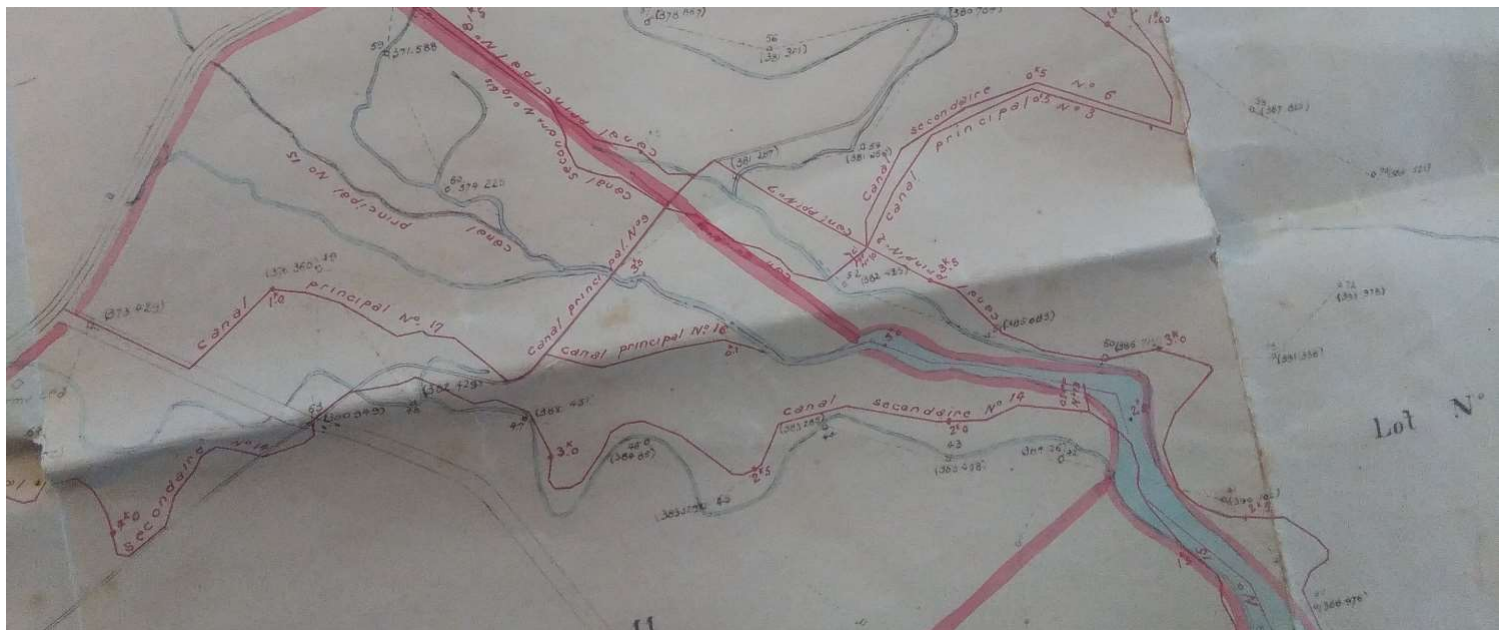


Water governance as a medium for colonial conquest in the early French protectorate in Morocco, 1912-1925.

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Cover image: detail of a map of *oued* Aïn Ben Kezza

Source: Archive du Maroc, Fond du Protectorat, Dahirs et Arrêtés relatifs aux droits de l'eau (D342), A.V. homologuant les opérations des commissions d'enquête relatifs à la reconnaissance de droit d'eau des oueds Ben Kezza, Amellal et N'Ja, *Arrête Viziriel homologuant les opérations de la commission d'enquête relatives à la reconnaissance des droits d'eau des oueds Ben Kezza, Amellal et N'Ja*, 5.

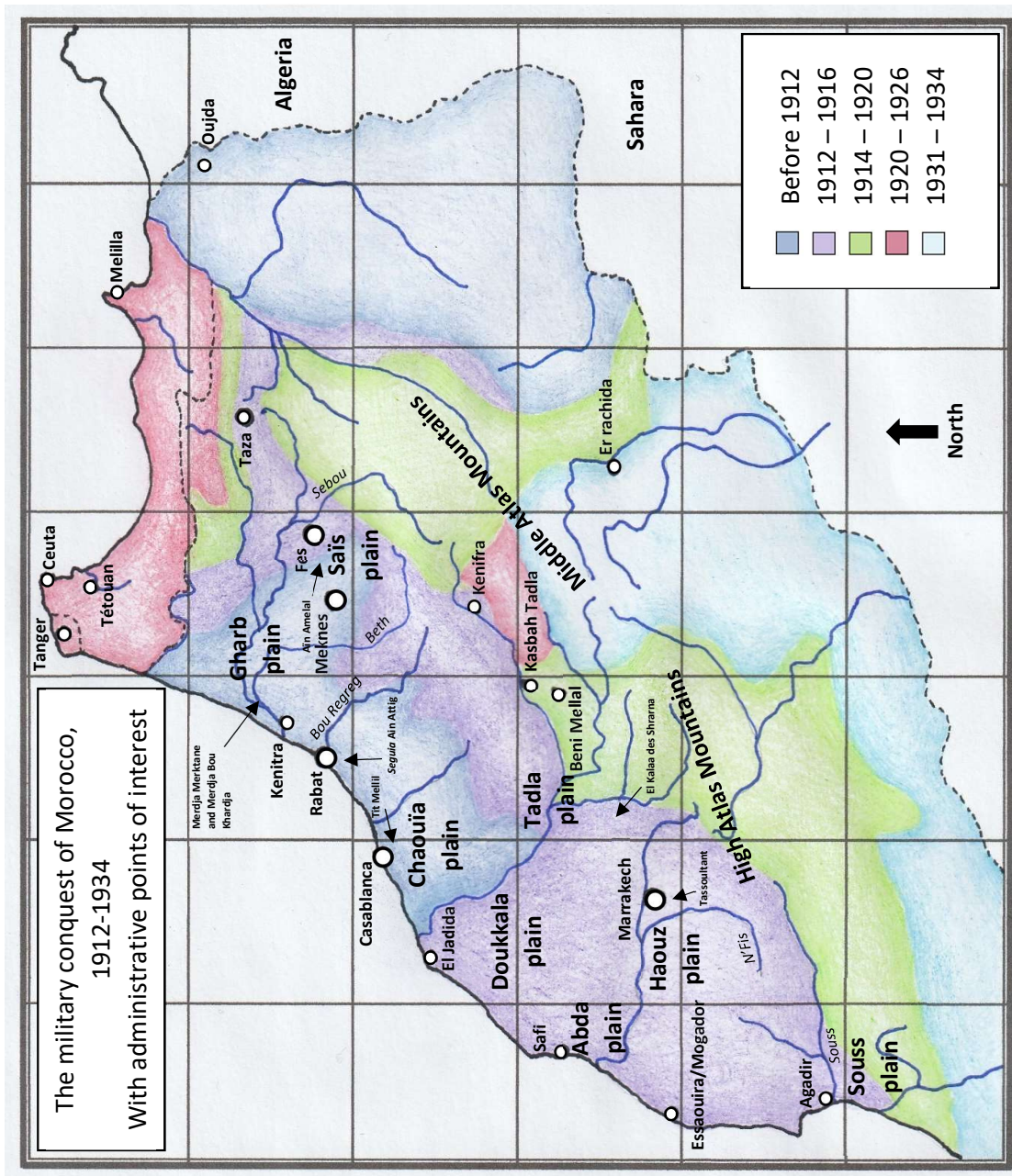
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Summary

This paper researches the early colonial conquest of Morocco. The official colonisation process began in 1912 with the establishment of the French protectorate in Morocco, and the early period ended in 1925. Traditionally, communities in Morocco had been relatively independent from central government. The Moroccan people fiercely resisted the loss of their autonomy, often through violent opposition. The French administration aimed to implement a strong, authoritative centralised government and to actualise their control over the people and resources of the territory. They used several strategies to simultaneously do so while minimising popular resistance and violent uprisings. This paper shows that one of those strategies was water governance. The administration implemented several water governance strategies to break open old power structures and replace them with new institutions. Existing laws concerning ownership were nullified and replaced with new legislation, which placed control of water resources in the hands of the French administration. Farmers were compelled to apply for a permit in order to use water sources that their families had been using for generations. The administration also invested strategically in water infrastructure to further limit access to water resources. Control over access to those resources was thus placed firmly in the hands of the French protectorate government. The administration also used water governance to outsource infrastructural construction and maintenance jobs to European colonists, while maintaining control over the water resources through complex legal constructions. This shows that the French administration was not primarily interested in helping the colonists, and not at all in developing the institutions or assisting the people of Morocco. It was mainly involved in creating a dominant and authoritative power structure from which it could further its commercial and colonial goals. Many challenges in the modern kingdom of Morocco have their origins in the colonial policy of the early French protectorate and the governance strategies of its administration.¹

¹ This thesis could not have been written without the help of Dr. Jan-Bart Gewald, Isabelle Vrijmoed, Andrea Michelini, and Jo Rensen. Enormous gratitude goes out to them and all the people who have advised and supported this project, and to the staff of the Moroccan Archives in Rabat.



Map 1: The military conquest of Morocco, 1912-1934; with administrative points of interest. Created by author based on maps in W. Swearingen, *Moroccan mirages: Agrarian dreams and deceptions, 1912-1986* (London, 1988), 9; and P. Brignon a.o., *Histoire du Maroc* (Paris, 1968), 328.

Introduction

Water is a necessity for life. On the most basic level, it determines where we can live, and how we manage to live there. When it is superfluous, we build dikes and drains, and when it is insufficient, we build the most ingenious mechanisms to supply it. This does not just refer to the mighty *qanat* that has channelled water to towns in the Iranian desert for centuries, or the Roman aqueducts in densely populated urban areas, or other physical infrastructure constructions. In every culture, people have developed socio-political mechanisms for the distribution of water. These are the rules that dictate property, affluence, and livelihood in regions where water is a scarce resource. When access to a water source dictates a crop's survival, or when access to clean drinking water is no certainty, these questions are prioritised over anything else. The study of water scarcity is timeless. Its problems are at the core of the human experience, and while it is more difficult for some to imagine its acuteness in our age of bottled water and (in many cases) governmental accountability, water scarcity has shaped the world.² The governance of water scarcity is an enduring concept, and the study of its history is a study of the underlying processes of the human experience.³

This thesis studies how malicious use of water governance can lead to inequality and loss of self-determination. It studies how the mechanisms of water distribution can be deployed to transform a society and its norms and practices of power. In doing so, this thesis provides historical examples of how water governance can be used as a weapon to skew power relations between people, and how these new relations become cemented in institutions that affect generations afterwards. This thesis studies water governance in the French protectorate in Morocco during the rule of its first resident general, Hubert Lyautey, who administered the protectorate between 1912 and 1925.⁴ During this period the authority of the sultans and the decentralised independence of his people were dramatically deconstructed and transformed by the French administration, and water governance was one of the many tools they used. Using the French protectorate in Morocco between 1912 and 1925 as a case study, the main question this thesis aims to answer is in which ways water governance strategies were used to centralise administrative control over the territory's resources.

² T. Naff, 'Islamic law and the politics of water' in J. Dellapenna and J. Gupta (eds.), *The evolution of the law and politics of water* (Berlin, 2009), 37-52, 37.

³ T. Tvedt and E. Jakobsson, 'Water history is world history' in T. Tvedt and E. Jakobsson (eds.), *A history of water: Series 1 volume 1: Water control and river biographies* (London, 2006), ix-xxiii, xi.

⁴ The state's official name was 'the French protectorate in Morocco' (*Le protectorat Français au Maroc*)

The territory under study was geographically diverse, parted roughly in the middle by the Atlas Mountains from which several perennial rivers flowed (see map 1.). The areas covered by these rivers were mostly very fertile and suitable for agriculture.⁵ While some of the land outside the direct supply of the rivers was irrigated, it was mostly subjected to the vicissitudes of Moroccan rainfall. The territory to the south of the Atlas Mountains, with the exception of the Marrakech region, was not under the effective control of the French administration, and thus falls outside of the scope of this research. Agricultural fertility and the supply of water decreased as one moved further south and east, where the Sahara proper began. The fertile Atlantic plains formed the heartland of French activity: the Gharb plain in the north-west, the Saïs plain near Fez and Meknes, the Tadla and Haouz plains near Marrakech, and the Chaouïa, Doukkala and Abda plains near Casablanca.⁶ The scarcity of water in much of this country, combined with the hydraulic demand of its traditionally agricultural economy, makes Morocco an excellent case study for this research.

The French protectorate in Morocco was signed into existence in Fez on the 30th of March 1912. In signing this treaty, the sultan transferred the administrative challenges that the old regime had faced to the French administration: a decentralised territory with a culture of self-determination and violent resistance to infringement upon their sovereignty.⁷ The French cultivated an arsenal of strategies and tools to gain effective control over the territory and its resources while maintaining public order, of which water governance was one. Water governance refers to the complex of socio-economic, political and administrative systems for the development and management of water resources, and the delivery of water services at different levels of society.⁸ It covers the manner in which allocative and regulatory politics are exercised in the management of water and embraces the formal and informal institutions through which authority is exercised.⁹ Put simply, water governance is the branch of water management that deals with controlling the distribution of access to water.

In the hands of the French administration, it proved a powerful tool in their transformation of Moroccan power structures. Not only was water governance effectively exercised in the colonial transfer of (hydraulic) resources from Moroccan actors to the coloniser, it was done in such a way that public order remained at manageable levels. The water governance strategies that were

⁵ C. Pennell, *Morocco since 1830: A history* (London, 2000), 4.

⁶ C. Stewart, *The economy of Morocco: 1912-1962* (Cambridge, MA, 1964), 6. While the geographical information in this book is still relevant, many of its conclusions are challenged in chapter 3.

⁷ J. Sater, *Morocco: Challenges to tradition and modernity* (New York, 2016), 18.

⁸ P. Rogers and A. Hall, *Effective Water Governance* (Stockholm, 2003), 7.

⁹ C. Batchelor, *Water governance literature assessment* (London, 2007), article 19, 1.

introduced by the colonial administration were so successful in gaining control over water resources from local water users that their effects are still visible at the root of contemporary problems today, such as the loss of public participation in water management,¹⁰ water grabbing through politics,¹¹ and indifference towards the fate of the poor.¹²

This introduction outlines the structure of this thesis, the relevant historiography, and the methodology and theoretical concepts used. Before answering the main research question, the historical setting is explained, as well as the institutional and legal background of the early protectorate. The three subsequent chapters answer the research question. Four water governance strategies have been identified in the primary source material used for this project.¹³ The first chapter analyses the first of those strategies: the measured maintenance of existing water rights in the colonial expropriation of the Moroccan resources. In doing so it explores the priorities of the administration and the place of settlers and Moroccans in the colonial network.

The second chapter explores the nature of legal pluralism in Morocco and the way in which the administration used legal pluralism to expand their claims over Morocco's water resources. The theory of legal pluralism, or the coexistence of multiple systems of law in a shared space, will be explained further in this introduction. The numerous co-existing legal systems in Morocco combined formulaic Islamic *Sharia*, *Amazigh* local law, and European influences.¹⁴ The French codified and modified these systems and challenged existing usage rights. As will be shown, they introduced new institutions and modified existing ones through which they could influence informal systems and carefully examined existing water usage rights so they could dismiss those that could be safely revoked. This chapter also discusses the idea of Hydraulic Property Rights Creation, a water management theory about the evolution of water rights. In short, the theory states that water rights can be derived from the improvement of a water source through (im-)material investment. The administration frequently implemented this strategy to wrest water sources or distribution systems from Moroccan users. This theory is further explained later in this introduction.

¹⁰ M. Kuper a.o., 'Supporting the shift from state water to community water: Lessons from a social learning approach to designing joint irrigation projects in Morocco' in *Ecology and society*, Vol. 14, No. 1 (2009), 10.

¹¹ A. Houdret, 'The Water Connection: Irrigation, Water Grabbing and Politics in Southern Morocco' in *Water alternatives*, Vol. 5, No. 2 (2012), 284-303, 287.

¹² C. Batchelor, *Water governance literature assessment*, 6-10.

¹³ When the word 'source' refers to historical written accounts, the form '(primary or historical) source material' is maintained. When it refers to a water source, such as a river or canal, it is presented as a 'water source'.

¹⁴ The frequently used 'Berber' is considered derogatory.

The third chapter examines the relationship between the European small-scale agricultural settlers (*colons*) and the French administration, and the way in which the administration used them for its colonial purposes. While it may be intuitive to assume them natural allies, *colons* and the administration were often at odds. Lyautey strongly disliked the *colons* and welcomed the opportunity to exercise some control over these unruly people. To this end, the administration employed mandatory farmers' associations called *Associations Syndicales Agricoles Privilégiées*, roughly translated as 'privileged agricultural trade unions' and abbreviated as ASAP's, through which they could manage legal disputes, control water uses, and maintain governmental influence.¹⁵ As an added benefit, these *colons* could be used by the administration to govern their territory indirectly and at lower costs.

Following the dramatic conclusions of global research projects such as the monumental 1972 publication *Limits to Growth*, research into sustainable and equitable water governance increased in both the historical discipline and the projects of policy institutions.¹⁶ Analytic tools such as Google books Ngram viewer, which tracks the use of key words over time, shows *water management* as a term spike in frequency in the 1970's, and *water governance* in the 1980's, to dramatically increase since then.¹⁷ While it is a crude tool, it shows the increasing interest of scholars in these questions. A call for insights into the historical inequities in water governance as an institute have been made by publications such as *The evolution of the law and politics of water*¹⁸, and the recent research report from the International Water Management Institute.¹⁹ When this call for historical water governance research is answered, the subject is usually treated in a larger narrative on related subjects such as agriculture.²⁰ Because there are few historians working specifically on the history of water governance as a socio-economic institute, many important questions remain unanswered.²¹

In the case of Morocco, water governance is a crucial aspect of history. Drought and mismanagement of water resources have been the key causes of hunger, poverty and unrest and

¹⁵ M. Attar, 'L'hydraulique agricole contemporaine et l'hydraulique durant le protectorat 1912-1951' in *Hommes terres et eaux*, Vol. 16 (1987), 66-67.

¹⁶ D. Meadows a.o., *The limits to growth: A report for the Club of Rome's project on the predicament of mankind* (New York, 1972).

¹⁷ <https://books.google.com/ngrams/>

¹⁸ J. Dellapenna and J. Gupta (eds.), *The evolution of the law and politics of water* (Berlin, 2009).

¹⁹ B. van Koppen and B. Schreiner, *A hybrid approach to decolonize formal water law in Africa: International Water Management Institute research report volume 173* (Pretoria, 2018).

²⁰ An important exception is the work of T. Tvedt, who studies global history through water. See for example T. Tvedt (ed.), *A history of water* (9 volumes) (London, 2006-2016).

²¹ An example of this research for South Africa is the work of Dr. J. Tempelhoff, for example: J. Tempelhoff, 'The Water Act, No. 54 of 1956 and the first phase of apartheid in South Africa (1948-1960)' in *Water history*, Vol. 9 No. 2 (2017), 189-213.

thus a key aspect of governance in general.²² Questions of water still constitute a major part of the agenda of the modern state.²³ It is therefore strange that very few studies of Moroccan history venture specifically into these issues. The geographic and meteorological setting of the country and agriculture and irrigation are often mentioned, but the focus is almost invariably on military or economic history.²⁴ Water governance is often relegated to a few lines, such as ‘significant changes took place because European colonists took agricultural land and water resources for themselves’, but the methods, goals and causal connections are usually omitted.²⁵ Specific studies into the socio-economic effects of water governance remain few and far between. There are two very important exceptions, which are cited in most works of Moroccan history when water is discussed.

The first is *Moroccan Mirages: Agrarian dreams and deceptions, 1912-1956*, by W. Swearingen. This book proposes that the policies of the French, and specifically their agricultural policy, was not formed by ‘hardheaded economic logic’ but by a romantic idea of recreating Morocco as the ‘wheat granary’ it had been in the Roman empire.²⁶ *Moroccan mirages* researches the socio-economic impact of the protectorate in light of the French agricultural policy, and the role of water governance in it. Its primary conclusions revolve around answering why large-scale irrigated agriculture did not begin until the mid-1930’s.²⁷ Its conclusions are tested, challenged and augmented with new primary source analysis and more recent secondary literature, as the book was first published in 1988.

The second literary source is the phenomenal *Le Haouz de Marrakech* by Paul Pascon, published in 1977. This massive two-volume work charts the history of water governance customs in the fertile Haouz region in elaborate detail. Pascon’s research has added enormous amounts of primary data for interested historians. On the colonial period, the book asks to what extent the colonial mission of creating mass-production and an export economy was realised on the ground of the Haouz.²⁸ It concludes positively and provides insights into the expropriation of

²² S. Miller, *A history of modern Morocco* (Cambridge 2013), 115.

²³ Kingdom of Morocco, *Sustainable development in Morocco: Achievements and perspectives from Rio to Rio +20* (Rabat, 2012), 20.

²⁴ For example, J. Sater, *Morocco*, which focusses the importance of the agricultural sector on questions of taxation.

²⁵ H. Obdeijn and P. de Mas, *Geschiedenis van Marokko* (Amsterdam, 2012), 144.

²⁶ W. Swearingen, *Moroccan mirages: Agrarian dreams and deceptions, 1912-1986* (London, 1988), 3.

²⁷ W. Swearingen, *Moroccan mirages*, 39.

²⁸ P. Pascon, *Le Haouz de Marrakech, tome 2* (Rabat, 1977), 443.

water and land usage rights and recreates the process by which farmers were forced into wage labour by the new colonial economy.²⁹

This thesis aims to deepen the important themes stirred up by these two authors: the place of water governance strategies as part of the institutional arsenal of the French colonising mission. It offers innovative arguments by measuring the historiographical studies, which were published decades ago, in light of newer studies, such as S. Miller's *A history of modern Morocco* (2013);³⁰ J. Sater's *Morocco: Challenges to tradition and modernity* (2016);³¹ M. Gershovich' *French military rule in Morocco: Colonialism and its consequences* (2012);³² and C. Pennel, *Morocco since 1830: A history* (2000).³³ Older works that are influential in the study of Morocco's history are D. Porch, *The conquest of Morocco* (1983);³⁴ R. Bidwell, *Morocco under colonial rule: French administration of tribal areas 1912-1965* (1973);³⁵ and A. Scham, *Lyautey in Morocco: Protectorate administration 1912-1925* (1970).³⁶ The primary source material, which will be discussed shortly, is another innovative addition to the historical debate. This thesis uses the colonial documents housed in the Moroccan archive in Rabat, which is often overlooked, with historians preferring the colonial archives in Nantes. The specific sources from the Moroccan archive that were used for this research have not yet found their way into the consulted secondary literature.

Two important theoretical ideas are central to this work: legal pluralism and Hydraulic Property Rights Creation (HPRC). Legal pluralism is a straightforward term: it indicates a situation in which various systems of law co-exist. A 'system' refers then to a set of norms and practises, institutionalised in written or oral form.³⁷ The section on the legal setting below will further explore the intricacies of legal pluralism in Morocco. Generally, European notions of water property law were introduced in Africa during its colonisation, before which the entire notion of private ownership of water resources was novel in many parts of sub-Saharan Africa.³⁸ The European system usually governed Europeans, while the original notions of property governed

²⁹ Ibid., 534.

³⁰ S. Miller, *A history of modern Morocco*.

³¹ J. Sater, *Morocco*.

³² M. Gershovich, *French military rule in Morocco* (London, 2000).

³³ C. Pennel, *Morocco since 1830: A history* (London, 2000).

³⁴ D. Porch, *The conquest of Morocco* (New York, 1983).

³⁵ R. Bidwell, *Morocco under colonial rule: French administration of tribal areas 1912-1965* (London, 1973).

³⁶ A. Scham, *Lyautey in Morocco: Protectorate administration 1912-1925* (London, 1970).

³⁷ P. Kameri-Mbote and F. Kariuki, 'Human rights, gender and water in Kenya: Law, prospects and challenges' in A. Hellum a.o. (eds.), *Water is life: Women's human rights in national and local water governance in Southern and Eastern Africa* (Harare, 2015), 81-117, 91.

³⁸ Ibid.

Africans, unless the two systems collided, in which case the European system took precedence.³⁹ Water uses protected in local systems of law were often not recognised in written legal systems, and Morocco was no exception.⁴⁰ In Morocco the legal situation was very complex due to the institutionalisation of written sharia law co-existing with other systems of local law.⁴¹ This is explained further in the legal setting section below.

Hydraulic Property Rights Creation (HPRC) is the academic term used to describe the process of creating or strengthening a claim to water extraction rights, coined in 1986 by E. Coward.⁴² This term has been used by water researchers since, and is a powerful tool in understanding how water property rights evolve and how they can be transferred. This theory shows how the creation of water infrastructure (water lifting, groundwater wells, gravity flows, irrigation, etc.), built to counteract the effects of climate variability, led to investments by farmers, and these investments were accompanied by evolving normative distribution systems for water.⁴³ These systems were based on flexible principles of supply and demand, and the largest investors were prioritised in this distribution.⁴⁴ The idea that investment in water infrastructure leads to stronger water claims is known as HPRC. In chapter 2, the French use of this process is explored.

A final note on methodology is in order. This thesis is based on research in the Moroccan Archives (ADM) in Rabat. The most extensive part of the ADM is the *Fonds du Protectorat* (FDP), consisting of the documents that have stayed in Morocco after independence, and relates mostly to the management of colonial affairs and the execution of colonial policy.⁴⁵ Its counterpart in Nantes holds the military and policy documents, of which some few remain in Rabat as well.⁴⁶ This thesis reflects on the distinction of policy versus execution illustrated by these historical sources. Whereas other secondary sources are often limited to the aims at the

³⁹ A. Hellum a.o., 'The human right to water and sanitation in a legal pluralist landscape: perspectives of Southern and Eastern African Women' in A. Hellum a.o. (eds.), *Water is life: women's human rights in national and local water governance in Southern and Eastern Africa* (Harare, 2015), 1-31, 9-10.

⁴⁰ R. Boelens a.o., 'Introduction: The multiple challenges and layers of water justice struggles' in R. Boelens a.o., (eds.), *Water justice* (Cambridge, 2018), 1-31, 10.

⁴¹ L. Buskens, 'Sharia and national law in Morocco' in J. Otto (ed.), *Sharia incorporated: A comparative overview of the legal systems of twelve Muslim countries in past and present* (Leiden, 2010), 89-138, 96.

⁴² E. Coward, 'Direct or indirect alternatives for irrigation investment and the creation of property' in K. Easter (ed.), *Irrigation investment, technology, and management strategies for development* (Boulder, 1986), 225-244, 226.

⁴³ B. van Koppen a.o., 'Decolonising peasants' marginalisation in African water law' in *Water law*, Vol. 26 (2019), 51-61, 53.

⁴⁴ E. Coward, 'State and locality in Asian irrigation development: The property factor' in K. Nobe and R. Shanpath (eds.), *Irrigation management in developing countries: Current issues and approaches* (Boulder, 1986) 491-508, 492.

⁴⁵ D. Rivet, 'Archives coloniales et écriture de l'histoire du Protectorat' in Université Mohammed V (ed.), *Recherches sur l'histoire du Maroc: esquisse de bilan* (Rabat, 1989), 25-33.

⁴⁶ G. Cornell, 'Archive du Maroc' in *Hazine* (8 July 2015).

top level of the administration, by virtue of the chosen primary sources this thesis can analyse the lower levels of management and come closer to the actual practices of water governance planning. After a thorough exploration of the FDP, resulting in a modest database, a selection of three representative and interesting primary sources is made:

- 1) The monthly reports of the *Services de la direction des affaires indigènes*;⁴⁷
- 2) The documents registered as *Dahirs et Arrêtés relatifs aux droits de l'eau*;
- 3) Various reports registered as *Région de Fès : rapports politiques mensuels*.

These titles refer to series of books with a wide temporal spread. For this thesis, only those which relate to the period between 1912-1930 have been consulted. Because of the large amount of material, a representative selection of photocopies has been made on which research was based. A spread of years was taken into consideration to account for the continuities and change during the period under study, as well as a spread of months to account for the yearly agricultural cycle. Several other sources from the archive in Rabat have been used, to a lesser extent.

The early period of the protectorate that makes up the temporal focus of this thesis is delineated by the rule of resident general Lyautey, between 1912 and 1925. In terms of policy and its execution, this period is strategically very different from the consecutive periods. This thesis reflects on the generally accepted periodisation of the French protectorate, in which the rules of Lyautey and his successor Théodore Steeg are often generalised.⁴⁸ This earliest period was formative for the protectorate and the independent Moroccan kingdom, and contrary to the claims in some historiography, there was extensive practical attention for water governance questions by the administration in this period, albeit in a different form than in the Steeg era.⁴⁹

Historical setting

A fight for authority over Morocco and its resources had been fought throughout the 19th century between the sultans and local notables.⁵⁰ This strife was fuelled by French, English, German, Italian and Spanish agents and merchants, who sought to open the protected Moroccan markets for import and export.⁵¹ Additionally, the people in the tribes and cities, who defended their traditional independence through violent uprisings if necessary, formed another layer of conflict

⁴⁷ These sources represent the documentation from administrative entities that will be introduced in the institutional setting section below.

⁴⁸ Such as M. Gershovich, *French military rule in Morocco*.

⁴⁹ Contrary to the claims in W. Swearingen, *Moroccan mirages*.

⁵⁰ C. Pennell, *Morocco since 1830*, 27.

⁵¹ J. Sater, *Morocco*, 20.

that complicated the political situation.⁵² The final decades of pre-colonial Morocco were characterised by the collapse of the traditional system of authority under the increasing pressure of the European advance.

The government of pre-colonial Morocco thus ruled an ambiguous state: its authority was not accepted by many tribes and the sultanate had no clear boundaries or subjects.⁵³ It responded to challenges to its authority through violence and upheld symbiotic links of kinship and patronage.⁵⁴ The household of the sultan, called the *makhzan*, was a mobile group of soldiers, retainers and administrators that moved between cities and other sites of unrest. Maintaining public order consisted of quelling rebellion and enforcing the sultan's authority over the local notables through physical proximity of the *makhzan*. These notables were part of a decentralised system of national taxation, for which they collected local dues of which they were paid a percentage. The sultan was revered each Friday in the weekly prayer as spiritual leader of the Islamic faith in Morocco.

The Europeans, on their part, battled for control of the colonial world. After the collapse of the first French global empire after the defeat of Napoleon in 1815, French interests in colonial affairs had been minimal.⁵⁵ The genesis of its second colonial empire came about after the 1830 invasion of Algeria, which was fuelled by military and commercial interests.⁵⁶ For decades, the interest in empire came almost exclusively from these military and commercial agents, who shaped the role of the newfound colonial empire: a vehicle for military glory and commercial profits.⁵⁷ Only after the 1889 colonial exposition in Paris did a popular interest in empire gain traction.⁵⁸ By that time, however, commercial and military actors had already vastly destabilised the Moroccan government. Interaction with European merchants and advisors had left the *makhzan* indebted and unable to levy most of its taxes. This was due to the successful resistance of warlords in the south, known as *qajids*, who used popular distaste of European modernisation of the *makhzan* for their insurrections. Indemnity payments forced upon the sultan by Europeans for real and imaginary offences forced the sultan to surrender his authority to the French piece by piece.⁵⁹ Claiming to protect French nationals in Morocco, French commanders occupied increasingly large parts of the territory, forced the sultan to pay for the upkeep costs,

⁵² C. Pennell, *Morocco since 1830*, 28.

⁵³ J. Sater, *Morocco*, 18.

⁵⁴ J. Waterbury, *The commander of the faithful* (New York, 1970), 15.

⁵⁵ M. Gershovich, *French military rule in Morocco*, 5.

⁵⁶ W. Swearingen, *Moroccan mirages*, 5.

⁵⁷ H. Obdeijn and P. de Mas, *Geschiedenis van Marokko*, 142.

⁵⁸ W. Swearingen, *Moroccan mirages* 6.

⁵⁹ C. Pennell, *Morocco since 1830*, 147.

and imposed their right to administer those conquered areas outside of the sultan's sovereignty.

⁶⁰ When the treaty of Fez was signed in 1912, the *makhzan* had already been made largely impotent. The *makhzan* consisted of pro-French ministers (*wazirs*) who had stakes in the colonial economy.⁶¹ A French colonel controlled the Moroccan army, and appointed French officers, and French banks controlled the *makhzan's* finances.⁶²

Any opposition to a French protectorate from other European powers had been neutralised through international treaties. In 1900, an agreement over Italian hegemony over Libya had ensured their support of a French Morocco.⁶³ The English had been recruited as an ally after a delineation incident in Fashoda in 1898, after which France had acknowledged British rule over Egypt in exchange for Morocco. This deal was formalised and strengthened in 1904 with the signing of the *Entente cordiale*, an alliance between the two countries to protect against the German land threat. Franco-German relations had been devastated by the Franco-Prussian war of 1870-1871, and the enmity between them impeded Germany's recognition of French Morocco.⁶⁴ Hostilities almost escalated in the Tangier crisis of 1905, in which Germany tested the Franco-British alliance, but when it proved resilient, Germany agreed to attend the Algeciras conference, after which French hegemony in Morocco was agreed upon. After that, German subversion attempts in Morocco existed mostly in the mind of French administrators, and with that, the road to the protectorate was clear.⁶⁵

Thus, resistance to the colonisation would not come from the international community, nor from the emancipated *makhzan*. The remaining pillars of anti-colonial sentiment and protection of traditional values and autonomy were the Moroccan people, their decentralised leaders, and the Moroccan legal tradition. These three institutions were the primary interests of French policy.

Institutional setting

Lyautey first sought to quell armed resistance to colonial rule. While the conquest would take 22 years to complete, the economic heartland was subjugated relatively quickly.⁶⁶ An important aspect of both military and administrative rule was that in order to achieve their goals, officers and administrators were only allowed to expend resources available in the territory directly

⁶⁰ L. Buskens, 'Sharia and national law in Morocco' in J. Otto (ed.), *Sharia incorporated*, 89-138, 95.

⁶¹ C. Pennell, *Morocco since 1830*, 148.

⁶² C. Pennell, *Morocco since 1830*, 148.

⁶³ C. Pennell, *Morocco since 1830*, 124.

⁶⁴ T. Zeldin, *France, 1848-1945: Volume II: Intellect, Taste, and Anxiety* (Oxford, 1977), 117.

⁶⁵ M. Gershovich, *French military rule in Morocco*, 16.

⁶⁶ *Ibid.*, 111.

under their control.⁶⁷ Primarily for this economic necessity, Lyautey relied on techniques of indirect rule: co-opting rural notables and reforming the centralised government.⁶⁸ The local leaders on the French payroll governing the more secluded areas were protected by the French and gained virtually unlimited power and wealth.⁶⁹

The layout of the centralised government has been studied laboriously by A. Scham in his 1970 book *Lyautey in Morocco: Protectorate administration 1912-1925*. While its age shows in some areas, such as the ethical legitimisation of the protectorate or the ease with which some testimonies from French administrators are incorporated as truth, the study of the government institutions is extraordinarily thorough.⁷⁰ It neatly describes the transition in the period that is under study in this work. The relevant content is summarised as follows. The French sought to reorganise the Moroccan government at three levels: central, municipal and tribal.⁷¹ Before 1912, the sultan was officially the only person with executive power in the central government. He was assisted by 5 *wazirs*, roughly translating to the ministers of war, foreign affairs and finances, the minister of administrative supervision and appeal, and the minister of internal affairs, also known as the grand *wazir*. Because the French had elected to construct a protectorate rather than a colony, the colonial narrative followed that of advising and supporting the sultan and his government, rather than replacing it with a French one.⁷² However, the old central government was transformed completely, starting in 1912 (see figure 1. The three central directions studied in this thesis are shown in detail.). Some parts of this new government were introduced as the protectorate grew. This new government was designed to follow the image of a protectorate, with numerous French branches supporting the sultan, but the *makhzan* was reduced to a part of the *Direction des affaires Chérifiennes*, headed by a French official and falling under the authority of the resident general.⁷³ The *wazirs* were reduced to ceremonial functionaries, especially the grand *wazir*, who's only authority lay in signing the French laws (called *dahirs* in Morocco), to subscribe to the narrative of the protectorate.

The *Direction des affaires indigènes et du service des renseignements* (Direction of indigenous affairs and information service) was created in 1917. It was central to the power of the resident general, because it fell under his authority completely, creating a sort of government within a

⁶⁷ *Ibid.*, 70.

⁶⁸ S. Miller, *A history of modern Morocco*, 92.

⁶⁹ J. Sater, *Morocco*, 22-23.

⁷⁰ A. Scham, *Lyautey in Morocco*. Examples on pages 1 and 56, respectively.

⁷¹ *Ibid.*, 48.

⁷² *Ibid.*, 58.

⁷³ *Ibid.*, 59.

government.⁷⁴ It was staffed by Lyautey's military patrons, and it was responsible for handling tribal affairs, mainly questions of tribal property, and coordinating the collection of information on the protectorate's assets.⁷⁵ Each region had a large number (120 in the Chaouïa region alone in 1912) of information officers who answered to the *service des renseignements* and thus to Lyautey. Their information formed colonial policy, and theirs were the hands that composed the primary material of the *Direction des affaires indigènes* on which part of this thesis is based. They aided the colonial conquest with informed advice and detailed the functioning of the administration process in their reports.⁷⁶

The *Direction general de l'agriculture, du commerce et de la colonisation* was made independently functional in 1920.⁷⁷ It informed the government, colonists and farmers (Europeans as well as Moroccans) on commercial and agricultural opportunity and held several other functions. Its reports feature in the source material of the *Direction des affaires indigènes* and show the interests of the government and the direction of policy related to water governance and agriculture.

The *Direction générale des travaux publics* oversaw the construction of infrastructure, such as ports and roads. Their reports often feature water management and in several cases their reports have proven informative in the study of water governance at the local level, especially the services of agricultural hydraulics, colonisation works, and municipal works. The authority of this department often overlapped with other departments, leading to administrative inefficiency.⁷⁸

⁷⁴ M. Gershovich, *French military rule in Morocco*, 76.

⁷⁵ A. Scham, *Lyautey in Morocco*, 65.

⁷⁶ *Ibid.*, 71.

⁷⁷ *Ibid.*, 67.

⁷⁸ W. Swearingen, *Moroccan mirages*, 42.

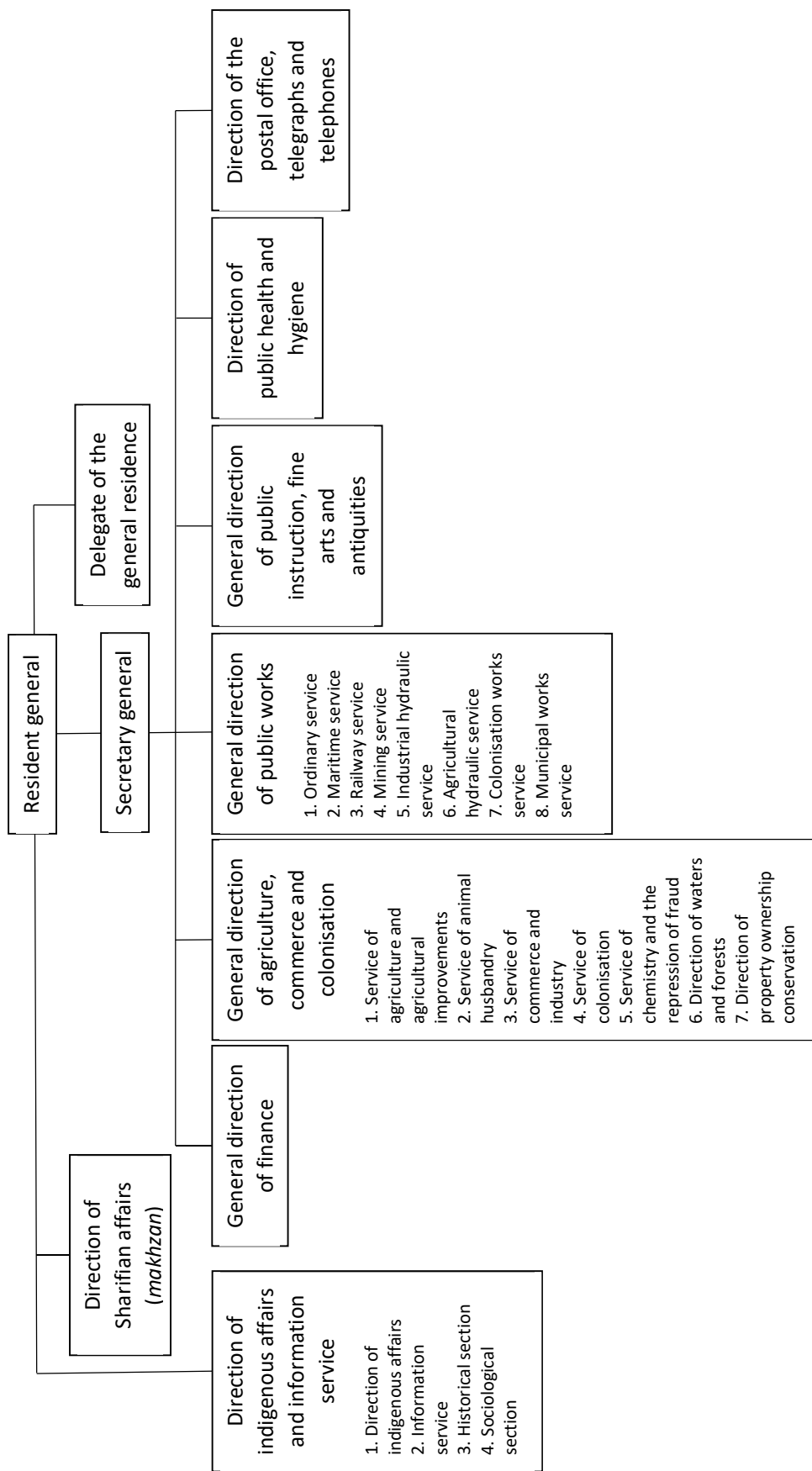


Figure 1. Central government of the Protectorate, 1912-1926.

Based on: A. Scham, *Lyautey in Morocco: Protectorate administration 1912-1925* (London, 1970), 62-63.

Finally, the office of the secretary general of the protectorate included the *Service des études législatives* (Service of legal studies), which produced several of the studies on water property rights used in this thesis.

On the regional level, the protectorate introduced most of the new administrative infrastructure. There had been no effective regional bodies under the rule of the sultan, who had left most regional governance to the tribes which were in most cases independent.⁷⁹ The territory was divided into regional provinces, called *circonscriptions*, *cercles* or *régions*, which were either under military or civil rule, depending on the level of local public order. The first civil regions were set up in 1919. In 1923, the territory was divided into two general zones: the civil zone, encompassing Rabat, Chaouïa, Rharb, Oujda, Mazagan, Safi, and Mogador, and the military zone, in which lay Fez (including Taza), Meknes, and Marrakech. (see map 1.).⁸⁰ At the municipal level, the traditional authority of the *pacha* or *caïds* was relegated to the new office of the *chef des services municipaux*, who led his office under the authority of the general secretary.⁸¹ The final source used in this thesis, the municipal reports of Fez, were written by local municipal officers.

Legal setting

The colonial experience of much of the African continent began with the violent overwhelming of existing norms and practices.⁸² At the root of that process lay the Hegelian idea that Africans had no history, written sources, or political institutions, from which followed that colonisation would happen in a vacuum of power.⁸³ This fallacious idea has been disproven countless times, and Morocco would be an excellent case to disprove this idea even further. Not only was there a very effective legal tradition which had evolved over many centuries, it was also extensively documented in written form.⁸⁴ Because the territory had such strong legal institutions, especially in the field of property rights, the French colonisers could not overwhelm their subjects by rejecting an existing (oral) tradition as invalid.

⁷⁹ A. Scham, *Lyautey in Morocco*, 69.

⁸⁰ *Ibid.*

⁸¹ *Ibid.*, 82.

⁸² D. Laumann, *Colonial Africa, 1884-1994* (Oxford, 2013), 14-15.

⁸³ F. Hegel, *Vorlesungen über die Philosophie der Weltgeschichte* (1837), quoted in J. Fage, 'The development of African historiography' in J. Ki-Zerbo (ed.) *General history of Africa: Methodology and African prehistory* (Paris, 1985), 25-42, 30.

⁸⁴ T. Naff, 'Islamic law and the politics of water' in J. Dellapenna and J. Gupta (eds.), *The evolution of the law and politics of water*, 40.

Before 1912, the *makhzan* mixed *Sharia* law, customary law, and a pragmatic administrative system.⁸⁵ This was supplemented by *qadis*, legal scholars who interpreted *Sharia* law, and local administrators who dispensed their interpretation in executive justice.⁸⁶ The centralised authority of the *makhzan* did not penetrate the entire country, resulting in a multitude of local customary systems.⁸⁷ The colonisation process was complicated by this legal pluralism: while the authority of state law was transferred to the administration, local communities retained their independent concepts of property rights. In addition, religious law included inalienable property rights which the French could not quash without inciting severe resistance (see chapter 1). The two relevant inalienable property right types were termed *melk* and *habous*. In *Sharia* law, property was historically held by the Islamic community, the *umma*, rather than individuals. This was especially true for water usage rights, as it was generally held that water was given by God. Several Islamic schools of law existed, and the school that was prevalent in Morocco, the *Maliki* school, was rare in that it allowed individual water usage rights, known as *melk*.⁸⁸ *Melk* usage rights could be either codified or transmitted orally.

Traditionally, *habous*, or *waqf*, constitutes a donation of land or infrastructure to be held in public ownership, so it could generate income for philanthropic or religious funding, or a religious building could be constructed for the spiritual support of the community.⁸⁹ Some *habous* endowments could also lead to private income, when only part of its income was reserved for public use, a custom known as private *habous*, or *taqib*.⁹⁰ This religious donation was at times also used to secure political or economic endowments.⁹¹ Although the state was the traditional owner of *habous* donations, many communities in Morocco observed this function instead, especially in regions of the country where the *makhzan* had little influence.⁹² The complications following from this dual system of centralised and decentralised legal authority shaped French colonial policy. Because water resources could be (part of) a *habous* holding, water-related ambitions of the administration had to account for this religious property right.⁹³ The administration created a special section for the study and preparation of *habous*

⁸⁵ L. Buskens, 'Sharia and national law in Morocco' in J. Otto (ed.), *Sharia incorporated*, 89-138, 92.

⁸⁶ *Ibid.*

⁸⁷ *Ibid.*, 96.

⁸⁸ T. Naff, 'Islamic law and the politics of water' in J. Dellapenna and J. Gupta (eds.), *The evolution of the law and politics of water*, 42-43.

⁸⁹ L. Buskens, 'Sharia and national law in Morocco' in J. Otto (ed.), *Sharia incorporated*, 89-138, 103.

⁹⁰ A. Scham, *Lyautey in Morocco*, 104.

⁹¹ F. Kogelmann, 'Sidi Fredj: A case study of religious endowment in Morocco under the French protectorate' in H. Weiss (ed.), *Social welfare in Muslim societies in Africa* (Stockholm, 2002), 66-78, 71.

⁹² R. Maarouf, *La protection de la ressource en eau au Maroc* (Bordeaux, 1983), 83.

⁹³ A. Raymond, *Grandes villes arabes à l'époque ottomane* (Paris, 1985), 155.

legislation, which fell under the *Direction des affaires Chérifiennes*, signalling the importance of this legal institution as obstacle to French ambitions.⁹⁴ Water governance strategies using *habous* endowments, legal pluralism and state ownership of water resources is discussed in chapter 2.

⁹⁴ A. Scham, *Lyautey in Morocco*, 60.

Chapter 1. Public order

The organisation of Morocco's political structure invited two colonial objectives for French conquest: reducing the autonomy of communities by invigorating the centralised system of government and gaining control of the economic assets of the country. Due to the relative shortcomings of the *makhzan's* influence over its subjects and the strong legal foundation of communal property rights, the administration set out to radically change the norms and practises of both government and property.⁹⁵ The primary opponent to French ambitions was the conservative and often violently autonomous tradition of the Moroccan population.⁹⁶ The final pre-colonial years had been characterised by violent uprisings: In 1897, rebels laid siege to Marrakech,⁹⁷ in 1902, another crippling revolt destroyed a large part of the *Makhzan* army,⁹⁸ and in 1907 the ruling sultan was disposed by his older brother.⁹⁹ The first reaction to the installation of the protectorate had been a violent two-day protest in Fez, which led to hundreds of casualties.¹⁰⁰ The management of public order was therefore of primary importance in colonial policy. Not only did the administration aim to gain political control of Morocco's economic means, it aimed to do so in such a way as to maintain the military control it had won.

This maintenance task fell on the municipal officers and the regional administration. The reports that they produced, which describe every aspect of their governance, were generally structured consistently throughout the studied period. Almost every one of these monthly reports opens with a description of the political situation, which begins with the perceived changes in public order in that month.¹⁰¹ The prominent position of this aspect of colonial rule indicates the primary importance that public order held, having priority even over economics, colonisation, exports or expropriation. In reading these reports, one gets the impression that the administrators were very aware of the value of public order: it could rise and fall in a given territory, following positive and negative incidents and circumstances. The introduction of colonial policy, which would usually lead to disruptive changes in the conservative societies of Morocco, could severely damage public order, while positive colonial changes could raise public

⁹⁵ J. Sater, *Morocco*, 18, quoting J. Waterbury, *The commander of the faithful*, 15.

⁹⁶ H. Obdeijn and P. de Mas, *Geschiedenis van Marokko*, 125.

⁹⁷ C. Pennell, *Morocco since 1830*, 125.

⁹⁸ *Ibid.*, 128.

⁹⁹ *Ibid.*, 136.

¹⁰⁰ *Ibid.*, 155.

¹⁰¹ For example: Archives du Maroc (ADM), Fonds du protectorat (FDP), Activités des services de la Direction des affaires indigènes : rapports mensuels (E43), 1921, *mois de février : Rapport mensuel du protectorat*, 1.

order. Disruptive policies such as dispossessions, regulation of *Sharia* practises, or new taxation, could be met with violent protest if public order was too low.

The administration therefore elected to incorporate several strategies to raise public order or limit the damage that their policies would do to it. The field of water governance provided several of these tactics, as water was central to public order. The authors of the monthly reports of the *Direction des affaires indigènes* often linked public order to water, rain, and agriculture. They described the availability of an adequate water supply as the dominant factor in determining public order, especially for agricultural purposes. Lack of water was a negative factor, such as in the report on the Chaouïa plain from February 1923:

‘The persisting drought in this region is causing serious concerns with the colons and the indigenous *fellah* [Moroccan farmers].’¹⁰²

Inversely, bountiful water supplies resulted in a general relaxation and calm, exemplified in a report on Rabat from February 1921:

‘[The political situation is] generally good. The natives are satisfied with the rains fallen after a long period of drought. (...) In the cities and the tribes, two questions interest the attention of the city dwellers and *fellah*:

1. The likely result of the crop which appears to be excellent;
2. The decline of [the price of] commercial products, of which they are beginning to feel the beneficial effects. The natives are showing real relief and currently look to the future with more confidence.’¹⁰³

Or:

‘Generally, the spirit of the natives, in the towns as well as in the countryside, (...) will improve following abundant rains which instil hope of a good agricultural year.’¹⁰⁴

The availability of sufficient water was thus central to public order, and the French administration diligently reported changes to one and the other. Not only were records kept of the public order levels, the French used that knowledge to time the enactment of their more

¹⁰² ADM, FDP, Activités des services de la Direction des affaires indigènes: rapports mensuels (E39), 1923, *mois de février: Rapport mensuel du protectorat*, 17. Translated by the author.

¹⁰³ ADM, FDP, E43, 1921, *mois de février: Rapport mensuel du protectorat*, 24. Translated by the author.

¹⁰⁴ ADM, FDP, E39, 1923, *Mois de décembre : Rapport mensuel d'ensemble du protectorat*, 1. Translated by the author.

disruptive policies. The quote below shows that the local administration of the Doukkala *conscription* gauged its political circumstances appropriate for the evaluation and purification of certain property rights of the old *makhzan*, a euphemism for expropriation (see chapter 2):

‘The good general economic and political situation of the *circonscription* seems to allow the reconnaissance and purification of the judicial situation of certain *makhzan* properties.’¹⁰⁵

The central importance of public order is not reflected by a large portion of the secondary literature. Of course, the armed resistance conflicts that characterised the protectorate until the end of the pacification war in 1934 have received considerable attention, but the ‘second front’ that was fought in the pacified areas by the French administrators has been insufficiently covered. Gershovich, who covers the themes of violence and resistance, comments on actions of resistance only when it comes to physical violence.¹⁰⁶ Pennell, similarly, considers protest mostly in cases where seemingly revolutionary changes happen, such as revolts and armed resistance.¹⁰⁷ When the regional administrators are considered, their involvement is reduced to either the exploitation of economic goods or patronising notions of developing the Moroccan people.¹⁰⁸ The layered, subtle and deeply insidious non-military components of administration which supported the other colonial ambitions provide another field of study which will provide insights in the conquest of Morocco. Other strategies mentioned in this thesis influenced public order, and its maintenance remained a central theme when they were implemented. The ideas discussed below, however, were aimed primarily at positively influencing the public order.

The administration spent its first years in power investigating the distribution of hydraulic resources within its territory.¹⁰⁹ They determined where the fertile areas were, and to what extent agriculture was possible there. Determining the economic value of each region in the conquered zone of Morocco was the primary purpose of the information officers of the *service des renseignements*. This was done so precisely that *colons* complained that the administration was spending all their time studying the Moroccan water sources rather than preparing them

¹⁰⁵ ADM, FDP, E43, 1921, *mois de février: Rapport mensuel du protectorat*, 23. Translated by the author.

¹⁰⁶ For example: M. Gershovich, *French military rule in Morocco*, 72. The exception mentioned in this source is the ‘political penetration’, which seem similar to the claims in this chapter, but differ on important questions, which are discussed later in this chapter.

¹⁰⁷ C. Pennell, *Morocco since 1830*, 155.

¹⁰⁸ A significant exception is A. Guerin, ‘Not a drop for the settlers: reimagining popular protest and anti-colonial nationalism in the Moroccan Protectorate’ in *Journal of North African Studies*, Vol. 20, No. 2 (2015), 225-246. This article laments that most other literature focusses only on the turning points of history, rather than including smaller protests which gained little nation-wide traction, but illustrated Moroccan displeasure effectively.

¹⁰⁹ W. Swearingen, *Moroccan mirages*, 39.

for colonisation.¹¹⁰ The process was completed in the early 1920's. The next phase brought a new assessment, carried out mainly by the *Service des études législatives*, of the pre-existing water usage rights of Moroccan individuals and communities.¹¹¹ This careful consideration of local rights caused the *colons* to continue expressing their dissatisfaction with the work of the administration. These feelings have been conserved in editorials and letters to *colon* newspapers and journals, such as *La vigie Marocaine* and *Le petit Marocain*, in which this theme featured frequently.¹¹² In *Moroccan mirages*, Swearingen suggested that these complaints were justified, and that the administration did little to develop water resources for *colons*.¹¹³ He proposed that the administration was slow to complete their surveys due to several factors including inefficiency and inertia, but willing to develop water infrastructure.¹¹⁴ However, the documents of the *Service des renseignements* and *Service des études legislative* suggest that any slowness was due to the priorities in French policy. This policy was not aimed at the *colons*, but at keeping the peace in Moroccan communities.

The administration completed many public hydraulic works, supplying drinking water to towns, creating canals for irrigation, maintaining water infrastructure, and building sewer systems in urban areas. The following excerpt is only one example of many, as this is a recurring theme in every monthly report:

'Hydraulique Agricole – Works carried out under the control of the general directorate for agriculture, trade and colonisation by the general directorate of public works:

Water supply of the Bou Fekrane [river] (project is running)

Development of the Bou Fekrane market garden estate (project approved)

Drainage of the marshes of Ras el Ma (Running)

Drainage of the marshes of *oued* N'ja and *oued* Bou Knafer (project approved)

Irrigation of the subdivision of Mjat (project approved).¹¹⁵

¹¹⁰ *Ibid.*, 40.

¹¹¹ A. Scham, *Lyautey in Morocco*, 118.

¹¹² W. Swearingen, *Moroccan mirages*, 42.

¹¹³ *Ibid.*, 40.

¹¹⁴ *Ibid.*, 45.

¹¹⁵ ADM, FDP, E39, 1923, *mois de décembre: Rapport mensuel d'ensemble du protectorat*, 58. Translated by the author.

Every month the lists are different, signalling progress in many of the mentioned projects.¹¹⁶ This suggests that the idea that the government was unable to exercise water projects is inaccurate. The first reason for the ineffectiveness of water development for *colons* in these early years was unwillingness on the part of the administration to help develop water resources for all colons. The use of the word ‘all’ is intentional: it was well known that Lyautey would have preferred not to have any small-scale *colons* in the protectorate.¹¹⁷ His experience when working in the Algerian colony caused him to describe them as having ‘the mentality of Huns. (...) They have neither humanity nor intelligence.’¹¹⁸ It is conceivable that Lyautey and his administration maintained a supportive strategy for large-scale settler-farmers while interacting with the small-scale *colons* with little enthusiasm.

Whereas it was common to incorporate conquered land into the colonial dominion in other colonies, it was impossible to do so in Morocco, for the reasons explained above.¹¹⁹ Instead, the French administration went to great lengths to determine when water was owned privately by communities, religious endowments (*habous*) or individuals (*melk*). Those water resources could not be disowned with a simple claim. These studies were not exclusively for determining which waters could be safely taken by the administration, but also to protect existing rights from *colons*. *Colons* and *fellah* often worked in the same area. French settlers cared little about traditional water usage rights and maintaining public order, while the French administration held it as its first objective. While the settlers might not have seen issues with claiming more water at the cost of the *fellah*, the administration did. An example is presented in the minutes of a meeting on water rights near Fez, in January 1927:¹²⁰

‘Mr Bouchend requested that an additional debit of 125 litres per second be taken from the Aïn Amelal for the benefit of the settlers. Mr Cavagnac pointed out that the committee did not examine this question but only the existing rights of users.’¹²¹

¹¹⁶ For example ADM, FDP, E43, 1921, *mois de mars: Rapport mensuel d'ensemble du protectorat*, 20 or ADM, FDP, E43, 1921, *mois de juin: Rapport mensuel d'ensemble du protectorat*, 24.

¹¹⁷ C. Pennell, *Morocco since 1830*, 171.

¹¹⁸ R. Bidwell, *Morocco under colonial rule*, 202.

¹¹⁹ For example, expropriation of land in Tanzania: C. Ndjovu, ‘Compulsory land acquisitions in Tanganyika: Revisiting the British colonial expropriation principles and practices’ in *International journal of scientific & technological research*, Vol. 4, No. 12 (2015), 10-19; in Algeria: J. Byrne, ‘Our own special brand of socialism: Algeria and the contest of modernities in the 1960s’ in *Diplomatic History*, Vol. 33, No. 3 (2009), 427-447; or in Zimbabwe: L. Sachikonye, ‘From ‘growth with equity’ to ‘fast-track’ reform: Zimbabwe’s land question’ in *Review of African political economy*, Vol. 30, No. 96 (2003), 227-240.

¹²⁰ See map 1.

¹²¹ ADM, FDP, Dahirs et Arrêtés relatifs aux droits de l'eau (D342), A.V. homologuant les opérations des commissions d'enquête relatifs à la reconnaissance de droit d'eau des oueds Ben Kezza, Amellal et N'Ja, *Procès-verbal de la commission d'enquête*, 1. Translated by the author.

His request was therefore denied. Another colon, Mr Bardon Henri, demanded additional water, as his allotment received less water than neighbouring ones. He, too, was denied by Mr Cavagnac as these quantities were fixed and could not be altered.¹²² Mr Cavagnac, as chief engineer of the province of Fez, thus protected the water allocation of the *fellah* against the expansion of the colons.

Another example is found in a document from the *Service des etudes legislatives* from 1919. It describes the process in which an area near the Sebou river is claimed by the government for agriculture. While there are several dispossessions in the text the administration knows precisely how far they can take them. The traditional, 'informal' rights of a group of pastoralists are not simply removed, but transformed into a right recognised by the administration:

'Considering that the provisions provided for in this project fairly safeguard the rights of neighbouring tribes by replacing their right to graze on marshland with a right of full ownership over a smaller but more developed area.'¹²³

Simple examples such as these illustrate that the French administration was aware of sensitive local property rights because of their extensive surveying.

An important distinction must be made here: Secondary sources like Pennell and Gershovich refer to the French approach as 'Political penetration backed by force'.¹²⁴ Some secondary sources claim that the French installed innovations for the shared benefit of the Moroccans.¹²⁵ The innovations that water governance brought were, as far as the primary source material used for this work indicate, never exclusively for the benefit of the local population. This is evident from the following reasoning:

The French conducted extensive surveys of the Moroccan country and found therein that the primary source of public uncertainty lay in the fluctuating availability of water for agriculture. Yet, there is no evidence that the administration ever installed irrigation infrastructure specifically for the use of local farmers. Evidence does exist of French indifference towards the negative effects on the Moroccan poor of colonial irrigation:

¹²² *Ibid.*, 2.

¹²³ ADM, FDP, D342, Dahir approuvant contrat a/s mise en valeur des merdjas Merktane et Bou Khardja, *Projet de dahir*, 1. Translated by the author.

¹²⁴ Pennell, *Morocco since 1830*, 156.

¹²⁵ For example: C. Steward, *The economy of Morocco*, 71; R. Bidwell, *Morocco under colonial rule*, 206; more recently H. Obdeijn and P. de Mas, *Geschiedenis van Marokko*, 144; Miller perplexingly describes Lyautey's vision of the protectorate as idealistic, perhaps even heroic in S. Miller, *A history of modern Morocco*, 90.

‘The lack of water, which is usual in summer, was felt in the less favoured localities but in general the low level in water sources and streams was normal, and from the end of September, there is or is expected to be an increase in the flow of *wadis* [river valleys], because of the stopping of irrigations or by the effect of storms’¹²⁶

Or, in the words of the director of the Hydraulic service in 1922:

‘The Tadla plain is superb for irrigation, and of remarkable fertility. However, because of the relatively dense indigenous population in the area, it would be almost impossible to create large holding (...). A large-scale irrigation project (...) could only be developed for natives. It would appear that other tasks are more pressing.’¹²⁷

The French did set up agricultural credit services and seed banks, which some authors see as evidence for French altruism.¹²⁸ These institutions functioned mainly as collectors of agricultural taxes, and the provided loans of these *Sociétés Marocaines de Prévoyance* were dwarfed by the dues of membership fees, which were mandatory.¹²⁹ It follows that the French strategy of calculated expropriation was a means to an end, and that end was colonial control and administrative stability.¹³⁰ The general goal of the colonial expansion was, in the words of Lyautey himself:

‘To extend the effective control of the French Protectorate over (...) those regions which are of real economic interest agriculturally, hydraulically, for their forests, or their mining [or which present a military or political interest].’¹³¹

The maintaining of certain local water rights must thus be understood as an intermediary strategy as an administrative necessity rather than for the benefit of the Moroccans. When water usage rights were reallocated to the benefit of Europeans, provisions for Moroccans who had held usage rights before were often installed:

‘The final fifth part of the land is held at the disposal of those (fellah) who held grazing rights on the *merdja* [marshland]’¹³²

¹²⁶ ADM, FDP, E43, 1921, *Mois de septembre: Rapport mensuel d'ensemble du Protectorat*, 21. Translated by the author.

¹²⁷ Paraphrased from W. Swearingen, *Moroccan mirages*, 42, quoting M. Chabert, *L'Hydraulique au Maroc* (Rabat, 1922), 21.

¹²⁸ R. Bidwell, *Morocco under colonial rule*, 225; C. Pennell, *Morocco since 1830*, 201.

¹²⁹ C. Steward, *The economy of Morocco*, 106.

¹³⁰ D. Laumann, *Colonial Africa*, 40.

¹³¹ P. Lyautey, *Lyautey l'Africain: Textes et lettres du maréchal Lyautey, tome IV et dernier* (Paris, 1957), 157.

¹³² ADM, FDP, D342, Dahir approuvant contrat a/s mise en valeur des merdjas Merktane et Bou Khardja, *Projet de dahir*, 10. Translated by the author.

Or the case of the colonial allotment of the Tassoultant domain in 1925, where Moroccans were displaced from their land, but then received one full day of water usage each week:

Current state of water repartition in the Tassoultant seguia		
<i>Domains</i>	<i>Day (6:00-18:00)</i>	<i>Night (18:00-6:00)</i>
[Sultan] Moulay El Kebir	Monday	Monday
The Moroccan farmers' association	Tuesday Wednesday	Tuesday
Boubeker Kabbadj		Wednesday
Colonisation allotment	Thursday Friday Saturday	Thursday Friday Saturday
Resettled natives	Sunday	Sunday

Table 1: The administration's repartition of water allowance in the Tassoultant seguia. Source: ADM, FDP, Législation : Arrêtés - dahirs. Cahiers de charges [eaux, hydraulique, ventes, transaction, construction et appropriation]. Doukkala Beni m'thir - Merzaga - petitjean - Marrakech - Casa - Mehnès - Sidi Slimane - M'jat - Fès - Sidi Yahia - Rabat - Oulad Yahia (D684), Cahier du charges [sic] hydraulique relatifs aux lotissements de colonisation de Tassoultant, Aghouatin, El Kalaa des Shrna, 10.

There were numerous colonial precedents where the original population of an area was displaced without compensation, but the administration elected in all these cases to provide some sort of usage right to the displaced Moroccans. Often, though, the preservation of existing rights or the arrangement of new ones was an obligatory step towards later dispossession. If direct dispossession would have been possible without violent resistance, it is probable that the government would have done so. This will become evident in the following chapter.

In conclusion, the primary concern of the colonial administration was to avoid and suppress acts of resistance by maintaining levels of public order. They did so by extensively surveying existing water usage rights and carefully considering to what extent each individual right could be dispossessed without inciting problematic resistance. Public order was monitored at all times and reported on every month. In addition, the administration took sides with local water users at times to protect them from encroachment from settlers. The maintenance of public order came before any other colonial goal, and it is vital to acknowledge its importance when studying the colonial history of Morocco.

Chapter 2. Legal pluralism

In reading the source material, one gets the impression that the main aim of the administration was to assert its authority and legitimacy as a state over the resources of the protectorate. The wars against Moroccan resistance to their rule continued after the colonial armies had left. The battle for control over the protectorate continued, but the theatre changed from the battlefields with their military columns to the judicial and administrative realms. After securing public order, as discussed in the previous chapter, the administration sought to strategically claim certain resources, introduce a new legal framework for water ownership to replace the traditional system, and invest in intelligently placed water infrastructure to control the water of Morocco.

This chapter presents three water governance strategies used by the administration to install their authority over the hydraulic resources of the protectorate. These strategies revolve around the idea of legal pluralism: the co-existence of several legal structures. These three strategies are: The confiscation of all *makhzan* property for the new administration; the installation of a permit system for water use; and the gradual acquisition of water resources through Hydraulic Property Rights Creation (HPRC).

In 1914, the administration promulgated a *dahir* that officially placed all water resources in the public domain.¹³³ In order to legally extract water anywhere in the territory, a user was required to have either a certified concession from the *makhzan* or written proof that their claim was backed by at least 10 years legal usage under customary law.¹³⁴ The administration, and traditional historiography, legitimised this decision with the claim that this protected existing land and water rights from unscrupulous colonists who bought or claimed good farmland, leaving the *fellah* without means to sustain themselves.¹³⁵ More recent literature suggests that the administration aimed to either sell these resources to the *colons* or develop large-scale water infrastructure for irrigated agriculture:¹³⁶

‘The clear intent of the legislation, however, was to **protect** Morocco’s water resources until they could be **developed** by the protectorate administration.’¹³⁷

¹³³ *Dahir* of 1 July 1914.

¹³⁴ W. Swearingen, *Moroccan mirages*, 40.

¹³⁵ G. Duval, *L’hydraulique au Maroc* (Paris, 1933), 15.

¹³⁶ Pennell claims that selling land and water to the *colons* was the main aim of these *dahirs*. See Pennell, *Morocco since 1830*, 200.

¹³⁷ W. Swearingen, *Moroccan mirages*, 45. Emphasis by author.

This excerpt defines the strategy very well but requires two refinements to correspond with the image in the primary sources. Firstly, the word ‘protect’ is ambiguous. The *colons* aggressively claimed these resources, which the government curtailed with this legislation. This legislation was, however, mostly in the interest of the administration itself. The *colons* often functioned as rivals to the administration, and the extent of their cooperation, and their relationship in general, must be reconsidered (see chapter 3). The idea that the administration developed these resources for the benefit of the Moroccans is also false, as this chapter will further illustrate. In many cases, ‘development’ increased the strength of government claims to those water resources.

Secondly, the administration seemed content to be in control of these resources in the early years of the protectorate. Rather than having pre-meditated development plans with all the resources that it claimed, it seems more likely that the administration sought simply to be in an authoritative position by controlling resources and enforcing peace (meaning an absence of violent resistance to the administration). These early years thus seemed to be more about legitimising the government, state and protectorate than about facilitating a *colon*-based agricultural export market. It also seems unlikely that the administration wanted the water resources so it could construct large-scale water infrastructure such as dams, because Lyautey’s administration seemed uninterested in developing such projects due to other priorities. Only after his departure in 1925 did the *politique des grands barrages* (large dam policy) begin with the exploitation of the N’Fis and Beth rivers in 1927.¹³⁸ Lyautey’s successor, Théodore Steeg, was a firm believer in the exploitation of large-scale irrigation.¹³⁹ In segmenting the history of protectorate Lyautey and Steeg, and their colonial visions, should be in two very different categories.

The basis of legitimising the state’s control over land and water rights thus lay in the *dahirs* of 1913 (moving all land to the public domain), 1914 (surface water), and 1919 (swampland and groundwater). Previously, ownership was directed by some other part of the pluralistic legal landscape. To reiterate the legal situation explained in the introduction, there were five general categories for land and water ownership:

1. *Makhzan*, indistinguishable from the land privately held by the Sultan;
2. *Habous*, held privately by religious foundations;

¹³⁸ W. Swearingen, *Moroccan mirages*, 53.

¹³⁹ C. Pennell, *Morocco since 1830*, 199.

3. *Guich*, held by the state but granted indefinitely by tribes who provided soldiers for the *makhzan* army;
4. Collective, held by tribes but subdivided in various ways under each' customary legal system;
5. *Melk*, privately held by individuals.¹⁴⁰

The ownership of large parts of these resources was not officially registered in written form, which was why the aforementioned *dahirs* were so effective in completely restructuring old power structures. A considerable portion of the administration's attention went to registering existing water rights and processing claims by Moroccans.¹⁴¹ A. Bahij, who has researched the impact of the French protectorate on modern Morocco, recalls one of the Moroccans he interviewed for his research stating:

‘It was a sneaky system, and the French knew this. Either you could prove that the land was yours, spending a fortune along the way, so that you could sell it to some European for less than its worth or you could have no proof and wait for the French to seize it themselves.’¹⁴²

An original piece of evidence from the municipal reports of Fez argues a similar point from the candid perspective of the administration, as this is not a document meant for public distribution:

‘*Makhzen property* - El Hadj Omar Tazi was put in possession by the *contrôleur des domaines* [the officer in charge of public domain delineation] of the *Mellah* land he claimed as having been granted to him per *dahir* by [Former sultan] Moulay Abdelaziz. The Municipal Services took the opportunity to impose on Hadj Omar Tazi, as conditions of this recovery, a number of clauses relating to the future subdivision of this land.’¹⁴³

This captured the spirit of these *dahirs*: there was no altruism involved. The great pains gone through by the administration to document all these resources were not to safeguard existing rights for the good of the *fellah*, but to make sure which rights could be confiscated without

¹⁴⁰ R. Bidwell, *Morocco under colonial rule*, 200-201.

¹⁴¹ W. Swearingen, *Moroccan mirages*, 40.

¹⁴² A. Bahij, *The socio-economic legacy of French colonialism in Morocco. The lasting impact of the French Protectorate on Moroccan trade, agriculture and education* (Bradford, 2012), 43.

¹⁴³ ADM, FDP, Région de Fès : rapports politiques mensuels (A1465), *Rapports mensuels, décembre 1913*, 2. Translated by the author.

significant risks to the maintenance of public order (see chapter 1).¹⁴⁴ Another example of malicious intent of the colonisers is the almost doleful statement that the Moroccan people pose more complications to land confiscation than the ‘indigenous people of Canada or Australia:

North Africa is not like the English dominions of Canada or Australia, which are gifted with immense land resources and an extinct or almost extinct indigenous population (*éteinte ou en voie de s'éteindre*)¹⁴⁵

All water, so stated the 1914 *dahir*, belongs to God. According to the reasoning of the administration, this was the correct Quranic interpretation. Previously, all these waters were part of some worldly legal system, so this new interpretation was justified and rationalised as being ‘more Islamic’.¹⁴⁶ This shrewd French view continued that the sultan was the representative of God on earth, and the Sharifian government was part of the protectorate’s structure. Thus, in theory, the public domain was to be managed and controlled by the French administration. This paper reality still had to be enforced, policed and actualised, but the legal foundation had been constructed. Interestingly, religious scholars in Morocco generally adhered to the *maliki* school of *Sharia*.¹⁴⁷ This school was the only one specifically allowing firm rights of ownership of water, thus the reasoning behind the 1914 *dahir* was questionable even for a theological perspective.¹⁴⁸

In the conquest of Morocco’s water resources, the *makhzan* property was the lowest hanging fruit. Of all the ways in which water was owned before the installation of the protectorate, the *makhzan* water was the easiest to expropriate without inciting resistance, as these resources had belonged to the centralised government before the protectorate. The waterways, canals and distribution infrastructure that had been amassed by the sultan and his government were numerous and well-endowed.¹⁴⁹ To illustrate the importance of this first water governance strategy, consider this overview of expropriated land from 1924:¹⁵⁰

¹⁴⁴ C. Pennell, *Morocco since 1830*, 200

¹⁴⁵ ADM, FDP, L’agriculture au Maroc (E1001), *Conférence sur les buts, les méthodes et les résultats de la colonisation officielle au Maroc*, 6. Translated by the author.

¹⁴⁶ See also C. Pennell, *Morocco since 1830*, 200.

¹⁴⁷ T. Naff, ‘Islamic law and the politics of water’ in J. Dellapenna and J. Gupta (eds.), *The evolution of the law and politics of water*, 43.

¹⁴⁸ *Ibid.*

¹⁴⁹ W. Swearingen, *Moroccan mirages*, 46.

¹⁵⁰ The source is undated, but the latest year mentioned is 1924. The contents also correspond more with the tone of Lyautey-era water governance than that of his successor Steeg.

In Morocco, the official colonisation currently entails 1200 *colons* and 205,673 ha. divided as follows:

State lands	122,959 ha.
Collective lands acquired through expropriation	43,355 ha.
Melk lands and private lands acquired through amiable cession or expropriation	28790 ha.
Lands liquidated from Austro-German sequesters	9333 ha.
Lands acquired from the Habous administration	1200 ha.

One remarks immediately that the primary effort is carried by the state lands and the collective lands.¹⁵¹

The same text adds that the acquisition of remaining lands (*les lenteurs*) is ‘practically impossible’ through regular expropriation, because of the strongly entrenched proprietors.¹⁵² The administration had other techniques for these lands which are discussed later in this chapter.

The process of claiming water for the *makhzan* was surprisingly straightforward. After the administration completed its study of water rights and resources in a given area, a decision was taken as to what extent water rights could be claimed by the administration. The main limiting factor was local resistance. Next, the existing *makhzan* infrastructure was officialised and formally reclaimed by the government in name of the sultan. This was done through an *arrête viziriel*, a proclamation composed by the grand *wazir*. These documents existed of an Arabic text with all the precolonial symbols and characteristics of authority to maintain the façade of protectorate. The copies kept in the Moroccan archives usually have a single line of French text underneath which reduced the Arabic text to ‘*Arrête viziriel* approving the operations of the commission of enquiry relating to the reconnaissance of [the area]’.¹⁵³ This constituted the entire legal process for creating *makhzan* property.

¹⁵¹ ADM, FDP, E1001, *Conférence sur les buts, les méthodes et les résultats de la colonisation officielle au Maroc*, 8. Translated by the author.

¹⁵² ADM, FDP, E1001, *Conférence sur les buts, les méthodes et les résultats de la colonisation officielle au Maroc*, 4. Translated by the author.

¹⁵³ For example ADM, FDP, D342, A.V. homologuant les opérations des commissions d’enquête relatifs à la reconnaissance de droit d’eau des oueds Ben Kezza, Amellal et N’Ja, *Arrête Viziriel homologuant les opérations de la commission d’enquête relatives à la reconnaissance des droits d’eau des oueds Ben Kezza, Amellal et N’Ja*, 7. Translated by the author.

Whenever land was held by other parties, the administration could declare a project by the department of public works as crucial to the development of an area. In those cases, they declared the entire territory as being part of the public domain, so it could be developed in name of the good of the public (*utilité publique*). It is important to remember this when secondary sources mention the development of (agricultural) land: it was usually a ploy to expropriate land from their Moroccan owners.

To illustrate the process, consider this report on the development of agricultural terrain near the Sebou river:¹⁵⁴

‘It is in the interest of agricultural development to develop *merdjas* on the right bank of Sebou, known as Merdja Merktane and Merdja Bou Khardja, and making them part of the estate. Considering that the provisions provided for in the project fairly safeguard the rights of neighbouring tribes, by replacing their right of grazing on marshland with a right of freehold over a less extensive but developed area. The following is decreed: The improvement work on the *merdjas* Merktane and Bou Khardja is declared of public utility (...).’¹⁵⁵

Another example from an account of hydraulic progress in a 1916 monthly report on Fez:

‘At the request of the local authorities, it was decided that the reorganization of irrigations in this plain would be the subject of a thorough study. As soon as the Agricultural Hydraulic Service is able to delegate agents to the Fez region, it will make an inventory of the water resources that can be used by these irrigation systems, at the same time as a survey will be conducted by the Information Service on the rights acquired by the various tribes for the irrigation of the lands they hold. A distribution project will then be established, with prediction of the works required for the supply and sharing of water.’¹⁵⁶

In mapping the water resources and their proprietors the French could to some extent print their own money: In many cases, the exact boundaries of *makhzan* holdings were either unclear or not completely registered in written form. In those cases, the French could rule in their own favour in determining these boundaries and subsequently claim them for the administration:

¹⁵⁴ See map 1.

¹⁵⁵ ADM, FDP, D342, *Dahir approuvent contrat de mise en valeur des Merdjas Merktane et Bou Khardja*, 1. Translated by the author.

¹⁵⁶ ADM, FDP, E39, 1916, *mois de novembre : Rapport mensuel d'ensemble du protectorat*, 14. Translated by the author.

‘The general political and economic situation of the Circumscription appears to allow the recognition and the purification of the legal status of certain *makhzan* properties whose recovery by the state had been postponed because of the state of war. These operations are carried out with the greatest kindness towards the claiming natives and with the concern to respect their possible rights.’¹⁵⁷

Notice the use of the word ‘purification’ (*l'épuration*). The author of this excerpt knew that the aim of this action was not merely to explore the existing *makhzan* right and to subsequently ‘clean’ or ‘purify’ these properties. Reading between these lines one sees that the administration has monitored and managed the public order of this area carefully before moving in to claim these rights. The ‘kindness towards the claiming natives’ can be seen in the same light: not as altruistic kindness but as calculated consideration of boundaries set by the level of public order.

The 1914 *dahir* was thus used to expropriate property that was ‘insufficiently’ secured in written form. The reports from Fez mentioned above provide another openly stated example of such policy:

‘*Makhzan property* – (...) The *contrôleur des domaines* is studying the question of the *Makhzan* lands of Fez-Djedid [the new city, *djedid* is Arabic for new], where the owners have only the *zina* [ownership of buildings on another person’s land] of their buildings. It seems essential to affirm the rights of the *Makhzen* on these lands and the practical solution seems to be the following: to allow free enjoyment of land to the natives with *guich* rights who inhabit their own property, but to impose a rent on all other holders whether or not they have *guich* rights.’¹⁵⁸

This case clearly considers people who were exempt from paying rent as they enjoyed *guich* rights (tax benefits in exchange for military service). This example thus shows the restructuring of Moroccan power structures and practices in severing the connection between the sultan and his base. This report shows the calculation that preceded expropriations and illustrates the transfer of power and control to the French administration.

While the sultan and his *makhzan* had held extensive (private) rights to water resources before the administration incorporated their holdings into the ‘public domain’, most resources in the land were held in collective ownership by *Amazigh* groups or the Muslim community (the *umma*).¹⁵⁹ To win these properties for the centralised authority, the French installed a water

¹⁵⁷ ADM, FDP, E43, 1921, *mois de février: Rapport mensuel du protectorat*, 23. Translated by the author.

¹⁵⁸ ADM, FDP, A1465, *Rapports mensuels, décembre 1913*, 2. Translated by the author.

¹⁵⁹ L. Buskens, ‘Sharia and national law in Morocco’ in J. Otto (ed.), *Sharia incorporated*, 89-138, 92.

permit system in Morocco. This was the second water governance strategy employed by the administration. Such a system was not entirely new to the country. Some urban areas maintained a licencing structure to assign water uses.¹⁶⁰ In Meknes, water allocation was done through the religious fraternities (*Zawiya*'s). They regulated access to canals, oversaw the seasonal rotation of water to different communal groups, and mediated property disputes.¹⁶¹ Such centralisation was not often necessary in more rural and lightly populated areas, explaining why the coverage of such systems was modest.¹⁶² In addition, the allocation of water rights was often undocumented, so even when a form of licencing existed, French officials often disregarded them. Another interviewee from Bahij's investigation of colonial dispossession stated:

'Here in Morocco, land is passed down through the generations – everybody had their share, and everyone knew where their land started and finished. We didn't need a piece of paper'.¹⁶³

This changed when the French authority reformed water right allocation in the protectorate. In 1925, most water rights had been effectively removed from private hands and placed within the custody of the state, which then determined who could use that water.¹⁶⁴ By then, three domains of water legislation existed: the modern registered rights, licenced by the state; recognised customary rights, which were rare; and unregistered customary rights.¹⁶⁵ A distinction can be made between having a water use recognised through an official licence on one hand and having it be tolerated on another. It has been shown that not all water resources could be claimed by the state even when they had not been officially recognised: sometimes public order posed an insurmountable object for the time being, or there was insufficient administrative capacity to determine or police state ownership. In such cases, the state knew its legal position was anchored by the various relevant *dahirs*. The administration could later claim that such water uses were unlawful when circumstances permitted and claim them themselves.¹⁶⁶

The most securely entrenched pre-existing rights were those of the *habous* endowments from which religious and charitable causes were financed. Still the administration went to great

¹⁶⁰ The words 'license' and 'permit' and their derivatives are used as synonyms in this paper. Both refer to written proof of an officialised water extraction right.

¹⁶¹ A. Guerin, 'Not a drop for the settlers:' in *Journal of North African Studies*, 231.

¹⁶² For the layout of such decentralised tradition see for example: D. Seddon, *Moroccan Peasants: A Century of Change in the Eastern Riff* (London, 1980).

¹⁶³ A. Bahij, *The socio-economic legacy of French colonialism in Morocco*, 41.

¹⁶⁴ A. Guerin, 'Not a drop for the settlers:' in *Journal of North African Studies*, 232.

¹⁶⁵ M. Doukkali, 'Water institutional reforms in Morocco' in *Water policy*, Vol. 7 (2005), 71-88, 77.

¹⁶⁶ A. Bahij, *The socio-economic legacy of French colonialism in Morocco*, 233.

lengths to bring about their assimilation. In 1914, the *makhzan* was expanded with the new institution for the administration of *habous* property which formally fell under the authority of the Sharifian government, but was run by French officials.¹⁶⁷ All holder of *habous* rights were obliged to formalise their licences through this institution. Clearly, it was the intention of the government to assess the strength of these claims in order to overwrite those that could not be sufficiently established (see for instance the overview of dispossessed land above, which shows the hostile take-over of former *habous* lands.) This process is delineated in the following excerpt:

'The holders of *habous* water rights of the *khettaras* [underground water canals] have been invited to produce their titles to the Municipal Services of Marrakech. Upon their collection the municipality will transmit them to the *habous mouraqib* [French officer of the *habous* administration] who will have to examine them and will inform the municipal services on their validity.'¹⁶⁸

These old customary rights were thus qualified by the colonial administration, which had a vested interest in their invalidity, but also in maintaining the peace. This process, which was deliberately complicated and costly for the applicants, was similar for non-*habous* right holders.¹⁶⁹ The difference was that their chance of success was much lower than that of *habous* applicants.

The permits system could thus be used to disposes people of their water usage rights. The process of applying for a licence was not only complicated and expensive, the changes to the old system that necessitated the application process were also deliberately kept under the radar.¹⁷⁰ Having fewer people officialise their claims helped the administration, because only a certified water claim could protect a water user from being dispossessed.

Dispossession could be very gradual. Only water sources that were directly desired by colonists or the administration was targeted. This could take the following form:¹⁷¹

'Following complaints of the residents of the *oued* Til Mellil [near Casablanca], the administration made known to the claimants (Mr. Ducrocq and Mr. Tardif) that they

¹⁶⁷ This process is described in detail in A. Scham, *Lyautey in Morocco*; and supplemented in A. Laroui, *Les Origines sociales et culturelles du nationalisme. Marocain (1830-1912)* (Paris, 1977), 232.

¹⁶⁸ ADM, FDP, E39, 1923, *Mois de septembre, rapport mensuel d'ensemble du Protectorat*, 3. Translated by the author.

¹⁶⁹ A. Bahij, *The socio-economic legacy of French colonialism in Morocco*, 33.

¹⁷⁰ A. Bahij, *The socio-economic legacy of French colonialism in Morocco*, 233.

¹⁷¹ See map 1.

have every freedom to obtain the satisfaction from their claim that they will find useful, by all legal means.’¹⁷²

In this case, which exemplifies many other similar instances, it was the settlers’ water licence that allowed them to dispossess other users indirectly. The claimants could overpower existing (unrecognised) customary rights with their claim that had been approved by the administration. This case illustrates that it was possible to be passively dispossessed by a stronger claim: this text does not mention any party without adequate legitimisation, it only mentions the strong claim of Mr. Ducrocq and Mr. Tardif. When these men enforced their claim, which probably happened after the *Direction des affaires indigènes* gave its permission, they took water which belonged to Moroccan users under the customary system. These people were thus forced to actively defend their claim, after the dispossession had happened, in front of a French water court. The report above never specified precisely where the additional water for the claimants would have to come from. Thus, the permit system allowed for the direct dispossession of water rights by denying specific customary rights, and also for passive and indirect dispossession.

Pascon defined another way in which the administration could redistribute water through the permit system. In some instances, the amount of water that each permit holder could take per any given period of time was tied to the amount of water in the *sequia*. Due to the inconsistent climate, this amount was unpredictable and erratic. The redistribution tables drawn up by the administration, which governed the individual uptake allowances, favoured European plots and prioritised their plots when water was scarce.¹⁷³ The same was done for distributing water from an *oued* between different *sequia*’s: canals with predominantly European plots had priority over any others.¹⁷⁴

The permit system also allowed the French administration to police certain water uptakes. Again, formal water rights (under the French system) would overrule customary rights over the same water uptake. In agricultural areas, this gave the administration enormous potential in exercising their authority. This potential was used in full when possible. Consider the following example of how the administration managed water uptakes in a *sequia* near Rabat:¹⁷⁵

‘The head of the Department of municipal works of Rabat was authorised to recruit the necessary personnel to police the *sequia* of Ain Attig, day and night; two

¹⁷² ADM, FDP, E39, 1923, *Mois de mars : Rapport mensuel d’ensemble du protectorat*, 3. Translated by the author.

¹⁷³ P. Pascon, *Le Haouz de Marrakech*, tome 2, 499.

¹⁷⁴ *Ibid.*, 497.

¹⁷⁵ See map 1.

mokhazenis [Moroccan colonial police] on horseback, in the employ of the Municipal Services, made rounds along this *segua*. Later, the chief controller of the Rabat Region provided such surveillance for the entire course [of the *segua*]. These measures stopped the diversion of water by the local natives who set up dams to water their cattle and wash their clothing, and thus wasted the waters of the Ain Attig.¹⁷⁶

The *segua* had probably been used for countless years for the uses that the author of the report deemed 'wasteful'. Under the pre-colonial legal systems, such uses had been normal and legal, but with the coming of the French permits such unlicensed water uptakes were outlawed. In many cases, especially in rural Morocco where the administration had little authority, such water uptakes would have remained possible. While not officially legal, the administration had to condone and tolerate such uses because it lacked the administrative power to police all water uptakes in the manner described above. The permit system was thus implemented not to fundamentally change the methods of water allocation, but mainly to place the authority to the French government. It could choose to exercise the legal authority it had thus created when it benefited the administration or leave the allocation of water rights to the traditional institutions. Water was not claimed only to support *colon* agriculture or to develop the traditional farming systems.¹⁷⁷ Rather it was a tool to increase the influence of the colonial state in the territory of Morocco. In this sense, the source material agrees with Pascon, who wrote:

'[The 1914 dahir] was therefore a radical division between two models: to freeze the rights existing prior to the promulgation of the text and to place all the remaining water that existed or would be discovered at the disposal of the state.'¹⁷⁸

The dispossession of water resources for the benefit of the colonial authority was limited by public order. The tactics of dispossession mentioned above only functioned when the public accepted them without violent protest. The government of the early protectorate was astute in reading these situations: water-related protests broke out under subsequent administrations, but rarely under Lyautey.¹⁷⁹

¹⁷⁶ ADM, FDP, E39, 1923, *Mois de juin : Rapport mensuel d'ensemble du protectorat*, 5. Translated by the author.

¹⁷⁷ This contradicts said idea in works such as A. Guerin, 'Not a drop for the settlers:' in *Journal of North African Studies*, 232; and M. Doukkali, 'Water institutional reforms in Morocco' in *Water policy*, 77.

¹⁷⁸ P. Pascon, *Le Haouz de Marrakech*, tome 2, 494.

¹⁷⁹ A. Guerin, 'Not a drop for the settlers:' in *Journal of North African Studies*.

When those tactics failed the administration would apply a more indirect approach: strengthening the claim of the government to water resources and existing water infrastructure by investing in their ‘improvement’. This process, explained in the introduction, is known today as Hydraulic Property Rights Creation (HPRC). Other authors have recognised this phenomenon without referring to the specific theory of HPRC. Bahij referred to Lyautey’s strategy as

‘Focused primarily on “improving” existing irrigation, that is, on “trying to liberate water from traditional systems for the benefit of the settlers”’.¹⁸⁰

Pennell referred to it in passing. In discussing the importance of underground canals (*khettaras*) in combating evaporating irrigation water he wrote that ‘they were also expensive, and therefore the state provided most of the funds, which increased its leverage still further’.¹⁸¹ He acknowledged the link between providing funding for water infrastructure and having leverage over it. Swearingen also endorsed the importance of the ‘improvement’ strategy and provided the example of cement-lining existing *seguias*, to combat waste and free up additional water supplies for *colons*.¹⁸²

Moroccan farmers also recognised this process as evident in of Bahij’s interviews:

‘Your land was a part of you; nobody had the right to take it, not a politician or king, no-one! Drill down as deep as you like and every particle would be yours. But then the French came and brought their European laws, taking our land and giving it to those who could afford to buy it or ‘improve’ it.’¹⁸³

The effect of this improvement strategy was actually much more profound than these examples imply. HPRC was an underhand and long-term tool in the colonial dispossession of water resources. It gave the investor a lasting claim over the infrastructure: as long as it existed, it remained a physical reminder of that investment. Furthermore, it provided significant leverage in officialising extraction rights on the water resources that the investor had improved.¹⁸⁴ Thus, strong legal positions of water ownership could be eroded by sudden or gradual investments in water infrastructure. Generations later, one could find all water resources blocked from public ownership because each was gradually claimed by private investors. In this sense, the colonial

¹⁸⁰ A. Bahij, *The socio-economic legacy of French colonialism in Morocco*, 62.

¹⁸¹ C. Pennell, *Morocco since 1830: A history* (London, 2000), 200.

¹⁸² W. Swearingen, *Moroccan mirages*, 46.

¹⁸³ A. Bahij, *The socio-economic legacy of French colonialism in Morocco*, 39.

¹⁸⁴ Van Koppen a.o., ‘Decolonising peasants’ marginalisation in African water law’ in *Water law*, 53.

administration can be seen as a private actor: like other players in the Moroccan theatre it tried to secure all water resources under its authority.

Examples of HPRC practices are abundant in the source material. New water development projects were begun and completed by government services every month. In March 1921, the administration reported:

*'Hydraulic works, completed or in progress – In Fez: repairs of the *segua* Zouagha derived from Aïn Chkeff (in progress). Close to Meknes, improvement of the Aïn Houranal. In Rabat: draining of the *merdja* Biarami (works are prioritised) (...). In Marrakech: Improvement of the *segua* and the road leading to the colonial lots of M^rTabouait (works completed). Refurbishment of the *segua* Targa and channelling works on the Aïn Dar à Marrakech (in progress).¹⁸⁵*

The line between public works and an active agenda for the strengthening of state claims to water resources is, admittedly, blurry. These short statements on the progress of the public works hydraulics department lack the necessary details to determine the exact purpose of these works. In any case, there are many such reports and it was obviously of major importance to the colonial government, also in terms of allocated funding.

A more telling example, in line with the cynical view portrayed in the interview excerpt above, comes from a contract for an agricultural development scheme near the Sebou river. It outlines a business agreement between the administration and a private agricultural firm to develop the water resources of two *merdjas*:¹⁸⁶

'The objects of this contract are:

First: to improve the *merdjas* Merktane and Bou Khardja and their surroundings by works of desiccation, irrigation, containment [diking], and by creating water points by sinking wells, done by care and at the expense of the agricultural firm;

Second: to allocate full ownership of a fraction of the thus reclaimed parcels.'¹⁸⁷

The administration was prepared to relinquish the usufruct rights to this area in exchange for the development of its water infrastructure. In this example, it is telling that the ownership of the infrastructure would lie with the administration, rather than the society that created it.

¹⁸⁵ ADM, FDP, E43, 1921, *Mois de mars: Rapport mensuel du protectorat*, 20. Translated by the author.

¹⁸⁶ See map 1.

¹⁸⁷ ADM, FDP, D342, Dahir approuvant contrat a/s mise en valeur des *merdjas* Merktane et Bou Khardja, *Projet de dahir*, 2.

HPRC theory recognises this as an alternative investment: the government did not invest money, but indirectly it invested the value of the parcels that it transferred to the society.¹⁸⁸ The land that constituted the development scheme was not empty: Moroccan farmers and pastoralists had been working there for many years. It is suggested here that the main aim of the contract was not to develop the agricultural potential of the land, but to actualise the authority of the colonial government over the area. In so doing, the administration gradually invalidated the claims of the existing right-holders and replaced them with the formal claims resulting from their property rights creation. The fact that the administration meticulously outlines the exact infrastructural improvements to be made supports this idea: the works outlined are distribution systems, supply canals, electric pump mechanisms, and drainage systems. This project, when executed, would ensure the complete sovereignty of the administration over agriculture in this area.¹⁸⁹

Another such example comes from the municipal reports from Fez. Each year, the water supply of that city was redistributed in August.¹⁹⁰ New claims could be made on the supply of the *oued* Fez by people by the citizens. In 1924, the department of municipal works started the construction of a 'distributor' (*répartiteur*) which would replace this custom. In the words of the information officer:

'As is the case every year in this season, claims have been made about the distribution of the water of the *oued* Fez. The work in progress significantly improves this special situation in the city of Fez, and there is every reason to believe that the completion of the dispatcher definitely resolves this annoying issue for both administrators and administrators.'¹⁹¹

One does not have to study the colonial water tactics to understand that this project was not primarily meant to 'resolve this annoying issue'. By installing water infrastructure in the primary water supply to the city the administration took total control over the entire system of distribution. It provided leverage over any diplomatic situation in the city. In this vein, it is interesting to note that the administration spent much attention and resources on the nation-

¹⁸⁸ E. Coward, 'Direct or indirect alternatives for irrigation investment and the creation of property' in K. Easter (ed.), *Irrigation investment, technology, and management strategies for development*, 225-244, 226.

¹⁸⁹ ADM, FDP, D342, Dahir approuvant contrat a/s mise en valeur des merdjas Merktane et Bou Khardja, *Projet de dahir*, 3.

¹⁹⁰ ADM, FDP, Ville de Fes : services municipaux (A832), *Rapport mensuel : Mois d'août 1924*, 1.

¹⁹¹ *Ibid.*

wide construction of sewage facilities.¹⁹² It might be interesting to study the implications of that project beyond its simple public health benefits. Pennell introduced the concept of ‘sanitary despotism’, referring to the public health agenda of the French, which might be an interesting point of departure.

Some authors, like Guerin, maintain that the French construction and repair of canals and water infrastructure was benevolent in nature, meant improve the lives of the Moroccan people.¹⁹³ This chapter has shown that it is at least a significant probability that improvements to water infrastructure hid the more malicious purpose of long-term expropriation through HPRC.

This chapter has shown that several water governance strategies that were designed and implemented in Morocco to increase the authority of the colonial administration. The aim of these strategies was not necessarily to aid the agricultural effectiveness of the *colons*, and surely not to help the *fellah* develop their agricultural productivity. The desired effect of these strategies was to solidify the authority of the colonial administration. This was done by putting the hydraulic resources of the territory under the direct ownership of the French government in Morocco. First, the legal foundation was ensured through the 1914 and 1919 *dahirs*, which put all resources under the authority of the administration. Then, this legal fiction was actualised through the forceful appropriation of all *makhzan* resources, even when those resources had not previously been *makhzan* property. The administration further challenged the old pluralistic legal systems of the pre-colonial state by introducing mandatory water permits. These were used to further expropriate water resources and protect them from the people who had extracted water from them before 1912. If such approaches were impossible because direct expropriation would lead to violent resistance, the government used the ‘improvement strategy’, known as HPRC. This was used to claim water over a longer period by investing resources into water infrastructure. These improvements would allow the administration to assert stronger claims over those water resources later.

¹⁹² Ibid., 25. The reports provide a long list of public works related to water, each of which can be seen in the light of HPRC.

¹⁹³ A. Guerin, ‘Not a drop for the settlers:’ in *Journal of North African Studies*, 226.

Chapter 3. *Colons* and the administration.

The European settlers in Morocco, known in French as *colons*, were no enthusiastic allies of the French administration.¹⁹⁴ It might be intuitive to assume that the *colons* and administration were natural allies because of their shared culture or common goals in colonising Morocco. In addition to sometimes functioning as allies, the *colons* were also rivals, liabilities, and instruments: Firstly, the *colons* were rivals to the colonial administration because they claimed water and land resources that the administration would prefer to see under its own jurisdiction. Secondly, they were portrayed as a liability in the monthly reports of the information officers who reported on them together with Moroccan dissidents when discussing public order.¹⁹⁵ The third relation between the administration and the *colons* is explored most thoroughly in this chapter: how *colons* were used colonial tools for the agenda of the protectorate through water governance. For this purpose, the administration obliged the *colons* to form water users' groups: legal entities through which the government could use the settlers in the colonisation process. The remnants of this policy still exist in Morocco today, and it is essential that the original political implications of these water users' groups are better understood.

Most secondary literature limits the beneficial aspects of the relationship between the *colons* and the administration to a few interactions: The *colons* were protected by French law, could purchase agricultural land, and were allowed certain political rights in government bodies, while the administration enjoyed the financial benefits of taxation and land sales.¹⁹⁶ This view is quintessentially summarised by Pennell:

'Lyautey opposed large-scale colonisation on the Algerian pattern, and despised *colons*. But he did not stop het colon's advance. (...) Lyautey and his colonial advisors were happy to [sell land to colons] provided that individual *colons* had access to capital and could bring the land up to European levels of cultivation.'¹⁹⁷

The source material, however, expands on this limited account of their interaction. The *colons* were a significant strategic instrument for the understaffed and underfinanced administration.¹⁹⁸ Land sales and the 'Europeanisation' of Moroccan agriculture were not the

¹⁹⁴ W. Swearingen, *Moroccan mirages*, 40.

¹⁹⁵ For example: ADM, FDP, E43, 1921, *Mois de février: Rapport mensuel du protectorat*, 23; or ADM, FDP, E39, 1923, *Mois de février: Rapport mensuel du protectorat*, 19. Both translated by the author.

¹⁹⁶ For example: J. Sater, *Morocco*, 23; C. Pennell, *Morocco since 1830*, 182; Miller, *A history of modern Morocco*, 115.

¹⁹⁷ C. Pennell, *Morocco since 1830*, 199.

¹⁹⁸ Complaints about lack of personnel and funding are rare in the monthly reports of the protectorate as a whole, but are more frequent in reports on lower level administration, such as ADM, FDP, *Organisation du*

only aim of the administration: It used the *colons* to decentralise expensive government tasks and increase its command over the contested territory and the resources of Morocco. To this end, the administration created cooperatives for *colons* who worked in agriculture. These groups were called *Associations Syndicales Agricoles Privilégiées*, roughly translated as 'privileged agricultural trade unions' and abbreviated as ASAP's.¹⁹⁹

Today, such organisations of water users exist in many countries in world.²⁰⁰ They are known as 'water users associations': groups for land cultivators in which resources are pooled for the operation and maintenance of irrigation and drainage systems and in which disputes can be settled effectively.²⁰¹ In modern water management theory they are seen as a vehicle to stimulate user participation and ensure bottom-up ownership, thus decreasing the influence of centralised interference.²⁰²

The problem with these modern associations in Morocco is that they have been introduced in the colonial era, when the government was aiming to limit local participation while centralising power, rather than the reverse. In 1990, the old ASAP's were converted into the *associations d'usagers de l'eau agricole*.²⁰³ The structure of these new groups was largely copied from the colonial version, which is one of the reasons why there are still many problems with user participation in these groups today.²⁰⁴ The intent of the original colonial water user groups in Morocco were implicitly defined in the contracts that *colons* had to sign in order to gain access to the Moroccan farmland. One such contract is thoroughly analysed in this chapter. This chapter explains the fundamental purpose of these groups as envisioned by the colonial administration. The decentralisation of water governance that these water users' associations

tertib: rapports mensuels (B45), Région de Meknès, Service des renseignements, *Rapport sur l'ensemble des opérations de tertib 1926*, 1. The financial troubles of the administration are discussed in C. Pennel, *Morocco since 1830*, 186.

¹⁹⁹ M. Attar, 'L'hydraulique agricole contemporaine' in *Hommes terres et eaux*, 66-67.

²⁰⁰ Searching for the term 'water users association' in google scholar gives examples from: South Asia; Pakistan; the Philippines; Northern China; and Kenya on the first page.

²⁰¹ International water management institute in Uzbekistan, *How to establish a water users association?* (Tashkent, 2003), 2-3.

²⁰² M. Xie, *Integrated water resources management (IWRM): Introduction to principles and practices, Africa Regional Workshop on IWRM, Nairobi, Oct. 2006*. (Nairobi, 2006), 5.

²⁰³ M. Alaoui, *Les pratiques participatives des associations d'usagers de l'eau dans la gestion de l'irrigation au Maroc : Étude de cas en petite, moyenne et grande hydraulique. Séminaire sur la modernisation de l'agriculture irriguée* (Rabat, 2004), 2.

²⁰⁴ G. Jolly, 'La gestion des périmètres irrigués : Méthodologie de diagnostic. Cas d'un transfert de gestion : les associations d'usagers du périmètre du N'Fis (office du Haouz, Maroc)' in P. Garin a.o. (Eds.), *La gestion des périmètres irrigués collectifs à l'aube du XXI^e siècle, enjeux, problèmes, démarches. Actes de l'atelier, 22-23 janvier, 2001, Montpellier, France* (Montpellier, 2002), 25-45, 39; and F. Jraïch and B. Akdim, 'Les associations d'usagers des eaux agricole et la gestion participative de l'irrigation : Cas : Province de Taza (Maroc)' in *Le journal de l'eau et de l'environnement*, Vol. 58 (2014), 1-7, 1.

produced provide insights into the methods and limitations of the colonial administration and the role of the *colons* in them.

Using only the primary source material it is difficult to determine to what extent the ASAP's were implemented in the protectorate. However, because the practice of devolving water administration in this form was widespread in French North Africa and France itself, it is plausible that they were also implemented extensively in Morocco.²⁰⁵ In Tunisia, the first *Associations syndicales des propriétaires des oasis* (Oasis owners' union associations) were created in 1912, and the *Associations spéciales d'intérêt hydraulique* (special associations for hydraulic interest) were instituted in 1933.²⁰⁶ The ASAP's also feature in several works on Morocco's colonial history,²⁰⁷ and in the monthly reports of the *Direction des affaires indigènes*.²⁰⁸ ASAP's were still important in the water governance strategy of the independent government when they were replaced in 1990. In conclusion, it is entirely plausible that the ASAP's were heavily implemented, at least in the colonial heartland where *colon* agricultural was widespread.

When the ASAP's were first created, they were presented as an instrument to help the *colons* in their agricultural efforts. That these groups were really a tool to regulate the *colons*, rather than empower them, is suggested in the wording of classified documents in which they were first discussed. These documents differ from public version in the manner in which they describe the purpose of these groups. Compare a 1922 statement on the necessity of suppressing regulation over irrigation practices of the *colons* with the stated goals of the same regulation in a public report on water usage rights in a colonisation allotment scheme:

'The Direction of agriculture, commerce and colonisation has approached the General Directorate of Public Works for the preparation of legislation relating to "Trade Union Associations for Irrigation and Drainage" [*Associations syndicales d'irrigation et de drainage*]. This text is necessary in particular for the **regulation of**

²⁰⁵ T. Ruf, 'Droits d'eau et institutions communautaires dans les Pyrénées-Orientales: Les tenanciers des canaux de Prades (xive-xxe siècle)' in *Histoire & Sociétés Rurales*, Vol. 16 (2002), 11-44.

²⁰⁶ R. Al Atiri, 'Evolution institutionnelle et réglementaire de la gestion de l'eau en Tunisie : Vers une participation accrue des usagers de l'eau' in S. Bouarfa a.o. (eds.), *L'avenir de l'agriculture irriguée en Méditerranée : Nouveaux arrangements institutionnels pour une gestion de la demande en eau. Actes du séminaire Wademed, Cahors, France, 6-7 novembre 2006* (Montpellier, 2007), 3. Available at <http://hal.cirad.fr/>, consulted on 21-06-2019.

²⁰⁷ For example: T. Ruf and M. Kleiche-Dray, 'Les eaux d'irrigation du Haouz de Marrakech: un siècle de confrontations des modèles de gestion publics, privés et communautaires' in *Echogéo*, Vol. 43 (2018), 1-42, 18.

²⁰⁸ For example : ADM, FDP, Activités des services de la Direction des travaux publiques : rapports mensuels (E11), *Rapports mensuels Mois de juin 1928, Service général rapport mensuel mois de juin 1928 rapport de l'ingénieur de Marrakech, Casablanca, Rabat, Knitra, Oudjda, Fes, travaux hydrauliques*, 4.

the irrigation [*nécessaire notamment pour la réglementation de l'irrigation*] of the "Targa" housing estate planned in Marrakech.²⁰⁹

Versus :

'The purpose of the trade union associations will be:

(a) To **improve and maintain** [*D'améliorer et d'entretenir*] existing water works;

(b) Execute and maintain new water use works.²¹⁰

Examples such as these imply that, while the *associations* were presented to the *colons* as helpful (improving and maintaining, excerpt 2), the underlying goals of this policy would benefit the administration at the expense of the *colons* (regulation and control, excerpt 1). Several authors have taken the second statement above at face value:

'The *associations syndicales d'agriculteurs privilégiées* (ASAP) were governed by the dahir of June 15, 1924. (...) This form of management, much supported during the protectorate, was only aimed at improving the irrigation conditions of settler farms.²¹¹

To appreciate that this was not the primary function of the ASAP's, one can review how they were founded. In first instance, membership of such a group was not mandatory. In 1923, a *dahir* was proclaimed in which so-called *cooperations* were established. These were similar in nature to the ASAP's, which were established per *dahir* two years later, but very different in their recruitment approach. *Colons* were firmly advised to form these groups after settling land, and even enticed to do so, if they refused the administration would ban them from maintaining their own water resources.²¹² Instead, one of the departments would maintain their water infrastructure at elevated costs 'at the expense, risk and peril of the colonists'.²¹³ Membership of the *cooperations* must have remained unsatisfactory because the administration quickly made membership mandatory when the ASAP's replaced the *cooperations* in 1925.²¹⁴ The reluctance

²⁰⁹ ADM, FDP, E43, 1922, Mois de juin, Rapport mensuel d'ensemble du protectorat, 43. Emphasis by author. Translated by the author.

²¹⁰ ADM, FDP, D342, A.V. homologuant les opérations des commissions d'enquête, *Arrête viziriel homologuant les opérations de la commission d'enquête relatifs à la reconnaissance des droits d'eau des oueds Ben Kazza, Amellal et N'Ja*, 4. Translated by the author.

²¹¹ L. Bekkari, *Dynamiques institutionnelles des systèmes d'irrigation communautaires au Moyen Atlas* (Leuven, 2009), 105. Translated by the author. See also Miller, *A history of modern Morocco*, 113.

²¹² ADM, FDP, D684, Cahier des charges hydraulique relatifs aux lotissements de colonisation de Tassoultant, Aghouatin, El Kalaa des Shrarna, 1. Translated by the author.

²¹³ Ibid. Translated by the author.

²¹⁴ Ibid. Translated by the author.

of the *colons* to form the groups that had been imposed upon them from the top-down indicates that the benefits of the *cooperatives* and ASAP's provided too little to entice them.

The contract studied for this chapter was drawn up in 1924. It describes in detail what the administration's vision for the ASAP's was. In 6 pages, the rights and duties of the *colons* are presented for three agricultural areas near Marrakech: Tassoultant, Aghouatin, and El Kalaa des Shrarra.²¹⁵ An ASAP was installed for each of these areas. Two aspects stand out: on the one hand the association was given extensive rights and duties in the management of affairs that would previously have been the tasks of the government. On the other hand, true ownership remained with the administration, and several barriers to *colon* participation and sovereignty were put in place. Rather than ownership, they were given usufructuary rights, meaning that they were entitled to usage (*usus*) rights, and profits (*fructus*) rights.²¹⁶ While this was a normal procedure, for the ASAP's this went hand in hand with extensive responsibilities and very few rights.

These responsibilities were documented diligently and completely:

'The association will carry out the annual cleaning and cutting of the bed of the canals, (...) the removal of the sands and gravels which would be driven by the waters and would come to reduce the section and the useful flow. It will ensure the maintenance of all work taken in the river, will make all repairs and restorations in case of degradation or removal by floods; it will fix and regulate the salaries, wages and allowances of the executing and supervisory personnel; in general, it will take all necessary measures to ensure the supply of irrigation water channels and the normal flow of water to prevent leakage. It is incumbent on the association to draw water that it has been entitled to withdraw by the administration from the *seguias* for the benefit of its members, taking into account the various easements, the rights of others, local customs and the limitation of the maximum flow rate granted above.'²¹⁷

In addition to these maintenance tasks, the association was tasked with specific management responsibilities such as 'fixing the distribution and maintenance schedules and administering

²¹⁵ See map 1.

²¹⁶ S. Pejovich, 'Towards a general theory of property rights', in *Zeitschrift für Nationalökonomie*, Vol. 31 (1971), 141-155, 148.

²¹⁷ ADM, FDP, D684, Cahier des charges hydraulique relatifs aux lotissements de colonisation de Tassoultant, Aghouatin, El Kalaa des Shrarra, 2. Translated by the author.

the usage rights in the interest of its members, that it represents vis-à-vis the Administration and third parties.²¹⁸

Repairing, maintaining and constructing water infrastructure had been the responsibility of the Department of public works. This contract, however, relocated those responsibilities to the individual *colons* making up the association. Any legal disputes between users, be they *colons* or Moroccans, were to be settled by the association council which was installed in parallel with pre-existing judicial:

‘Disputes between associates or groups of associates concerning the usage or flow of water must be decided by the *conseil syndical*.²¹⁹

In addition, the association was tasked with ‘the administration of the land and water in the public domain.’²²⁰

One might think, and it has in fact been argued in other studies, that having these extensive responsibilities would also endow the ASAP’s with power, authority and sovereignty.²²¹ Upon careful reading of the contract, however, it becomes clear that the administration foresaw and restricted this decentralising transfer of power. This took several forms: infiltration of the association boards and its decision-making capabilities; continued government ownership of water and land; preservation of judicial supremacy; reservation of penal possibilities against unwanted *colon* action; and complicating the expression of *colon* grievances against the administration. The position of the ASAP was thus weak compared to that of the administration, but it was tasked with many (expensive) responsibilities which were previously held by the government.

Not only *colons* were members of the association. Other (government) parties were part of its decision-making structure and thus in a position to steer its course and deflect oppositions from the inside out:

‘The association is composed of the beneficiaries of the colonisation parcels and any Service or person enjoying usufruct rights. (...)’²²²

²¹⁸ ADM, FDP, D684, *Cahier des charges hydraulique relatifs aux lotissements de colonisation de Tassoultant, Aghouatin, El Kalaa des Sharna*, 2. Translated by the author.

²¹⁹ *Ibid.*, 5. Translated by the author.

²²⁰ *Ibid.*, 2. Translated by the author.

²²¹ M. Doukkali, ‘Water institutional reforms in Morocco’ in *Water policy*, 77.

²²² ADM, FDP, D684, *Cahier des charges hydraulique relatifs aux lotissements de colonisation de Tassoultant, Aghouatin, El Kalaa des Sharna*, 1. Translated by the author.

Meaning that government institutions such as the Service of agriculture and agricultural improvements, which could hold agricultural endowments, was part of that association as long as they held usufruct rights in that agricultural area.

‘(...) This will include anyone to whom subsequently the State could grant water rights along the course of the *sequia*, be it for irrigation, industrial uses or motive power. (...) [In addition,] the concerned Services are represented in the association by their head of department or their delegate.’²²³

The ‘Services concerned’ were not necessarily holders of usufruct rights. This simply referenced any government institution that could be found relevant, which was subsequently represented in the council by a high-ranking administration official or a representative. The addition of government personnel to the boards of the *associations* undercut their effectiveness to represent the interests of the *colons*.

The administration installed other checks on decision-making. Whenever the members of the association performed an ‘act of management’ on public property, they were obliged to submit their plans to the director-general of the department of public works. Only with his permission was work on public infrastructure permitted:

‘The administration of the parts of the public domain listed in article 3 belongs to the association under the control of the Director General of Public Works to whom will be submitted all acts of management of the public domain, which will be finalized only after approval the Director General of Public Works.’²²⁴

This clause might seem sensible and legitimate, but the extent of the public domain was considerable. The contract specifies the extent of the public domain for Tassoultant:

‘The intake mechanisms used to supply the colonisation lots, the structure used to distribute the flow of the Bachia *sequia* between the colonisation lots and the parcels of the old [Moroccan] users of this *sequia*, and all the canals upstream from these uptakes (...) extending over a width of 2 meters on both sides.’²²⁵

And for El Kelaa des Shrna:

²²³ Ibid. Translated by the author.

²²⁴ Ibid., 2. Translated by the author.

²²⁵ Ibid. Translated by the author.

'The set of canals located upstream of the particular outlets used to feed the colonization lots, until their catch in the Wadi Gaino, the course of the Wadi Gaino from the intake serving to feed the subdivision located the most downstream on this wadi, up to its source included, the right-of-way of the channels of Wadi Gaino and its source, with a width of 2 meters on both sides of their banks.'²²⁶

The public domain thus included upstream canals, distribution infrastructure, the water source in El Kelaa, and a wide area of riparian land. The reasonable obligation to inform the director-general of work on state infrastructure thus turns out to be another check on the authority of the association.

It has been stated above that the associations were mandated to settle their legal disputes internally, but another clause in the contract states that:

'Any other dispute concerning the association or the functioning of the association as well as any recourse against the decisions of the *conseil syndical* will be brought before the French courts of the *Empire Chérifien* which rule in first and last instance.'²²⁷

Thus, local issues were left to the *conseil*, but when anything of interest to the administration occurred, litigation was referred to the *Empire Chérifien* (a euphemism for the French administration). This legal situation allowed the administration to decentralise the supervision of small and time-consuming infractions to the *colons* while maintaining their position as 'first and last' judiciary authority.

The administration also reserved the right to exact penal measures on *colons* for transgressions:

'It is forbidden to open new water intakes on the main irrigation *sequias*. Any user who benefits from clandestine water acquisition will be prosecuted for the deterioration of works and canals to the full possible extent.'²²⁸

Legal action was also possible if the administration found the efforts of the association in repairing and maintaining water infrastructure lacking:

'If the trade union association has not carried out the works for which it has been established, the Director General of Public Works may have the work carried out

²²⁶ Ibid. Translated by the author.

²²⁷ Ibid., 5. Translated by the author.

²²⁸ Ibid., 3. Translated by the author.

directly at the expense of the association. In the case where the association would refuse to administer itself, the State will appoint a director who will have the powers necessary for its management'.²²⁹

The administration monitored itself as there was no formal institution to supervise it, with the possible exception of the distant ministry of foreign affairs on the *Quay d'Orsay* in Paris. Options to officially protest the government were thus very limited for the *colons*. It was possible to contact the administration to discuss any grievances, but there was no viable option for direct contact. Any such official communication was done through a representative of the local government:

'The association's relations with the Administration take place through an intermediary of the regional authority.'²³⁰

It was thus possible for the intermediary to colour, change or deflect the grievances of the association. This might have contributed to the extensive number of letters of complaint published in *colon* newspapers such as *La vigie Marocaine* and *Le petit Marocain*.²³¹

These considerations fit into the historiographic idea that the administration and the *colons* were in conflict, and the administration sought to reign in the freedom with which the *colons* had appropriated Moroccan resources before the protectorate was established.²³² When the power of the last pre-colonial sultans began to wane, European settlers flocked to the Moroccan territory to claim land and water resources, a practice which had been forbidden in Moroccan law until the Algeciras conference of 1906.²³³ The administration sought to counter this practice by claiming per *dahir* all land (in 1913) and water (in 1914) for the state, ostensibly to protect Moroccan rights. Based on the evidence in this chapter it seems more likely that these *dahirs* were not meant to protect the *fellah* but rather to reserve those resources for the administration itself. The *colons* were thus not primarily an ally of the state but rather a contending actor in the colonial conquest of Morocco's resources.

In this light, one can imagine several ways in which the administration benefited from the ASAP's, such as outsourcing agricultural costs and risks; effectuating and extending the

²²⁹ Ibid., 3. Translated by the author.

²³⁰ Ibid. Translated by the author.

²³¹ W. Swearingen, *Moroccan mirages*, 42.

²³² C. Pennell, *Morocco since 1830*, 171.

²³³ H. Obdeijn and P. de Mas, *Geschiedenis van Marokko*, 144.

administration's claim of ownership over land and water resources; and generally increasing social order and the supervisory influence of the state.

Firstly, the *associations* were not entitled to any financial assistance in their operations of working the field, repairs or construction. It is stated clearly in the contract that any such works must be declared to and approved by the state, and that they must be financed by the associations 'at their costs and diligence'.²³⁴ Chapter 1 described that the *colons* expected help from the administration in these works, and that they were disappointed by the lack of attention that they were given by the French treasury. This image is reinforced by the aforementioned decentralisation of agricultural costs: as soon as the ASAP's were created, the government signed away a large part of its responsibilities and expenses, while retaining the right to change or veto works by the *colons* when they interfered with the goals of the administration.

Secondly, the ASAP's allowed the government to outsource agricultural risks. The history of agriculture in Morocco, of which the French were very aware, had shown that the production of crops was extremely unpredictable due to floods, droughts and locusts.²³⁵ Again, chapter 1 introduced the link between successful agriculture and high public order. In this context, abundant food at a reasonable price was important as well as the revenue of successful harvests. The contract states that:

'The state does not guarantee or ensure, at any time of the year, a minimum flow against the *seguia*. The beneficiaries [of this contract] will not have any recourse against the state in the event of lack or shortage of water as a result of drought or damages caused by accidents or third parties.'²³⁶

The administration thus benefited from the colonisation because their capital-heavy irrigation farming provided a reliable supply of food for local consumption at little risk or investment to the administration. While the interest of secondary literature is mostly directed at the export market for *colon* production, colonial interest in the local market expressed in the monthly reports of the *Direction des affaires indigènes* suggests that a large amount of *colon* agricultural production was meant for local consumption. These monthly reports invariably have a section

²³⁴ ADM, FDP, D684, *Cahier des charges hydraulique relatifs aux lotissements de colonisation de Tassoultant, Aghouatin, El Kalaa des Shrarra*, 4. Translated by the author.

²³⁵ C. Bois, 'Années de disette, années d'abondance: sécheresse et pluies au Maroc' in *Revue pour l'étude de calamités* (1947), 26-27. Quoted in C. Pennell, *Morocco since 1830*, 7.

²³⁶ ADM, FDP, D684, *Cahier des charges hydraulique relatifs aux lotissements de colonisation de Tassoultant, Aghouatin, El Kalaa des Shrarra*, 4. Translated by the author.

on local economics and cost of living for Moroccans, often expressed in long lists of the prices for specific products in the local markets (*souks*). For example:

‘Quarterly economic reports announce a downward trend due to sales difficulties and favourable condition of current crops. For barley a drop of 30% is reported in Mazagan and one of 22 francs per quintal for wheat.’²³⁷

And

‘The price of cereals is always high and, consequently, the cost of living remains high. However, many natives have found work in the harvest, and as a result, misery has disappeared.’²³⁸

Thirdly, and most importantly, the administration used the *colons* to actualise their claims on water resources. In many cases the administration held theoretical titles to water resources, while not being able to enforce their ownership. Water was often used by the same people who had done so before their resources were claimed by the French while, in theory, all water was owned by the government since 1914. All uptakes of water that had not been explicitly licenced by the state were thus, officially, illegal. Because of the vastness of the territory and the limited personnel available, this situation was impossible to implement or police in a centralised way, but by decentralising this enforcement to the ASAP’s, the administration was able to outsource these tasks at minimal capital investment. Because of the extensive clauses in the ASAP contracts, all water remained the property of the administration, even if it was being used by the *colons*. The administration could thus install a legal fiction, and have it realised by the ASAP’s. In addition to realising these legal fictions, the *colons* were also used to create physical realities. When *colons* occupied lands that the administration had made available to them, they often discovered a different state of affairs than they had been promised.²³⁹ By the terms of their contract they were subsequently obliged to implement the government’s policy.

Interestingly, the *colons* accepted these terms *en masse* as many flocked to the protectorate. 50% of the number of settlers that lived in Morocco in 1956 was reached in 1925 already.²⁴⁰ Colonisation in Morocco rose quickly after the end of the first world war.²⁴¹ The ASAP programme was extensive and influential throughout the protectorate era and was only officially

²³⁷ ADM, FDP, E43, 1921, *Mois de mars: Rapport mensuel du protectorat*, 22. Translated by the author.

²³⁸ ADM, FDP, E39, 1923, *Mois de mai: Rapport mensuel du protectorat*, 4. Translated by the author.

²³⁹ P. Pascon, *Le Haouz de Marrakech, tome 2*, 493.

²⁴⁰ C. Pennell, *Morocco since 1830*, 199.

²⁴¹ S. Miller, *A history of modern Morocco*, 112.

altered in 1990. The *colons* and their agricultural affairs were indirectly supervised and regulated through the ASAP's for decades, but any protest remained unobtrusive. While the administration was seen as an inefficient and enthusiastic partner, *colons* appreciated their protection from conflicts with Moroccan locals.²⁴²

A final illustration of the *colons'* position in the protectorate can be made by comparing them to the medium- and large-scale colonisation in Morocco. The ASAP's were used mostly for small-scale colonisation, and other systems were in place for the larger, company-based colonial agriculture. Three ASAP's were formed in the Ben Kezza, Amellal, and N'Ja *oueds* near Marrakech as a by-product of a study into the existing water rights there. Apparently, this was a routine approach as their creation is casually mentioned in the source: the accompanying documents state that 'the users that will be authorised to use the waters available in these *oueds* will be obliged to be a part [*feront obligatoirement partie*] of these *associations syndicale*.'²⁴³ It also provides an overview of all water right holders in the area:

²⁴² M. Nahon, *Notes d'un colon du Gharb* (Casablanca, 1925) (non vidi), translated by S. Miller in S. Miller, *A history of modern Morocco*, 114.

²⁴³ ADM, FDP, D342, *Arrête viziriel homologuant les opérations de la commission d'enquête relatifs à la reconnaissance des droits d'eau des oueds Ben Kazza, Amellal et N'Ja*, 4. Translated by the author.

Name of lot	Name of user	Debit
Lot No. 3 Aïn Taoudjat	Joseph Cohen	21,6
Lot No. 12 Aïn Taoudjat	Edmond Laune	2,6
Lot No. 9 Aïn Taoudjat	Raoul Serie	28
Lot No. 10 Aïn Taoudjat	Jean Serie	57,4
Lot No. 11 Aïn Taoudjat	Daniel Ledoux	40,3
Lot No. 7 Aïn Taoudjat	Cormier	28
Lot No. 8 Aïn Taoudjat	H. Bouchend	28
Terrain de l'Aïn Amellal		13
Natives on the right bank of the <i>oued</i> Ben Kezza		20
Natives of the left bank of the <i>oued</i> Ben Kezza		90
Native buyers of a parcel of Mr. Pagnon		20
<i>Bled</i> Chania & El M'Rant	Pagnon	120
Parcel acquired by natives	<i>Idem</i>	40
<i>Idem</i>	<i>Idem</i>	4
Road No. 5 left bank of the <i>oued</i> Ben Kezza	Public domain	1
Road No. 5 right bank of the <i>oued</i> Ben Kezza	<i>Idem</i>	2,5
Road No. 5 of <i>oued</i> Ben Kezza	<i>Idem</i>	2,5
Native users of the <i>segua</i> Moulay Youssef		50
Lot No. 1 Bethma Guellafa	James Betrequin	54
Lot No. 2 Bethma Guellafa	Abelard Pansard	54
Lot No. 3 Bethma Guellafa	Georges Pansard	54
Lot No. 4 Bethma Guellafa	C. Tourdonnet	21
Lot No. 5 Bethma Guellafa	Joseph Luco	95
Lot No. 2 Douiet I	Louis Laugier	9
Lot No. 3 Douiet I	J. Louis Petrequin	13
Lot No. 4 Douiet I	Emile Bertin	13
Lot No. 5 Douiet I	Pierre [...]	11
Lot No. 7 Douiet I	Henri Lafon	11
Lot No. 1 Douiet II	Henri Pardou	10
Lot No. 2 Douiet II	Augustin Lepretre	10
Lot No. 3 Douiet II	Augustin Moredo	10
Lot No. 4 Douiet II	Charles Roux	10

Table 1: Water rights in the *oueds* Ben Kezza, Amellal, and N'ja. Source: ADM, FDP, D342, A.V. homologuant les opérations des commissions, *Arrête Viziriel*, 3-4. Emphasis by the author. Translated by the author.

This table shows that these water users are mostly small-scale *colons*. Pagnon, who is mentioned (in bold print) above as having considerably more land than the other users and who could apparently even sell land to Moroccans, was not a small-scale user. Most of the others, however, have relatively modest amount of water allocated to them. All *colons* are mentioned in name, and some were probably family members living on separate farms with separate water allocations, further indicating a smaller plot size. The *fellah*, called 'natives' in the source, had significant water allocations. The wording suggests that they were granted water rights as a group rather than as individuals, so their debit per person was probably lower. It is plausible that the European farmers cultivated more water-intensive irrigation techniques, explaining why they could use up so much more water per person than the *fellah*. The ASAP's were thus tools mainly used for the small-scale *colons*.

As mentioned above, secondary literature often claims that the administration gave out extensive authority to *colons*: they could expropriate, build and exert judicial power over their territory, while being funded by the government with subsidies and tax rebates.²⁴⁴ In the source material used for this work, no evidence has been found for any of these un-reciprocal benefits for the ASAP's. However, such benefits did exist for large-scale colonisation.

Consider the following example from 1919. In a contract between a representative of the Sharifian government (a Frenchman) and a representative of the *Société pour l'étude des irrigations de la plaine du Sebou* (the society for the study of irrigations in the Sebou plain), the two parties agree to 'improve' two *merdjas* near the Sebou river. The society is granted extensive rights to fulfil their work:

'For the execution of works situated outside the abovementioned perimeter, the Sharifian Government shall transfer to the society all the rights which the laws and regulations forbade or forbid in matters of expropriation, acquisition, servitude and temporary occupation, being already specified that the approving dahir of the present contract will carry a declaration of public utility.'²⁴⁵

²⁴⁴ M. Doukkali, 'Water institutional reforms in Morocco' in *Water policy*, 77.

²⁴⁵ ADM, FDP, D342, A.V. homologuant les opérations des commissions d'enquête, *Arrête viziriel homologuant les opérations de la commission d'enquête relatifs à la reconnaissance des droits d'eau des oueds Ben Kazza, Amellal et N'Ja*, 5. Translated by the author.

It describes in detail which improvements the society was to manufacture. These works were to be financed by the society itself at an estimated cost of 2 million francs.²⁴⁶ In exchange, the society was to receive a large tract of farmland in this area. In addition, the society could gradually extend its occupation, starting two years later in 1921.²⁴⁷

The relationship between the administration and the *colons* was thus very complex. It is widely understood that Lyautey and his officers strongly disliked the small-scale *colons* and would have preferred to work with agricultural firms only, but the governance technique of decentralising water regulation, maintenance and construction allowed the administration to benefit greatly from the *colons*. Through the ASAP's the *colons* could be used to realise the legal fantasies that often only existed in the colonial bureaus, costs could be reduced by decentralising the responsibilities of the department of public works, markets could be stabilised by outsourcing agricultural risks, and legal disputes could be settled without spending the resources of the administration.

The ASAP's also increased the control of the government over the land and resources of the country, and they limited the independence of the troublesome *colons*: the associations were submitted to direct government intrusion in their composition by incorporating officers of the various *Directions*; their infrastructural development was supervised directly by the director of the public works department; they were liable to legal repercussions and financial reparations if the administration disapproved of their hydraulic infrastructure development; and their legal position and possibilities for filing grievances were very limited. Thus, the administration had constructed a tool to actualise their control over the protectorate, decentralise expenses and risks, and regulate and use the small-scale settlers that could also have been their rivals in the conquest of Morocco's resources.

The relationship between the two is often misinterpreted. The government forced unfavourable conditions on small-scale *colons* and worked through them, while the cooperation that many secondary sources identified between the administration and the *colons* was generally reserved for large-scale colonisation rather than with the small-scale European farmers. M. Doukkali wrote:

'Beside the corpus of legislation on public ownership, the protectorate also issued a law regarding water user associations (Associations syndicates agricoles privilégiés (ASAP)) to initiate and formalize the development of private irrigation networks.

²⁴⁶ Ibid., 2.

²⁴⁷ Ibid., 5.

The ASAP were allowed to intervene in the public domain to undertake irrigation infrastructure and were given privileges to implement this work on the infrastructure.²⁴⁸

The formalisation of private irrigation networks was not the primary aim of the ASAP, nor were they given many privileges. It is important to differentiate between the various groups of colonists, and to understand the relationship between them and the administration with all its implications.

²⁴⁸ M. Doukkali, 'Water institutional reforms in Morocco' in *Water policy*, 77.

Conclusion

The history of Morocco is a history of public order and resistance, of the contention between centralised and decentralised power, of tradition and change. The state that the French wrested from the sultan was decentralised, traditional and contested by widespread resistance. For this reason, the colonial armies set out to actualise the power that resident general Lyautey had secured in Rabat in the rest of the territory by force. The hard-fought colonial conquest was won in the military theatre, but had to be maintained in the socio-economic and legal sphere. In addition, the authority of the young colonial state had to be asserted over the commercial and agricultural resources of the protectorate.

The extensive surveys that the colonial administration performed laid the foundation for the strategies discussed in this paper. A small army of administrative officers documented the distribution of Morocco's hydraulic resources; who laid claim to them, and who owned them. The key characteristic of Lyautey's administration was its strategic and deliberate focus on maintaining public order. Other literature has covered tactics used to influence public order, and this thesis has added the field of water governance to the existing corpus of military, social, and legal measures. The water governance strategy for public order maintenance was built around the water surveys: the administration was very aware of the connection between water and public order; it knew which water allocations were strongly entrenched, and it knew what the social limits of dispossession were. In short, they knew when to maintain an existing extraction right or ownership, when to provide extraction rights for a community when dispossessing land, and when it was possible to lay their claims without repercussions. In this, they differed from the European agricultural settlers. Whereas it was of great importance to the protectorate to maintain the hard-fought civil order, these settlers had little regard for the wellbeing of the *fellah*. They counted on the administration to secure them and did not go out of their way to respect existing rights. In such cases the administration chose at times to protect Moroccan water rights against settler encroachment, not to help the *fellah*, but to maintain the public order. This three-way interaction indicates a more complex relationship between *fellah*, the administration, and the settlers.

With a clear image of the limits of dispossession, in terms of public order, the administration set about asserting their sovereignty as the final authority over Morocco's hydraulic resources. Firstly, they claimed all water that had been the property of either the Sultan or his government, the *makhzan* land and water. This was some of the best property in the country, and the French could claim it without significant resistance because of the legislative precedent of *makhzan*

property. While transforming the old *makhzan* property into 'public domain', they extended the traditional boundaries whenever they safely could. Through very questionable theological arguments, they declared all water official property of the state through the 1914 and 1919 *dahirs*. This created an unprecedented legal situation wherein the government was the only party which capable of issuing official water usufruct rights. All pre-existing rights had to come before a French judge to be re-evaluated. Most water rights had not been documented in written form before 1912, so this permit system effectively gave the French a legal foundation to dispossess all water resources that benefited their plans. In addition, water could be claimed by people who had been awarded such a permit at the cost of the now powerless Moroccans. These strategies were very effective at maintaining public order, as very little violent resistance has been recorded in the protectorate before 1925, excluding the war zones.

Because of the constant attention to public order, it was not always possible to claim water directly. In such cases, the administration initiated the long-term strategy of Hydraulic Property Rights Creation. By strategically investing in certain water infrastructural structures, they could increase the strength of their claim over those of the people living there. In some cases, they paid other parties to develop such infrastructure, but they always stipulated that ownership would lie with the state. In other cases, the various Services and Departments constructed water distribution tools, canals and pumps in order to physically be able to control the course of the water supply.

The dual focus on control and public order was echoed by the relationship between the small-scale *colons* and the administration. While it has been generally depicted as being a troubled one, this relationship was very beneficial to the specific strategy of Lyautey's administration. It used the *colons* to actualise its authority over the Moroccan resources and people by obliging them to form ASAP's, participatory water development groups with seemingly significant executive and judicial powers. The contracts between the state and these groups show that the authority over legal processes, infrastructural construction, and final ownership remained with the administration at all times, and only the costs and responsibilities were decentralised. This was a way for the government to assert their authority at very low risk and cost. The ASAP's also allowed the administration to directly control the *colons* and to stop them from destabilising public order through several restrictive clauses.

This thesis has given several examples of how water governance has been used to transform power relations and deconstruct autonomous networks of communities. The strategies introduced in this thesis give insights into modern problems in arid regions, many of which can

be traced back to the colonial era. These strategies were not implemented with the long-term interests of the respective countries or their inhabitants at heart, but with those of their complete socio-economic colonisation.

It would be interesting to devote more attention in future studies to the permit system in Morocco and the idea of HPRC. This thesis has shown that covert dispossession strategies such as these led to strong, institutionalised claims that moved hydraulic sources from their historical users to the colonial powers. These ideas can also suggest new lines of questioning in other former colonies or deepen existing research projects there.

Bibliography

Primary sources:

Archives du Maroc (ADM), Fonds du protectorat (FDP), Ville de Fes : services municipaux (A832).

ADM, FDP, Région de Fès : rapports politiques mensuels (A1465).

ADM, FDP, Organisation du tertib: rapports mensuels (B45).

ADM, FDP, Dahirs et Arrêtés relatifs aux droits de l'eau (D342).

ADM, FDP, Législation : Arrêtés - dahirs. Cahiers de charges [eaux, hydraulique, ventes, transaction, construction en appropriation]. Doukkala Beni m'thir - Merzaga - petitjean - Marrakech - Casa - Mehnès - Sidi Slimane - M'jat - Fès - Sidi Yahia - Rabat - Oulad Yahia (D684).

ADM, FDP, Activités des services de la Direction des travaux publiques : rapports mensuels (E11).

ADM, FDP, Activités des services de la Direction des affaires indigènes: rapports mensuels (E39).

ADM, FDP, Activités des services de la Direction des affaires indigènes : rapports mensuels (E43).

ADM, FDP, L'agriculture au Maroc (E1001).

Secondary sources:

Alaoui, M., *Les pratiques participatives des associations d'usagers de l'eau dans la gestion de l'irrigation au Maroc : Étude de cas en petite, moyenne et grande hydraulique. Séminaire sur la modernisation de l'agriculture irriguée* (Rabat, 2004).

Atiri, R. Al, 'Evolution institutionnelle et réglementaire de la gestion de l'eau en Tunisie : Vers une participation accrue des usagers de l'eau' in S. Bouarfa a.o. (eds.), *L'avenir de l'agriculture irriguée en Méditerranée : Nouveaux arrangements institutionnels pour une gestion de la demande en eau. Actes du séminaire Wademed, Cahors, France, 6-7 novembre 2006* (Montpellier, 2007. Available at <http://hal.cirad.fr/>, consulted on 21-06-2019).

Attar, M., 'L'hydraulique agricole contemporaine et l'hydraulique durant le protectorat 1912-1951' in *Hommes, terres et eaux*, Vol. 16 (1987), 66-67.

- Bahij, A., *The socio-economic legacy of French colonialism in Morocco. The lasting impact of the French Protectorate on Moroccan trade, agriculture and education* (Bradford, 2012).
- Batchelor, C., *Water governance literature assessment* (London, 2007), article 19.
- Bekkari, L., *Dynamiques institutionnelles des systèmes d'irrigation communautaires au Moyen Atlas* (Leuven, 2009).
- Bidwell, R., *Morocco under colonial rule: French administration of tribal areas 1912-1965* (London, 1973).
- Boelens, R., a.o., 'Introduction: The multiple challenges and layers of water justice struggles' in R. Boelens a.o., (eds.), *Water justice* (Cambridge, 2018), 1-31.
- Bois, C., 'Années de disette, années d'abondance: sécheresse et pluies au Maroc' in *Revue pour l'étude de calamités* (1947), 26-27.
- Buskens, L., 'Sharia and national law in Morocco' in J. Otto (ed.), *Sharia incorporated: A comparative overview of the legal systems of twelve Muslim countries in past and present* (Leiden, 2010), 89-138.
- Byrne, J., 'Our own special brand of socialism: Algeria and the contest of modernities in the 1960s' in *Diplomatic History*, Vol. 33, No. 3 (2009), 427-447.
- Cornell, G., 'Archive du Maroc' in *Hazine* (8 July 2015).
- Coward, E., 'Direct or indirect alternatives for irrigation investment and the creation of property' in K. Easter (ed.), *Irrigation investment, technology, and management strategies for development* (Boulder, 1986), 225-244.
- Coward, E., 'State and locality in Asian irrigation development: The property factor' in K. Nobe and R. Shanpath (eds.), *Irrigation management in developing countries: Current issues and approaches* (Boulder, 1986) 491-508.
- Dellapenna, J., and Gupta, J. (eds.), *The evolution of the law and politics of water* (Berlin, 2009).
- Doukkali, M., 'Water institutional reforms in Morocco' in *Water policy*, Vol. 7 (2005), 71-88.
- Duval, G., *L'hydraulique au Maroc* (Paris, 1933).
- Fage, J., 'The development of African historiography' in J. Ki-Zerbo (ed.) *General history of Africa: Methodology and African prehistory* (Paris, 1985), 25-42.
- Gershovich, M., *French military rule in Morocco* (London, 2000).

- Guerin, A., 'Not a drop for the settlers: reimagining popular protest and anti-colonial nationalism in the Moroccan Protectorate' in *Journal of North African Studies*, Vol. 20, No. 2 (2015), 225-246.
- Hegel, F., *Vorlesungen über die Philosophie der Weltgeschichte* (1837).
- Hellum, A., a.o., 'The human right to water and sanitation in a legal pluralist landscape: perspectives of Southern and Eastern African Women' in A. Hellum a.o. (eds.), *Water is life: women's human rights in national and local water governance in Southern and Eastern Africa* (Harare, 2015), 1-31.
- Houdret, A., 'The Water Connection: Irrigation, Water Grabbing and Politics in Southern Morocco' in *Water alternatives*, Vol. 5, No. 2 (2012), 284-303.
- International water management institute in Uzbekistan, *How to establish a water users association?* (Tashkent, 2003).
- Jolly, G., 'La gestion des périmètres irrigués : Méthodologie de diagnostic. Cas d'un transfert de gestion : les associations d'usagers du périmètre du N'Fis (office du Haouz, Maroc)' in P. Garin a.o. (Eds.), *La gestion des périmètres irrigués collectifs à l'aube du XXIe siècle, enjeux, problèmes, démarches. Actes de l'atelier, 22-23 janvier, 2001, Montpellier, France* (Montpellier, 2002), 25-45.
- Jraïch F., and Akdim, B., 'Les associations d'usagers des eaux agricole et la gestion participative de l'irrigation : Cas : Province de Taza (Maroc)' in *Le journal de l'eau et de l'environnement*, Vol. 58 (2014), 1-7.
- Kameri-Mbote, P., and Kariuki, F., 'Human rights, gender and water in Kenya: Law, prospects and challenges' in A. Hellum a.o. (eds.), *Water is life: Women's human rights in national and local water governance in Southern and Eastern Africa* (Harare, 2015), 81-117.
- Kingdom of Morocco, *Sustainable development in Morocco: Achievements and perspectives from Rio to Rio +20* (Rabat, 2012).
- Koppen, B. van, a.o., 'Decolonising peasants' marginalisation in African water law' in *Water law*, Vol. 26 (2019), 51-61.
- Koppen, B. van, and Schreiner, B., *A hybrid approach to decolonize formal water law in Africa: International Water Management Institute research report volume 173* (Pretoria, 2018).

- Kogelmann, F., 'Sidi Fredj: A case study of religious endowment in Morocco under the French protectorate' in H. Weiss (ed.), *Social welfare in Muslim societies in Africa* (Stockholm, 2002), 66-78.
- Kuper, M., a.o., 'Supporting the shift from state water to community water: Lessons from a social learning approach to designing joint irrigation projects in Morocco' in *Ecology and society*, Vol. 14, No. 1 (2009), 1-19.
- Laroui, A., *Les Origines sociales et culturelles du nationalisme Marocain (1830-1912)* (Paris, 1977).
- Lyautey, P., *Lyautey l'Africain: Textes et lettres du maréchal Lyautey, tome IV et dernier* (Paris, 1957).
- Maarouf, R., *La protection de la ressource en eau au Maroc* (Bordeaux, 1983).
- Meadows, D., a.o., *The limits to growth: A report for the Club of Rome's project on the predicament of mankind* (New York, 1972).
- Miller, S., *A history of modern Morocco* (Cambridge 2013).
- Laumann, D., *Colonial Africa, 1884-1994* (Oxford, 2013).
- Naff, T., 'Islamic law and the politics of water' in J. Dellapenna and J. Gupta (eds.), *The evolution of the law and politics of water* (Berlin, 2009), 37-52.
- Nahon, M., *Notes d'un colon du Gharb* (Casablanca, 1925).
- Ndjovu, C., 'Compulsory land acquisitions in Tanganyika: Revisiting the British colonial expropriation principles and practices' in *International journal of scientific & technological research*, Vol. 4, No. 12 (2015), 10-19.
- Obdeijn, H., and Mas, P. de, *Geschiedenis van Marokko* (Amsterdam, 2012).
- Pascon, P., *Le Haouz de Marrakech, tome 2* (Rabat, 1977).
- Pejovich, S., 'Towards a general theory of property rights', in *Zeitschrift für Nationalökonomie*, Vol. 31 (1971), 141-155.
- Pennell, C., *Morocco since 1830: A history* (London, 2000).
- Porch, D., *The conquest of Morocco* (New York, 1983).
- Rogers, P., and Hall, A., *Effective Water Governance* (Stockholm, 2003).

- Rivet, D., 'Archives coloniales et écriture de l'histoire du Protectorat' in Université Mohammed V (ed.), *Recherches sur l'histoire du Maroc: esquisse de bilan* (Rabat, 1989), 25-33.
- Raymond, A., *Grandes villes arabes à l'époque ottomane* (Paris, 1985).
- Ruf, T., 'Droits d'eau et institutions communautaires dans les Pyrénées-Orientales: Les tenanciers des canaux de Prades (xive-xxe siècle)' in *Histoire & Sociétés Rurales*, Vol. 16 (2002), 11-44.
- Ruf T., and Kleiche-Dray, M., 'Les eaux d'irrigation du Haouz de Marrakech: un siècle de confrontations des modèles de gestion publics, privés et communautaires' in *Echogéo*, Vol. 43 (2018), 1-42.
- Sachikonye, L., 'From 'growth with equity' to 'fast-track' reform: Zimbabwe's land question' in *Review of African political economy*, Vol. 30, No. 96 (2003), 227-240.
- Sater, J., *Morocco: Challenges to tradition and modernity* (New York, 2016).
- Scham, A., *Lyautey in Morocco: Protectorate administration 1912-1925* (London, 1970).
- Stewart, C., *The economy of Morocco: 1912-1962* (Cambridge, MA, 1964).
- Swearingen, W., *Moroccan mirages: Agrarian dreams and deceptions, 1912-1986* (London, 1988).
- Tempelhoff, J., 'The Water Act, No. 54 of 1956 and the first phase of apartheid in South Africa (1948-1960)' in *Water history*, Vol. 9 No. 2 (2017), 189-213.
- Tvedt, T. (ed.), *A history of water (9 volumes)* (London, 2006-2016).
- Tvedt, T., and Jakobsson, E., 'Water history is world history' in T. Tvedt and E. Jakobsson (eds.), *A history of water: Series 1 volume 1: Water control and river biographies* (London, 2006), ix-xxiii.
- Waterbury, J., *The commander of the faithful* (New York, 1970).
- Xie, M., *Integrated water resources management (IWRM): Introduction to principles and practices, Africa Regional Workshop on IWRM, Nairobi, Oct. 2006.* (Nairobi, 2006).
- Zeldin, T., *France, 1848-1945: Volume II: Intellect, Taste, and Anxiety* (Oxford, 1977).