having started digging the well" (42 years, 08/2017). The authorities then resorted to different strategies to break up protests, as a collective act defending the actors' common interests embodied in the necessity to ensure the continuity of customary legislation, which has long contributed to the rational management of the scarce water resources in the oasis. This is a very legitimate struggle for the protection of the interests of the poor and it gathered old and young people who are ready to do anything for their rights, unlike those who are easily deterred by the authorities and back off from participating in protests. The actors' reaction was the strong resistance of tribes to the methods of the local authority. They were confident that their claims, that is, the right to access water and the preservation of groundwater to feed the Khattaras were legitimate. It is worth noting that tribes in Aljorf do not recognize the authority of the Makhzen as long as the latter does not ensure customary law enforcement. The protest movement in the oasis continued and after a week of negotiations, the protestors refused to evacuate the main road that they had cut off. In fact, this conflict went beyond the current reality and became a historical questioning as to who was the first to have settled in the region: is it the inhabitants of Fazna or the inhabitants of Aljorf Ksours located downstream the oasis, especially that the Khattaras were built 400 years ago and that they cross the region of "Fazna" and their "head" is located in a region at the upstream of "Fazna" called "Wkhit" and this region, it is clear, is composed of collective lands that were divided and used for the planting of the

variety Elmajhoul palm trees and where many pumping stations were implemented. These pumping stations are directly responsible for the absorption of groundwater in the oasis, and ultimately, for the drought Khattaras.

During negotiations between the Sheikhs of irrigation Saguias and the president of the commune of the upstream oasis, the issue of the territorial borders between the upstream and the downstream oasis was raised, a fact which the local authorities refused to address. The actors at upstream the oasis confirm that the Khattaras cross the land of the upstream up to (07) km. According to Redouane a 34-year old young man, says: "the raising of the issue of borders put the inhabitants of the upstream oasis in an embarrassing legal situation; the sheikh of the "Fazna" tribes, who was intelligent and in an attempt to quench the fires of anger, promised to show the protesting tribes the well so that they can close it and cover it up" (09/2017). In reaction to this incident, the actors in the movement decided to cut the road to the inhabitants of the upstream oasis and prevent all "Fazna" people in the upstream oasis from entering the downstream oasis home to all vital facilities, including the weekly market place; "They say that the area of 'khattaras' is their land; in fact, it is a private ownership of Aljorf; you prevent us from drilling although we own large areas. On Wednesday, which is the market day, we decided that, as long as it is a matter of borders, no one from "Fazna" is allowed to enter Aljorf until a solution to this problem is found and until the well is found and covered up." (11/2017). El Arabi the 96year old sheikh of downstream oasis the tribes since 1958, confirmed that the digging of Khattaras upstream the oasis used to be subject to the consensus between the tribes. Now, the water basin agency gives drilling licenses and asks the inhabitants of the downstream oasis to provide them with the documents that specify the customary law as well as the legitimacy of drilling prohibition: "We all know that in the past, land used to be sold without any document but simply witnesses. Since the advent of France, there were water wars. In the past, people used to keep their words and promises; there was no need for documents in selling and buying; even marriage did not require any document; only Al Fatiha (the first verse of the Koran) and a bowl of couscous. For tribes, customs were more important than documents (10/2017).

The idea that Khattaras cross the lands of the upstream oasis is not tenable; they are collective lands and the inhabitants of the downstream oasis have the right to access them. Usually, tribal conflicts over groundwater and khattaras wars were solved through "Almachyakha", which is composed of senior farmers who are familiar with the history of custom. However, in his attempt to justify the right of his tribe to carry out drilling operations in the area where drilling is banned by downstream farmers, Sheikh Hamani a 78 year old, who belongs to the upstream oasis tribes, denies the existence of any customary law, and confirms that the green Morocco plan allows drilling wells anywhere, which is not only a local or national right, but a

worldwide right as well: "The truth is you speak of the Green Morocco plan and it is an international word. Aljorf has the right to dig wells wherever it wants; those in the right side can dig wells wherever they want; on the left side, there is a point; who said that? as specified in the green plan, land owners can dig wells wherever they want; once you reach the property of others you stop; we forgave them a long time ago; now they prevent us from digging wells in our land"(3/2018). According to the Sheikh's story, studies conducted by foreign researchers confirmed that well waters have nothing to do with the water of "khattaras" and the banned side included wells "Aghrou". When the khattaras are dry, they used to resort to the waters of wells; for him, this is out of jealousy between the tribes. The conflicts between tribes started four years ago when many farmers upstream the oasis wanted to dig wells in the area where digging wells is prohibited by customary law because the authorities, claiming that it is the new water laws that regulate access to water rather than customary laws, granted them the necessary digging licenses and permits. Si Mohammed, a 62-year old farmer considers his being prevented from digging a well a violation of his right to expand his land and plant variety Elmajhoul palm trees to compete with other fellow tribesmen. According to him, "if one of his fellow tribesmen digs a well, I need to dig one too; if he plants Elmajhoul palm trees, I need to do so, too. What is important is that I am doing this legally; if they prevent me from digging the well, I will do like EL Bouazizi in Tunisia. I will kill myself. Here in Aljorf, we are oppressed; we cultivate vegetables and sell them in their market. They want to live, but want us to die. Water is like the king and kings are always surrounded by his entourage; if you offend the king, you will be offended; when they blamed us for digging the wells, their Saguias dried and none benefited from this"(10/2017). The field observation proved that the social organization of the irrigation system upstream the oasis was characterized by its accuracy and vitality; its Saguias connected to wells facilitating water transportation from the right side to the left side. The right side however has been depleted by new extensions who invested in the planting of the marketing Elmajhoul date palm variety.

CONCLUSION AND DISCUSSION

Local rights in common resources

What the state and investors have left behind?

Discussions relating to the recognition of rights have renewed the urgent need to identify the actors' local and customary rights so as to achieve social justice and ensure their right to access and use resources, which is sometimes ironical for those in charge of the implementation of the agricultural development scheme. The ambition of

agricultural reforms calls for the opening up of the process of access to resources, and re-establishing the twofold vision of agriculture: a "traditional" sector and "modern" one; a high productivity and high value added marketing sort of farming as opposed to small marginalized farms operated within the framework of solidarity support. This very fact, according to Aksbi (2011) is failure to overcome the dual vision of agriculture. The small farmers who are the owners of Khattaras, face a very tough competition in terms of pumping stations from farmers investing inside the oasis. They try to dig wells and pump water, which leads to the drought of khattaras. The conflicts over natural resources had been exacerbated by ecological policies; the protest movement is closely related to the power relationships prevailing between the various actors because successful ecosystems depend on cultural adaptation (Walker, 2005). Therefore, ecological policies are concerned with authority and the way it is impacted by the unequal relationship of access to resources. If the right to access water is linked to the most productive crops, it is likewise the factor that most contributes to the vulnerability of poor farmers. On the one hand, modern "agriculture" helps improve the social conditions of investors and farmers consider water as a means to reach "unlimited horizons", where it does not exist.

This can be compared with our ethnographic observation of agricultural production which lies in new extensions and ambitious the investors working to expand more and more on the sidelines of the oasis. The specific aim of Green Morocco plan was the exploitation of resources (land and water) in line with the new economic ambitions. The conflicts over water resources were expected to stop after independence. However, the same pattern of dominance continued with a relatively little change in the use of water resources to comply with the national and international expectations and requirements. It seems that that the most serious and alarming threats in such a conflict is depriving poor farmers of their means of subsistence and ultimately forcing them to migrate and leave their oasis. Their needs in terms of resources are relatively very minor and their survival depends on agriculture that are outside the market pattern. However, with the new changes and developments and expansions that occurred in farming when the government opened access to resources (land and water) to investors, the small farmers' survival needs were bypassed. Through its discourse and policies of the green plan, the state seeks to face climate changes and, at the same time, face the unstable water system. It was able to start the race to the bottom of the aquifer through pumping operations. Poverty, vulnerability and the low economic status of farmers, together with the difficulty to access and use water resources have certainly led to social and economic differentiation and have forced them to migrate and look for work in other cities all over Morocco. If the challenge today is how to link economic security to environmental sustainability, it is difficult to invoke equal rights of all

individuals in natural resources and environmental services in case of open access resources. Of course in such cases, the environmental and ecological distribution is always unjust and leads to conflicts resulting from contradictions in the management of natural resources.

The impact of the ecological policies consists principally of the poor farmers, who most of the times are not able to have access to sufficient water resources in order to irrigate their lands. Besides, their low income makes it difficult for them to buy water from well owners. In fact, the market-driven "agricultural reform" is in contradiction not only with the survival of the population of the Oasis, but with the renewal of natural resources as well. Developments plans taken into consideration neither the scarcity of resources nor the culture of local population. Control over resources shifted from local communities to national and international financial institutions. There is no doubt that the project of variety Elmajhoul palm trees in Aljorf oasis (Morocco) is related to traditional oasis resources and to governmental support, which gives priority to the market economy and makes local economy and survival economy something that can be dispensed with. Through these projects, there has emerged severe and tough resource competition between investors over water resources; more than that, there has emerged a discourse claiming that certain categories of farmers should leave the oasis, and that they are social categories that cannot keep up with the policies of agricultural production reforms brought about by the Green Morocco Plan. The "environment of the poor", to use Martinez's words is characterized by inferiority and poverty in terms of means of production; and only by using techniques adapted to the surrounding environment and nature of production can this be overcome. In many societies, financial deficiencies were secured outside the market; today, however, it seems that society's income acquired in the market represents the basic means of subsistence.

The various dynamics of the oasis, the agricultural dynamics or new investments and marginalization of small farmers, show that according to de Haas (2006), the state will not be forced to limit itself to only one driving force for economic growth in rural areas. The results reveal the importance of flexible and dynamic use of resources through social organization and collective management to which the irrigation system is subject and based on local norms. This point has been the focus of many discussions about the importance of traditional knowledge in the management of resources and the possibility of losing this knowledge as a result of globalization. The importance of conflicts over resources and ecological movement lies does not lie in the voices of the disadvantaged who are victims of unequal distribution of the costs of development, but rather in the way it unveils the hidden external impacts of development based on specific economic ideology and revealed the injustice distribution of resources.

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