

**IRRIGATION BETWEEN IMPROVISATION AND TECHNOLOGY IN  
LATE OTTOMAN IRAQ: THE HINDIYA BARRAGE 1890-1914**

by

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## ABSTRACT

This thesis examines the role of irrigation practices in the Ottoman centralization attempts in Iraq between the years 1890 and 1914. It questions the ways in which the irrigation infrastructures served and/or opposed the political and economic interests of the Ottoman central power in the Iraqi provinces. In doing so, the research focuses on the Hindiya Barrage which was one of the largest-scale irrigation projects across the Ottoman Middle East in the late nineteenth and early twentieth centuries. The thesis basically examines the building process of the Barrage from the point of view of the Ottoman state, benefiting from official correspondence, local petitions, in addition to some British newspapers, and the memoirs of the Ottoman-Iraqi officials in order to trace the dynamics of the center-periphery and state-society relationships. Moreover, this study aims to bring an environmental perspective to the ways in which water resources were organized and used by the Ottoman administration through the construction of the Barrage.

**Keywords:** Iraq, irrigation, late Ottoman Empire, Arab provinces, environment, infrastructural development, Hindiya Barrage.

## ÖZET

Bu çalışma, Osmanlı yönetiminin, 1890-1914 yılları arası Irak vilayetindeki merkezileştirme politikaları çerçevesinde sulamanın rolünü ele almaktadır. Sulama altyapılarının, merkezi yönetimin Irak'taki siyasi ve ekonomik çıkarlarına ne ölçüde hizmet ettiği veya ters düştüğünü sorgulamaktadır. Bu bağlamda çalışma, Osmanlı Ortadoğusunun geç on dokuzuncu ve erken yirminci yüzyıldaki en geniş kapsamlı sulama projelerinden olan Hindiye Barajı'na odaklanmaktadır. Çalışmada, barajın inşa süreci, temel olarak Osmanlı merkezi yönetiminin bakış açısıyla ele alınıp, kaynak olarak Osmanlı Devlet Arşivleri (BOA) ve bu kapsamda resmî yazışmalar ve arzuhallerden faydalanılmış, bunların yanı sıra, merkez-çevre ve devlet-toplum ilişkilerine ışık tutmak amacıyla da İngiliz gazeteleri ve Irak'ta görev yapmış Osmanlı devlet adamlarının hâtıratlarından istifade edilmiştir. Bu çalışma ayrıca Osmanlı yönetiminin su kaynaklarını nasıl organize ettiği ve kullandığı konusuna bir çevre tarihi perspektifi getirmeyi amaçlamaktadır.

**Anahtar Kelimeler:** Irak, sulama, geç dönem Osmanlı Devleti, Arap vilâyetleri, çevre, altyapısal gelişme, Hindiye Barajı.

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## Introduction

This study investigates the role of irrigation practices in the Ottoman centralization attempts in Iraq between the years 1890 and 1914. It questions the ways in which the irrigation infrastructures served and/or opposed the political and economic interests of the Ottoman central power in the Iraqi provinces. In doing so, the research focuses on the Hindiya Barrage which was one of the largest-scale irrigation projects across the Ottoman Middle East in the late nineteenth and early twentieth centuries. The thesis basically examines the Barrage from the point of view of the Ottoman central state, benefiting from local petitions and official correspondence, in addition to British newspapers, and the memoirs of the Ottoman-Iraqi officials in order to trace the dynamics of the center-periphery and state-society relationships. Moreover, the study aims to bring an environmental perspective to the ways in which water resources were organized and used by the Ottoman administrators through the construction of the Barrage.

In the second half of the nineteenth century, internal and external challenges put the integrity of the Ottoman Empire at risk. Its territorial expanse was challenged by disastrous wars with Russia in 1853 and 1877, and a series of treaties enforced the shrinkage of Ottoman borders in the Balkans. British forces occupied Egypt in 1882, benefiting from the decline of Ottoman influence in the region. In addition to these external threats, there emerged also internal challenges such as a series of secessionist movements in the Balkan provinces and the bankruptcy of the state treasury in 1875. The Ottoman governors were under pressure both politically and economically. Under these circumstances, the imperial center came to place a new emphasis on frontier regions as untapped resources which could provide revenue and manpower under a centralized rule. In accordance with this new emphasis, the Ottoman governors initiated a series of reforms in the

Asiatic provinces including the Arab-populated frontier regions, extending the impact of the *Tanzimat* state into the provincial periphery.<sup>1</sup>

In a frontier province like Iraq, establishing Ottoman central authority was difficult.<sup>2</sup> The recurrent sieges of Iraqi provinces by the rulers of Iran and the periodic Ottoman-Iranian wars during the 1700s and early 1800s led the region to be drawn into political instability. Furthermore, Iraq, as a region remote from the center, was dominated by semi-independent rulers such as the Mamluk Pashas as well as tribal groups which constituted a substantial part of the population. From the nineteenth century onwards, the *Tanzimat* reforms ushered in a process of provincial integration and centralization which reached its peak during the governance of Midhat Pasha in Baghdad.<sup>3</sup>

The process of administrative centralization in Iraq was mainly identified with the rule of Midhat Pasha who concentrated mostly on land registration and tribal control. The Pasha aimed at registering the lands to the actual cultivators rather than the *multazims* (tax-farmers) to guarantee their settlement, cultivation, and taxation. Tribal organization, on the other hand, was perceived as an obstacle to centralization. In accordance with the political goals of the central state, Midhat Pasha applied both governmental subsidies and military force which can be summarized as a

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<sup>1</sup> Gökhan Çetinsaya, *Ottoman Administration of Iraq, 1890-1908* (London: Routledge, 2006), 10, 142; Şükrü Hanioglu, *A Brief History of the Late Ottoman Empire* (Princeton: Princeton University Press, 2008), 121; Eugene L. Rogan, *Frontiers of the State in the Late Ottoman Empire: Transjordan, 1850-1921* (Cambridge: Cambridge University Press, 1999), 2–5.

<sup>2</sup> Rogan, *Frontiers of the State*, 5.

<sup>3</sup> Çetinsaya, *Ottoman Administration of Iraq*, 4; Ebubekir Ceylan, *The Ottoman Origins of Modern Iraq: Political Reform, Modernization and Development in the Nineteenth Century Middle East* (London: I.B. Tauris, 2011), 3, 13; Stanford Shaw, “Iranian Relations with the Ottoman Empire in the Eighteenth and Nineteenth Centuries,” in *The Cambridge History of Iran: From Nadir Shah to the Islamic Republic* (New York: Cambridge University Press, 2007), 303–13.

“carrot-and-stick” policy in order to subdue the tribes who complicated the reform agenda. These policies of Midhat Pasha indeed bore some fruit, which will be explained in the first chapter.

The reform process in Iraq not only involved political/administrative integration, but also economic integration with the center. For Ottoman reformers, employing provincial resources to serve the state’s revenues was equally important to tribal control. In order to provide the maximum level of economic benefit to the imperial center, agricultural and commercial activities had to be enhanced. One indispensable means to achieving this goal was to extend the infrastructural capacity in the region. The existing potential of water and land resources, as well as the human population in Iraq, could serve the state treasury substantially through the establishment of infrastructural works such as communication networks- including roads, railways lines, and telegraph connections, which would help organize these resources and transfer them from the periphery to the center. These infrastructural works provided the imperial center further channels to assert its rule over the remote provinces through a more strictly regulated taxing process and military intervention.<sup>4</sup> This thesis claims that irrigation works were also one of the significant avenues of the infrastructural reform, aimed to economically integrate the Iraqi provinces with the capital through increasing the caliber of the irrigated agriculture and accordingly the state revenues.

An important strategy to enable the economic integration of Iraq in the late nineteenth century was to enhance the irrigation infrastructure and boost agricultural activities. The province of Baghdad stood at the forefront in this process, since most of its lands consisted of state lands (*emlâk-ı hümayun*), and the concentration of the irrigation systems in the region appeared to have

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<sup>4</sup> Rogan, *Frontiers of the State*, 12.

benefited more to the state treasury itself. During the rule of Abdulhamid II, the privy purse (*saniyya*) lands in Baghdad became the primary target of irrigation investments through which agricultural production and trade were expected to be multiplied. In this regard, the construction of a wide-scale irrigation project such as the Hindiya Barrage seems to have been expected to irrigate and make prosper those state lands as well as help transfer income from Iraq to the imperial center.

Environmental transformations throughout the mid-nineteenth century were indeed among the basic elements that shaped how irrigation works were organized. In this period, the environmental balance in Tigris and Euphrates delta was seriously challenged in the late eighteenth century since the main course of the Euphrates shifted from Hilla to the Hindiya channel. In the surroundings of the old riverbed (Hilla), a large-scale water scarcity took place, a process which was well reflected both in the official documents and local petitions. In Hindiya, on the other hand, inundations harmed both the dwellings and agricultural lands. These environmental challenges affected the ways the imperial center dealt with irrigation in Iraq. The flow of the river was tried to be balanced between the two channels by waterways, embankments, and dams which mostly constituted temporary solutions for the irrigation problem until the Hindiya Barrage was constructed.

The Hindiya Barrage was the culmination of the processes of the political and economic integration of Baghdad into the imperial center as well as the environmental transformations in the region. The imperial center attempted to enhance the political and economic links of Baghdad with the center by land regulations, investments in irrigation and agriculture and transferring the revenues to Istanbul. In this regard, the Hindiya Barrage constituted the most obvious and large-scale irrigation investment on the state lands, whose construction process extended from the reign

of Abdulhamid II (1876-1909) to the end of the Committee of the Union and Progress (CUP) rule (1908-1918).

From the mid-nineteenth century onwards, British involvement in the Tigris and Euphrates region had already intensified in terms of infrastructural technology, which was intended to transform the Iraqi lands through irrigation. British technological experts, capitalists, and diplomats came to Iraq to conduct geographical surveys, draw up irrigation projects, and make investments in irrigation works in line with British political and commercial interests in the region. The Hindiya Barrage project became the most obvious example which provided the ground for the British involvement in Iraq through technical and financial support during the construction. However, Ottoman political and economic interests, tribal society, and environmental factors in the region changed the direction of and shaped the British “informal imperialism”<sup>5</sup> as it was carried out in the Iraqi provinces.

The first phase of the Hindiya Barrage under the Hamidian rule was mostly by reform proposals and improvisation. In this period, the projected reforms in irrigation could not be achieved due to financial and technical inadequacies as well as environmental challenges. When the Young Turks came to rule, British financial and technical impact became more dominant in the project because of the government’s efforts to restore relations with Britain. During the second phase of the Barrage between 1908 and 1913, the Ottoman government submitted the project to the British irrigation engineer Sir William Willcocks and then to the British firm Sir John Jackson Co, as an indication of resignation from the Hamidian policy that almost cut off the Ottoman-British relations.

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<sup>5</sup> For the concept, see Camille Lyans Cole, “Hydraulics and the New Imperialism of Technology in Late Ottoman Iraq” (Unpublished Master’s thesis, University of Cambridge, 2013), 2–3.

The Barrage was completed and opened in 1913 with the help of Sir John Jackson Co. and the National Bank of Turkey. The most important difference between the latter barrage from the former one was the use of steel gates and sluices rather than the earth, which made the barrage more of a regulator of the flow rather than a passive obstruction. Thanks to the function of the regulation, it became possible to manage the supply of water into the Hindiya and Hilla channels, without upsetting the natural balance of flow between the two courses. Shortly after the construction, however, the outbreak of the First World War swept away all the potential economic benefits of the Barrage to the Ottoman Empire. The British government's positive attitude towards the Ottoman hegemony in Iraq was replaced by imperial ambitions, as it was well represented in the reports about irrigation in the British newspapers. Eventually, British forces captured Baghdad in 1917 and began to use the Barrage for their warfare purposes, preventing their enemies from water. The Hindiya Barrage, which was built in 1913, did not have much time to benefit the Ottoman Empire in the long term.

In retrospect, it appears that the possibilities of Ottoman power consolidation in Iraq were unremittingly being undermined by political and financial shortcomings in addition to the rising imperial ambitions of the British government in the region. The repair of the Barrage in 1913 with British financial and technical support paved the way for further political interference by the British in the Iraqi provinces, a process which resulted in the withdrawal of the Ottoman Empire from the region, and the official declaration of the mandate government in Iraq. However, given the fact that this course of events was unexpected and historically contingent at the time, examining such a wide-scale irrigation project in the late Ottoman Iraq would allow us to better evaluate how a multiethnic, multi-linguistic, and multi-religious polity sought to achieve a renewed territorial

integration with its provinces and to obtain its subjects' loyalty in order to comply with a nation-state dominated world conjuncture.

### **Literature Review**

Irrigation policies in late Ottoman Iraq have remained an understudied subject in recent historical scholarship. The existing literature has consisted mostly of political and administrative histories concentrated on the implementation of the *Tanzimat* and the Hamidian era from the Ottoman state's perspective. *The Ottoman Administration of Iraq* by Çetinsaya has been among the most comprehensive studies in this regard, which focuses on the reform policies of the Ottoman center in the three provinces of Baghdad, Basra, and Mosul during Abdulhamid II's reign. By relying on both Ottoman and British archives as well as the memoirs of leading Ottoman statesmen, the book asks how the Ottoman center saw the Iraqi provinces, what were the motivations and criteria behind the reform policies, and what kind of problems the administrators dealt with while applying the political, economic, and social reforms.<sup>6</sup> According to Çetinsaya, one of the driving forces behind the reform policies in Iraq was to increase the Empire's sources of income after the loss of tax revenues coming from the Balkans and fertile lands of Egypt. The Ottoman government sought to repay the economic losses by reforms in the remaining provinces in Asia, including Iraq. Irrigation schemes occupied a particular place in this context and the ones applied in British Egypt served as a model for the Ottoman reform proposals about irrigation of Iraq. As Çetinsaya shows, following the Egyptian model of reform and "creating a second Egypt" in Iraq were among the central motivations stressed in these reform proposals prepared by the Ottoman governors and

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<sup>6</sup> Çetinsaya, *Ottoman Administration of Iraq, 1890-1908*, p. 2.

foreign ambassadors. The common point in the proposals was the comparison between the irrigation schemes in Egypt with those in Iraq and the problem of the lack of irrigation infrastructure of the latter region. If the Egyptian model of irrigation were to be imitated, these proposals suggested, Iraq would develop both socially and economically, by an increase in agricultural production and the amount of the tax revenues.<sup>7</sup>

Comprising a wide range of reform schemes during the Hamidian era, Çetinsaya's study, however, does not specifically refer to any specific irrigation reforms or the Hindiya Barrage in its proper political, social, and environmental contexts. Thus, this study aims to demonstrate that the Hindiya Barrage was a concrete example of the Ottoman reform process in Iraq. In doing so, it will rely on the British newspapers and the memoirs of British officers alongside the Ottoman archival material, discussing the extent of British financial and political involvement during the construction of the Barrage. The study will also contextualize the Hindiya Barrage to demonstrate which specific political, economic, and environmental concerns stimulated the Ottoman administration to carry out this large-scale irrigation project.

Similar to Çetinsaya's work, Ceylan's *The Ottoman Origins of Modern Iraq* deals with administrative and political history with the difference that it examines the process of Ottoman centralization and modernization in Baghdad from the restoration of Ottoman rule in 1831 until the end of Midhat Pasha's governorship in 1872. The study aims to demonstrate how the *Tanzimat* reforms were applied in Baghdad and how the Ottoman central power expanded to the detriment of tribal groups, relying heavily on the Ottoman state archives.<sup>8</sup> In his book, Ceylan argues that

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<sup>7</sup> Çetinsaya, 34–35.

<sup>8</sup> Ceylan, *The Ottoman Origins of Modern Iraq: Political Reform, Modernization and Development in the Nineteenth Century Middle East*, pp. 2–4.

providing the provincial security and the sedentarization of tribes were the essential parts of the *Tanzimat* rule in the reform process in Baghdad. The overall reform agenda in the provincial administration, education, as well as public works were directly related to security and sedentarization policies which aimed at increasing state control over the local population and suppress the tribes by military measures.<sup>9</sup>

Like Çetinsaya, Ceylan presents an analysis of imperial and bureaucratic perspectives on the reform process in Iraq focusing basically on legislative regulations brought by the *Tanzimat*. In the context of *Tanzimat* centralization, Ceylan also dedicates a specific chapter to the public works in Baghdad including the irrigation and canal projects. However, the Hindiya Barrage was mentioned only in a sentence and without its political, social, or environmental contexts. In my thesis, instead, I aim to examine the Hindiya Barrage in its proper contexts from the rule of Midhat Pasha, Abdulhamid II, and Young Turks, until the occupation of the Barrage by British military forces during WW1, to demonstrate how the change in the technology of the Barrage served to change political aims in different periods. In addition, my study aims to examine the perspective of the local population as it was reflected in the petitions and memoirs in order to also show the perception of the local people of the Hindiya Barrage as a British-supported irrigation project.

A recent master's thesis, *Osmanlı Dönemi (19 ve 20. Yüzyıllar) Irak Vilâyetlerinde Sulama Projeleri*, by Şahin, concentrates on the British irrigation operations in late Ottoman Iraq focusing on those conducted by William Willcocks and the Sir John Jackson Company. In her thesis, Şahin reflects on the Ottoman state's change of attitude toward the British political and economic penetration in Iraq before and after the 1908 Revolution with a specific focus on the British

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<sup>9</sup> Ceylan, pp. 18, 148.

irrigation projects. Şahin argues that irrigation proved an important tool in the economic and political intervention of the British government in Iraq, which was well represented in the engineering experience of Willcocks in the British-occupied lands like India, Egypt, and Iraq. The most visible impact of the 1908 Revolution on the Ottoman state's perception toward the British was the employment of irrigation engineer Willcocks, who was at the same time the representative of British imperial interests.

The Hindiya Barrage is mentioned in Şahin's study only as one irrigation project among others performed by Willcocks and maintained by the Jackson Co. In other words, the thesis is not organized around the Hindiya Barrage alone but touches also upon other projects drawn up by Willcocks and Jackson Co. such as irrigation channels, weirs, and railways, which remained unfinished because of WW1. At the end of her study, Şahin suggests that, because the Barrage was finished shortly before WW1, it benefited the British and the Iraqi Kingdom, more than the Ottomans. However, the thesis does not give details in what specific ways the Hindiya Barrage benefited the Ottoman Empire. Moreover, the thesis does not contain the political, economic, and environmental contexts of the Barrage in detail, such as irrigating the *saniyya* lands and creating a "second Egypt," as my thesis aims to examine.<sup>10</sup> In other words, different from Şahin's study, my thesis will put the Hindiya Barrage at the center of analysis and deal with the Barrage in its proper historical context, reflecting the perspectives of both the state and local inhabitants on irrigation and water control in Iraq between 1890 and 1913.

*Osmanlı'da Su Projeleri: Hindiye Barajı* by Akpınar is the only book which takes the Barrage as a case study. Having the characteristics of a historical monograph, the book depends

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<sup>10</sup> See Nesrin Şahin, "Osmanlı Dönemi (19 ve 20. Yüzyıllar) Irak Vilâyetlerinde Sulama Projeleri: Sir William Willcocks ve Sir John Jackson Şirketi'nin Faaliyetleri" (M.A. diss., İstanbul, 2019).

heavily on the Ottoman archives, the British Foreign Office, and a few Ottoman and American newspapers. Similar to Çetinsaya and Ceylan's works, this book also reflects the perspective of the central state on irrigation reforms and water control in Iraq. Akpınar aims to analyze the economic and political motivations of the Ottoman center behind the construction of the Barrage, suggesting that the underlying purposes of this project were not restricted to the development of agricultural production or supplying water to the local population. The central state also aimed to use irrigation projects as an investment tool to maintain its rule in Iraq vis-à-vis the growing British presence in the region. Nevertheless, Akpınar suggests, Ottoman Empire did not live long enough to receive the benefits of the Barrage. After the loss of the Iraqi provinces to British rule, the Barrage began to serve British imperial interests.<sup>11</sup>

Even though the book's sources include documents from the Ottoman and British archives as well as journal reports, it refers to very few academic studies on Ottoman-Iraqi history which could have been helped to set the historical contexts for the Barrage project. In addition, the study does not cover the political and economic motivations behind the Hindiya project in any detailed way, except giving place to transcribed versions of the archival documents. My study, however, will place the Barrage in its proper historical context and consider the political, economic, and environmental dynamics which played a certain role in the configuration of the Hindiya Barrage, benefiting both from state archives, memoirs, newspapers, as well as recent academic studies related to my research.

Another recent study that refers to the Hindiya Barrage is the unpublished master's thesis by Cole: "Hydraulics and the New Imperialism of Technology in Late Ottoman Iraq". The thesis

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<sup>11</sup> Deniz Akpınar, *Osmanlı'da Su Projeleri: Hindiye Barajı* (İstanbul: Arı Sanat, 2017), 11.

examines the development of British “technological imperialism” in Mesopotamia before the First World War, relying on a unique theoretical framework in addition to a vast array of archival documents, memoirs, and recent academic works. The archival material mostly comes from the British Foreign Office, the Indian National Archives, as well as newspaper articles and memoirs of British officers. The thesis argues that informal imperialism in the form of the irrigation networks became the main channel of British intervention, linking the mobilization of experts, diplomats, and capitalists in late nineteenth-century Ottoman Iraq. In this respect, the British involvement in Iraq in the form of hydraulic works owed much to its political presence in India and Egypt, encouraged by the imperial awareness of commercial and religious links across the Indian Ocean.<sup>12</sup>

Cole perceives those patterns of technological imperialism were shaped by the interests of local and Ottoman agents as much as by British and Indian aims. Compromise and cooperation between these actors were a crucial part of hydraulic endeavors in late Ottoman Iraq.<sup>13</sup> In addition, Cole touches upon the environmental factors that shaped the irrigation schemes, such as the Euphrates’ shift towards the Hindiya channel.<sup>14</sup> However, Cole put the British involvement in Iraq at the center of the historical analysis and focuses on the British role in the construction of the Hindiya Barrage. The Ottoman and local interests were mentioned in her thesis only in terms of cooperation or negotiation with the British actors in the region. My thesis, instead, will focus on Ottoman imperial interests in irrigation of Iraq, examining the changing technology and functions of the Hindiya Barrage between 1890 and 1913. Furthermore, the environmental changes will be addressed in terms of the Ottoman administration’s management of water and land resources in

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<sup>12</sup> Cole, “Hydraulics and the New Imperialism of Technology in Late Ottoman Iraq,” pp. 1-5.

<sup>13</sup> Cole, p. 6.

<sup>14</sup> Cole, p. 75.

Iraq through the construction of the largest-scale dam among its counterparts across the whole province.

Bektaş'es master's thesis "The 'Tanzimat State' in the Ottoman Iraq" examines the Hamidian reform policies in Iraq by focusing on the central government's relations with the Shiite population in the nineteenth century. The study addresses how the imperial center perceived Shiism and what political measures were taken against the spread of Shiism in the Iraqi provinces, relying on the Ottoman state archives, Ottoman newspapers, in addition to recent academic works in Turkish and English. Moreover, the study suggests that the controlling policies of the Ottoman Empire towards the Shiites were closely related to the increasing economic and political interests of Britain and Iran in the Iraqi provinces. To break the British and Iranian influence on the region, the Ottoman government initiated reform policies in Iraq to reintegrate the region with the center both politically and economically.<sup>15</sup>

Bektaş touches also upon the role of irrigation works in the change of the sectarian balance throughout Iraq. The construction of the Hindiya channel in Najaf at the end of the eighteenth century provided irrigation solutions as well as for the increase of the settled population. Although the majority of the population in Najaf consisted of Shiite believers, the channel drew even more Shiite settlers to Najaf from the surrounding areas. Ottoman administration aimed to settle these Shiite tribes and engage them in agriculture in the fertile lands of Iraq. Even though Bektaş refers to the centrality of irrigation channels in the Ottoman reform process in Iraq between 1830 and 1910, it does not even refer to the Hindiya Barrage project in his study. It will be my contribution

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<sup>15</sup> Erhan Bektaş, "The 'Tanzimat State' in the Ottoman Iraq: Tribes, Ideology/Shiism and Taxation, 1830-1910" (MA thesis, Boğaziçi University, 2015), 1-5.

to examine the Hindiya project in its political, social, and environmental contexts regarding the Ottoman state's interests, British intervention, local demands, and environmental changes.

Taking a close look at the Ottoman official reports about the Hindiya Barrage, one can consider that the project was attached vital importance in terms of integration of Baghdad with the imperial center. This process of integration was expected to be achieved through the provision of water for the human population, animals, and plants, as well as prospering the *saniyya* lands and supporting the finances of the shrinking Empire. Furthermore, local petitions that referred to the Barrage demonstrate that how the Hindiya project, although partially, shaped by people's complaints about inadequacy of water resources and lack of water management in their region. Environmental changes, on the other hand, indeed one of the basic elements that gave shape to the Hindiya project, such as the shift of the Euphrates' main channel to Hindiya after the second half of the nineteenth century. This shift upset the natural dispersion of water between Hilla and Hindiya and forced the engineers to adopt techniques to re-distribute the water flow between two channels, a process which culminated by the construction of the Barrage.

The Hindiya Barrage seemed a "Hamidian" project at the beginning since it was built to irrigate and prosper the *saniyya* lands in the first place. Nevertheless, continuous attempts for the maintenance of the Barrage after 1908 showed that the project became an "Ottoman" one through which the provincial integration and economic prosperity of Iraq were expected to be achieved. With the beginning of World War I, however, Iraq was occupied by British military forces, and the surroundings of the Hindiya Barrage were turned into military headquarters. The war ultimately changed the function of the Barrage from irrigation of agricultural lands to manipulation of river flow for the purpose of deprivation of the enemy of water.

The contribution of my research to our historical understanding will be to demonstrate the ways in which the changing technology and function of the Hindiya Barrage as an irrigation project represented the changing political and economic interests of the Ottoman administration in Iraq between 1890 and 1913. In this regard, my thesis aims to analyze the Hindiya project within the framework of the Ottoman Empire's interests and efforts to extend its infrastructural power into a frontier province, Iraq.

Looking from the perspective of "the state," integration of the local population into the administrative mechanism by irrigation works would be regarded as a necessary and legitimate purpose. Adopting a provincial or tribal point of view, on the other hand, would cause neglect of the Ottoman imperial framework on behalf of highlighting the intra or inter-tribal confrontations over the management of water resources. To analyze the Hindiya project on the level of the Ottoman central state in this thesis is only a preference, not advocacy, affected partially by the difficulty of reaching the local/provincial resources. Furthermore, considering the studies of late Ottoman Iraq were still in the stage of infancy, building a proper imperial framework in the history of Iraq would open a way for further studies.

Of the primary sources used in this thesis, the majority comes from Ottoman state archives (*BOA*) including official correspondence, official reports (*lâyahâ*), and local petitions pertaining to the Hindiya Barrage. In addition, the study depends on the Baghdad provincial yearbooks (*salnâme*) of the late nineteenth and early twentieth centuries, which include geographical, economic, and social characteristics of the region. In order to make the narrative more dynamic with eyewitness accounts of the prominent personalities, auto-biographical resources were also used, such as the memoirs of Ottoman-Iraqi officer Babanzade İsmail Hakkı Bey (1876-1913). Among the contemporary historical studies about late Ottoman Iraq, the official reports by British

military officers including Sir John Hewett's (1919) and Sir James Haldane's reports (1920), and the chronicle of Abbas Al-Azzawi, *Târîkh al-'Iraq Bayna İhtilalayn (1258–1917)* were cited to the extent that each source gave references to the construction of the Barrage. Furthermore, since this study concerns with a concrete irrigation project completed in 1913, it takes advantage of the visual resources available in the Ottoman archives, Ottoman and British periodicals, and the personal archives of several British officers, comprising plans and photographs of the Barrage during and after construction.

*Such that the thirsty yearn and burn endlessly for water.*

Fuzûlî al-Baghdadî<sup>16</sup>

## **CHAPTER 1:**

### **THE TANZIMAT IN IRAQ: WHEN IRRIGATION BECOMES AN IMPERIAL GOAL**

This chapter will first provide a brief overview of the geographical and demographic characteristics of Iraq and the political landscape in Baghdad between its takeover by the Ottoman Empire in 1534 until the imposition of *Tanzimat* reforms in the region. Then, it will examine Midhat Pasha's reforming process in Baghdad in the context of the *Tanzimat*, with a specific focus on the application of the Provincial Law of 1864 and the Land Law of 1858. These two laws had particular importance in Baghdad since they marked the modernization of the irrigation systems in parallel with the centralization policies. This chapter will also question to what extent provincial security, land registration, and tribal control were related to the applicability of irrigation works during Midhat's rule, demonstrating that these policies were inseparable parts of the overall reform agenda in the region. Through examining the proprietary measures in relation to the irrigation policies of Midhat, the chapter will then display that the reform process in Baghdad facilitated Abdulhamid II to be the greatest landowner in the province and laid the ground for the construction of the Hindiya Barrage between 1890 and 1913.

In the second half of the nineteenth century, the Ottoman Empire found itself threatened by continuous political and economic crises. The Treaty of Berlin (1878) resulted in the shrinkage

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<sup>16</sup> “*Öyle kim leb-teşneler yanıp diler hemvâre su.*” Fuzûlî (1495-1556) was a Turkish poet who lived in Karbala serving as tomb-keeper of the Imam Husayn shrine.

of the Ottoman presence in the Balkans by the secession of many former provinces such as Serbia, Romania, and Montenegro from the empire. Another result was the establishment of the Public Debt Administration (*Duyûn-i Umûmiye*) in 1882, which put Ottoman economic sovereignty under pressure by monopolizing the revenues of specific goods such as salt and tobacco, in repayment of loans of the Empire.<sup>17</sup> In the same year, the province of Egypt was occupied by British military forces under the pretext of suppressing the Urabi revolt and providing political stability in the region. Although the province continued to be a part of the Ottoman Empire, its administration fell to the British to a large extent.<sup>18</sup>

Under these circumstances, the Ottoman government gave a new emphasis to the Arab and Anatolian provinces that remained, preparing for the withdrawal of the empire to Asia.<sup>19</sup> In parallel with this new emphasis, the government attempted to carry out administrative, military, and economic reforms in the Asian provinces in the context of *Tanzimat*, in order to tap the potential of new resources which were expected to provide revenue and manpower to the Ottoman imperial center. Midhat Pasha, who governed Baghdad between 1869-1872, sought to adjust the *Tanzimat* reforms in the province. During his short term of office, Midhat focused mostly on land registration and tribal control, in order to achieve provincial centralization representing the hand of “the center in the periphery.”<sup>20</sup> The importance of Midhat Pasha’s rule in Baghdad also lies in the irrigation

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<sup>17</sup> Hanioglu, *A Brief History*, 121, 135.

<sup>18</sup> M. W. Daly, “The British Occupation, 1882-1922,” in *The Cambridge History of Egypt*, ed. M. W. Daly (Cambridge: Cambridge University Press, 1998), 239–40.

<sup>19</sup> Cevdet Küçük, “The Egypt Policy of Abdulhamid II,” in *Proceedings of the International Conference on Egypt during the Ottoman Era, 26-30 November 2007, Cairo*, ed. Cengiz Tomar (İstanbul: Research Centre for Islamic History, Art and Culture (IRCICA), 2010), 80, 85.

<sup>20</sup> Jens Hanssen suggests that the terms “imperial center” and “provincial periphery” have more distinct meaning than just “center” and “periphery” since the last two concepts simplifies complex relations within the Ottoman Empire. According to this argument, officials of the central government, for instance, represented the interests of the imperial center, even if they performed their duties in the provinces. Thus, provincial officials such as Midhat Pasha, can be called as the “center in the periphery.” Provincial notables who entered governmental positions in Istanbul, on the other hand, represented the interests of “the periphery” in the center, regardless of their places of origin. For

reforms which were closely related to security, land registration, and tribal policies in Baghdad. The promotion of irrigation works such as channels, riverbanks, and dams gradually led to the opening of new lands to agriculture and encouraged tribesmen to cultivation activities. This relative increase in irrigated and cultivated lands in Baghdad prompted landownership and sedentarization between the tribes in the long run.<sup>21</sup>

### Iraq before Tanzimat

The region is called *Iraq* (in Arabic), meaning “coast” or “lower land,” located in the lower Mesopotamia between the Twin Rivers (Tigris and Euphrates) which flow from north to south. Topographical variations in the region are mostly related to the flow of rivers. The mounds of the earth are the sign of the existence of irrigation canals used or abandoned over time. The northern lands can be called as “rainfall zone” (*al-mintaqa al-matariya*), which included highlands irrigated by rain water. The southern lands where Baghdad was also located, on the other hand, can be called as “irrigation zone” (*al-mintaqa al-irvā’iya*), consisted of rich alluvial plains and marshlands which are suitable for cultivation. In the southern part of Iraq, perennial irrigation from the rivers has been an inevitable practice for the continuation of each of the human population, flora, and fauna, due to the high rates of evaporation and scarce rainfall.<sup>22</sup>

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the conceptualization, see Jens Hanssen, “Practices of Integration- Center-Periphery Relations in the Ottoman Empire,” in *The Empire in the City: Arab Provincial Capitals in the Late Ottoman Empire*, ed. Jens Hanssen, Thomas Philipp, and Stefan Weber (Würzburg: Ergon in Kommission, 2002), 51.

<sup>21</sup> Samira Haj, *The Making of Iraq, 1900-1963: Capital, Power, and Ideology* (New York: State University of New York Press, 1997), 23.

<sup>22</sup> Ahmed Sousa, *Atlas Al-‘Irāq al-Hadis* (Baghdad: Maṭba‘at Mudīriyat al-Misāḥah al-‘Āmmah, 1953), 1, 8–9; Robert A. Fernea, *Shaykh and Effendi: Changing Patterns of Authority Among El Shabana of Southern Iraq* (Cambridge: Harvard University Press, 1970), 6–9.

The flow of the Twin Rivers was marked by seasonal floods which led to irregularity of water supply and inundation of residential areas and agricultural lands. The rivers were in flood in March, April, and May, whereas August and September were the months of low supply. In the irrigation zone, the irregular stream created marshy areas while leaving some other lands without a supply of water. Particularly the Euphrates apparently changed courses below Baghdad and major shifts of water occurred between Hindiya (eastern branch) and Shamiya (western branch), causing soil erosion, silting, and flooding. These natural phenomena led to common usage of dikes and artificial channels throughout Iraq, to control the overflow, distribute the water equally between channels and prevent the salination for efficient irrigation of agricultural lands. Among the irrigation channels built in Baghdad, the Hindiya channel of 1793 attracts attention by having a large impact on the ecological balance in the Tigris-Euphrates delta. After the channel was opened, Euphrates shifted from its old route (Hilla channel) towards Hindiya, a process that caused the former channel to drain and be choked by sediments. The Hindiya channel, on the other hand, gradually extended and led to the emergence of large marshlands in its surroundings.<sup>23</sup>

Charles Issawi drew attention to the vitality of irrigation activities for social and economic development of Iraq saying: “In perhaps no other country in the world the prosperity so directly dependent on an intricate system of irrigation, demanding the constant attention of the government, as it is in Iraq.”<sup>24</sup> This statement was particularly applicable for the lands within the Baghdad province which needed regular irrigation for continuation of not only the human population but also animals and plants. Even though most irrigation efforts in the region during the Ottoman rule remained small-scale and inefficient -except the Hindiya Barrage, Ottoman authorities seem to

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<sup>23</sup> William Kennett Loftus, *Travels and Researches in Chaldea and Susiana* (London: Ballantyne and Company, 1857), 40–41; Fernea, *Shaykh and Effendi*, 27; Charles Issawi, *The Economic History of the Middle East, 1800-1914* (Chicago: The University of Chicago Press, 1966), 193.

<sup>24</sup> Issawi, *The Economic History*, 129.

have been aware that building a stable irrigation network was inevitable both to prosper the region and to provide its economic integration.

The population of Iraq in the last two centuries of Ottoman rule mainly consisted of urban, rural, and nomadic groups. As for Baghdad, the provincial *salnâme* of 1882-1883 indicates the urban inhabitants of the region as three to four percent. According to the *salnâme*, most of the landholders within the urban groups dealt with farming and agriculture (*felâhat ve zirâ'at*) while common people worked as laborers or dealt with renting out animals (*kiracı*).<sup>25</sup> Issawi suggested that the vicinity of Baghdad, the districts of Diyala and Karbala (including Hindiya) had the lion's share in the settled population. The rural groups were, on the other hand, mostly organized within tribes and clans, dealt also with farming and agriculture, living in huts called *sarîfas* which were made by reed. The nomadic or Bedouin population often engaged in brigandage and constituted a security threat both for the provincial inhabitants and the central authority.<sup>26</sup>

Ottoman Empire captured Baghdad first in 1534 during a military campaign<sup>27</sup> of Sulayman I (the Magnificent) towards the middle and south of Iraq which were under the rule of the Safavid shah. The campaign was challenging for the Ottoman army because of the geographical characteristics of the region such as mountainous terrains and wetlands. Particularly, the ruggedness of the Zagros mountains and the flooding of the Diyala river<sup>28</sup> slowed down the army

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<sup>25</sup> See "Bağdad Vilayet Salnâmesi" (Matbaa-i Vilayet-i Bağdad, 1300), 62; "Bağdad Vilayet Salnâmesi" (Matbaa-i Vilayet-i Bağdad, 1325), 231.

<sup>26</sup> See "Bağdad Vilayet Salnâmesi," 1300, 62–63; "Bağdad Vilayet Salnâmesi," 1325, 231.

<sup>27</sup> This military campaign was named as "Irakeyn" (the Two Iraqs), referring both to the Iraqi lands under the Persian rule (*Irak-ı `Acem*) and the surroundings of Baghdad (*Irak-ı `Arab*). This historical distinction of "two Iraqs" coincides even the borders between modern Iraq and Iran. See Feridun Emecen, "Irakeyn Seferi," in *DİA* (İstanbul, 1999); Nabil Al-Tikriti, "Was There an Iraq before There Was an Iraq?," *International Journal of Contemporary Iraqi Studies* 3, no. 2 (2009): 133.

<sup>28</sup> *Nahr Diyālā* or "Uluşu" (the Great River, as it was called by the Ottomans), is a tributary of the Tigris river. It springs from the Zagros mountains as the "Sirwan River" until the Kurdish settlement Darbandikhan, then becomes Diyālā, flowing westward to join to Tigris below Baghdad. Dams on the Diyālā river are used both for irrigation, flood control, and hydroelectric power, because of the strength of the current in the river flow. "Diyālā River," in

and caused casualties among the soldiers and pack animals. When the Ottoman forces were able to reach Baghdad, fortunately, they did not encounter any armed resistance from the local population since the Safavid *valis* had already left the city. After its takeover, Baghdad was turned into an Ottoman *eyâlet* and functioned as a kind of buffer zone against Safavid attacks.<sup>29</sup> One of the first operations of Sulayman I after capturing Baghdad was to register all the *muqâta'as* (appanage) in the region in the name of state property to subject those lands to taxation.<sup>30</sup> Furthermore, the sultan opened the Husayniya channel<sup>31</sup> and built a weir on it to provide water for the population of Karbala, to revive the cultivation of cereals, and protect the region from floods.<sup>32</sup> Apart from regulating taxation, agriculture, and irrigation, the sultan also restored tombs of the Shiite Kazimayn and some Sunni scholars like Abu Hanîfa, all of which were attempts both to overshadow the former Safavid rulers' public works and establish firm Ottoman control over the province.<sup>33</sup>

Throughout the 1600s and 1700s, however, ongoing Safavid attacks on Baghdad threatened the Ottoman presence in the region. Even though the Ottomans re-captured Baghdad in 1638 and the Ottoman-Safavid frontier struggle was largely ended with the Treaty of Qasr-i Shirin (1639), Iraq remained largely in political instability. No serious irrigation effort could be made in this

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*Encyclopædia Britannica* (Encyclopædia Britannica, inc., 2011); Abbas Azzawi, *Târîkh al- 'Irâq Bayna Ihtilâlayn (1258–1917)*, vol. 4 (Baghdad: Sharikat al-Tijâra, 1949), 25.

<sup>29</sup> Sources do not give any specific amount about the casualties during the campaign. Azzawi, *Târîkh al- 'Iraq*, 1949, 4:26–28; Nikolay Ivanov, *Osmanlı'nın Arap Ülkelerini Fethi (1516-1574)* (Ankara: Türk Tarih Kurumu Yayınları, 2013), 67; Emecen, "İrakeyn Seferi."

<sup>30</sup> Azzawi, *Târîkh al- 'Iraq*, 1949, 4:36–37.

<sup>31</sup> The Husayniya channel, separated from the Euphrates at Musayyib, is regarded one of the oldest channels in the region. It was also called as "Sulaymaniya channel" since it was opened with the order of Sulayman I, right after the military campaign of 1533-1534. See Ahmed Sousa, *Wādī Al-Furāt Wa-Mashrū' Saddat al-Hindiyah*, vol. 2 (Baghdad: Maṭba'at al-Ma'ārif, 1945), 333–34; J. G. Lorimer, "Husainiyah (Nahr Al-)," in *Gazetteer of the Persian Gulf, Oman, and Central Arabia* (Dundee, 1908), 751–53.

<sup>32</sup> Azzawi, *Târîkh al- 'Iraq*, 1949, 4:37.

<sup>33</sup> Stefan Winter, *The Shiites of Lebanon under Ottoman Rule, 1516-1788* (Cambridge: Cambridge University Press, 2012), 26.

period except small-scale waterways and weirs on the Husayniya channel to supply water to Karbala.<sup>34</sup> Towards the middle of the 1700s, a dynasty of provincial governors commonly referred to as the “Mamluks of Iraq” established themselves as the most powerful local rulers of Baghdad. The most obvious irrigation effort during Mamluk rule was the construction of the Hindiya channel<sup>35</sup> in 1793 by a Shi’i Indian ruler, Asaf al-Dawla, to bring water to the holy city of Najaf.<sup>36</sup> It was accomplished by wedging a waterway (*jadwal*) on the west bank of the Euphrates flowing through Kufa. Construction of this channel caused major ecological and hydrologic changes in southern and central Iraq. By the second half of the eighteenth century, the channel began to drain the water of the old (Hilla) channel of the Euphrates and poured it down the Hindiya, changing the river’s course. As a result, the district of Hilla lost its importance as an agricultural and commercial center.<sup>37</sup> Later in the nineteenth century, the irrigation project of the Hindiya Barrage was proposed as a solution to the problem of irregular water supply in the region.

### *The Tanzimat State in Ottoman Iraq*

The application of the *Tanzimat* was a turning point in Iraq with regard to the inclusion of irrigation projects into the reform agenda which was conducted within the province. Before the

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<sup>34</sup> Azzawi, *Tārīkh al-‘Irāq*, 1953, 5: 210.

<sup>35</sup> Ahmed Sousa accounted that such a proposal about opening an alternative channel to Hilla, which was made by Sinan Pasha of Baghdad to the Ottoman sultan Murad III (1590-1600). For Sinan Pasha, while the Husainiya channel brought water to Karbala, there was no such water source for Najaf whose population was prominently increased because of the water scarcity. Whether this proposal was approved by the sultan or not, it was understood that the problem of water scarcity and irrigation efforts dated well back to the first centuries of the Ottoman Baghdad. See Sousa, *Wādī Al-Furāt*, 2:261–62.

<sup>36</sup> Asaf al-Dawla (r. 1775-1797) was the ruler of the Shi’i state of Awadh (Oudh) in North India. Between 1780 and 1844, the rulers of Awadh remitted more than one million rupees for philanthropic activities including the construction of the Hindiya channel in Iraq. Yitzhak Nakash, *The Shi’is of Iraq* (Princeton: Princeton University Press, 1994), 211, 279.

<sup>37</sup> Nakash, 31.

*Tanzimat*, Iraq's remoteness from the capital, political instability in the region, and ecological imbalance created by floods and swampy areas around the Twin Rivers caused the Ottoman center to remain incapable of carrying out large-scale and useful irrigation systems in the region. Instead, irrigation works in this period were carried out by either the hands of local people or wealthy individuals like Asaf al-Dawla. It was true that even the *walis* of Iraq before *Tanzimat* initiated major projects such as constructing or repairing channels, but most of them were only temporal solutions to the problem of water supply. Thus, the *Tanzimat* might be regarded as an overall reform agenda in which irrigation of Iraq began to be taken seriously by the imperial center.

The most comprehensive reform program in the Iraqi provinces since its takeover by the Ottoman Empire was introduced with the *Tanzimat* era (1839-1876) in the administrative, economic, and social domains. These reforms were perceived by the center and the periphery in different ways. The imperial center saw the *Tanzimat* primarily as a bureaucratic reform agenda that would help to weaken the power of local authorities and to centralize the Ottoman rule in the provinces. For provincial inhabitants, the *Tanzimat* meant re-imposition of direct Ottoman control by compulsory tasks of conscription and regular taxation.<sup>38</sup>

Throughout the eighteenth century, Ottoman governance in the Arab provinces was dominated by local notables (*a'yan*) who functioned as natural leaders of the local inhabitants as guarantors of the flow of the revenues to the central treasury. Including *ulama*, *naqibs*, Janissaries, and *amirs*, these local leaders' legitimacy depended on an Ottoman *berat* (patents of investiture) which linked their political base directly to the Ottoman center. The notables acted like intermediaries between the central government and the provincial society, holding both political

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<sup>38</sup> İlber Ortaylı, *İmparatorluğun En Uzun Yüzyılı* (İstanbul: İletişim Yayınları, 2005), 149; Bruce Alan Masters, *The Arabs of the Ottoman Empire, 1516-1918: A Social and Cultural History* (Cambridge: Cambridge University Press, 2013), 157–58.

and economic sources of power. In Baghdad, the autonomous power of the local households was shaped according to the region's geographical distance from the Ottoman capital and its status as a frontier territory with Iran. Profiting from the unsteadiness of Ottoman rule caused by Bedouin disturbances and Iranian invasions in the eighteenth century, a Georgian-Mamluk household rose to power in Baghdad. Established in 1749, this Mamluk dynasty began to rule in Baghdad, integrating their *mamluks* (slaves) into the household and using them in the highest civil and military posts.<sup>39</sup> The Mamluk rulers usually refused to obey the imperial decrees from Istanbul such as paying the annual taxes. Furthermore, Mamluk pashas failed to take military actions against Wahhabis as well as to prevent the Persian attacks on the Ottoman frontiers. In 1831, the Ottoman imperial center put an end to the autonomous power of the Mamluk regime with the support of leading Iraqi tribes like the Shammar and initiated the restoration of central rule in Baghdad.<sup>40</sup>

Even though the Ottoman center succeeded in circumventing Mamluk power, it would take time and effort to re-establish central control and apply the *Tanzimat* reforms in the region. It was because of Iraq's remoteness to Istanbul and its deprivation of sufficient infrastructure of communication, transportation, and public works which would link the province to the capital and improve its prosperity. Existing roads, for instance, were not secure and were often blocked by tribal brigandage. Tribes constituted the majority of the population including agriculturalists, pastoralists, and nomadic ones. Dwelling places of tribes consisted of deserts, marshes, and

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<sup>39</sup> Albert Hourani, "Ottoman Reform and the Politics of Notables," in *The Modern Middle East: A Reader*, ed. Albert Hourani, Philip S. Khoury, and Mary C. Wilson (Berkeley: University of California Press, 1993), 89–90; Bruce Alan Masters, "Semi-Autonomous Forces in the Arab Provinces," in *The Cambridge History of Turkey: The Later Ottoman Empire, 1603-1839*, ed. Suraiya N. Faroqhi (Cambridge: Cambridge University Press, 2006), 186–89, 200; Jane Hathaway and Karl K. Barbir, *The Arab Lands under Ottoman Rule, 1516-1800* (Harlow: Pearson Longman, 2008), 79, 95–97.

<sup>40</sup> Ceylan, *The Ottoman Origins of Modern Iraq*, 42, 45.

riverain areas which were difficult to access for the central government. Furthermore, the annual floods generated by riverbed variations in the Tigris and Euphrates obstructed large-scale irrigation and river transportation. All these factors, combined with the political instability, harmed agricultural production and land tenure which the *Tanzimat* government intended to deal with in Iraq.<sup>41</sup>

In Iraq, the application of the Provincial Law (*Vilâyet Nizamnâmesi*) of 1864 and Land Code (*Arazi Kanunnâmesi*) of 1858 were particularly important in terms of increasing the state's control over the periphery. With the Provincial Law, the imperial center intended to narrow the geographical frontiers of the former *eyâlets* and classified them as *vilâyets* (province) which were divided into sub-units such as *sancaks*, *kazâs*, and *nâhiyes*. Thanks to the sub-division of these provinces into smaller units, their administration by the Ottoman center would be less complicated. In this regard, Baghdad and Basra were separated into two distinct *vilâyets* after Midhat Pasha's term. The Land Code, on the other hand, promoted the rights of property ownership over cultivable lands by providing the landholders with *tapu* (title deed). Another main target of this code was to guarantee the continuation of agricultural activities, settlement of tribes, and taxation. However, these reforms could be applied in the region only gradually. Most of the Iraqi districts remained untouched by the reform measures until the second half of the nineteenth century due to some geographic and political circumstances such as distance of Iraq to the imperial center and resistance of the tribal population to reform measures.<sup>42</sup>

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<sup>41</sup> Tom Nieuwenhuis, *Politics and Society in Early Modern Iraq: Mamluk Pashas, Tribal Shaykhs, and Local Rule between 1802 and 1831* (Hague: Martinus Nuhoff Publishers, 1982), 4–5, 76, 108.

<sup>42</sup> Ortaylı, *İmparatorluğun En Uzun Yüzyılı*, 149–50; Ceylan, *The Ottoman Origins of Modern Iraq*, 102, 103.

Midhat Pasha's governorship in Baghdad marks a period in which the *Tanzimat* policies were most effectively implemented in the region. Midhat's reform agenda depended basically on the Provincial Law of 1864, which he previously introduced in the Danube (*Tuna*) province; and the Land Code of 1858. The application of the Provincial Law brought a general reorganization of the provincial government by establishing large *vilayets*, each to be headed by a *vali* with administrative and military authority.<sup>43</sup> The significance of the Law in Iraq was related to its role in the provision of order and security in the provinces. When Midhat Pasha was appointed to Baghdad, he established military strongholds in tribally dominated areas and built up military forces in the province. Midhat seems to have intended the elimination of tribal groups as an autonomous force in the region vis-à-vis the central authority.<sup>44</sup> The relations between the imperial center and provincial society in Baghdad and elsewhere in Iraq, however, cannot be understood by examining only the political activities in isolation from other aspects of social life, such as environmental phenomena. From the perspective of the imperial center, establishing control over the tribal population and natural resources were equally important and closely related to each other in the overall reform agenda in Iraq. It was the reason why the imperial center was deeply concerned with land registration, irrigation infrastructures, and agricultural activities in terms of *Tanzimat* reforms. Besides, it was this process of reforming which set the stage for the construction of later large-scale irrigation schemes including the Hindiya Barrage.

The distinctiveness of Midhat Pasha's policies in Iraq lay in his application of the Land Code of 1858. Prior to his rule, the state lands in the region were not subjected to any systematical reform program. In this period, the greater part of the irrigation zone was controlled by tribal

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<sup>43</sup> Çetinsaya, *Ottoman Administration of Iraq*, 8–9.

<sup>44</sup> Ceylan, *The Ottoman Origins of Modern Iraq*, 66, 127–28.

confederations such as the Shammar and Muntafiq. Leaders of the tribes could seize state lands for a long while and claim these lands as their *de facto* property (*mülk*). Over these lands, tribespeople dealt both with husbandry and agriculture, seeking to revive the dead lands by irrigation works, and moving to different plots of land in case of exhaustion of land, the inadequacy of water supply, or flooding. These holdings including the ones that belonged to the sheikh, however, were not regarded as personal, but communal belongings that comprised the tribe as a whole. The Ottoman central state disapproved of such land claims of the tribes relying on the Land Code which hindered the communal ownership and recognized a prescriptive right of the land to the individual cultivators. In this regard, the new land policy depended on selling the state lands basically to the peasants in return for cleaning an irrigation canal or planting a garden for the purpose of continuity of cultivation. Midhat Pasha also bestowed state lands as well as water canals to the tribal leaders in order to make them settled, taxable, and subordinate to the state which awarded them their title deeds (*tapu*).<sup>45</sup>

Under the new Land Code, the title deeds gave the cultivating tribespeople legal rights to the land, on the condition that these individuals prove ten years of continuous ownership. One of the main purposes of this regulation was to weaken the power of tax-farmers (*mültezim*) in favor of the actual cultivators who were expected to pay their taxes directly to the central state. The Land Code bore some fruits after Midhat Pasha. After the 1880 and 1892 decrees, however, only about a fifth of the cultivable land in the irrigation zone had been registered as *tapu* lands, and the remaining four-fifths was set up as a new type of land in which the state retained both the ownership and usufruct (*tasarruf*) rights. Occupants of these state lands were regarded as tax-

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<sup>45</sup> Stephen Hemsley Longrigg, *Four Centuries of Modern Iraq* (Oxford: The Clarendon Press, 1925), 306, 307; Charles Issawi, *The Fertile Crescent, 1800-1914: A Documentary Economic History* (New York: Oxford University Press, 1988), 288; Issawi, *The Economic History*, 165–69; Ceylan, *The Ottoman Origins of Modern Iraq*, 167.

paying tenants-at-will who could be dispossessed at any time.<sup>46</sup> By 1913, however, many of the *tapu*-holder peasants had lost their lands to the urban merchants, Ottoman officials, or the local elites. In southern Iraq, a very small number of peasant holders remained.<sup>47</sup> One of the most important beneficiaries of the title deed was Abdulhamid II himself who acquired large plots of land in Iraq under the title of *saniyya* which will be examined in detail in the next chapter.

The underlying motivation behind the application of the Provincial Law and the Land Code in Baghdad was to weaken the tribal forces and to reinforce the central authority. The strong tribal organization was perceived by the imperial center as an obstacle to provincial reforms. Midhat Pasha, as a representative of the central administration, pursued a tribal policy that aimed to undermine the tribal structure in Baghdad by encouraging the population to settle and cultivate. This tribal policy included strategies not only giving governmental subsidies but also using military force, which appeared as a kind of “carrot and stick” of the imperial center.<sup>48</sup> For instance, in 1871, Midhat Pasha offered the tribal groups in Hindiya to reduce the amount of regular taxes from rice planting (*çeltik*) and to assign lands to the cultivators free of charge if they agreed to build houses and settle in the region. The Pasha also promised to give the lands to the actual cultivators with a title deed free of charge (*meccânen*), however with the condition of one-fifth tax annually. In response, as Midhat stated, tribes agreed to leave their *sarîfas* and to start cultivating, as well as ordered bricks and adobe from Karbala to construct new houses.<sup>49</sup> This example might

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<sup>46</sup> Issawi, *The Economic History*, 164; *An Economic History of the Middle East and North Africa* (New York: Columbia University Press, 1982), 147.

<sup>47</sup> Haj, *The Making of Iraq*, 25, 42; Ceylan, *The Ottoman Origins of Modern Iraq*, 169–70.

<sup>48</sup> Ebubekir Ceylan, “Carrot or Stick? Ottoman Tribal Policy in Baghdad, 1831–1876,” *International Journal of Contemporary Iraqi Studies* 3, no. 2 (2009): 184–85.

<sup>49</sup> In the document, names of the tribes are not mentioned. See BOA, *İrade Dahiliye (İ.DH)*, 642/44676, (12 Şaban 1288).

be regarded as a “carrot” extended by the Ottoman center to the tribal population to make them submit to the central authority.

The other face of this tribal policy was military force. In 1869, when Midhat Pasha was assigned to the provincial governorship of Baghdad, he was also granted the commandership of the Sixth Army (*Altıncı Ordu-yu Hümayun*), because it would be difficult in a frontier province like Baghdad, to establish control, collect the taxes, and deal with the tribal rebellions without having administrative and military power altogether. This tradition of combining bureaucratic and military power remained valid for provincial governors in Baghdad even after Midhat Pasha’s term. The Sixth Army, in this regard, represented an important political tool to incorporate the tribes into the provincial political mechanism. Especially in cases of tribal brigandage and security problems in Baghdad, the military measures of the Sixth Army appear to have constituted an important trump for the imperial center. Furthermore, the financial affairs of the province were under close supervision of the military office.<sup>50</sup> The collection of taxes in Baghdad constituted a significant duty in which the Sixth Army played a central role. For instance, in 1888, during the rule of Abdülhamid II, an official report mentioned that the Sixth Army itself undertook the collection of the sheep (*ağnam*) tax and the tithe (*öşür*) in the sub-provinces of Diwaniya and Samava.<sup>51</sup> The appeal of the central government to the Sixth Army in collecting taxes demonstrates that the military measures functioned as “the stick” of the Ottoman reform policy in Baghdad in this period.

Just as important as the application of Provincial Law and Land Code in Iraq, Midhat Pasha also dealt with irrigation infrastructures which were among the cornerstones of the reform policies.

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<sup>50</sup> BOA, *İrade Dahiliye (İ.DH)*, 816/65882, (30 Zilkade 1297).

<sup>51</sup> BOA, *Dahiliye Nezareti Mektubi Kalemî (DH.MKT)*, 1532/43, (5 Zilhicce 1305).

The opening and maintenance of water channels, strengthening the riverbanks, as well as sharing of water resources were under the authority of local sheikhs before Midhat's reforms in Baghdad. Midhat, however, attempted to change the tribal dominance in water usage in Baghdad, attaching the authority over the water resources to proprietary ownership. In other words, just like the lands, water sources were also organized as part of the *mülk* regulations, subject to the regulations of private ownership. Thanks to the *mülk* practice over water, the owners not only possessed the water channels within the boundaries of their lands but also became legally responsible for the reclamation of these channels. Approximately ten years after the Midhat's term, the central government appears to have continued to impose ownership rules over the proprietors by holding them responsible for excavating and cleaning the canals to support agricultural improvement.<sup>52</sup> On the other hand, irrigation works appear to have been promoted as a kind of preliminary to catalyze sedentarization and cultivation among tribes. If water resources could become sufficient, it would be easier to encourage tribes to settle and to attach them to their lands through agriculture. During his term of office in Baghdad, Midhat tried to overcome the inadequacy of irrigation and to promote agriculture by opening and repairing canals as well as building weirs for a better water supply. By repairing and damming the Saqlawiya channel, for instance, Midhat expected to prevent the formation of swamps which could cause epidemics between inhabitants as well as harm to the agricultural lands.<sup>53</sup>

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<sup>52</sup> "... Âsâr-ı kadîmeden beri münderis olan enhâr-ı müstesnâ el-yevm mâ 'mur olup zirâ 'at olunagelen enhâr ve cedavil ve mukâta 'atta bu yoldaki zirâ 'atin tevfir ve teksiri için ihtiyaç görülen tedâbire gelince bi'l-müzâyede râgıblarına tefvîz olunan mukâta 'atin enhâr ve cedâvilinin hafr ve tathîri mütefevvizlerine â'id olduğu cihetle..." BOA, *Yıldız Esas Evrâkı* (Y.EE), 7/12, (14 Rebi'ülevvel 1297).

<sup>53</sup> Sousa, *Wādī Al-Furāt*, 2:44. The imperial concern that floods could bring epidemics was not groundless. During the governorship of the last Mamluk ruler, Dawud Pasha, a wide-spread plague broke out during two great floods in Baghdad. The epidemic reached its peak in April 1831 in the eastern part of Baghdad where the *wali*'s place and residences of the notables were situated. During this period, approximately 30,000 people perished. Issawi, *The Fertile Crescent*, 101–3.

An important ecological problem that Midhat had to contend with was the unstable debit of the Euphrates river which upset the balance of flow and created seasonal floods and water shortages in different regions within the irrigation zone.<sup>54</sup> As previously mentioned, there had been a serious water shortage in the Hilla district by the middle of the nineteenth century, because of the Euphrates' shift towards the Hindiya channel. This change in the river course disrupted the local population who settled along Hilla and led them to complain about the water shortages by submitting petitions to the sultan, which will be mentioned in the next chapter. In order to prevent the overflow of the Euphrates through Baghdad and the formation of marshlands, Midhat restored and opened the Saqlawiya (or Kananiya) canal which was expected to provide water for 20.000 hectares of cultivable land.<sup>55</sup> Since the Euphrates river frequently flooded in the Saqlawiya region, Midhat also built a new dam over the canal in 1870, instead of strengthening the old earthen dikes along the river. This dam caused the Euphrates to flow from Saklawiya through the Hilla channel more intensely. The damming of the Saqlawiya channel by Midhat Pasha then became one of the driving forces that led the Euphrates' redirection through Hindiya since the Hilla channel could not resist the strong influx of water and flooding. Furthermore, the Hindiya channel could absorb the excess flow of water more easily because of stream bed was lower than Hilla's.<sup>56</sup>

After Midhat Pasha, the Ottoman government in Iraq maintained the model of centralization and reforms. Among the most critical steps in this regard was the restraining of tribal movements between the mountains and encouraging the tribesmen to settle in fertile agricultural areas. In 1873, an Ottoman official report about Baghdad stated that registering lands with *tapu*

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<sup>54</sup> Abdulkazem Al-Khazraji, "Irrigation in Iraq in the late Ottoman Era in the light of British reports: The report of Sir George Buchanan Model," *Adab al-Kufa* 2, no. 35 (2018): 543.

<sup>55</sup> Rhoads Murphey, "The Ottoman Centuries of Iraq: Legacy or Aftermath? A Survey Study of Mesopotamian Hydrology and Ottoman Irrigation Projects," *Journal of Turkish Studies* 11 (1987): 25.

<sup>56</sup> Sousa, *Wādī Al-Furāt*, 2:43–45, 270–71.

deeds had become increasingly common in the province, to such an extent that even semi-nomadic tribes like the Shammar were settled and given agricultural lands with title deed on the condition of cultivating, selling their camels, and paying their taxes from the second year of settlement onward. Furthermore, the central government promised that if the nomadic tribes accepted to settle, they would not be obliged to pay tribute during the first year of settlement.<sup>57</sup> Irrigation works, on the other hand, began more visibly put into action under the rule of Abdulhamid II (1876-1909).<sup>58</sup> The establishment and repair of existing irrigation works near the *saniyya* estates stood at the center of these measures, in addition to bringing water engineers from Europe to enhance irrigation, and taking loans from both local and foreign banks to cover the expenses of the irrigation projects. Apparently, the most significant result of these policies was the Hindiya Barrage (1890-1913), which provided water for large tracts of lands opened in the newly settled agricultural areas, as will be discussed in a more detailed way in the next chapter.

### *Conclusion*

Captured by the Ottoman powers in 1534, Iraq could not be integrated into the empire politically and economically until the process of *Tanzimat* reforms, which included provincial centralization and landownership regulations that were in close relation to irrigation measures. Just like the landownership rules regarding the arable plots, water sources such as parts of rivers and

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<sup>57</sup> “... *Hitta-i Irâkiyede tapu ahvâlinin vaz'ı ve te'sisinden dolayı az müddet içinde birçok halk arâzî sâhibi olduğunu ve emr-i tavnî ve iskanları icrâ kılınmış olan Şammar aşâ'iriyle sâir bazı aşâ'irin sa'âdet-i hâle eriştiğini gören umûm 'Arabân ve aşâ'ir kendilerini sâhil-i selâmet ve menba'-i servete îsal edecek esbâb ve vesâ'ile teşebbüs eyledikleri... ve zirâ'atten lezzet almış olmak için ilk senesi mahsullerinden hisse-i mîrî nâmıyla bir şey alınmayarak verilecek tohumun dahî sene-i âtiye mahsullerinden alınması... tavnî olunacak 'Arabânın servetten fazla olan deve ve sâ'ir hayvanlarının sattırılması şerâ'it-i iskâniye cümlesinden idüğünden mümkün olduğu halde bunların zâid hayvanlarının kendi ma'rifetleriyle fûruht ettirilmesi...*” BOA, *Şura-yı Devlet (ŞD)*, 2149/13, (9 Recep 1289).

<sup>58</sup> Çetinsaya, *Ottoman Administration of Iraq*, 36.

canals were also treated as private property held by title deed. In parallel, however, centralization policies required that the imperial center still had the right of taxation over the lands and water resources in Iraq. Accordingly, from Midhat Pasha's term onwards, the imperial center sought to invest in agricultural lands by improving irrigation facilities. Before the *Tanzimat*, the distance of Iraq from the imperial center, political instability accompanied by the ongoing conflict with Iran, ecological imbalance around the Twin Rivers, as well as collective ownership of lands among tribal people caused the Ottoman center to remain incapable of carrying out large-scale and permanent irrigation works in the region. During Midhat Pasha's term of office in Baghdad, *Tanzimat* reforms organized sedentarization, cultivation, and irrigation in the province, a process that mainly benefited Abdulhamid II through his appropriation of the *saniyya* lands. Furthermore, the promotion of irrigation works over the *saniyya* estates then paved the way for a larger-scale dam project, the Hindiya Barrage.

## CHAPTER 2

### IRRIGATION UNDER HAMIDIAN RULE

This chapter will examine how irrigation policies in Iraq were shaped under Abdulhamid II until the construction of the first Hindiya Barrage in 1890. In doing so, the chapter will demonstrate the motivations that underlay irrigation policies such as creating a “second Egypt,” increasing the agricultural capacity of the *saniyya* lands and *çiftliks*, and boosting their revenues. Interestingly, the idea of creating an “alternative Egypt” out of Iraq was evident in both Ottoman reports and British newspapers, as they compared the irrigation and agricultural capacities of the two regions. The development of agriculture in the *saniyya* lands and *çiftliks*, on the other hand, constituted one of the central motives for irrigation policies during the Hamidian rule including the Hindiya Barrage. Through an examination of these motivations, this chapter aims to demonstrate what stages the irrigation projects went through before being put into practice.

#### *Irrigation in Official Reports*

Throughout the 1880s, centralization and reform policies gained new momentum in Iraq. The Yıldız Palace began to replace the Sublime Porte by imposing centralization not only in the central but also in the provincial administration, acting as an “unofficial” parliament over which the sultan imposed his autocratic and despotic power. In this period, Yıldız had the privilege of interfering in the appointment of the provincial governors as well as gained the monopoly over

conducting official correspondence with all state departments.<sup>59</sup> Taking a close look at the type of documents produced in this period, one can appreciate the intensity of correspondence in the Yıldız collection of the Ottoman state archives. Among this correspondence were the reform proposals by the investigation officials who were assigned by the sultan to prepare reports (*lâyiha*) about the financial problems, the living conditions of the local population, and the possibility of infrastructural improvements in Iraq. These *lâyihas* were produced as reform schemes to be pursued by the imperial center to ensure the prosperity of the province and apparently to transfer its revenues to the capital. Irrigation schemes held a major place within these proposed reforms because of the importance of the water supply both for the local population and cultivable lands among which the *saniyya* estates and *emlâk-ı hümmâyün* (state lands) mattered most.

One of the *lâyihas* on the imperial reform agenda in Iraq was presented by the British Ambassador Sir Henry Layard to Abdulhamid II in August 1878, at the request of the sultan himself. The report included Layard's reform proposals which were to be applied in the Asian provinces of the empire in the military, judiciary, economy, and administration. Layard dedicated a special section to the Tigris-Euphrates basin in the text, considering the large arable lands as well as the commercial and agricultural potential of the region. Increasing the productive capacity of the natural resources was regarded as a vital need, by means of infrastructural projects supported by foreign capital and expertise. In this report, Layard does not specifically refer to the construction of any large-scale irrigation projects like riverbanks and dams, but his scheme seems to have served

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<sup>59</sup> Gökhan Çetinsaya, "II. Abdülhamid'in İç Politikası: Bir Dönemlendirme Denemesi," *Osmanlı Araştırmaları / The Journal of Ottoman Studies*, no. XLVII (2016): 376–78.

as a model for subsequent reform proposals in the İraqi provinces in general, including for the Hindiya Barrage.<sup>60</sup>

Another report was drawn up by the governor of Baghdad, Abdurrahman Nureddin Pasha, in 1880, which emphasized the “urgent need of reform” in the İraqi provinces. According to this *lāyihā*, the issue of security was the first and foremost condition of the overall reform agenda in İraq in order to overcome deficiencies in the fields of education, agriculture, handicraft, and trade. The emphasis on security was apparent in most of *layihas* about İraq since the vast majority of provincial inhabitants consisted of tribes who tended, -according to the center, to resist governmental measures such as recruitment and taxation. For the Pasha, however, it would not be possible for the imperial center to impose either taxation or, conscription, or to provide provincial security.<sup>61</sup> After emphasizing the vitality of security or the reform process, Nureddin Pasha switched to the section of “agriculture” which stressed the productive potential of the vast arable soils in İraq in general and Hindiya in particular, and drew attention to the ongoing damages in the *muqāta‘a* lands in Hindiya stemming from the regular flooding in the Hindiya channel and the inferiority of dikes opened around it. Because of the long neglect of irrigation works around the Euphrates, for the Pasha, the river had drained off its water through the Hindiya channel,

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<sup>60</sup> Münir Aktepe, “Osmanlı İmparatorluğu’nun İslahı Hakkında İngiltere Elçisi Layard’ın II. Abdülhamid’e Verdiği Rapor,” *Belgelerle Türk Tarihi Dergisi*, no. 22 (1969): 13–19.

<sup>61</sup> “... Memleket ve ahālînin en ziyāde muhtac olduğu hüsn-i muāşeret olub bu esāsın tahkîmi şartıyla ihtiyācât umūmiye-i sāire maārif zirā‘at san‘at ticāret gibi dört büyük kısma taksîm olunur ki... İrakda hüsn-i muāşeret husûlü takrîr-i emniyet ve āsāyîş demektir... Asākîr-i nizāmiye-i şāhānenin satvet-i kâhiresi ve kuvve-i zabtiyenin cebr ü şiddeti olmasa hükümet-i seniyye-i merkeziyenin tenfiz-i evāmîr ve nizāmâtı ve kur‘a-i şer‘iyye icrā‘âtı ve emvāl ve tekālîf-i mîriyye tahsîlâtı aslā kâbil ve müyesser olamayacağı misillü... hiçbir mahalde muhāfaza-i emniyet ve āsāyîş mümkün ve mutasavver değildir...” BOA, *Yıldız Esas Evrâkı* (Y.EE), 7/12, (24 Şevval 1297).

submerging and wasting the crops in the *muqāta'a* lands of Hindiya district. Conversely, however, the same shift of the river caused a water shortage in Hilla.<sup>62</sup>

In order to solve the problems of inadequate irrigation and cultivation, the Pasha proposed building a “technological” (*fennî*) dam with a folding floodgate from iron, at a cost of thirty or forty thousand liras, a project that had been sketched by Monsieur Mangel, the chief engineer of Baghdad. The dam would have three floodgates each of which could be closed after supplying adequate water to the tillage during the floods, and the extra water could be drained away through the Tigris. If this dam could be built, the *muqāta'a* lands of Hindiya would be protected from natural disasters and the imperial share (*hisse-i miriyye*) from the agricultural revenues would pay back the ongoing economic damages. Thanks to its mention of a detailed scheme of a dam on Hindiya, this *lāyihā* became one of the earliest proposals of the Hindiya Barrage of 1890.<sup>63</sup>

Based on these two examples, it appears that the writers of such *lāyihās* drew a clear hierarchy between the administrative, social, and economic reforms among which provincial security and suppressing the tribes were at the forefront. The suggestions for economic improvement, on the other hand, were largely concentrated on exploiting the rivers and tillage in

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<sup>62</sup> “... Fıratın münşâ'ib olan Hindiye nehr-i cesîmi bālâda arz ve hikaye olunduğu vechile sadrının ya'ni Fıratın ayrıldığı mahallin arâzî zâten kumluk olduğu ve cânibeyninde sinâ'î ve fennî bina yapılmayıb yalnız 'ādî bir cedvel açılmış bulunduğu cihetle mürûr-i zaman ile mevâsim-i feyezânda kesret-i miyâh etrâfını alarak Fıratın aslı kadar bir mecrâ peydâ ile Fıratın sülûsan raddesinde sularını oralara icrâ etmiş olduğundan Hindiye mukâta'a-i cesîmesinin beher sene mevrûâtının birçok kısmını kesret-i miyâh gark ve telef eylemekte olduğu gibi bilakis Hille sancağı cihetinde bu sebeble su az gidib birçok arâzînin su çıkmaması ve ekilememesiyle o taraf dahî suyun az gitmesinden hasâr-ı azîm görmekte olduğundan...” BOA, Yıldız Esas Evrâkı (Y.EE), 7/12, (24 Şevval 1297).

<sup>63</sup> “...Nehr-i mezkûr sadrında otuz-kırk bin lira kadar masrafla demir kapılı ve istenildiği zaman icâbı kadar su salıverilmek üzere açılır kapanır fennî bir sed inşâsı elzemdir... Olbabda vilâyet başmühendisi Mösyö Mojel tarafından bi't-tersîm leffen takdîm kılınan iki resimden ma'lûm olacağı üzere yapılması tasavvur olunan kârgir seddin demirden ma'mûl üç kapısı olup esnâ-yı feyezanda zirâ'at-i mahalliyeye kâfî derecede su alındıktan sonra kesret-i miyâhdan husulü melhûz olacak muhâtarâtın def'i için kapılar kapanacağı misillü Fırat nehrinin feyezânında taraflarının isti'âb edemeyib taşan suların hevrlerde terâküm ile havayı izlâle bârî olmakta ve arâzîyi dahî zirâ'atten ta'tîl etmekte bulunan miyâh-ı zâ'ide ve râkideyi Dicleye icrâ için kezâlik kapılar küşâdıyla isti'mâl olunacağından...” BOA, Yıldız Esas Evrâkı (Y.EE), 7/12, (24 Şevval 1297).

the most efficient way possible. According to these proposals, not only the imperial center but also foreign capital should invest in irrigation works to manage the water coming from the Twin Rivers to feed the cultivable lands which could then be sold to the individuals by title deed and be subjected to regular taxation. By means of a sufficient irrigation system and extended agriculture, the arable lands in Baghdad could contribute to both the commercial revenues and the imperial treasury, and eventually help Iraq integrate economically with the center. However, until the opening of the Hindiya Barrage in 1890, most of these reform proposals about irrigation and agriculture remained “on paper,” namely, without concrete outcomes. The Ottoman center failed to implement these schemes due to the political and financial challenges that stemmed from local and foreign elements.<sup>64</sup> In other words, the tribal resistance to the reform schemes as well as the foreign, mostly British, political and economic penetration in Iraq restrained the reform process through which the Iraqi provinces would better be linked and secured as an integral part of the Ottoman Empire.

The dominance of tribal organizations in Baghdad was among the most challenging factors that the reformers had to deal with while building irrigation infrastructures. The tribal dominance in Baghdad was perceived by the imperial center as a potential danger for the reform policies, due to the local tribesmen’s defiance to settlement, cultivation, and taxation. In 1889, for instance, it was reported to the province of Bagdad that the Ferhan Pasha faction of the Shammar tribe seriously harmed the *mukāta‘a* lands belonging to the *Emlāk-ı Hümāyun* (state lands) in Tarmiya (north of Baghdad) and Mahmudiya (a region located south of Baghdad and north of Musayyib). In the report, a request was made for military intervention by the Sixth Army in order to expel the

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<sup>64</sup> Gökhan Çetinsaya, “Challenges of a Frontier Region: The Case of Ottoman Iraq in the Nineteenth Century,” in *The Frontiers of the Ottoman World*, ed. A. C. S. Peacock (Oxford University Press, 2009), 275.

tribes from the *mukāta* 'as if they continued causing damage.<sup>65</sup> In the document, it was not specified what kind of “harm” the Shammar gave to these agricultural lands. However, in the provincial *salnāmes* of Baghdad, it is most stressed that the members of the Shammar tribe frequently participated in looting and plundering activities throughout Iraq, preventing the reform schemes from being put into practice. Thus, it is possible that they had looted the *mukāta* 'as to which the imperial center attached great importance in terms of the economic development of the region.

The frequency of brigandage and ongoing conflicts between rival tribes also harmed the provincial security on which the overall reform process would be grounded. In 1891, an encrypted telegram from the governor of Baghdad, Sırrı Pasha, to the capital Istanbul informed that two tribes in Hindiya and Shamiya (Al-Fatla and Banu Hasan) had begun to clash with each other because of a conflict over landholding. In response, the provincial authorities called the sheiks of both tribes in order to arbitrate between the two sides. For Sırrı Pasha, because the tribes were aware that the local government did not have the military authority, they could easily presume to quarrel with each other.<sup>66</sup> According to the commission of the provincial council (*meclis-i vilāyet*) of Baghdad, these quarrels stemmed from the fact that tax-farming was still could not totally abolished. The ongoing landowning practice, for instance, allowed for a plot of land which had long been tilled by a certain tribe to be seized by the government and given to another. Nevertheless, the

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<sup>65</sup> BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 1682/83 (23 Rebiülahir 1307).

<sup>66</sup> “... Geçende bir arāzī maddesinden dolayı yekdiğeri aleyhine kıyam eden aşā'ir El-Fetle ve Beni Hasan aşiretleridir... bunlar ikişer fırka olup bir takımı Hindiye ve diğer takımı Şāmiye kazalarında yekdiğeriyle çarpışmış oldukları istihbār kılınmasıyla bilā ifate-i vakit Kerbelādan ve vilāyetten yanlarına me'murlar gönderilerek Hindiyedekiler nasāih-i vākı'a üzerine terk-i nizā' etmiş ve usūl-i aşirete tevfiken islāh-ı beyn için gerek bunların gerek Hindiyenin diğer aşā'iri rüesası merkez vilāyete istenilmişti... bu aşiret şerirleri ise keyfe mā yeşā' bilā isti'zān hükümet-i mahalliye asker sevkine me'zun olmadığı zihinlerine birleştirerek şu cihetle aralık aralık serkeşlik göstermekte bulduklarından bu zan ve zehābı bi'l-kuilliyeye izāle için lede'l hāce asker sevkine müşiriyet-i celileye me'zūniyet verilse bunu anlamalarıyla beraber bir daha öyle nabecā hālat ve harekātta bulunamayacaklarına...” BOA, *Yıldız Mütenevvi Maruzat Evrakı (Y.MTV)*, 52/61 (20 Zilhicce 1308).

commission continues, practicing full rights of property ownership could likely forestall tribal conflicts over land.<sup>67</sup>

The preponderance of the tribal population in southern Iraq was a key feature for the Ottoman government to consider before carrying out any irrigation reforms. In the eyes of the imperial center, tribal confederations were more likely to obey their tribal sheikhs than the state and to maintain their nomadic or semi-nomadic form of life which sometimes conflicted with the imperial demands. Moreover, because some Bedouin tribes like the Shammar had no specific means of livelihood such as agriculture, some of the tribesmen migrated regularly between their pastures and their homes, occasionally raiding the towns and neighborhoods on their migration path.<sup>68</sup> After the 1873 attempt to settle the Shammar faction in the irrigation zone<sup>69</sup>, it appears that the imperial center somewhat changed its mind about the possibility of sedentarizing the Shammar and gave up this attempt instead of repressing the tribe by military means. In 1900, the Ministry of the Interior (*Dāhiliye Nezāreti*) sent a telegram to Baghdad, stating that the sheikh of the Shammar, Majul Bey, promised that his tribe would settle and cultivate if he was given a plot of land from the imperial estates located between Baghdad and Mosul. According to the imperial center, however, the Shammar tribe had already given such promises but had not kept them, continuing their brigandage activities throughout Iraq. Furthermore, the lands that the sheikh

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<sup>67</sup> "... Aşā'irin yekdiğeri aleyhine kıyām ile rızā-yı hazret-i padişāhilerine mugāyir ahvāl-i fecī'a vukū'a gelmiş olması birinin arāzisi alınıp diğesine verilmek gibi mu'āmelatın vukū'undan neş'et etmekte ve... gerek aşiretlerin mine'l kadīm i 'mār ettikleri arāzinin yedlerinden nez'iyile başkalarına itası mesele-i muzirrasına... vilāyetlerce muhikkāne ve ādilāne bir hüsn-i netīce verilmesi... cālib-i nazar ve dikkat olup zīrā aşā'irin i 'mar etmekte oldukları arāziye keyfe mā yeşā' tasarruf hakkına mazhar olmadıkça bu gibi münāza'at ve mukātelātın önü alınması kābil olamayacağı gibi... BOA, *Yıldız Mütenevvi Maruzat Evrakı (Y.MTV)*, 52/61 (20 Zilhicce 1308).

<sup>68</sup> Bayram Nazır, "Irak'taki Aşiretler Hakkında Osmanlı Devlet Adamlarının Gözlemleri," *Yüzüncü Yıl Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, no. 15 (2008): 15; Sinan Marufoğlu, *Osmanlı Döneminde Kuzey Irak* (İstanbul: Eren Yayıncılık, 1998), 128.

<sup>69</sup> This attempt of sedentarization was previously mentioned in the first chapter. BOA, *Şura-yı Devlet (ŞD)*, 2149/13, (9 Recep 1289).

demanded were already in use as a *remont mahalli* (place to be used for breeding horses), which belonged to the Sixth Army and included cavalry horses. As a result, the imperial center decided not to give the sheikh the lands he sought, since the security that the military provided was more suitable for the Ottoman political interests than the unclear outcome of the Shammar's' settlement (*...menāfi-i mülkiyesi Şammar aşiretinin mevhum olan iskanından daha büyük*).<sup>70</sup> In other words, banditry activities and the empty promises of the Shammar made the Ottoman government abandon the settlement policy and its probable economic benefits on behalf of provincial security by military measures in the process of provincial reform.

A second obstructing factor for carrying out irrigation projects in Baghdad was the inadequacy of the financial resources to cover the expenses of irrigation. Most of the proposed irrigation projects during the Hamidian era including the Hindiya Barrage had to be postponed because of the deficiency within the provincial budget, which was closely related to the gradual shrinkage of the financial resources of the imperial center.

In the second half of the nineteenth century, the Ottoman imperial treasury passed through a deep crisis accompanied by the increasing dependence on foreign loans. The extraordinary spending during the Crimean war (1853-1856) led the Ottoman administrators to accept offers of foreign lending in 1854 for the very first time and then to intensely appeal to long-term borrowing from the European money market at high-interest rates. In 1875, the Ottoman state officially announced the bankruptcy of the imperial treasury and ceased the payment of the external debt. In consequence, an agreement was signed between the Ottoman government and *Duyûn-i Umûmiye* (the Ottoman Public Debt Administration) which was established in 1881 as the representative of

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<sup>70</sup> BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 2309/53 (21 Şevval 1317).

the foreign creditors. According to the agreement, the Administration would oversee the tax revenues of specific goods within the Ottoman territories -such as salt from Baghdad<sup>71</sup>, and transfer their revenues directly to the European creditors. In order to accomplish this task, the Administration established more than five thousand offices mostly concentrated in the periphery of the empire including Baghdad. The Ottoman state aimed to renew the debt contracts with the European banks after the agreement, a process that ended up with the growing burden of the accrued interest on the Ottoman state finances.<sup>72</sup> Moreover, the extension of the Administration's control over the economy had gradually increased in this period and brought more constraints on the economic and political autonomy of the Ottoman Empire.<sup>73</sup>

Under the circumstances, the sultan and provincial governors tried to find alternative ways to cover the irrigation expenditures in the region. One solution was to incorporate large and fertile lands into the personal property of the sultan and to ensure that these lands would be irrigated and cultivated regularly by the tribal tenants.<sup>74</sup> For instance, in the report of Abdurrahman Nureddin Pasha mentioned above, it is envisaged that the expenses for the cleaning and excavation of the water channels would be covered by the *saniyya* tenants themselves in order to irrigate the lands in a regular and sufficient manner.<sup>75</sup> By this means, the imperial center could avoid irrigation

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<sup>71</sup> "... Bağdad Duyûn-i Umûmiye Nezâretinin dâhil-i dâ'ire-i idâresi bulunan mahaller ikiye taksim olunarak Musuldan i'tibâren şattın sağ cihetinde Divâniyeye ve sol tarafında Azîziyeye kadar hutta-i 'Irâkiyede vâki' Duyûn-i Umûmiye anbarlarında tuzun ale's-seviye beher kıyesi on beş paraya ve Divâniye ve Azîziye dâhil olduğu halde ondan aşağı Basraya kadar mevâki'de dahî on paraya satılmak ve mevâki'in i 'câbât-ı zarûriyesinden olarak 'Arabân ve 'aşâyirin ihtiyâcât-ı beytiyeleri için istedikleri kadar tuzu memâlih-i gayr-ı mazbûtadan almalarına mümâna'at edilmemek..." BOA, *Dahiliye Nezareti Mektubi Kalemî (DH.MKT)*, 1559/32 (24 Safer 1306).

<sup>72</sup> Şevket Pamuk, *Osmanlı-Türkiye İktisadi Tarihi 1500-1914* (İstanbul: İletişim Yayınları, 2007), 230–33.

<sup>73</sup> Murat Birdal, *The Political Economy of Ottoman Public Debt: Insolvency and European Financial Control in the Late Nineteenth Century* (London: I.B. Tauris, 2010), 170.

<sup>74</sup> Marion Farouk-Sluglett and Peter Sluglett, "The Transformation of Land Tenure and Rural Social Structure in Central and Southern Iraq, C. 1870-1958," *International Journal of Middle East Studies* 40, no. 1 (2008): 5.

<sup>75</sup> BOA, *Yıldız Esas Evrâkı (Y.EE)*, 7/12 (24 Şevval 1297).

expenses on the one hand, and attain revenues from those irrigated and cultivated lands on the other, using these revenues to finance the building of more irrigation works.

### *Irrigating Iraq, or Creating 'Another Egypt'*

Throughout the nineteenth century, in parallel with the financial shortcomings, the imperial center gradually lost its authority in the Balkan provinces and Egypt, which led to the shrinkage of its borders and the Empire's withdrawal towards Asia. Under these circumstances, the Iraqi provinces (*hutta-i Irakiye*) gained a new importance in the eyes of the Ottoman governors. Thanks to its large arable lands and water resources springing from the Tigris and the Euphrates, Iraq began to be regarded as a promising territory that was expected to contribute to the state revenues (*vâridat*) and compensate for the losses of the Balkan provinces and Egypt. The latter region was particularly emphasized in the official documents as well as periodicals in terms of its rich lands and water resources as well as its infrastructural development since the rule of Muhammad Ali Pasha to the British occupation of the province. A kind of comparison between the provinces of Iraq and Egypt draws attention in the *lâyihâs* (official reports) which included reform proposals presented to Abdulhamid II. While describing the land and water potential of Iraq, the authors of the *lâyihâs* frequently referred to the fertile lands of Egypt and the Nile river as bases of comparison between the two provinces. Each *lâyihâ* argued that if the reform agenda succeeded in Iraq, the province would equal or surpass Egypt in terms of revenue and the level of agricultural development.

One of the official reports which made an analogy between Iraq and Egypt was written by the governor of Basra, Mazhar Pasha, in 1880. Using multiple references to history, the Pasha

suggested that Iraq had once been a prosperous region and the site of capital cities of great powers such as the Babylonians, Persians, and Abbasids. The present exiguousness caused by natural disasters (*sadamât-ı kevnîyye*) which disturbed the ecological balance, however, affected Iraq to such a degree that only one-tenth of the existing arable lands could be cultivated in a given year while the rest left ruined and desolate. The majority of the local population consisted of cultivators, however, they were nomadic and deprived of lands registered in their names. These cultivators were incapable of feeding even themselves because of the poor irrigation facilities and scantiness of the harvested crops (*kaht ü galâ*). Iraq, however, owned vast lands almost equivalent to one of the European states, in addition to its vast rivers such as the Tigris, Euphrates, and Diyala, each of which corresponded to the Nile of Egypt.<sup>76</sup>

According to Mazhar Pasha, if the irrigation from the rivers were enhanced by opening canals, and the peasants were kindly encouraged to settle and cultivate in the previously deserted lands, production of the agricultural crops such as wheat, barley, and rice would necessarily be multiplied to the extent that even these products could be exported to Istanbul and the European states through the Persian Gulf. However, the government lacked adequate funding, the Pasha pointed out, and these developments would be put into action only gradually. Opening new drainage channels and repairing the old ones required 30 or 40 thousand *liras* for the first time,

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<sup>76</sup> "... Muhtâc-ı arz ve beyan olmadığı üzere hutta-ı 'Irâkiye Diyarbekir vilâyeti hudûdundan Necd'e kadar hâiz olduğu cesâmet ve vüs'atı Avrupa düvel-i mu'azzamasından birisinin mülküne mukâbil ve derûnunda cereyân eden Dicle ve Fırat ve Diyala gibi enhâr-ı cesîmenin her biri Nîl-i Mısır'a mümâsil olub gerek bu nehirlerin ve gerek onlardan inşi'âb eden müte'addid ve mütenevvî' cedâvil üzerindeki arâzî-i vesî'aya Cenâb-ı Hakkın ihsan buyurduğu kuvve-i inbâtiye ve kâbiliyet-i fevkalâde ... derkârdır... ve ma'mûriyetinin derecesi müsellem-i cihân ve gibta-yı nümây-yı memâlik ve büldân iken bi'l-âhare tesâdüf eylediği sadamât-ı kevnîyeden kesbettiği şimdiki ahvâl-i teessüf-iştimâli azâde-i kayd-ı beyandır ancak bu kıt'a-i fesîhatü'l-enhânın mevcûd olan bunca arâzî-i münbitesinde senede onda bir hissesi tahmînen zirâ'at olunabilip bâkîsi harâb ve mu'âtl kalmakta olduğu gibi... ahâlî-i mutî'anın mâ'mûriyet-i 'Irâkiyenin ... fakr-ü fakâdan kurtularak sa'âdet-i hâle ve servet ü sāmāna nâ'il olursa hutta-ı mezkûre Mısır'a tefevvukla Rumeli zâyi'âtından dahî bālîgan-mâ-belag bunun kesb-i 'imrân ve terakkiyâtında bulunarak hâlen ve istikbâlen menâfî' ve muhsenât-ı lâ-tuhsânın vücûda geleceği yâni saltanât-ı seniyyenin kuvve-i askeriye ve mâliyesini dahî yâr ve ağıyara karşı derece-i kusvâ-yı i'tilâyâ isâl edeceği emr-i celîdir..." BOA, Yıldız Esas Evrâkı (Y.EE), 9/8, (Şevval 1297).

then the agricultural activities would eventually pay for themselves without burdening the central treasury. If these reforms succeeded and prosperity increased, Iraq would even overshadow Egypt and financially compensate for the loss of revenues coming from the Balkans.<sup>77</sup>

A constitutionalist military officer exiled to Baghdad, Süleyman Hüsni Pasha<sup>78</sup>, wrote a detailed report in 1892, on the reform process in Iraq. After presenting the ethno-religious diversity of the region, the Pasha separates the tribal society into two main categories: nomadic (*rahhâl ve nezzâl*) and settled people. Despite the fact that both were dealing with cultivation in different degrees, the second group was tied to *muqâta'as* (tax-farms) as if they were their own property and regularly engaged in agriculture. The majority of arable lands, however, were owned by the tribal notables who appropriated the *mîrî* lands by giving minimum tribute to the state. If these lands would be officially registered and subjected to taxation, the tribal owners would presumably have to pay fivefold or tenfold what they paid previously.<sup>79</sup> Thus, for Süleyman Hüsni, the solution

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<sup>77</sup> “... bu arâzinin müştemil olduğu cedâvil ve enhâr-ı adîde vâsıtasıyla mahsulât-ı arzîyesi bâliğan-mâ-belâg ihtiyâcât-ı mahalliyeye bir sene kifâyet ettiğinden mâ’adâ ziyâde fazlasından Dersa’âdet için dahî hinta ve pîriñç ve şa’îr gibi külliyyetli zehâ’îr irsâliyle bu yolda fevkalâde hizmet etmesi ve Basra mahreci vasıtasıyla Avrupa’ya da her sene bir hayli zahîre satıp nakde tahvîliyle ticâret ve servet esbâbının ilerletilmesi kâbil iken... bu mekûle ‘imârâtın kuvveden fi’ile zuhûru müceddeden bir takım cedâvil açmak ve münderis olan cedvelleri tathîr ve küşâd etmek ve ahâlî ve aşâ’îrin menfa’at ve memnûniyetini mücib olacak bir yolda teksîr-i zirâ’ate sevk ve teşvîk-i birle arâzi-i meyyite ve hâliyyeyi kâmilen ihyâ eylemek gibi ‘ameliyât ve tedâbir-i mü’essire isti’mâline menût ve mütevakkıf olub... hutta-i cesîme-i mezkûrenin bir-iki sene zarfında ma’mûriyet-i matlûbesinin kâmilen kuvveden fi’ile çıkarılması kabîl olamayıp ancak tadrîcen vücûda geleceği cihette... ve cüz’î ‘ameliyâtla küllî mahsulât alınması mümkün bulunan bazı cedâvilin açılması ve münderis olarak istifâdeden geri kalmış olan cedâvilin küşâdına başlanılması...” BOA, *Yıldız Esas Evrâkı* (Y.EE), 9/8, (Şevval 1297).

<sup>78</sup> Süleyman Hüsni Pasha was a military officer who was banished from the capital Istanbul due to his affiliation with the Young Ottoman movement and his suspicious involvement in the deposition of sultan Abdulaziz. In 1878, Abdulhamid II exiled him to Baghdad where he wrote reports on the development of the Iraqi provinces. Alongside his military career, Süleyman Hüsni also engaged in history by giving lectures in the military schools and writing books for the curriculum. One of his books, *Târîh-i Âlem*, deals with the ancient history of places such as Egypt, Babylonia and the Asia Minor. His knowledge of history obviously reverberated in his official reports. See Aydın Efe, “Süleyman Hüsni Paşa’nın Tarih Anlayışı,” *Kâzım Karabekir Eğitim Fakültesi Dergisi*, no. 9 (2004): 207–12.

<sup>79</sup> “...Hutta-ı ‘Irâkiye arâzi-i zer’iyyesi kâmilen ashâb-ı nüfûz ve servet taht-ı tasarrufunda olub fukarâ-yı zürrâ’ ‘uhdesinde hemen hiç bir şey yok gibidir... Cibâyeti arzu etmeyenler... hukûk-i miriyyeyi istifâde-i şahsiyelerine hasretmiş ve zîr-i tasarruflarındaki arâzi ve bâğât ve mukâta’âtta mümkün olursa mîrîye bir şey vermemeye veyâhud devede kulak kabîlinden te’diyâta alışmış olduklarından mülkleri tahrîr edilib de tahmîn-i sahîh üzerine tahmîs usûlüne tevfiķan maktû’iyete rabt edilecek olursa hazîne-i celîleye şimdiki verdiklerinin beş-on mislini te’diye mecbûriyyetinde kalacaklarını biliyorlar...” BOA, *Yıldız Esas Evrâkı* (Y.EE), 9/34, (9 Ramazan 1309).

was to register the lands to the actual cultivators in order to increase agricultural production and protect the state treasury from a financial deficit.<sup>80</sup> The last proposal about land tenure was in parallel with Midhat Pasha's land reform which aimed to weaken the power of the tribal landowners on behalf of the actual cultivators who were expected to pay their taxes directly to the central state. It appears that Süleyman Hüsnü endorsed Midhat Pasha's reform agenda on landownership and suggested to Abdulhamid II that this policy to be maintained in Iraq.

According to Hüsnü Pasha, another important problem for the continuity of agriculture was the inefficient irrigation. In order to curb the regular flood of the Twin Rivers and prevent the marshy places (*hawr*) from being submerged and devastating the agricultural lands in Baghdad, the river courses should be controlled by weirs and dams. Another solution that would not burden the treasury was to employ cultivators to clean the alluvial deposits around the Tigris River. Emphasizing the complicated environmental conditions of the region, the Pasha suggested that to restrain the yearly floods and deal with the silt was difficult to even for an irrigation expert like Monsieur Schoendorfer, who had needed a decade to complete the Hindiya Barrage of 1890 with the support of the government. If these proposed reforms would be gradually (*tedrîcen*) put into action, the Pasha assured, Iraq would show up as "an alternative to Egypt" (*iklîm-i Mısra nazîre-i diğêr*).<sup>81</sup>

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<sup>80</sup> Written during his thirteen-year exile in Baghdad, the twenty-four page report included proposals on social, economic, military, and educational reforms in addition to the historical references to the ancient societies of the region and a short income-and-expense table for Iraq. The table includes estimates of the annual consumption of the male and female population and the export and customs revenues of the Iraqi provinces in order to compare it with actual income and identify the treasury deficit. According to the table, the expenses of the province were two and a half times the provincial income. The deficit of the provincial budget reached 1.552.500 Ottoman *liras* per annum, which apparently put the reform process in jeopardy. BOA, *Yıldız Esas Evrâkı (Y.EE)*, 9/34, (9 Ramazan 1309).

<sup>81</sup> BOA, *Yıldız Esas Evrâkı (Y.EE)*, 9/34, (9 Ramazan 1309).

Mehmed Pasha, a former governor of Bitlis, also submitted a report in 1892, suggesting that if the water resources from the Tigris, Euphrates, and Diyala and the agricultural potential of their surroundings were successfully utilized, the revenues would increase, and the province would eventually approach to the province of Egypt. According to the Pasha, the surface area of Egypt constituted one-third of Iraqi lands, and the Nile River corresponded to only one of the rivers in Iraq. The Tigris, Euphrates, and Diyala rivers were sufficient to irrigate lands 250 hours in length and 70-80 hours in width. However, the Pasha continues, Iraq has presently been suffering from the unbalanced flow of the rivers which caused droughts and floods in different places, leaving the peasants and agricultural lands ruined. These disasters led both to the misery of the population and the decline of revenues.<sup>82</sup> In addition, districts like Hindiya were dominated by tribal sheikhs who took more than half of the agricultural income under their administrative domains while the peasant cultivators continued living in misery. To undermine the collective tribal ownership over the lands in Hindiya, the Ottoman government transferred (*ihale etmek*) the agricultural lands in the name of the *serkârs*<sup>83</sup>, rather than the sheikhs, as a temporary solution. For the Pasha, however, the remedy to the previously mentioned problems in Iraq depended on controlling the flow of the Twin Rivers, settling the population, and gradual abolishment of sheikhdom (*meşihatın ilgâsı*)

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<sup>82</sup> "... Bu vilâyetler arâzîsinin kuvve-i inbâtiyesi ve enhâr-ı mezkûreden münşa'ib cedâvilin arâzîyi istilâsı münâsebetiyle hüsn-i idâresine muvaffak olunur ise beher sene vâridât-ı sâbıkasına nisbetle külliyyetli terakkî ederek müddet-i kalîle zarfında hutta-i Mısriyeye ikrân olabileceğinde ve masârif-i devletin cüz'-i a'zamını ifaya kifâyet edeceğinde kat'a şüphe edilmez. Şimdiki hâli ise pek çok arâzîyi susuzluktan harâb ve ahâlî ve zürrâ'ı perişan kaldığı misilli ekser mahallerini de su basıp ziraatten mahrum olmuştur. Bu iki ahval yekdiğerine muhâlif olarak vâridâtın tedennîsini ve ahâlinin de perişanîyetini mücib olmaktadır... Dicle ve Fırat nehirleridir ki, iki yüz elli saat kadar tül ve yetmiş-seksen saat kadar 'arzında olan arâzîyi kâmilten irvâ ve iskâ ediyor. Mısır eyâletinin tül ve 'arzu mikdâr-ı ma'rûfun sülüsü nisbetinde ve Nîl ise enhâr-ı ma'rûfenin birisi mikdârındadır..." BOA, Yıldız Esas Evrâkı (Y.EE), 81/2 (19 Muharrem 1310).

<sup>83</sup> Serkârs were tribal dignitaries whose position was below the sheikhs' within the tribal hierarchy. Serkâr was a kind of intermediary ruler between the sheikh and the local population. As Mehmed Pasha reported in his *lâyiha*, the Ottoman government tried to register the agricultural lands in the name of *serkars* to break the power of the sheikhs, disturb the tribal order, and ensure the agricultural revenues were transferred to the state treasury. This policy, the Pasha suggested, gave a concrete result in that the revenues (*vâridat*) from rice had increased to eight million *kıyes*. But then, the lands were abandoned by the governor of Karbala and the rice revenues again decreased to two and a half million *kıyes*. BOA, Yıldız Esas Evrâkı (Y.EE), 81/2 (19 Muharrem 1310).

along the lines of the Land Code.<sup>84</sup> For irrigation works that could remedy Iraq's problems, the Pasha does not refer to any detailed schemes or indicate any specific agenda, other than pointing out the inefficient usage of the water potential. The most underlined theme in the *lāyiha* was reorganizing the land registration and accordingly guaranteeing the state revenues from agricultural commodities. This persistent emphasis on the landownership regulations might have been related to the Pasha's implicit doubts about Abdulhamid II's acquisition policy over the *mülk* lands which decreased the cultivator's position from being a landowner to being only a tenant-at-will.

Mehmed Pasha's report then referred the sultan to one of his chief advisers, Müşir Şakir Pasha.<sup>85</sup> Supporting Mehmed's scheme to a large extent, Şakir Pasha suggested that the basis of the overall reform agenda in Iraq lay in the establishment of a "province of the Euphrates" extending between Maskana and Kan'aniya and supported by military forces to provide for security. Once the province was established, the government could encourage the cultivators to settle by creating farms and orchards (*çiftlik ve bağçe*) which were to be allocated to them in return for paying its tithe (*öşür*) every five years. Among the ways to further stimulate tribes to settlement was to establish villages in the province and distribute arable lands to the settlers as well as agricultural tools (*arāzī tefrik ve zirā'at edevātı tevzī' olunmak*), or otherwise to build irrigation channels with the favor of cultivators themselves and lend them seed (*tohumluk*). If these reforms could be implemented, the Pasha assures, a province as developed (*mâ'mur*) and prosperous as Egypt would arise in *al-Jazira* (Mesopotamia).<sup>86</sup>

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<sup>84</sup> BOA, *Yıldız Esas Evrâkı* (Y.EE), 81/2 (19 Muharrem 1310).

<sup>85</sup> Çetinsaya, *Ottoman Administration of Iraq*, 35.

<sup>86</sup> BOA, *Yıldız Esas Evrâkı* (Y.EE), 81/2 (24 Eylül 1892). It was understood from the content of the document that Mehmed Pasha's report predates Müşir Şakir Pasha. Whereas the former report was dated 1310 *Muharram* (1892),

There is also evidence that making comparisons between Iraq and Egypt was not peculiar to the military officers. In a telegram sent by the notables of the Samava district to Yıldız Palace in 1890, the completed Hindiya Barrage was compared to the Suez Canal built in Egypt. The telegram included an expression of gratitude towards the Ottoman government, suggesting that when Hilla became a wasteland due to the Euphrates' shift towards the Hindiya, Sırrı Pasha reinstated the water to people and lands by completing the Hindiya Barrage as “worthy of being called as second Suez” (*ikinci Süveyş denilmeye şāyan*).<sup>87</sup> The importance of the Suez Canal underlay the fact that it not only benefited Egypt but also Iraq by greatly reducing distance, time, and freight costs to Europe and in the same measure by increasing agricultural production and settlement among tribes.<sup>88</sup> It appears that the comparison between Iraq and Egypt was not limited only to government officials who represented the imperial center but also concerned provincial inhabitants who might gain economic benefits from the opening of the Hindiya Barrage.

Even Ottoman officials and Iraqi notables intimated a similarity between Iraq and Egypt, it still remained vague in which particular aspects the two provinces resembled -or were expected to resemble, each other when the Barrage opened. As understood from the reports, officials associated the two territories on the bases of land and water resources as well as financial prosperity. Paradoxically, however, the comparisons regarded Egypt as a sample province to keep pace with on the one hand, and as inferior to Iraq in terms of its natural wealth, on the other.

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the latter report in the same register gave the date of 1292 *Eylül* which coincided with the year 1876 if taken as *rûmi* month. Since it is unlikely for the latter to be written in 1876, it makes sense for the date to be given as *miladî* (C.E).

<sup>87</sup> The document consists of telegrams from Samava and Diwaniya to Istanbul, in addition to an Arabic telegram from Baghdad to Istanbul. The telegrams carried included the signatures of the notables (*mu'teberan*) including tribal leaders, merchants, and provincial officials from Samava, Diwaniya, and Baghdad. The telegram mentioned above is the one sent from Samava, signed mostly by the members of provincial government including the district governor, the members of the provincial council, and a *'yans*. BOA, *Yıldız Perakende Evrakı Umumi (Y.PRK.UM)*, 19/61 (1 Teşrinisani 1306).

<sup>88</sup> Issawi, *An Economic History of the Middle East and North Africa*, 31, 51.

The answer to the question of why the governors strove to transform Iraq into an “alternative Egypt” lay mostly in the significant economic position of the latter province within the Ottoman Empire. After its conquest in 1517, Egypt became the granary of the empire as the largest producer and exporter of agricultural foodstuffs. The agricultural cultivation periods in the region depended on the flood cycles of the Nile which formed the linchpin of irrigation. The *multezims* (holder of the *muqāta‘a* lands) within the province were responsible both for ensuring the continuity of agricultural activities and irrigation works as well as for paying the state treasury an annual tribute (*irsāliye-i hazīne*).<sup>89</sup>

Another aspect of the “Egyptian model” was the military. While Sultan Mahmud II’s troops remained incapable of suppressing the Greek rebellion that started in 1821, he appealed to Mehmed Ali, the Ottoman *vali* of Egypt, for military support. At the time, Mehmed Ali and his son İbrahim Pasha had established a conscript army, trained by Europeans to fight a conventional European-style war. At the sultan’s request, the Egyptian troops arrived in 1825 and the campaign quickly turned in favor of the Ottomans. Furthermore, the sultan also used the Egyptian forces in 1826 against the Janissaries. The occupation of Syria in 1832 by İbrahim Pasha, the son of Muhammad Ali both shocked and alarmed the Ottoman central government. During the occupation, Egyptian troops under İbrahim Pasha overwhelmed the Ottoman army and even marched as far north as Kütahya, until they were stopped by the European powers. Technical shortcomings and ongoing defeats of the Ottoman troops led Sultan Mahmud II to build a new army along the lines of Mehmed Ali’s military model. Above that, the Egyptian occupation of Syria set a template for the

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<sup>89</sup> Alan Mikhail, “The Nature of Ottoman Egypt: Irrigation, Environment, and Bureaucracy in the Long Eighteenth Century” (Ph.D. thesis, University of California, Berkeley, 2008), 4–5, 150–51.

Ottoman center to impose reforms in the Arab provinces and establish direct control from the imperial capital.<sup>90</sup>

It is important to keep in mind that within the time period the reports were submitted, the province of Egypt shifted from being one of the most important territories of the Ottoman Empire to quasi-independent sovereignty. This process coincided with the establishment of a centralized bureaucracy, Egypt's incorporation into the world economy, and subsequent European penetration into the region. On the other hand, modern infrastructural technologies such as railways and telegraph were introduced on a large scale along with the enlargement of the irrigation system under İsmail Pasha to 112 water channels reaching 8400 miles in total. In 1869, the Suez Canal was built with the help of European financial investments.<sup>91</sup>

Ottoman control in Egypt was further weakened with the British occupation in 1882. In this period, the first concern of the Egyptian government backed by British diplomats was agricultural development and increasing production. Accordingly, they spent huge sums of money on irrigation and cultivation which led to the improvement of irrigation infrastructures and the increase of agricultural productivity.<sup>92</sup> The first Aswan Dam was built in upper Egypt in 1902 by water engineer Sir William Willcocks<sup>93</sup>. The dam was designed to hold up a large part of the Nile's

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<sup>90</sup> Masters, *The Arabs of the Ottoman Empire, 1516-1918: A Social and Cultural History*, 144–49, 160.

<sup>91</sup> Ehud R. Toledano, "Social and Economic Change in the 'Long Nineteenth Century,'" in *The Cambridge History of Egypt*, ed. M. W. Daly (Cambridge: Cambridge University Press, 1998), 255, 261.

<sup>92</sup> Daly, "The British Occupation, 1882-1922," 242.

<sup>93</sup> William Willcocks was a British engineer who was born in India as the brother of a colonial officer General James Willcocks. After graduating from Thomason College of Civil Engineering, William joined the Indian Public Works Department. Following the British occupation of Egypt in 1882, he was transferred to Cairo to serve as Director-General of Reservoirs for Egypt. During his term of employment in Egypt, he conceived the bold scheme of the Aswan Dam on the Nile, which aimed to control the annual floods and provide irrigation in the dry season. At the time, the Aswan Dam became the largest masonry dam in the world. Coincidentally -or not, he was the same person who constructed the Hindiya Barrage in 1913. See Tony Murray, "Past Master: Sir William Willcocks - Visionary Irrigation Engineer," *Civil Engineering*, 2018, 24–25; "Turkey's Demand for Englishmen," *The Westminster Gazette*, October 9, 1908.

autumn flood rather than leaving it to go to waste in the Mediterranean. The excess water was to be used for the perennial irrigation of the cultivable soils (particularly the ones under cotton) through subsidiary canals. According to the Anglo-Egyptian government, the promised increase of agricultural revenues through perennial irrigation was a way to avoid the financial pressure of the *Caisse de la Dette Publique* (the Public Debt Commission) to which the revenues from railways, telegraphs, and the port of Alexandria had been allocated. If the revenues were multiplied and the debts were paid, it was expected, the government would eventually have required less for the international loans. Following the construction of the Aswan Dam, around 4,000,000 acres out of 6,500,000 acres of arable land could be perennially irrigated. There was also a dramatic increase in the yearly agricultural output of Egypt from £39,000,000 in 1895 to £70,000,000 in 1913. The dam, however, posed some unexpected problems arising from the mismanagement of the stored water, such as the continuous decline in cotton production which reached its peak in 1909. Apart from the economic yields, the importance of the Aswan Dam also lay in the conversion of water from a local resource to one controlled and allocated by the central state.<sup>94</sup>

The inauguration of the Suez Canal in 1869 was presumably not of the highest priority for the governors of Egypt as was the construction of the Aswan Dam. The basic function of the Canal was navigation and trade, rather than irrigation. On the other hand, the expenditures necessary for the Canal exploded Egypt's foreign debt well beyond the state's ability to pay it off. The official announcement of bankruptcy in 1876 gave way to the establishment of the *Caisse* and eventually

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<sup>94</sup> Roger Owen, *The Middle East in the World Economy 1800-1914* (London: I.B. Tauris, 1993), 221–22, 228; Claire Jean Cookson-Hills, “Engineering the Nile: Irrigation and the British Empire in Egypt, 1882-1914” (Ph.D. thesis, Queen’s University, 2013), 299, 310; Jennifer L. Derr, “Drafting a Map of Colonial Egypt: The 1902 Aswan Dam, Historical Imagination, and the Production of Agricultural Geography,” in *Environmental Imaginaries of the Middle East and North Africa*, ed. Diana K. Davis and Edmund Burke III (Athens: Ohio University Press, 2011), 138, 146.

to the British occupation of the province.<sup>95</sup> For Baghdad, the Suez Canal facilitated contact with distant regions, increased trade eightfold between 1870 and 1914, and swept away major obstacles to increasing Iraq's exports by direct steam navigation to England. The Canal also multiplied foreign demand for Iraqi grain and dates which eventually encouraged the settlement of nomads and the extension of cultivation activities.<sup>96</sup> The latter two aspects were probably the reason why the Ottoman governors and notables compared the Suez Canal and the Hindiya Barrage and wanted Iraq to catch up with Egypt.

Apart from Ottoman official reports, the British media also made the analogy between Egypt and Baghdad based on Willcocks' irrigation projects in both provinces. Even those periodicals which did not specifically mention the Hindiya Barrage nevertheless based themselves on Willcocks' irrigation works when comparing the two regions. According to a London-based newspaper, *The Sphere*, the attention of the civilized world was now turning from Africa to Western Asia. Sir William Willcocks' detailed irrigation surveys in Mesopotamia were an important indicator of this shift. Willcocks had already completed large-scale irrigation projects in Egypt and proposed to apply his engineering techniques in the Tigris-Euphrates valley as well. For Willcocks, history constituted an important source regarding irrigation. He stressed that swampy soils in Baghdad had been brought under cultivation by a functional irrigation system since the ancient ages. His mission would only be the resurrection of these old techniques to revive the agricultural potential of Mesopotamia. If successful, 1,500,000 acres of arable land in Baghdad could be reclaimed and cultivated by improved irrigation. On the other hand, the establishment of irrigation works would also safeguard international interests in the area with the help of the

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<sup>95</sup> Owen, *The Middle East in the World Economy 1800-1914*, 122; Mikhail, "The Nature of Ottoman Egypt," 440; Cookson-Hills, "Engineering the Nile," 347.

<sup>96</sup> Issawi, *The Fertile Crescent*, 279; Owen, *The Middle East in the World Economy 1800-1914*, 183.

Baghdad railway that followed the course of the Twin Rivers. William Willcocks thought that the builders of the irrigation works should be the same as the builders of the Baghdad railway, i.e., the British. Thereby, British interests through the eastern section of the transcontinental line could be guaranteed.<sup>97</sup> Indian laborers who were British subjects could dig the channels, construct the weirs and regulators, as well as settle down in millions to cultivate these promising lands just as they were in another Punjab. Such achievement, the newspaper claimed, had already been accomplished in Egypt.<sup>98</sup>

Another British newspaper, *The Northern Whig*, reported that Willcocks himself also made a comparison between Iraq and Egypt regarding that the rivers of both regions fulfill the same functions. Baghdad, however, was far too desolate and arid in comparison with the ancient and middle ages. The cause of the ruin of Baghdad's agricultural wealth was the neglect of the dams and regulators, and the consequent desertion of the rivers of their courses. If irrigation works were restored in Iraq, Willcocks thought, the increased value of the lands would not only pay for themselves, but also for the proposed Baghdad railway which was expected to transport people and goods from the Persian Gulf to the irrigated lands. In other words, the prospected increase in agricultural production and exports would ensure the prosperity of the railway. With the increase

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<sup>97</sup> Whether Willcocks supported British political intervention in Iraq or not is another matter of debate. From this report, Willcocks seemed to promote at least British economic intervention in the area, in order to ensure their commercial interests through the Persian Gulf. In another report, Willcocks himself stated that he was only an engineer, and politics were no part of his profession. Nevertheless, he continued, it was politics that prevented him from putting the irrigation schemes into practice in the Ottoman lands. With "politics," he probably meant the negative attitude of the Hamidian government towards his proposals and British enterprises in general. "The Garden of the World: Mesopotamia to Be Restored (Sir William Willcocks' Great Project)," *London Daily News*, July 14, 1905.

<sup>98</sup> "To Make Another Egypt of the Baghdad Valley," *The Sphere*, May 9, 1903.

of population and income, Willcocks continues, Mesopotamia would probably reach the same level of prosperity as Egypt.<sup>99</sup>

In the newspaper, *The Field*, the development level of Iraq was measured by that of Egypt, referring to the Twin Rivers' potential both for irrigation and navigation: "*Sir William Willcocks's experienced eye sees the revival of the ancient fertility of the valleys of the Tigris and the Euphrates, through which the Baghdad railway is to pass. With the restoration of the long decayed canal systems there will arise a second Egypt.*" The newspaper also argued that Willcocks saw in Iraq the same potential for agricultural yield as in Egypt. If the irrigation engineering techniques that were used in Egypt were also applied in Iraq, more tracts of land could be brought under cultivation. On the other hand, even though the article respected the scientific approach of Willcocks in engineering, it also described his claims as "*romance in irrigation*" and "*fairy tale*" since he frequently referred to historical irrigation systems and the not yet realized potential of Mesopotamian resources.<sup>100</sup>

*The Leeds Mercury* newspaper took the comparison one step further and stated that Mesopotamia had greater water and land potential than Egypt. Whereas Egypt has only "*one Nile*," Mesopotamia has two glorious streams, the Tigris and the Euphrates, between which existed "*one of the most magnificent alluvial valleys on the surface of the globe.*" This great plain, according to the newspaper, which contained the "Garden of Eden" and being of the richest agricultural potentiality, would, at the not very remote date again "*blossom as the rose.*"<sup>101</sup>

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<sup>99</sup> "Restoring the Garden of Eden," *Northern Whig*, May 21, 1903.

<sup>100</sup> "The Romance of Irrigation," *The Field (The Country Gentleman's Newspaper)*, June 27, 1903.

<sup>101</sup> "The Garden of Eden: Desert That Should Be a World's Granary," *The Leeds Mercury*, June 24, 1909.

It appears that benchmarking between Egypt and Iraq was common in Ottoman correspondence/reports as well as in Willcocks' words and the British media. Nevertheless, the reason why the latter group made such an analogy probably lies in their different motives than the Ottomans'. The British probably aimed to justify their financial and political penetration in Iraq by showing their irrigation achievements in Egypt: *“Are we on the eve of witnessing a return of prosperity to the desolate wastes of Chaldea? A smiling, fertile, and contended Egypt is the best answer to those who demurred to the British occupation, and this result has been achieved, second to the establishment of the firm hand which has the power to administer justice and enforce its decisions, by artificial fertilisation, made possible by the magnificent system of canals introduced. Massive dams have been erected which rank with the greatest engineering works of the world, and the huge reservoirs feed the canals which maintain life and luxuriant crops over scores of miles of once arid desert.”*<sup>102</sup> The quote referred to the fact that irrigation systems and agricultural development in Egypt were achieved by stable governance facilitated by the British occupation. It also emphasized that Mesopotamia, with its grand potential, was indeed a candidate to become a second Egypt with the help of British political and technical experience.<sup>103</sup>

Through a closer look at the Ottoman *lāyihās* and British newspaper representations of the development process in Iraq in the late nineteenth and early twentieth century, one can consider a common theme which can be summarized as “creating a second Egypt.” Irrigation promised to be a prominent means to achieve this goal. Nevertheless, the reasons behind “creating a second Egypt” in Iraq were different for the Ottomans and the British since both sides intended to establish dominance over the Iraqi lands politically and economically. For Ottoman officials, the most

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<sup>102</sup> *The Western Times*, February 10, 1905.

<sup>103</sup> *Ibid.*,

apparent motivation to compare Iraq with Egypt was to increase the volume of production and trade in the former region and to integrate it economically into the Ottoman center. For the British side, such a comparison rather referred to the economic development in Egypt after 1882 under the British occupation government. According to British newspapers, it was the British who could accomplish the economic development also of the Tigris-Euphrates valley by setting up canal systems, dams, and reservoirs as well as catalyzing agricultural production under a centralized rule provided by occupation.

### *The Saniyya Lands and State Farms*

As reflected in official reports, a significant part of the irrigation measures under Hamidian rule was providing water for agricultural lands and boosting the state revenues. These agricultural lands, however, were not composed only of the “state lands” (*mīrī* or *emlāk-ı hümāyun*) in the general sense. Under Abdulhamid II, a particular type of land, *saniyya*, which was intertwined with state lands but had specific appropriation procedures, became the focus of irrigation activities.

Abdulhamid II attached particular importance to the continuity of cultivation in the fertile lands of Iraq and acquired large arable areas for his personal treasury. These holdings were called *saniyya* lands over which the sultan could exercise all the rights of *mulk* ownership including water privileges.<sup>104</sup> For instance, if a piece of land were irrigated by the creek of a *saniyya* estate, the tenant had to pay for the water; otherwise, his lands could be appropriated by the sultan. In other cases, the lands which prevented *saniyya* estates from accessing water were easily purchased by the sultan to guarantee the irrigation of his lands. Large *miri* lands along the irrigation canals were also turned into *saniyya* for the purpose of raising agricultural production in these well-hydrated

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<sup>104</sup> Arzu T. Terzi, *Hazine-i Hassa Nezareti* (Ankara: Türk Tarih Kurumu Basımevi, 2000), 90–92.

lands, by benefiting from the surrounding water resources.<sup>105</sup> By 1890, approximately 30 percent of the total cultivated land in Baghdad had been incorporated into the *saniyya* estates.<sup>106</sup>

Arable lands in the irrigation zone including central and southern Iraq were the most sought-after the sultan to integrate into the *saniyya* estates because water use in most of the north depended on seasonal rains which were a much less stable resource for agriculture.<sup>107</sup> Abdulhamid II, instead, aimed to increase the capacity of his lands by more advanced irrigation works which could eventually return more income both for the state and his personal treasury. According to the official correspondence in this period, it even appears that a small part of the *saniyya* revenues was used to invest in irrigation works. For instance, in 1886, the imperial center reported that a widespread drought had emerged in Hilla and Hindiya because of the seasonal shrinkage of the Euphrates River. Saving these regions from disaster depended on building irrigation works which necessitated the amount of approximately 3.411.000 piasters (*kuruş*), half of which was to be collected from the revenues of the state treasury, and the other half jointly from the revenues of the *saniyya* estates, and the local landholders.<sup>108</sup> In this regard, an unknown amount of the revenues generated from the irrigated *saniyya* lands seemed to be used for investment in the construction of the new irrigation projects. Considering that the resources of the imperial treasury had passed through a deep financial crisis at the time, the sultan might have intended to spend some part of

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<sup>105</sup> Albertine Jwaideh, "The Sanniya Lands of Sultan Abdulhamid II in Iraq," in *Arabic and Islamic Studies in Honor of Hamilton A. R. Gibb*, ed. George Makdisi (Leiden: E. J. Brill, 1965), 330–31.

<sup>106</sup> Çetinsaya, *Ottoman Administration of Iraq*, 14; Jamil Mousa Al-Najjar, *Al-Idara al-Uthmaniya Fî Wilayat Bagdad: 1869-1917* (Cairo: Maktabat Madbuli, 1991), 397.

<sup>107</sup> Kamal Abdal-Rahman Salman, "The Ottoman and British Policies toward Iraqi Tribes: 1831 to 1920" (Ph.D. thesis, United States, Utah, The University of Utah, 1992), 143–44.

<sup>108</sup> BOA, *İrade Dahiliye (İ.DH)*, 1002/79143 (8 Eylül 1302).

the *saniyya* revenues to complete the remaining expenses of what the central treasury could not cover.

The concentration of the *saniyya* lands in the irrigation zone -including Hilla and Hindiya- made these lands not only economic but also administrative bases of power. In those regions, the supervision of lands was dealt with by the *Saniyya* Land Department, which was established in 1882, and whose administrator was the commander-of-chief for the Sixth Imperial Army in Baghdad. This close relationship between the two departments demonstrates that the military was a key source for the imperial center to provide surveyors and trained engineers for irrigation and cultivation.<sup>109</sup> Moreover, there was no jurisdiction in Baghdad province over the Sixth Imperial Army. The department took instructions directly from Istanbul and provided the legitimate force to impose the imperial orders, to confiscate the lands from tribes, and to collect the revenues from the *saniyya* estates.<sup>110</sup>

The *saniyya* lands were administered differently than other cultivable areas throughout Baghdad. The governor of Baghdad had no jurisdiction over the *Saniyya* Land Department which took the orders directly from the Department of the Privy Purse (*Hazine-i Hâssa Nezâreti*) located in the imperial center. The *Saniyya* Land Department consisted of two main branches: land and irrigation as one branch, and navigation as the other.<sup>111</sup> Digging irrigation canals, building drainage systems in marsh areas, and constructing bridges over the canals were controlled and organized around the *saniyya* estates by this department. The tenant farmers were encouraged to plant and cultivate unremittingly, in return for certain rights such as priority in water usage and exemption

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<sup>109</sup> Jwaideh, "The Sanniya Lands," 327–32.

<sup>110</sup> Salman, "The Ottoman and British Policies toward Iraqi Tribes: 1831 to 1920," 146; Al-Najjar, *Al-Idara al-Uthmaniya Fi Wilayat Bagdad*, 398.

<sup>111</sup> Çetinsaya, *Ottoman Administration of Iraq*, 18.

from conscription. Likewise, crops cultivated and harvested in *saniyya* soil were provided with better storage facilities in order not to expose them to any natural disaster or damage. Considering the annual floods and droughts in the vicinity of Baghdad, this aspect was particularly important to ensure the continuity of the cultivation process. In the long run, these irrigation measures indeed contributed much to the productivity of the *saniyya* lands in comparison with other cultivable areas in the region.<sup>112</sup>

The provision of water to lands belonging to *çiftlikât-ı hümayun* (state farms) was another central motivation of the Ottoman government for improving irrigation facilities in Baghdad. Similar to the *saniyya* estates, the *çiftliks* were assigned to the personal property of the sultan. In 1815, state farms were established for the purposes of horse-breeding in several regions including Eskişehir, Adana, Malatya, and Baghdad (Waziriya). The horses were raised on these lands to meet the requirements of the Ottoman army to ensure animal improvement (*ıslah*). Towards the end of the century, the state farms began to be utilized also for agricultural purposes and became the main target of the irrigation measures of the Ottoman center.<sup>113</sup>

In the late nineteenth century, the Baghdad-Waziriya farm was allocated to the Department of the Sixth Imperial Army, with the purpose of meeting the needs of cavalrymen deployed in the region.<sup>114</sup> Even though the details of what kind of horses and plants were raised on the farm are unknown, archival documents provide an idea about how the Ottoman center utilized and benefited from these lands. For instance, in a correspondence between the imperial center and the Baghdad

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<sup>112</sup> Jwaideh, "The Sanniya Lands," 333; Al-Najjar, *Al-Idara al-Uthmaniya Fî Wilayat Bagdad*, 397.

<sup>113</sup> Terzi, *Hazine-i Hassa Nezareti*, 104; İsmail Yaşayanlar, "19. ve 20. Yüzyıllarda Kirmasti ve Mihaliç Kazalarında At Yetiştiriciliğine Dair Veriler," *OTAM*, no. 37 (2015): 382, 384.

<sup>114</sup> Sevım Erdem, "Dicle Nehri Vadisinde At ve Beygir Cinsinin İslahına Yönelik Kurulan Bir Çiftlik: Harnini/Kharnini Çiftliği," *İstem*, no. 32 (2018): 335.

provincial administration, it is indicated that the Waziriya lands had been used both as agricultural land and a *hāra-i hümāyun* (farm to reproduce horses). In 1901, a water shortage occurred in the region which not only prevented the irrigation of the cultivated lands but also deprived people and animals of drinking water. As a result, the local population of Waziriya began leaving the farm and spreading to surrounding regions. The revenues of the farm visibly decreased and brought harm to the imperial treasury (*hem hazīne-i celīlenin azrārını hem çiftlik vāridātının tedennīsini müstelzim bulunmuş olduğundan*).<sup>115</sup>

In the same year, another correspondence between the imperial center and Baghdad province mentioned that the owners of agricultural lands (*ashāb-ı emlāk*) near Waziriya cut the water of the state farms in the region, claiming rights on the water resources that surrounded their lands. The interruption of water caused the cereals and vegetables to be completely wasted in the state farms in addition to a heavy loss to the imperial treasury. The cultivators of the state farms, on the other hand, could not find water even for drinking and began abandoning the *çiftlik*s, leaving the soils uncultivated. The neighboring *mülk* lands, on the other hand, continued producing large quantities of crops thanks to their water channels which kept even more water than their legitimate share. They were so wasteful that they even released excess water into the deserts. These attempts by the landowners to cut the water of the state farms, according to the imperial center, aimed to hinder the agricultural improvement of the farms. Under the circumstances, the imperial center ordered the Baghdad provincial administration to assign “fair” water officials who would solve ongoing disputes about the water rights in addition to building a bank on the *Diyala* river which would bring water to state farms and increase the provincial revenues.<sup>116</sup>

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<sup>115</sup> BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 2533/28 (3 Eylül 1317).

<sup>116</sup> “Vezīriye Çiftlik-i Hümāyunun terakkiyātına mâni’ olmak üzere Bağdad eşrāfı ve çiftlikler ashābı birçok esbāba tevessül edib ahīren dahī çiftlik-i hümāyun arzīsının suyunu kat’ eyledikleri beyānyıla... mezkūr çiftlik cins-i feresin

It seems that in parallel with the *saniyya* estates, state farms became the target of irrigation and cultivation activities during the rule of Abdulhamid II, both being incorporated into the sultan's own property and subjected to eminent water rights. This large-scale appropriation of farms by Abdulhamid II, as understood from the official documents, triggered a kind of rivalry between the landowners in Waziriya and the sultan over the economic interests of each from agricultural production. On the other hand, it was unclear whether the water supplied by the Hindiya Barrage directly benefited Waziriya since this region was located in the south of Baghdad and far away from Hindiya. However, irrigation in the Waziriya farms still took place within the overall reform agenda of which the Hindiya Barrage was a part.

### Conclusion

The Hindiya Barrage was the product of a reform process that began in Iraq in the late nineteenth century. After Midhat Pasha's administrative reorganizations, irrigation proved a significant tool in centralization and reform policies throughout the region. Under Abdulhamid II, whereas the actual reform process was interrupted for a while because of political and economic challenges, provincial officials frequently submitted irrigation proposals that were regarded as vital for Iraq. A remarkable point to consider in these reports was the motivation of "creating another Egypt" out of Iraq, referring to the vast and fertile lands and abundant water resources of Egypt and holding it up as a model for Iraq. This motivation was possibly related to the fact that

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*ıslah ve teksiri süvâri alaylarına muktezî hayvanâtın dâhilen tedârîki maksadıyla te'sis edilip bu maksadın esbâb-ı husûlünden beri sermâye tedârîki ve emr-i zirâ'atın tevsî'i maddesi olarak çiftlik kuvve-i inbâtiyesi ve kâbiliyeti derecesinde... sebze zer'îyle esbâb-ı terakkîsinin istikmâline sarf-ı mesâ'î olunmuş ise de semere-bahş-i muvaffakiyet olması oraca arzu edilmemekte olduğu... ve çiftlik-i hümâyunun enhâr ve cedâvilindeki suların inkitâ'ından dolayı mezrû'âtı külliyyen mahv ü telef olduğu hâlde... arâzi ashâbının mezrû'âtı feyiz ve bereketli olup... çiftlik istihkâki olan su ise... kat' edilerek zürrâ'a içecek su bile verilmemesinden nâşî zürrâ'ın ekserî dağıldığı..." BOA, Dahiliye Nezareti Mektubi Kalemi (DH.MKT), 2563/10 (17 Teşrinisani 1317).*

the Ottoman Empire had lost Egypt and the Balkans, and the frontiers gradually withdrew to Asian (Arab and Anatolian) provinces. Under these circumstances, Iraq attracted the attention of government officials and Abdulhamid II took seriously investment in the irrigation zone by appropriating fertile lands as his own property under the title of *saniyya* estates and *çiftliks*. These estates with superior water privileges were expected to contribute to the state treasury through continuous agricultural yield. The Hindiya Barrage was indeed a culmination of the Hamidian irrigation policies in this period and a model for the irrigation works through which the *saniyya* estates, *çiftliks*, and the state lands would be provided water.

## CHAPTER 3

### FIRST PHASE OF THE HINDIYA BARRAGE: EARLY IMPROVISATIONS, 1890-1908

In this chapter, it is argued that the Hindiya Barrage was shaped by the expectations of its builders, financial considerations, and environmental phenomena. Beginning in the 1850s, the existing earthen dam on the Hindiya river was subjected to restorations until a completely new dam was constructed in 1890. The following improvisation process of the Barrage between 1890 and 1908 will demonstrate the importance of water control in Iraq for the Hamidian government, despite ongoing financial and technical inadequacies. In this period, the Hindiya Barrage frequently needed to be repaired due to its structural deficiencies and the low quality of material used in the construction. The process of repair and improvisation, however, brought mostly temporary solutions, challenged by financial and technical shortcomings and the regular floods, a process that resulted in a public outcry that is reflected in the petitions submitted to the imperial center. Furthermore, the increasing British interest in undertaking irrigation projects in Iraq after the 1900s disturbed the Hamidian government, which conducted a negative and defensive policy against Britain and sought to hinder British economic and political intervention in Iraq as far as possible. This British interest in irrigation, however, would yield results under the Young Turk government during the second construction of the Hindiya Barrage.

The first reports about a dam on the Hindiya river already date back even to the first half of the nineteenth century. In 1849, a piece of official correspondence by Baghdad's governor-in-office Abdülkerim Nadir Pasha made mention of a dam (*sed*) reconstructed at the mouth of the Hindiya channel.<sup>117</sup> In the text, the Pasha informed the sultan that the Hindiya *sed* was already

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<sup>117</sup> The Hindiya channel was established in 1793 by Asaf al-Dawla, a Shi'i Indian ruler, who aimed to provide water to Najaf. The channel was dug in the shape of a crescent 12 to 15 meters wide, in order to decrease the pace of the river flow and carry water in an alternative route below Musayib to Najaf. Over time, the channel enlarged and

completed as a quite solid and stable structure.<sup>118</sup> The new dam was made out of osiers, reeds, and earth at the mouth of the Hindiya channel, to protect the local population from thirst, the crops from being wasted, and the state revenues from decrease, preventing the periodic overflow of the Euphrates. The construction cost 1000 bourses (*kese*), or 500.000 *kuruş* in total, which were to be covered from the excess of the provincial income. Nevertheless, it appears that the dam was not solid enough to tolerate the annual floods and severe fluxes and became completely ruined within five years.<sup>119</sup> Accordingly, the imperial center attempted to repair the dam since the submersion was seriously devastating the *mîrî* lands in which rice plants were cultivated.<sup>120</sup> The repair was carried out in 1859, with the help of 5000 day laborers, at a charge of 20,327 piasters covered by the provincial treasury.<sup>121</sup> Even after the repair, the dam resisted less than a year and collapsed due to the regular overflow of the Euphrates in the Hindiya channel.<sup>122</sup>

With the collapse of the dam for the second time, the governors of Iraq appealed to the province of Egypt for technical support in the construction of a dam and embankment in Hindiya since the environmental conditions were regarded as compatible between the two regions. Both provinces had rivers, the Tigris and Euphrates, and the Nile, which flooded regularly and

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became the main route of the Euphrates. See “Bağdad Vilayet Salnâmesi,” (1309), 263; Faisal Husain, “In the Bellies of the Marshes: Water and Power in the Countryside of Ottoman Baghdad,” *Environmental History* 19, no. 4 (2014): 655.

<sup>118</sup> “*Hindiye sadrının seddi... pek metîn ve rasîn olduđu halde reside-i hüsn-i hitâm olub...*” BOA, *İrade Meclis-i Vâlâ (İ.MVL)*, 160/4620 (19 Safer 1266). In addition, the document stresses that this dam was constructed once again (*müceddeden*), which meant there was indeed a dam at Hindiya well before this construction. Rhoads Murphey points out that Asaf al-Dawla, who sponsored the Hindiya channel, had also built a primitive dam at the juncture of Hilla and Hindiya channels. After Asaf, both the channel and the dam continued to be called as “Hindiya” (Indian), referring to the Indian origin of their founder. See Murphey, “The Ottoman Centuries of Iraq: Legacy or Aftermath? A Survey Study of Mesopotamian Hydrology and Ottoman Irrigation Projects,” 24.

<sup>119</sup> BOA, *Sadaret Mektubi Kalemi Meclis-i Vâlâ Evrakı (A.MKT.MVL)*, 21/46 (2 Muharrem 1266); *Cevdet Nafia (C.NF)*, 39/1907 (5 Safer 1266); Loftus, *Travels and Researches in Chaldea and Susiana*, 44–45.

<sup>120</sup> BOA, *İrade Meclis-i Vâlâ (İ.MVL)*, 347/68 (3 Safer 1272).

<sup>121</sup> BOA, *İrade Meclis-i Vâlâ (İ.MVL)*, 413/18047 (18 Receb 1875); *İrade Dahiliye (İ.DH)*, 424/28047 (17 Cemaziyellevvel 1275).

<sup>122</sup> BOA, *İrade Dahiliye (İ.DH)*, 426/28204 (29 Cemaziyelahir 1275).

constituted the basis for irrigation in the cultivated lands. The governors asked İsmail Pasha of Egypt to send skillful water engineers to solve the irrigation problems in Hindiya. The appeal of the Ottoman center to Egypt for technical support was presumably related to the imperial goal of converting Iraq into another Egypt. However, at the time, Egypt also lacked the qualified labor and equipment to overcome the Nile's flood and was incapable of providing irrigation engineers for Iraq.<sup>123</sup>

Even though the flood cycles continued damaging the state lands and causing losses to the treasury, there was no real attempt to reconstruct the dam at Hindiya for about two decades after 1860. This interruption was probably related to the overall financial crisis that broke out during the 1877-78 war with Russia, which further disrupted the balance of the imperial budget after the official declaration of bankruptcy in 1875.<sup>124</sup> In 1886, an official commission was dedicated to the project of the Hindiya Barrage by order of Abdulhamid II. The commission saw that the previous efforts had proven to be worthless and the Hindiya project had to be restarted by conducting a new survey in the region and opening a new channel through the Euphrates by removing the alluvial deposit from the riverbed.<sup>125</sup> In this period, there were only some small-scale irrigation efforts to meet the need for water around Karbala. In 1887, the Karbala district informed the capital about the opening of a waterway through Hindiya: "... *When the Husayniya channel, the main source of water for Karbala, dried out, the public (umum ahālī) and the visitors*<sup>126</sup> *of Imam Husayn began*

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<sup>123</sup> BOA, *Meclis-i Vâlâ Evrakı (MVL)*, 768/85 (13 Cemaziyevvel 1280).

<sup>124</sup> Ö. Faruk Bölükbaşı, *Tezyid-i Varidat ve Tenkih-i Masarifat: II. Abdülhamid Döneminde Mali İdare* (İstanbul: Osmanlı Bankası Arşiv ve Araştırma Merkezi, 2005), 28.

<sup>125</sup> BOA, *Meclis-i Vükela Mazbataları (MV)*, 13/63 (9 Safer 1304); 19/63 (3 Şaban 1304).

<sup>126</sup> BOA, *İrade Dahiliye (İ.DH)*, 1049/82431 (10 Eylül 1303). The document included a telegram sent by the notables of Karbala to the imperial center, complaining that a *naqib* called sayyid Süleyman claimed property rights to a major part of the newly opened channel, depriving both the inhabitants and the *saniyya* lands of water. In response, *Yıldız* palace ordered the return of the water to the locals and the pilgrims (*züvvar*) who were suffering from thirst. The denotation of *züvvar* (visitors) instead of the "Shi'i pilgrims," and the emphasis on the benefit of the

*suffering and getting sick from drinking bore water*<sup>127</sup> (*kuyu suyu içmekten fevkalāde ızdırab ve maraz içinde idi*). This year, however, the local government accomplished to open a waterway (*cetvel*) in Karbala in direction of the Hindiya course and carried its water to the district. Hundreds of thousands of Muslims prayed in this honorable land (*arāzī-i müşerrefe*) for the sultan caliph (*emīrū'l mü'minīn ve halīfe-i rūy-i zemīn*).<sup>128</sup>

Opening channels, however, was only a partial and temporary solution to the irrigation problem in Baghdad. For the Ottoman governors, the crux of the problem was the Euphrates' shift from Hilla to the Hindiya channel. If the main river course were returned to Hilla, the water would be distributed in a balanced fashion and the damage to people and land could be compensated. In the same year, 1887, Monsieur Galan, the technical advisor of the Ottoman Ministry of Trade and Public Works, conducted a survey in Baghdad and prepared a scheme for the Hindiya Barrage by order of the imperial center. As a result of the survey, Galan proposed to return the water to Hilla by opening an alternative channel to the main course and rebuilding the barrage. In addition, a gate bridge was to be constructed in Hindiya, whose gates could be opened or closed to regulate the intensity of river flow. The overall project would cost around 45-50,000 *liras* which were not even one-half the annual loss to the provincial treasury.<sup>129</sup> Nevertheless, the project had to be

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Muslim population (*umûm-i İslâm*) seem to have reflected the pan-Islamic policy which aimed at gathering the Muslim subjects under the rule of the Ottoman caliph.

<sup>127</sup> The emphasis on the unsanitary conditions of bore water was noteworthy in light of an International Sanitary Conference which took place in Istanbul in 1866 to discuss the spread of cholera in the major ports and frontiers of the Ottoman Empire. Among the major topics that came to the fore in the conference was the role of pilgrimage and the corpse traffic between Iranian lands and Ottoman Iraq (*'atabāt*) in spread of cholera. In 1867, the same year in which the telegram was written, the disease had broken out in Karbala. Even though the telegram does not specifically refer to cholera, it seems that the Karbala notables were aware of the economic benefits of the Shi'i pilgrimage to the Iraqi provinces and demanded sanitary water resources for the pilgrims' use. See Sabri Ateş, "Bir Ayırışma Unsuru Olarak Salgın Hastalıklar: 19. Yüzyılda Osmanlı-İran Güç Mücadelesi ve Cenaze Trafığı," in *Osmanlı'dan Cumhuriyete Salgın Hastalıklar ve Kamu Sağlığı*, ed. Burcu Kurt and İsmail Yaşayanlar (İstanbul: Tarih Vakfı Yurt Yayınları, 2017), 118–19, 132.

<sup>128</sup> BOA, *İrade Dahiliye (İ.DH)*, 1049/82431 (10 Eylül 1303).

<sup>129</sup> BOA, *Meclis-i Vükela Mazbataları (MV)*, 26/58 (8 Rebiülevvel 1305); *İrade Meclis-i Mahsus (İ.MMS)*, 95/4006 (5 Rebiülevvel 1305). In the provincial *salnâmes*, the annual loss of the provincial treasury from the floods was

temporarily ceased since necessary supplies (e.g. wood and stones) could not be afforded by the treasury.<sup>130</sup>

In 1889, irrigation engineer Monsieur Schoendorfer was invited from Paris by the Ottoman government, to undertake the overall irrigation works under the charge of the Privy Purse and the provincial government. After his survey in the region, Schoendorfer saw that a main reason for the failure of the barrage was the use of timber and stones of poor quality, which could not resist the intensity of the river flow and loose earth. Thus, Schoendorfer proposed an alternative irrigation scheme, considering the gate bridge unnecessary.<sup>131</sup> Instead, he found sufficient material to rebuild the Hindiya Barrage underwater, by taking the bricks from ancient Babylonian sites and stone from quarries in Hit and Ana towns<sup>132</sup> near the Euphrates. The height of the barrage would be half of the Euphrates' depth in order to let a certain amount of water over the top to reach Hilla through the Omar Pasha channel. This scheme, according to Schoendorfer, would cost 360,000 *liras* in total.<sup>133</sup>

In the summer of 1890, when the water level in Hindiya was low, the barrage project was started under Sirri Pasha, following Schoendorfer's scheme. Carried out by approximately 5000

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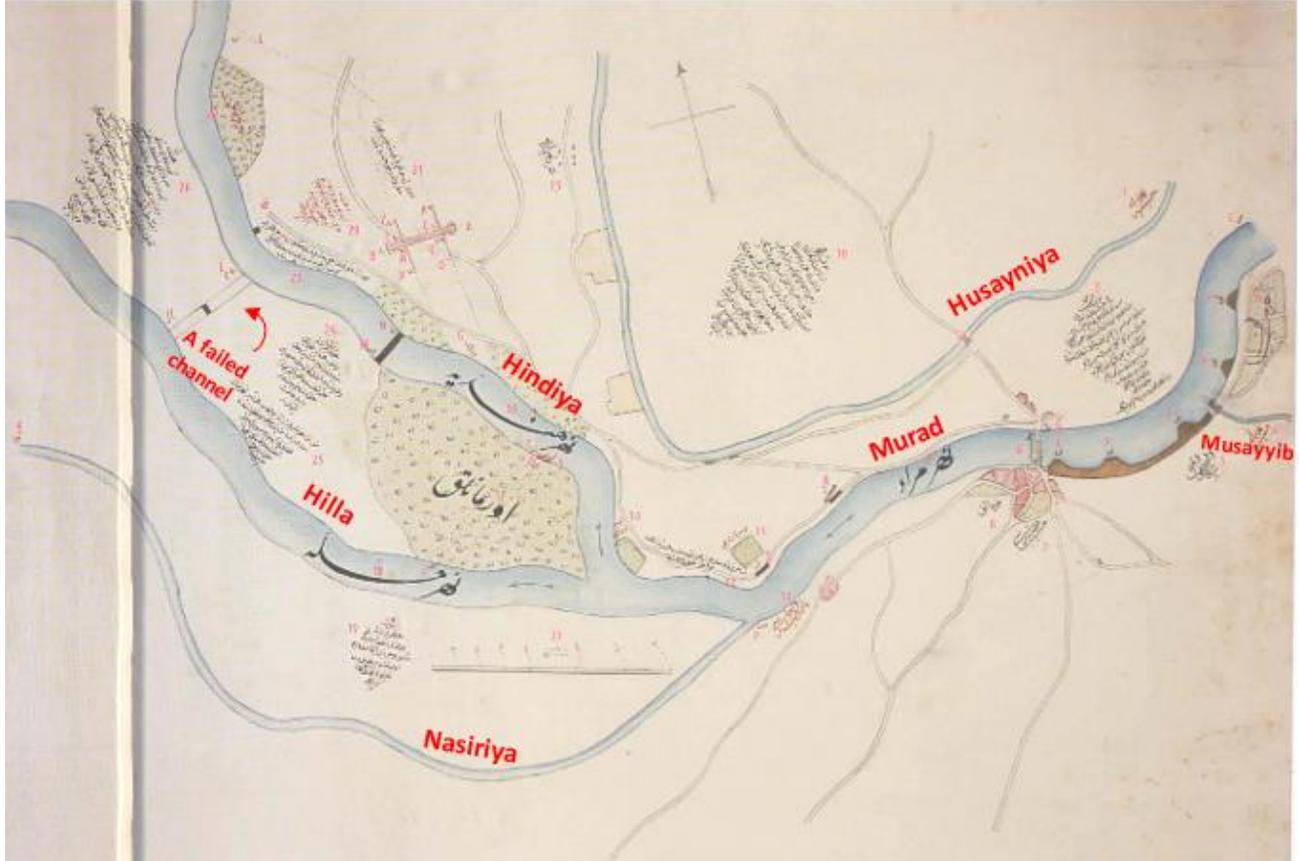
estimated as 100.000 *liras*. It means that the Hindiya project would be less costly for the imperial center than yearly financial losses. "Bağdad Vilayet Salnâmesi" (Matbaa-i Vilayet-i Bağdad, 1309), 293.

<sup>130</sup> BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 1655/111 (15 Muharrem 1307).

<sup>131</sup> "Bağdad Vilayet Salnâmesi," 1309, 294–95.

<sup>132</sup> These two towns are located north-west of Baghdad along the Euphrates. Hit included rich bitumen sources, stone quarries, and salt mines. The salt mines were monopolized by the Public Debt Administration. In Ana, there were stone ruins of ancient "Anato" town which dates back to the 2nd millennium BC. See "Bağdad Vilayet Salnâmesi" (Matbaa-i Vilayet-i Bağdad, 1319), 288–89; *Britannica Academic*, s.v. "Ānah."

<sup>133</sup> "Bağdad Vilayet Salnâmesi," 1309, 295–96, 309.



An Ottoman map demonstrating natural and man-made channels of the Euphrates (the late 1800s), scale 1:30.000. See Cevat Ekici, ed., *Osmanlı Döneminde Irak: Plan, Fotoğraf ve Belgelerle* (İstanbul: Plato Basımevi, 2006), 38.

day laborers who carried the stones by river and land, both the construction of the dam and the excavation of a channel were finalized by October of the same year.<sup>134</sup>

On the third day after the opening, the water reached Hilla through the newly opened channel, whereas Diwaniya gained water on the fifteenth day, and Samava only on the twenty-third. After the overall project was finished, engineer Schoendorfer and two sheikhs of the Hindiya tribes were rewarded with Mecidi medals because of their outstanding services in the barrage

<sup>134</sup> “Bağdad Vilayet Salnâmesi,” 269–72.

project.<sup>135</sup> In response, the notables of Baghdad including merchants and *naqibs* as well as the local inhabitants (*fakîrân-ı ahâlî*) expressed gratitude towards the central government by sending a telegram with sixty-five signatures. The telegram stated that Euphrates' water now reached their region and reinvigorated the previously deserted lands as well as the hearts of the inhabitants.<sup>136</sup>

An effective representation of the Hindiya Barrage mattered for Abdulhamid II, so as to create a positive image of his rule in the eyes of the subjects. For the sultan, public works like the Hindiya Barrage were symbolic declarations through which he could legitimize his power. These symbols could serve the sultan to further penetrate society and reinforce his rule even without showing up personally in public. When the Hindiya Barrage was completed and opened, a standing stone (*amud*) was put next to the Barrage with an Ottoman coat of arms (*arma*) and an Arabic inscription (*kitābe*) on its wall. It was noteworthy that, contrary to the ordinary practice of using official Ottoman Turkish in the inscriptions, the script on the Hindiya Barrage was written in Arabic, targeting directly the majority of the local population.<sup>137</sup> Following the sultan's order, the Arabic inscription for the Hindiya Barrage was prepared in the capital Istanbul, being incised on a marble stone and then sent to Baghdad. The text started with *basmala* and was written in a poetical style that ended with rhyme. It mentioned that when the Euphrates River changed its course, the sultan ordered the construction of the Hindiya Barrage through which the arid lands of Hilla were brought back to life.<sup>138</sup> Considering the importance and attention shown by the sultan to the Hindiya Barrage using Arabic inscriptions, special materials, and the coat of arms, the Barrage

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<sup>135</sup> "Bağdad Vilayet Salnâmesi," 1309, 274–75; *İrade Dahiliye (İ.DH)*, 1198/93814 (13 Rebiülevvel 1308).

<sup>136</sup> BOA, *Yıldız Perakende Evrakı Umumi (Y.PRK.UM)*, 19/61 (25 Teşrinievvel 1306).

<sup>137</sup> Nadir Özbek, *Osmanlı İmparatorluğu'nda Sosyal Devlet: Siyaset, İktidar ve Meşruiyet (1876-1914)* (İstanbul: İletişim, 2013), 151; Selim Deringil, *Simgeden Millete: II. Abdülhamid'den Mustafa Kemal'e Devlet ve Millet* (İstanbul: İletişim Yayınları, 2013), 54–57, 66–67.

<sup>138</sup> BOA, *Yıldız Sadaret Hususi Maruzat Evrakı (Y.A.HUS.)*, 245/43, 13 Mart 1307.

seems to have played a crucial role in representing the sultan's power and authority in a remote province like Baghdad.<sup>139</sup>

### *Improvisations after 1890*

Even though the Barrage was officially inaugurated in November 1890, it was not the end of the story. Immediately after its construction, the Barrage began to create problems because of its weak ground, low-quality material, and continuous exposure to flooding. In the period between 1890 and 1908, the overall efforts of repair, however, were mostly improvisational in character, depending on temporary solutions. Affected by financial shortcomings, ecological problems, the lack of solid materials, and of qualified engineers, neither could the Barrage be properly repaired, nor the water shortages overcome permanently. Thus, the concept of "improvisation" best illustrates irrigation efforts in Baghdad in this period.

No sooner was the Barrage constructed than it became clear that it would require regular expenditure. In 1891, a guardsman was assigned by the government with a 750 piasters monthly salary, to protect the barrage from the assaults of the nomadic tribes.<sup>140</sup> Furthermore, it was decided to build a police station for the gendarmes protecting the Barrage, which cost 12,000 piasters.<sup>141</sup> Worries of the Ottoman center were not out of place since telegraph lines and steamships were

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<sup>139</sup> This attention to Arabic might also have been related to Abdulhamid II's policy to integrate the Arab provinces into the Empire. This policy aimed to employ more Arabic-speaking officials in the capital and to encourage them to publish more in the Arabic language in order to prevent both the occupation of the Arab provinces by the European powers, as in the example of Egypt, and also to prevent the separation of these provinces from the Empire. For the close relations of Abdulhamid II with Arabs and his support of the Arabic language, see Buzpınar, Şit Tufan, (2010-2011), "Dersaadet'te Bir Arap Şeyhi: Şeyh Muhammed Zafir ve Sultan Abdülhamid ile İlişkileri," *Akademik Araştırmalar Dergisi* (47-48), 213-223.

<sup>140</sup> BOA, *İrade Şura-yı Devlet (İ.ŞD)*, 108/6482 (8 Zilhicce 1308).

<sup>141</sup> BOA, *Dahiliye Nezareti Mektubi Kalemî (DH.MKT)*, 1866/78 (5 Safer 1309).

often attacked by Iraqi tribes in this period. Sheikh Mansur who was appointed by the Ottoman government as the chief of the Muntafiq tribe, for instance, attacked the Baghdad-Hilla telegraph lines in 1863. Furthermore, in 1895, the Banu Asad tribe, which was based in Basra, attacked an Ottoman steamer, killing or wounding the soldiers on board. The reason why the tribes targeted the electric telegraph was that it ensured constant and quick contact between the provinces and the imperial center in addition to helping organize military expeditions against the tribes. Since they saw the telegraph as a means of Ottoman centralization, damaging the line meant to hurt this policy. Steam navigation, on the other hand, allowed the government to have more troops on the Twin Rivers, which meant more restriction on the mobility of tribes.<sup>142</sup> Like the telegraph and steamers, the Barrage also served to organize water resources basically for the benefit of the central state. The imperial center might also have expected the Barrage would become a target of tribes who resented the extension of the state's water rights to the detriment of tribal ownership.

Expenditures for the Barrage did not remain limited to guardsmen. The imperial center ordered 4500 m<sup>3</sup> of extra stones (each one of them 100-150 kg) to be brought from Hit at the cost of 4500 *liras* for the entrenchment (*tahkîmât*) of the barrage, as a precaution against demolition.<sup>143</sup> To cover the expense, the Ottoman center attempted to sell off *mîrî* lands by auction.<sup>144</sup> It now became clear that the provincial revenues remained insufficient to cover the Barrage's costs and further economic solutions were needed.

Despite all the precautions, the intensity of the river flow broke the Hindiya Barrage and submerged many buildings including the government office in Baghdad in 1892, causing a large

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<sup>142</sup> Soli Shahvar, "Tribes and Telegraphs in Lower Iraq: The Muntafiq and the Baghdad-Basrah Telegraph Line of 1863-65," *Middle Eastern Studies* 39, no. 1 (2003): 93-96; Çetinsaya, *Ottoman Administration of Iraq*, 97.

<sup>143</sup> BOA, *İrade Meclis-i Mahsus (İ.MMS)*, 127/5425 (4 Rebiülevvel 1309).

<sup>144</sup> BOA, *Maliye Nezareti Emlak-ı Emiriye (ML.EEM)*, 172/36 (6 Zilkade 1310).

budgetary deficit.<sup>145</sup> The amount of money required to repair the Barrage alone was 850,000 piasters, from which the central treasury could provide only 350,000.<sup>146</sup> While it is unclear whether the repair was completed, the problem of overflow in the Hindiya channel did not seem to end after the construction. On the contrary, the Barrage required continuous repairs which meant a large amount of expenditure for the imperial treasury.

In 1893, the level of the Hindiya river rose because of the accumulation of red mud in the channel's ground and heavy waves demolished the dam of the *muqāta'a* lands in Karbala. Many crops and vineyards were ruined and numerous houses and the government office in Abbasiya<sup>147</sup> were destroyed. In order to remedy Hindiya's unbalanced flow, an Indian viceroy and *muqāta'a* holder in Karbala, Naser Ali Khan, and a member of the district (*livā*) administrative council, seyyid Salih Efendi, submitted petitions to open a new channel near Najaf. However, according to the imperial center, the two people's request to undertake the channel project was unacceptable since Ali Khan was himself a British citizen, and Salih Efendi's name was used by the khan in order to cover his identity. Moreover, in return for the project, Ali Khan demanded *muqāta'as* along the two sides of the new channel in addition to a ten-year exemption from the tithe. Under these circumstances, the government decided to refuse the proposal and put it to reverse auction, to commit the operation to an Ottoman citizen, rather than to a British subject. Furthermore, the expenses of the excavation, 9000 *liras*, would be undertaken by the provincial treasury.<sup>148</sup>

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<sup>145</sup> BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 1980/91 (6 Muharrem 1310).

<sup>146</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 206/15430 (7 Zilkade 1310).

<sup>147</sup> Built in 1870 by draining the marshlands, the Abbasiya quarter (*mahalle*) was located at in the Karbala district near the Husayniya channel. It was a meeting point for many Shi'i pilgrims including Iranians and Indians who come to visit the tomb of Imam Abbas. See "Bağdad Vilayet Salnâmesi" (*Matbaa-i Vilayet-i Bağdad*, 1318), 466–67.

<sup>148</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 255/19078 (27 Zilhicce 1310).

The mistrustful approach of the Ottoman government towards Indian sponsorship might well be related to the increasing economic and political penetration of the Oudh Bequest as well as of the British in Ottoman Iraq. Based in the Shi'i state of Awadh in north India, the Oudh Bequest provided funding for philanthropic activities in Najaf and Karbala beginning in the 1850s. The main source of this vast Indian fund was the expansion of British commercial enterprise and political involvement in India. In this period, the Bequest also became a potential channel for British influence in Iraq.<sup>149</sup> In this regard, it seems that the Ottoman government's refusal of Ali Khan's proposal to open a new channel was more in line with Ottoman imperial interests since the central government aimed to maintain its economic superiority by being the owner of water resources and agricultural lands as well as the main beneficiary of taxation in the province. On the other hand, the growing impact of the British in the Shi'i patronage networks in Iraq under the cover of the Oudh Bequest further triggered Abdulhamid II's suspicions that the British government might also have imperial ambitions over Iraq, like India and Egypt. It was another reason why Abdulhamid II sought to prevent any Indian sponsorship of irrigation in Iraq.

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<sup>149</sup> Nakash, *The Shi'is of Iraq*, 211–12.



The collapse of the first Hindiya Barrage which was built of stone, earth, and reed. See Robert I. Money, "The Hindiya Barrage, Mesopotamia," *The Geographical Journal* 50, no. 3 (1917): 220.

In 1894, the imperial center admitted that the central treasury remained incapable of covering the repair expenses of the Hindiya Barrage. While the expense was 572,000 piasters in total, the annual budget could cover only 196,000 piasters.<sup>150</sup> Moreover, the guardsman appointed to protect the Barrage required 9000 piasters annual salary, which constituted another financial burden for the treasury.<sup>151</sup> Next year, the technical advisor of the Ministry of Public Works, Monsieur Galan, conducted a survey of the total amount of money for the maintenance of the barrage since large amounts had been spent on the project so far. According to Galan's calculations, 546,000 piasters would be enough for the repair. However, this amount was also too much for the treasury to cover. Instead, the central government decided to exempt the Barrage

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<sup>150</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 444/33259 (24 Muharrem 1312).

<sup>151</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 621/46546 (5 Zilkade 1312).

expenses from the budget of the Ministry of Trade and Public Works and resorted to supplying the cost from the landholders who were likely to benefit from water flow near Hindiya.<sup>152</sup>

The most detailed report about the Hindiya project was presented in 1896 by a technical committee in charge of conducting a survey about the Barrage's repair. According to the report, the key point to strengthen the barrage was to open a larger floodgate (*savak deliği*) at the bottom of the river to reduce the intensity of water and prevent the collapse of the dam wall. In order to prevent the overflow, artificial rocks should be placed both at the mouth of the floodgate and the holes on the river ground, and an embankment from red earth should be constructed on the front side of the barrage.

In previous repairs, the barrage had failed to retain water since the width of the floodgate remained inadequate. Moreover, the barrage was constructed on the river bottom which consisted of silt. The material used was natural rock, bricks, and bituminous stones unearthed from Hilla. Due to the weakness of both the riverbed and the material, the water could leak under the barrage even when its level was low and drag along alluvial deposits. In order to support its walls with stone masonry and to strengthen the floodgate, 1,272,000 piasters were required in total. Given the vital importance of the Hindiya Barrage for the prosperity of Baghdad, The Ottoman Council of Ministers offered to provide this amount by selling more state lands. Between 1887 and 1895, the overall cost of the barrage -including the repair, reached 6,090,000 piasters covered by the central treasury. Even though 10,000 *liras* worth of *mîrî* lands had been sold to individuals by title deed,

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<sup>152</sup> “...mezkur süddenin tâmir ve tahkîmi için her sene bir hayli akçeye lüzum gösterilmekte olması hasebiyle ... taşralara müteallik bu misillü masârifin tarîk-i bedelât-ı nakdiyesinden verilmek üzere bütçeden tay ve ihrâc edilmesi ve Bağdad vilâyeti ise tarîk-i bedelât-ı nakdiyesinden müstesnâ tutulmasına nazaran... vilâyet-i mezkûrece meblağ-ı mezkûrun seddin inşâsından dolayı istifâde edecek ashâb-ı emlâkdan ve sâir cihetden tedâriki dahî mümkinâtdan bulunduğundan...” BOA, *Babiali Evrak Odası Evrakı (BEO)*, 650/48745 (14 Muharrem 1313).

the expenses could not be covered.<sup>153</sup> It appears that the previous exemption of the barrage's expenses from the *Nâfia* budget was related to the large amounts that had been paid so far, as well as to the sentiment of the provincial governors that all the repair efforts had gone to waste.

The lack of irrigation, however, would cost more than the barrage's expenditure. The cultivation of rice plants (*çeltik*), which constituted the backbone of the Hindiya district, could not have been maintained due to inadequate irrigation in the agricultural lands for several years. Besides, most tribesmen and cultivators had scattered to surrounding districts to seek their livelihood and the annual revenue of Hindiya decreased from 30,000 to 10,000 or 12,000 *liras*. It was proposed that if two additional weirs could be built for 1,500 *liras* in total, the Hindiya Barrage would be supported and rice plant cultivation would benefit the *saniyya* estates and private lands with 20,000 *liras* of yearly income.<sup>154</sup> In addition to the weirs, the center proposed to the financial department to grant rice plant seeds to poor cultivators, which cost 98,460 piasters, in order to provide for the continuation of agriculture. However, the costs were probably not approved due to the lack of financial resources.<sup>155</sup> Apart from the difficulties in rice cultivation, delaying the repair of the Barrage was making the treasury lose more revenue every year. The low-speed flow of the Euphrates through Hilla regularly accumulated sediment in the channel and left the flux of water

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<sup>153</sup> "... Şimdiye kadar icrâ olunan amelîyât hükümsüz kalarak bu yüzden hazîne ve ahâlî külliyyen mütezarrir olacağına ve mâliye nezâretinden gelen tahrîrat hükmüne tevfiken sinîn-i mâziye masrafına karşı on bin liralık arâzî satıldığı gibi masârifat-ı muhammene nisbetinde arâzî satılmasından başka tedbir görülemediğine..." BOA, Yıldız Sadaret Resmi Maruzat Evrakı (Y.A.RES), 80/100 (18 Safer 1314).

<sup>154</sup> "...Hindiye kazâsının çeltik hâsılâtı livânın başlıca vâridatı iken birkaç seneden beri arâzinin tamamıyla saky edilemesinden nâsî ziraatten mahrum kalan aşâir ve zürra 'ın kısm-ı küllisi öteye beriye dağılarak kazâ-i mezkurun vâridât-ı seneviyesi otuz bin liradan on-on iki bin liraya kadar tenezzül eylediğinden halbuki mezkur kazâ dâhilindeki... iki seddin inşâsıyla suyun ehyevm... çeltik ziraati kâbil olamayan arâziye kadar îsâli hâlinde şitevî ve sayfî çeltik mahsûlünün senevî yirmi bin lira vâridat husûlü kavîyyen me'mûl ve melhûz bulunduğundan bahsile masârif-i inşâiye olarak tahmin olunan bin beş yüz liradan bu amelîyattan istifade edecek arâzi-i seniyye ile tapuya merbut arâzî hissesine isâbet eyleyecek şey sonra ashâbından istifâ edilmek ve mütebâkisi masraf yürütülmek... üzere meblağ-ı mezkûrun mal sandığından sarfî lüzümü..." BOA, Babialı Evrak Odası Evrakı (BEO), 1453/108942 (7 Zilkade 1317); *İrade Maliye (İ.ML)*, 38/42 (12 Safer 1318).

<sup>155</sup> BOA, Babialı Evrak Odası Evrakı (BEO), 2088/156543 (12 Rebiülevvel 1321).

to Hindiya. This situation not only put the Hindiya Barrage at risk of collapse but also harmed the *saniyya* lands in Baghdad.<sup>156</sup>

In 1898, the government attempted to take a new initiative with the Hindiya project. According to correspondence between the Ministry of Trade and Public Works and the imperial center, it was reported that one hundred tons of cement were required for the maintenance of the barrage at cost of 39,600 piasters.<sup>157</sup> Even though it is not clear if this amount was paid or not, it is understood that the imperial center did not give up the project and sought to restart the construction. Accordingly, in the same year, the *sadaret* (the Grand Vizirate) reported that 4,000 to 5,000 *liras* would be added to the provincial budget every year to cover the annual repair of the barrage.<sup>158</sup> The Council of Ministers (*Meclis-i Vükelâ*) saw that any amount of money spent on the barrage remained less than the potential benefits it would bring. The Council also proposed that the amount of expenditure should be divided into two halves of which one half would be paid by the state treasury and the other by the landowners who were the potential beneficiaries of the barrage water.<sup>159</sup> One of these landowners from Baghdad, Kölemen-zâde Hasan Bey, paid 2,800 piasters in barrage expenses.<sup>160</sup> Another landowner in Hindiya, Mutasarrıf Falih Pasha of the Al-Sadun tribe, was also obliged to pay for the Hindiya Barrage because he possessed two-third of the al-Badir *muqâta* 'a which had been cultivated for ten years and which brought a large amount of revenue to the Pasha.<sup>161</sup>

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<sup>156</sup> BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 668/21 (4 Zilhicce 1320).

<sup>157</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 1161/87007 (27 Safer 1316).

<sup>158</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 1168/87531 (12 Rebiülevvel 1316).

<sup>159</sup> BOA, *İrade Ticaret ve Nafia (İ.TNF)*, 5/40 (2 Receb 1316).

<sup>160</sup> BOA, *Maarif Nezareti Mektubi Kalemi (MF.MKT)*, 463/14 (21 Receb 1317).

<sup>161</sup> BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 2400/104 (14 Cemaziyelevvel 1318).

In 1898, Baghdad province took concrete actions and started to extract bricks for the barrage from the Babylonian ruins. Even though the 1884 Law of Antiquities declared that all the findings in archeological excavations within Ottoman lands belonged to the Ottoman state, there was an old practice of utilizing ancient ruins in new architectural works. Following this practice that dates back to the Byzantine Empire, the Ottoman administration saw these historical artifacts more from the aspect of utility and practical benefits than as cultural heritage.<sup>162</sup> During the construction of the Hindiya Barrage, it seems the provincial government sought to reduce material expenses by using ancient Babylonian stones without regard to their historical value. The director of the Ottoman Imperial Museum, Osman Hamdi Bey<sup>163</sup>, however, aimed to take all the archeological finds under the protection of the Ottoman government by preventing artifacts from falling into the hands of individuals. When Osman Hamdi was informed about the use of ruins in the Hindiya project, he immediately requested a stop to the extraction of stones from the lands near Babel because of the archeological value of the historical ruins in the region. Moreover, while the provincial government had permission to provide stones only from Barnun village, those responsible for the Hindiya project persistently extracted stones from sites where the German

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<sup>162</sup> Fatma Şimşek and Güven Dinç, “XIX. Yüzyılda Osmanlı İmparatorluğunda Eski Eser Anlayışının Doğuşu ve Bu Alanda Uygulanan Politikalar,” *Uludağ Üniversitesi Fen-Edebiyat Fakültesi Sosyal Bilimler Dergisi* 10, no. 16 (2009): 104–7, 112.

<sup>163</sup> Osman Hamdi Bey (1842-1910), an artist and archeologist, traveled to Baghdad three times. On his first visit which took place between 1869-1871, he was on training as a junior bureaucrat and accompanied Midhat Pasha in the civilizing mission of Baghdad province which indeed shaped his thoughts on the “Orient.” Beginning with this visit, he saw the Ottoman officials as corrupt, of course with the exception of Midhat Pasha and himself, and Ottoman society as lacking integrity and unwilling to comply with the norms of Western civilization. Following some official positions in the administration, Osman Hamdi was appointed director of the Imperial Museum, a position which he maintained until his death and made him an authority in archeology, art, and culture within the whole Empire. His second visit to Baghdad was for an archeological excavation on the peak of Mount Nemrud in company with the Armenian sculptor Osgan Efendi, to see the tumulus of Antiochus of Commagene. On his last visit to Baghdad between 1892-1896, Osman Hamdi took photographs and wrote stories representing the local people living in Ottoman lands within an Orientalist fiction, appealing to a Western audience. Both his photographs and stories stressed the ultimate difference between East and West, seeing as impossible any attempt of a union between the two worlds. Edhem Eldem, “Ottoman Traveler to the Orient: Osman Hamdi Bey,” in *The Poetics and Politics of Place: Ottoman Istanbul and British Orientalism* (İstanbul: Suna and İnan Kıraç Foundation, Pera Museum, 2011), 170–76.

archeological committee was conducting excavations. Due to the opposition of Baghdad province to state regulations on antiquities as well as the complaints of the German archeologists, Osman Hamdi Bey's request was accepted, and the imperial center forbade the Hindiya team from extracting stones from Babel except for Barnun village.<sup>164</sup>

In 1904, the collapse of the Hindiya Barrage and a lack of rainfall caused the decrease of the tithe in Diwaniya by 40 percent in addition to a decline in livestock taxes which reached 6,000 *liras* as usual. The report continued to emphasize that the treasury was dealing with difficulties in the payment of the barrage's repair expenses.<sup>165</sup> All the previous efforts from the first construction to annual repairs remained non-functional and swallowed the provincial revenues, in addition to the fact that irrigation conditions had gotten even worse around the Hindiya district.

The same year, the central government invited an engineer from France, Frederick Chauchot, to conduct a survey of the present situation of the Hindiya Barrage and to prepare a technical report on what could be done to save the Barrage. Hiring an engineer would cost a lot to the treasury. The travel expenses (*harcırah*) of engineer Chauchot, which were 6,000 francs (26,400 *kuruş*) in addition to his monthly salary (2,000 francs), would be covered by the imperial treasury by paying a deposit to the Ottoman Bank in return for credit. M. Chaucot's work on the survey continued for nine months (June 1904 to March 1905) and cost 27,133 francs in total. However, it was disappointing for the government to realize that Chauchot was an engineer of

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<sup>164</sup> “Bağdadda Hindiye seddi ameliyâtı için hükümet-i mahalliyenin Babil harâbelerinden tuğla ihrâc ettirmekte olduğu... vilayetce gösterilen ihtiyâc-ı kat'îye binâen mezkûr harâbelerden yalnız Bernun karyesi civârındaki harâbeden tuğla alınmasında bir dereceye kadar beis görülmeyerek vilayetin şu sûretle teshîl-i ihtiyâcâtına çalışmış olduğu halde... hükümet-i mahalliyeye ol babdaki tebligât-ı celîleyi nazar-ı itibâra almayıp Almanların hafriyat-ı fenniye icra etmekte oldukları noktalardan tuğla ihracında musır bulunduğundan bahisle şu hâl-i esef-iştîmâle bir netice verilmesi lüzûmu ehemmiyetle bildirildiğinden...” BOA, *Maarif Nezareti Mektubi Kalemî (MF.MKT)*, 472/7 (25 Cemaziyelevvel 1317); *Babialı Evrak Odası Evrakı (BEO)*, 1388/104040 (13 Cemaziyelahir 1317).

<sup>165</sup> BOA, *Babialı Evrak Odası Evrakı (BEO)*, 2375/178097 (10 Cemaziyelevvel 1322).

mechanics rather than hydraulics and did not have any competence in irrigation technologies. His salary was as costly for the treasury as the renovation of the Hindiya Barrage itself. Thereupon, the imperial center abrogated his contract and decided to maintain the survey process by a technical commission consisting of the Commander of Sixth Army (Fahri Pasha), the engineer of *saniyya* lands (Mirlivâ Zeki Pasha), and the municipal engineer Monsieur Maugel, until an expert hydraulic engineer could be invited from Europe.<sup>166</sup>

In 1906, the government opened a channel in Hilla, which raised the water level and began irrigating lands, as a temporary solution to water scarcity.<sup>167</sup> The following year, a 170 meters long embankment was built in Dulaim near the collapsed Kananiya dam which used to provide water to the *saniyya* estates. The construction was made from wood carried by ship, and by rushes from Hindiya and Shamiya<sup>168</sup> brought by about two thousand workers from the opposite side of the river. The governor of Baghdad, Hazim Bey, informed that despite many difficulties they faced during the construction, the embankment was successfully completed. Now, the amount of water flowing to Baghdad (200 m<sup>3</sup> to 800 m<sup>3</sup>) could completely be turned towards the original course of the Euphrates. Thanks to this new embankment, not only the Diwaniya district but also the rice plant cultivated in the *saniyya* lands could be saved from the danger of drought. Even Midhat Pasha's Kananiya dam, which was 50 meters lower, was completed in three years by spending 27,000 *liras* in one year alone. The present construction was accomplished in only three months

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<sup>166</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 2383/178701 (23 Cemaziyelevvel 1322); 2422/181586 (23 Receb 1322); 2533/189946 (16 Muharrem 1323); 2540/190470 (25 Muharrem 1323); 2525/189308 (5 Muharrem 1323).

<sup>167</sup> BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 1055/31 (9 Muharrem 1324).

<sup>168</sup> Shamiya district was located on south of Hindiya, supplying its water demand from the Hindiya channel and surrounding marshes. Rice production during the summer was central for the district's exports. See Eroğlu, Babuçoğlu, and Özdil, *Osmanlı Vilayet Salnamelerinde Bağdat*, 124.



“Floods on the Euphrates,” Sir John Hewett, “Report for the Army Council on Mesopotamia,” IOR/L/PS/20/35 (1919), 22.

at a cost of 6000 *liras* which was covered by the money deposited for the Hindiya Barrage since the provincial income of Baghdad would remain insufficient.<sup>169</sup>

In the meantime, a “first-class” engineer of hydraulics, Louis Cugnin, was invited from France to conduct a survey about the Hindiya Barrage and solve the problem of sedimentation in the Hilla channel. According to Cugnin, a weir with a movable floodgate on the Hindiya channel was required to protect the Barrage from the pressure of the flow. The construction’s cost was 165,000 *liras* in addition to Monsieur Cugnin’s monthly salary (2,000 francs) and travel expenses (6,000 francs), which could be covered only by receiving a high-interest loan from the Ottoman Bank.<sup>170</sup> However, since the imperial center saw that the treasury would need credit even for the

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<sup>169</sup> BOA, *İrade Maliye (İ.ML)*, 77/45 (6 Cemaziyelahir 1325); *Babiali Evrak Odası Evrakı (BEO)*, 3157/236772 (21 Şaban 1325); *Yıldız Perakende Evrakı Umumi (Y.PRK.UM)*, 80/87 (21 Şevval 1325).

<sup>170</sup> BOA, *Meclis-i Vükela Mazbataları (MV)*, 117/28 (21 Şaban 1325).

salary alone, the contract with engineer Cugnin was canceled right after the survey report about the restoration of the Barrage and enhancement of irrigation in Iraq.<sup>171</sup>

With regard to all measures that have been taken since the first construction of the Hindiya Barrage in 1890 until 1906, it appears no permanent solution could be produced for the water shortages around Karbala district. Attempts of repair after 1890 mostly ended up with failure due to the use of low-quality material, inadequacy of technical knowledge, environmental challenges (floods and cholera), and most importantly, financial shortcomings or absence of any sponsorship for the Barrage. The regular expenditures were sought to be covered either from the provincial revenues or from the income of the *saniyya* estates and *emlāk-ı hümāyun*. Not a small amount of state lands was sold to meet the expenses during this period. Baghdad province corresponded often with the imperial center about repairing the Barrage and even commissions were set up to discuss the ways for reconstruction. Nevertheless, these efforts after 1890 remained mostly as paperwork that did not produce concrete results.<sup>172</sup> Expenditures for repair and endeavors of retrenchment mostly have gone to waste. There emerged a big difference between expectations from the irrigation efforts and their outcomes. It was only after 1908 that the construction of the Hindiya Barrage entered its second phase, promoted by British sponsorship and technical expertise.

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<sup>171</sup> BOA, *Meclis-i Vükela Mazbataları (MV)*, 117/99 (24 Zilkade 1325).

<sup>172</sup> This was not peculiar to Baghdad province, but valid also for the public works in Istanbul. For instance, see Burcu Kurt, "Payitaht'ın Suyunu Muhafaza Etmek: 1894 Depremi Sonrası Kırkçeşme Su Yolunun Tamiri," in *Kanunî Sultan Süleyman Dönemi ve Bursa*, ed. Burcu Kurt (Bursa: Gaye Kitabevi, 2019).

## *A Public Outcry for Water*

Despite the efforts of reconstruction after 1890, the Barrage had broken irreparably in 1903. The remainder of the dam wall was only 5-6 meters high.<sup>173</sup> In response, a noteworthy petition had been received by the imperial center from the Baghdad province. The author is unknown, however, and the petition was signed as “the people of Hilla and Diwaniya,” and had a stamp of the *Makâm-ı Seraskerî* (War Ministry) on it. The petition used highly satirical and bold language about the provincial governors and their policies. Moreover, the author had a quite literary language by using metaphors and historical references with a correct usage of punctuation marks which appears as an unusual style among the other petitions sent from Baghdad, most of which were poor translations from Arabic into Turkish.<sup>174</sup>

The petition’s main theme was the poverty and misery of the local inhabitants because of the harsh drought in Hilla and Diwaniya. The thirst was affecting not only people but also animals and plants. According to the author, the first and foremost reason for these poor living conditions was the negligence of the state and the corrupt officials in the province. The central state had long been neglected Baghdad leaving the administration to the officials who greedily strive for their personal interests rather than for the improvement of the province. Within the large halls of the huge government offices, the officials were living in luxury while the people were struggling against indigence within their hometown which turned into owl nests. In addition, the tithe (*aşar*)

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<sup>173</sup> “... *Hindiye süddesinin kısmen münhedim olduğundan ve mümkün mertebe tâmirât icrâ kılınmış ise de süddenin hâl-i aslîsine ircâ`î mümkün olamayb...*” BOA, *Babialı Evrak Odası Evrakı (BEO)*, 2200/164958 (29 Receb 1321); 2246/168434 (Eylül 1319).

<sup>174</sup> BOA, *Babialı Evrak Odası Evrakı (BEO)*, 2246/168434 (11 Eylül 1319).

increased severalfold despite the sharp decrease of the provincial income (*vâridat*), a situation that contributed only to the misery of the people.<sup>175</sup>

The main reason for the poverty of the province, the petition claims, was the drought of the shatt al-Hilla, due to the influx of Euphrates through the Hindiya channel. In order to solve this problem, the government employed engineer Monsieur Schoendorfer to dig another channel near Hilla and to build a huge technological masterpiece, the Hindiya Barrage, which indeed slowed down the river flow and carried sufficient water to Hilla.

Nevertheless, the barrage, which was built with great effort and cost 274,475 *liras*, collapsed due to the negligence of the corrupt officials. The Euphrates river, without any obstacle to holding its water, again turned its direction completely towards Hindiya, leaving many cultivable lands of Hilla aridly. There was also a map attached to the petition, demonstrating the dried channels and lands in Hilla. According to the map, the dried Hilla channel was 33 hours-length and the lands along the coast included vineyards and orchards which included more than 400,000 date palms. Moreover, there were 150 *muqāta* 'as withered in Hilla and Samava, included many poor inhabitants and suffering animals. The financial loss of the *muqāta* 'as belonged to the central treasury alone was about 200,000 *liras*, nearly the cost of the Hindiya Barrage itself.<sup>176</sup>

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<sup>175</sup> “...İşte bu ahvâl-i müeessifeyi gördükçe, bu büyük hükümet konaklarımızın müzeyyen ve heybetnümâ salonlarında geniş odalarında kanepelere gömülen koltuklu iskemleleri, yeşil örtülü masalar önünü büyük bir azamet ve ihtişam ile işgâl edenlerin bizim saâdet hâlimiz için değil surf sefâletimizin tesri` ve teşdidi için hep bir araya gelmiş olduklarına inanmakta istikâmet ve nazar-ı hikmet ve hakîkatten mahrum ve mücerred olanlardan imâr-ı mülk hissiyât-ı celîlesine hırsı câh ve ikbâli tercih edenlerden baykuş virânelerine dönen memleketimizin bu hali için şimdiye kadar hüsn-ü tedbir ve sıyânet beklediğimizden nâşi ne kadar sadedil olduğumuzu hakkı teslim edenler tasdikten çekinmezler... İânattan sarf-ı nazar şimdi bizden tarh olunan vergi ve aşar birkaç sene evvelkisinin birkaç misli iken varidâtımızın bu derece-i tedennîsinin ... bu güne kadar hiç bir nazar-ı agrâz ve dikkati dâvet edememesi sezâ-yı taccüb değil midir?” Ibid.

<sup>176</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 2246/168434 (11 Eylül 1319).

After the barrage went to ruin, the petition continues, the sedimentation increased in shatt al-Hilla, replenishing the channel with sands. The provincial governor and army officer immediately reached the region to deal with the problem. However, their action was virtually trying to prevent a huge and fast-flowing river by a handful of soil and several bundles of reed and rush. After the operation, there was no trace of water except a very weak stream. The *vali* gathered “thousands of poor people by force and invited them to thank the government for the newly-opened channel.”<sup>177</sup> Unfortunately, some people did thank the government, and the news of the successful operation was promulgated in the official newspaper of the province of Iraq, *Zawra*.<sup>178</sup> In the newspaper, it was announced that the provincial government accomplished to carry water to Hilla by opening a channel, and the crowd all together prayed for the sultan. Nevertheless, according to the petition, the *Zawra* Newspaper<sup>179</sup> ignored the maladministration and increasing poverty in the province. The thirst came to such a degree that while the wealthy people were carrying water from far away on the camels, the poor were forced to use stinky bores not different from hives. “Now”, the author asks, “to where those people can go, abandoning the lands they have been settling for

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<sup>177</sup> Ibid.

<sup>178</sup> “... *Ha şunu da unutmamalım ki vâli-i vilâyet ve ordu müşîri Allah için! ameliyat başına koştı. Bunu inkâr edemeyiz. Hem iki sefer ve başına binlerle kişi topladı. Lakin sonradan eser-i durâbet ve fetâneti olarak çağlayan teşkil eden kükremiş suları iki üç avuç toprak ile, dört beş demet kamışla, beş on salkım ile saz ile durdurmak istediği anlaşılınca herkesin evvelce tazelenen ümîdi hemen sönüverdi... Ahaliyi zavallı ahaliyi arz-ı teşekküre dâvet etti. Şâyân-ı teessüf ki bu teklîfi kabul eden bulundu. Çünkü meydanda sudan eser bile yoktu.*” BOA, *Babialı Evrak Odası Evrakı (BEO)*, 2246/168434 (11 Eylül 1319).

<sup>179</sup> *Zawra* Newspaper began to be published weekly in 1869 during Midhat Pasha’s term of office. Published both in Arabic and Ottoman Turkish, the first editor-in-chief of the newspaper was the well-known author Ahmet Midhat Efendi. The newspaper included news from the province such as official declarations and public improvements, as well as included articles of the editor and letters from the readers. See Murat Hanilçe, “Orta Doğu’da Osmanlı Vilayet Gazetelerine Bir Örnek: Zevra Gazetesi (1869),” in *Türk Basın Tarihi Uluslararası Sempozyumu Bildiriler*, vol. 1 (International Symposium on Turkish Press History, Ankara: Atatürk Araştırma Merkezi Yayınları, 2018), 241–43.

hundreds of years?” The petition ends by protesting the oppression of the provincial officials and saying: “We want justice!”<sup>180</sup>

The petition expresses that the provincial government and its media distorted the life conditions in the province and covered poverty, thirst, and maladministration that the inhabitants suffered. The newly-opened channel, despite its inadequacy, was reflected by the governors as if it solved the water shortage all over the province. Though, falsification of the real-life conditions of the provinces by the *valis* was not unusual during the Hamidian era. Provincial governors tended to manipulate the official reports, present their administrative zone as trouble-free, and even obscured the complaints and clamors of the inhabitants. Even the policy of provincial centralization envisaged to establish a direct link with the imperial center and its provinces, there was always a possibility for the *valis* to choose what report would arrive at the imperial center and to affect the imperial policies by manipulating the reports.<sup>181</sup> In relation, the petition sent by the inhabitants of Baghdad in 1903 apparently tried to show the difference between their real-life conditions and the picture of what was represented to the imperial center by the *valis* by seeking the help of the imperial center about the water shortage. It appears that there was no concrete action to solve the water shortage in the year the petition was written, except granting 50,000 *kıyye* seeds of rice plant (*çeltik tohumluğu*) to the poor peasants of Hindiya district, on the condition to receive

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<sup>180</sup> “... İşte emniyet-i müstakbelemizi talan bizi de nâlân eden bütün karanlıklar hep sû-i idârenin mülke ihânetin hemcinsine kasd-ı hiyânetin netâic-i izmihlâl-perveridir. Mâmâfih Zevrâ-i Irak’ın bu mecmuâ-i siyasî ve edebîsi bunları bütün bu enkâz-ı sefalet-bârı inkâr ediyor... Bir kere de hak el-insâf düşününüz ki yüzlerce seneden beri tevattün ettiğimiz bu yerleri terk edip de nereye gidelim!... Hemen Cenâb-ı Hak şu nâkes ellerden memleketimizi kurtarsın da semâ-yı hayâtımızı kaplayan ridâ-yı isâ’etin parçalandığı muhabbet-i vatana, hayât-ı insâniyeye sâhib olanların is`âr-ı `ibâda, i`mâr-ı bilâda cidden bezl-i makderet eylediklerini görelim; bir daha tekrar ederiz ki: “Zulüm ve cehâletin hüküm sürdüğü yerlerde asâr-ı imrân ve mes`ûdiyet müşâhede olunamaz, her hâlde adâlet isteriz adâlet!” BOA, Babiali Evrak Odası Evrakı (BEO), 2246/168434 (11 Eylül 1319).

<sup>181</sup> Abdülhamit Kırmızı, *Abdülhamid’in Valileri: Osmanlı Vilayet İdaresi 1895-1908* (İstanbul: Klasik, 2008), 105–9.



A map of Baghdad demonstrating the dried lands due to Euphrates' shift to Hindiya, 1903. Scale 1:1.500.000. See BOA, *Babiali Evrak Odası Evrakı (BEO)*, 2246/168434 (11 Eylül 1319).

the worth of seeds during the harvest season.<sup>182</sup> In the meantime, the growth of swamps due to the unbalanced flow of the Euphrates was threatening the air purity and public health in Baghdad. It was already a cholera outbreak in districts like Hilla, Najaf, Karbala, and Hindiya<sup>183</sup>, which constituted jeopardy for the public as well as for the provincial revenues by restraining the pilgrim caravans and corpse traffic.<sup>184</sup> The lack of water not only threatened the people, but also agricultural

<sup>182</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 2355/176559 (2 Rebiülevvel 1322). In 1324, the imperial center informed that 50,000 *kıyye* seeds of rice plant (worth 30,000 *kuruş*) could not be provided to the peasants yet. See *Babiali Evrak Odası Evrakı (BEO)*, 2770/207750 (3 Muharrem 1324).

<sup>183</sup> BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 2605/48 (20 Rebiülahir 1322).

<sup>184</sup> Ateş, "Bir Ayırışma Unsuru Olarak Salgın Hastalıklar," 138.

lands. The Hilla-Diwaniya channel had completely dried out, leaving 15,000,000 *liras*-worth of arable state lands waterless.<sup>185</sup>

In 1905, another local petition sent from Hilla with the sign of Kazvînîzâde Seyid Mehmed and his twenty-eight companions, informing that the present water shortage and salination in the riverbed resulted in a huge economic loss, and more than 100,000 inhabitants had already begun to leave their soils and disperse surrounding regions in searching for livelihood. Besides, the engineer sent by the government to the region (Monsieur Frederick Chauchot) could not solve the problem and the Hindiya Barrage became completely useless. The petition also stressed that more than three hundred submissions have been sent to the imperial center about the drought in the last three years, however, none of them was taken into account.<sup>186</sup> Regarding that only a few of these petitions could reach the imperial center, it was possible that some provincial officials filtered the petitions and kept which they desire to be read by the sultan.

Both petitions mentioned above express the public grievance against the inadequacy of irrigation works, continuing water shortage, poverty, and illnesses in the region. At the center of the grievance was the mismanagement of irrigation works. Furthermore, the petitions complained that most of the submissions written either did not reach the central state or were completely ignored by the provincial government. In any case, it appears that there was a mediation problem between the provincial society and the imperial center, which prevented the local people from directly communicate with the center.

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<sup>185</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 2518/188842 (18 Şubat 1320).

<sup>186</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 2587/193960 (21 Rebiülevvel 1323).

## *The British as “Unwelcome” Visitors in Iraq*

The Treaty of Berlin (1878) was a turning point during which the British government left its policy to protect the territorial integrity of the Ottoman Empire by putting in a claim for Cyprus. It was followed by the occupation of Egypt in 1882 under the pretext of suppressing the Urabi revolt and increasing philanthropic activities of the Oudh Bequest which paved the way for British penetration in Iraq.<sup>187</sup> In response, the Hamidian government developed a negative and defensive political attitude towards Britain and put in the effort to prevent the British economic and political penetration in the Ottoman lands as much as possible. This policy became concrete when the sultan preferred to employ French engineers in the construction of the Hindiya Barrage in 1890 and granted the concession of the Baghdad railway to a German firm in 1899, even though the British put in an effort to undertake both projects.<sup>188</sup> After about the early 1900s, however, British journalists, engineers, and diplomats began to visit Iraq more often as it was reported from the Ottoman provinces. According to the provincial reports, the main purpose of these visits was to provide further control in Iraq under the cover of journalism and scientific survey.

In October 1908, the publisher of Daily Mail (a London-based newspaper), sent a telegram to Istanbul questioning if the Ottoman government was decisive in building a barrage on the Hindiya channel.<sup>189</sup> Whether the Ottoman center replied to the question is untold in the report, it seems the newspaper was aware of that the French engineers failed several times to maintain the Barrage. Furthermore, considering the eagerness of the British government to undertake the

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<sup>187</sup> Halil İnalçık, *Devlet-i Aliyye: Osmanlı İmparatorluğu Üzerine Araştırmalar-IV* (İstanbul: Türkiye İş Bankası Kültür Yayınları, 2016), 209.

<sup>188</sup> Çetinsaya, “II. Abdülhamid’in İç Politikası: Bir Dönemlendirme Denemesi,” 384–85.

<sup>189</sup> “*Ceziretü'l Arabda vâki Hindiye kanalında bir sed inşâsı hükûmet-i seniyyece mukarrer idüğünün muvâfık-ı hakikat olub olmayacağı iş'ârına dâir Londrada Daily Mail gazetesi sâhib-i imtiyâzı tarafından keşide olunan telgrafnâme...*” BOA, *Babiali Evrak Odası Evrakı (BEO)*, 3235/242606 (21 Zilhicce 1325).

project, it was newsworthy for the journalists to report the technical shortcomings of the Ottoman government in maintaining the project. In the same year, a journalist from Daily Mail had made a trip to the Ottoman capital after visiting Mosul and Nusaybin.<sup>190</sup> Likewise, the wife of the chief editor of Daily Mail also visited Istanbul after stopping by Baghdad, İskenderun, Mersin, Tarsus, and Konya.<sup>191</sup> In parallel with the increase of these visits, the provincial reports sent to Istanbul expressed concerns about the fact that the British media was closely following the latest developments about the Hindiya project and conducting surveys about the economic potential of the Iraqi lands. The Ottoman government got anxious that these investigations would result in a possible political intervention in Iraq. On the other hand, the representatives of the British government sought an opportunity to get involved in the infrastructural projects in Iraq, from which they had been precluded by the Hamidian government. When the financial and technical inadequacies became apparent in a project like the Hindiya Barrage, the British might have expected that the Ottoman government would eventually have to appeal to their help.

More interestingly, Sir William Willcocks, who was in service of the British government in Egypt at the time, also made a trip to Anatolia and Iraq in 1904, to conduct a geographical survey in the region.<sup>192</sup> Willcocks came to observe the present conditions of irrigation and agriculture in Mesopotamia under the protection of the British embassy, by preparing written reports and taking some photographs during his journey. The Ottoman imperial center acted with

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<sup>190</sup> BOA, *Dahiliye Nezareti Tesri-i Muamelat ve Islahat Komisyonu Müteferrik (DH.TMIK.M)*, 243/37 (11 Nisan 1323).

<sup>191</sup> BOA, *Dahiliye Nezareti Tesri-i Muamelat ve Islahat Komisyonu Müteferrik (DH.TMIK.M)*, 245/47 (11 Mayıs 1323).

<sup>192</sup> Willcocks' first trip to Iraq was years before he attracted attention of British and Ottoman governments. At the trip, he was deeply affected by the fact that inhabitants of Hilla turned into wanderers due to the desertification of lands. As a hydraulic engineer worked in India and Egypt, Willcocks attached a high importance to the management of irrigation in Mesopotamia which meant for him the restoration of 'Garden of Eden' through scientific knowledge. He thought that the Tigris-Euphrates delta was suitable for the perennial irrigation. See Cole, "Hydraulics and the New Imperialism of Technology," 36–38.

suspicion towards Willcocks and ordered the provinces to follow him closely and to restrain his actions if there were any threats to the Ottoman sovereignty. According to the imperial center, the first and foremost goal of Willcocks was to set the stage for the British occupation of Iraq<sup>193</sup>, by settling the British citizens in the region and making financial investments in the area.<sup>194</sup> Irrigation was a kind of fortress that the Hamidian government aimed to protect from the British penetration and to allocate it for the benefit of the state and the *saniyya* lands as far as possible. Furthermore, the working experience of Willcocks in British-occupied Egypt made him a servant of British imperial ambitions in the eyes of the Hamidian government.

British visitors in Iraq were not limited to journalists and engineers at the time. As it was denounced to the imperial center, a group consisted of the British consul of Bahrain, two guardsmen, a civil servant, and eight Bahraini guides were on the way to Iraq, in charge of conducting surveys about trade (*tedkikât-ı ticâriye*) as well as about the natural characteristics of water resources (*miyâh-ı arâzînin ahvâl-i tabî'iyesi*) in the region. Although the British embassy claimed that these surveys did not carry any imperial purposes, the British officials' actions seemed to the Ottoman government as quite threatening, since they insisted on visiting Najaf and Najd, meeting with Ibn Saud (tribal leader of Najd), and collected some detailed sketches of Euphrates, Hilla, and Shatt al-Arab regions. The imperial center saw that these officials were most likely to

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<sup>193</sup> “*Basra ile Haleb beynindeki arâzinin ziraat nokta-i nazarından suver-i iskâiyesini tedkik için o cihetlere gitmiş olan İngiliz su mühendislerinden Mösyö Willcocksun yegâne maksadı havâli-i merkûmeyi İngilizler ve İngiliz sermâyesi ile doldurup İngiltere devletinin nüfûzu altına koymakdan ibâret olduğunu ahıbbâsına gelen mektubları mefâhîminden anlaşıldığı Mısır fevkalâde komiserliğinden arz-ı atebe-i ulyâ kılındığından mûmâ ileyhın o taraflara geşt ü güzârının kat`iyyen men` olunması... ve hâl ve hareketleri tarassud altında bulundurulacak mugâyir-i merzâ-yı âlî bir hareketleri görüldükde hemân ma`lumât verilmesi...*” BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 889/72 (7 Receb 1322).

<sup>194</sup> Even though the Ottoman correspondences included suspicious attitude towards Willcocks, it appears he did not observe any preventions during the surveys: “*So well rooted is Turkish power, that my authorisation from the Government carried me everywhere. I was treated with far greater consideration and respect in ancient Chaldea than I, an Englishman and Christian, would receive in Egypt.*” “The Valley of the Euphrates: A Big Scheme of Irrigation, Interview with Sir William Willcocks,” *The Englishman*, February 9, 1905.

serve the British imperial interests and to manipulate the tribal sheiks in the Arab provinces against the Ottoman government, under the guise of scientific survey and trade.<sup>195</sup>

The Hamidian government's suspicions towards the British government were not groundless, though. After the occupation of Egypt in 1881, British-backed revolts in Sudan (1883) and Kuwait (1896) ended up weakening Ottoman control in those regions, in the favor of the British government. Moreover, Ibn Saud, who had close relations with the British, clashed with the Ottoman forces many times until Abdulhamid II sent a military troop on Najd in 1904.<sup>196</sup> Despite all of the British interventions, there was no authority for the Ottoman center to prevent the actions of the British officials except to monitor their activities and inform the British embassy in case of any action threatening the Ottoman sovereignty.<sup>197</sup> It was clear that the British officers, journalists, and irrigation engineers were closely investigating the water resources and irrigation works in Mesopotamia including the Hindiya Barrage. The imperial center, on the other hand, appears to have been aware of the growing British interest in the Iraqi provinces and feared the fact that the Ottoman sovereignty in Iraq would be shaken in the short run.

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<sup>195</sup> “*Kuveyt ve Basraya gelen İngiliz memurlarının mücerred yolda tedkîkât-ı ticâriye icrâsı ve miyâh-ı arâzînin ahvâl-i tabî`îyesini keşfe memur olub alâmât-ı fârika rez ve tevsi`-i hudûd için istikşâfât ifâ etmek gibi bir vazîfe ve salâhiyetleri olmadığı sefaretten resmen bildirildiği... işbu İngiltere memurlarının Necef ve Necid cihetlerine azîmet ve İbn Su`ûd ile mülâkât arzusunda bulunmaları ve bunda ısrâr eylemeleri hüsn-ü niyete delâlet etmeyeceğinden ve maksad-ı aslî tedkîkât-ı ticâriye nâmı altında mestûr kalmakta idüğünden... İngiltere Bahreyn konsolosu ... ile iki zâbit ve bir doktor ve bir de mülkiye memurinin ma`îyyetlerinde sekiz kadar Bahreynli kılâğuz bulunduğu halde Kuveyt tarikiyle Cezîretü'l Araba doğru gidecekleri muhtemel olduğu ve bunlar Basraya giderler iken yolda bir takım planlar tedkîkiyle iştigâl edib Fırat ve Hille ve Şattu'l Arabın bazı mahallerinin planlarını almış oldukları anlaşıldığı ve yanlarında esliha-i cedîde ve âlât-ı rasadiye bulunduğu bu kere arz ve ihbâr kılınmış olduğundan... işbu İngiliz memurlarının o cihetlere azîmetleri menfa`at-i devlete muvâfık olmayacağından...*” Ibid.

<sup>196</sup> Çetinsaya, “II. Abdülhamid'in İç Politikası: Bir Dönemlendirme Denemesi,” 384–85, 394–95; Zekeriya Kurşun, *Necid ve Ahsa'da Osmanlı Hâkimiyeti: Vehhabî Hareketi ve Suud Devleti'nin Ortaya Çıkışı* (Ankara: Türk Tarih Kurumu Basımevi, 1998), 173–74.

<sup>197</sup> “... *Ecânibin memâlik-i şâhânede seyr ü seyâhatlerini tahdîd eder ve bunun men`ine devlete salâhiyet verir ahkâm-ı ahdiye olmadığından bu gibilerin bi'l külliye men`i mümkün olmayıp ancak hâl ve hareketlerine dikkat olunması ve muvâfık-ı merzâ olmayacak halleri görülür ise ona göre sefâretlerine beyân veyâhud sâir tedbîr itihâz kılınması muvâfık-ı hâl ve maslahat görüldüğü...*” Ibid.

## *Conclusion*

The first phase of the Hindiya Barrage between 1890 and 1908 well represented the Hamidian policy of irrigation in Iraq, which was marked mostly by reform proposals and improvisation. In this period, the projected reforms in irrigation could not be achieved due to financial and technical inadequacies as well as environmental challenges. The imperial treasury was already going through a financial crisis that limited the provincial budget allocated for the irrigation works including the Hindiya Barrage. In relation, the lack of educated irrigation experts in the empire was required to employ foreign engineers with a large amount of expenditure for the treasury. Regular floods, on the other hand, continued to break down the Barrage as well as the weirs that constituted a buffer against the river stream. All these challenges shaped the ways in which the Hindiya Barrage was constructed. Thus, shortly after its construction, the Barrage was demolished during the flood season of the Euphrates. Between 1890 and 1908, irrigation works in general and the Hindiya Barrage, in particular, went through a phase of improvisation that could only bring temporary solutions to the problem of water provision in Baghdad. Moreover, the imperial center considered that the lack of irrigation cost even more than the expenses of the Barrage. Thus, during this period, official commissions for public works were gathered, irrigation surveys were conducted, and multiple irrigation projects were designed. Nevertheless, these efforts did not bear any fruits except small-scale solutions to water shortages in the province. It gave way to public resentment which was echoed in the local petitions sent from Iraq to the imperial center. This public expression helped change the positive representation of the provincial governors in their correspondence with the capital. On the other hand, British government's efforts to undertake irrigation projects in Iraq were mostly prevented because of Abdulhamid II's doubts that the British would also takeover Iraq such as they occupied Ottoman Egypt, and they would use the

irrigation projects to set the stage for their future hegemony in Iraq. This British interest in irrigation would give its results when William Willcocks and then the Sir John Jackson Company undertook the Hindiya Barrage project under the Young Turk government.



## CHAPTER 4

### SECOND PHASE IN THE HINDIYA PROJECT:

#### BRITISH DOMINANCE, 1908-1913

This chapter briefly examines the increasing British impact on the second construction of the Hindiya Barrage in addition to the repercussions of the Barrage in the British media before and after WW1. When the Young Turks came to rule, the British financial and technical impact increased on the project because of the government's efforts to restore relations with Britain, which had been interrupted during the reign of Abdulhamid II. Growing British economic penetration in Iraq was resented by the local population but their reactions differed when it came to irrigation through which the province could be economically developed. Additionally, this chapter gives a general overview of the changing attitude of British newspapers toward Ottoman sovereignty in Iraq, with a focus on the reports about irrigation works in the region. It will try to demonstrate how the way of representing the irrigation works changed in the newspapers before and after the First World War in parallel with the changing political attitude of the British government toward the Ottoman sovereignty in Iraq. Finally, the chapter covers a different aspect of the Barrage besides irrigation, namely, its use as a British war front during WW1. Through this function, the chapter will show how irrigation investments by the British government turned out to be a justifying tool to pave the way for further political interventions.

The year 1908 was indeed a turning point for the reconstruction of the Hindiya Barrage. Under the Hamidian rule, the irrigation of the *saniyya* estates and maximizing the state income were the primary targets of the imperial center in building the Barrage. Technical support was

provided mostly by French engineers rather than the British. After the Committee of Union of Progress came to power, the *saniyya* lands of Abdulhamid II were confiscated and their concessions were transferred to the state treasury (*Mâliye Hazînesi*). Thereafter, these estates were not attached the same significance as before, and their revenues deteriorated.<sup>198</sup> The Hindiya project, however, was not left to its fate like the *saniyya* lands. On the contrary, the CUP rule gave the Barrage as much importance as Abdulhamid II but carried out the project in a different way. Both British finances and technical expertise became the dominant elements in the second phase of the project.

### *British Penetration and Public Reactions*

After the 1908 Revolution, the new Young Turk government attempted to establish a closer relationship with the British government.<sup>199</sup> One of the first measures taken was to employ Sir William Willcocks as the official irrigation advisor of the Ottoman Empire in Baghdad province. The official correspondences between Istanbul and Baghdad described the appointment of Willcocks as “the first fruits of the recent revolution.”<sup>200</sup> In this regard, British corporations began to dominate both in irrigation and navigation across Iraq, a process that resulted in public reactions expressed in the petitions and protests. Nevertheless, reactions against irrigation and navigation were different. While British contributions to irrigation were regarded as a support to agricultural

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<sup>198</sup> Jwaideh, “The Sanniya Lands,” 335; Terzi, *Hazine-i Hassa Nezareti*, 151.

<sup>199</sup> Burcu Kurt, *Osmanlı Irak 'ında İngiliz Nüfuzuna Tepkiler: Dicle ve Fırat'ta Seyr-i Sefain İmtiyazı Teşebbüsü (1909-1913)* (İstanbul: Osmanlı Bankası Arşiv ve Araştırma Merkezi, 2009), 19.

<sup>200</sup> “... *Mukaddemâ Avrupa'dan celbolunan mösyö Kônin nâmında bir mühendise mecrâ-yı mezkûrun keşfi icrâ ettirilerek evrâk-ı sadaretle keyfiyyet bi'l-ilân ameliyât-ı lâzimeyi deruhde edecek tâlib dahi taharrî edilmiş ise de bir nefîce elde edilememiş iken inkılâb-ı ahirin semere-i mütemenniye-i ûlâsı olmak üzere evvel bi-evvel hutta-i Irâkiyenin istihsâl-i esbâb-ı imrânı zımında Dicle ve Fırat nehirlерinin tathîri ve lâzım gelen sedlerin tesîsiyle arâzinin irvâ ve iskâsı hakkında keşfiyat ve tedkikât-ı fenniye icrâsı için bu gibi imâlât-ı nehriyedeki ihtisâsı ve mahâretiyle memâlik-i ecnebiyede dahi müteârif olan meşâhir mühendisînden Sir William Willcocks ile akd-i mukavele olunarak...*” BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 2632/50 (24 Eylül 1324).

development in Iraq, British partnerships in navigation were perceived as a sign of British imperial goals in the region.

The designation of Willcocks was a conscious attempt by the CUP to improve the Anglo-Ottoman relationship.<sup>201</sup> He was in charge of conducting research and recommending schemes for cleaning the Tigris and Euphrates waterways and for enhancing irrigation in agricultural lands.<sup>202</sup> Right after his designation for the project, Willcocks immediately began to collect material necessary for the repair of the Hindiya Barrage. As per his regular practice, he began to extract stones from the ancient Babylonian sites whose ruins carried archeological importance. In a newspaper article about the future of Mesopotamia, Willcocks himself stated that the best quality and longest-lasting stones were the bricks found in Babylon, those which were stamped with the name of Nebuchadnezzar. The success of Nebuchadnezzar's bricks, for Willcocks, lay in the fact that stone in the area was probably well washed before having been turned into bricks, with all of its salt removed since it is soluble in water.<sup>203</sup>

Whereas Willcocks kept extracting stones from Babylon, this activity was contrary to the Law of Antiquities promoted by Osman Hamdi Bey. The central government, however, exempted Willcocks' activities from any sanction, because of the Barrage's priority for Ottoman imperial interests. There was only one condition that if any cuneiform tablet were found during the excavation, the Hindiya team was obliged to inform archeologists in the region.<sup>204</sup> The privilege

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<sup>201</sup> Cole, "Hydraulics and the New Imperialism of Technology," 65.

<sup>202</sup> BOA, *Dahiliye Nezareti Mektubi Kalemi (DH.MKT)*, 2632/50 (24 Eylül 1324).

<sup>203</sup> "Nebuchadnezzar's Bricks: Nothing to Beat Them," *The Newcastle Daily Chronicle*, September 30, 1916.

<sup>204</sup> "... *El-cezîrede amelîyât-ı iskâiye icrâsı için mahalline ilzâm olunan mühendis Sir William Willcocks tarafından Hindiye seddinin tâmiri için Bâbil harâbelerinden tuğla ihrâc edilmekte olduğu... âsâr-ı atika nizamnâmesinin mevâdd-ı mahsûsası mücebbince âsâr-ı atıkayı muhtevî harâbelerden taş ve tuğla ihrâcı... ve buralarda bilâ ruhsat icrâsı memnû` ise de teşebbüs-i vâki`in umûr-i nâfia-i memlekete doğrudan doğruya taalluku cihetiyle... tuğlalarda mektûb elvâh-ı kadîme zuhûru hâlinde alıkonulmak üzere sûret-i istisnâiyede olarak tuğla ihrâcı ve mezkûr süddede*

that Willcocks and the project had was quite remarkable at this point; even a powerful bureaucratic figure like Osman Hamdi could not prevent the usage of the ancient stones for the construction.

British dominance in the Hindiya project was not limited to the expertise represented by Willcocks. The Young Turk government also sought to employ British transportation companies to import the necessary material for the Barrage. Six tug boats (*römorkör*) and twelve barges (*duba*) were to be purchased from the Sir John Jackson Company in order to carry the material. In order to accelerate the process, the government ordered the provinces not to prevent the navigation of the company's boats on the rivers. This was a precaution against possible actions by the provincial authorities, who might wrongly believe the boats to be foreign intruders and block them in the Persian Gulf.<sup>205</sup> Nevertheless, the tug boats were not received by the Ottoman government on time. Under the circumstances, the only option was to transport the material by ships belonging to the Ottoman Navigation Board (*idâre-i nehriye*).<sup>206</sup> Unfortunately, these ships could not even provide the regular transportation of commodities. Many commercial goods accumulated in harbor warehouses for long periods. If the tug boats did not arrive on time and trade continued to be interrupted like this, the Lynch company would extend its penetration into the Gulf, and merchants would likely complain about the economic policies of the Ottoman government.<sup>207</sup>

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*istimâli muvâfık-ı hâl ve maslahat görüldüğünün cevâben savb-ı âlilerine izbârı...*" BOA, *Maarif Nezareti Mektubi Kalemi (MF.MKT)*, 1123/38 (5 Cemazıyelevvel 1327).

<sup>205</sup> BOA, *Babiali Evrak Odası Evrakı (BEO)*, 4014/301032 (23 Rebiülevvel 1330).

<sup>206</sup> After the 1909, the concession of steamship navigation was transferred to the Ottoman state treasury from the Privy Purse. Besides, the name of the "Hamidian Board of Steamship" (Hamidiye Vapur İdaresi) was changed as the "Ottoman Navigation Board." See Kurt, *İngiliz Nüfuzuna Tepkiler*, 19; İlhan Ekinçi, "Hamidiye Vapur İdaresi: Fırat ve Dicle'de Osmanlı-İngiliz Rekabeti," in *Devr-i Hamid: Sultan II. Abdülhamid*, vol. 2 (Kayseri: Erciyes Üniversitesi Yayınları, 2011), 459. BOA, *Babiali Evrak Odası Evrakı (BEO)*, 4027/302018 (27 Rebiülahir 1330).

<sup>207</sup> "... Jackson kumpanyasıyla mün'akid mukâvelenin madde-i mahsûsası mücebince Hindiye süddesine müte'allik levâzım nakliyâtının idâre-i nehriye vapurlarıyla yahud Osmanlı sancağını hâmil olmak üzere şirketçe sûret-i muvakkatede tertib olunacak vapurlarla icrası lüzumu derkâr ve Linç kumpanyası vapurlarına Osmanlı bandırası çekilmekle mezkûr vapurların sıfat-ı Osmaniyeyi iktisâb edemeyeceği ... idare-i mezkûre vapurlarına ilâveten altı römorkör ile on iki dubanın mübâya'ası mukaddemâ kararlaştırılmış ve bunların ağustos'a kadar ihzâr olunacağı mukaddemâ makâm-ı valâlarından bildirilmişken henüz tedârik olunamaması seddeye müte'allik levâzım

On the other hand, the local population was very worried about growing British penetration in Iraq. The extended authority of British companies in both Iraq's irrigation and navigation possibly led different social groups to consider that their political and socio-economic interests were under threat. Accordingly, after 1909, political debates about the Lynch concession on the Tigris and Euphrates became the driving force that encouraged many groups of inhabitants to react against the concession with telegrams, petitions, and even protest marches. In a similar vein, the weight of British finances and expertise in the Hindiya project made some Iraqi notables like Babanzade İsmail Hakkı approach the project with suspicion, regarding it as a likely preliminary of British imperial ambitions in Iraq in the near future.

As previously mentioned, during the rule of Abdulhamid II, technical expertise in irrigation was provided by French engineers rather than the British, because of the negative attitude of Hamidian policy against the British government. Furthermore, William Willcocks had presented a pamphlet to Abdulhamid II, already in 1905, about irrigation in Mesopotamia. However, the irrigation proposal was refused by the sultan on the pretext that Willcocks would not be able to form a company to conduct the project. In this period, the concession for steamship navigation belonged only to the Privy Purse, since Abdulhamid II was seriously worried about British intervention in Iraq and the Persian Gulf.<sup>208</sup>

After 1909, the Young Turk government moved to establish a close relationship with the British Empire. In this regard, a combination of the Ottoman Navigation Board with the Lynch

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*nakliyâtından dolayı idâre-i mezkûrece husûlü tabii olan menâfi-i külliyyenin elde edilememesini ve Linç kumpanyasının teşebbüsâtının devamını ve eşya-yı ticâriyenin vakt ü zamânıyla nakledilmeyerek terâküm etmesinden dolayı tüccârın mürâca'at ve şikâyatını istilzâm etmekte bulunduğundan idâre-i mezbûre için römorkörleriyle dubaların bir gün evvel tedârikiyle ve Hindiye süddesine âid nakliyâtın idâre-i nehriyece ve bunun adem-i imkânı halinde ber mucceb-i mukâvele diğer Osmanlı vapurlarıyla icrâsı..." BOA, Babiali Evrak Odası Evrakı (BEO), 4069/305120 (20 Şaban 1330).*

<sup>208</sup> Çetinsaya, *Ottoman Administration of Iraq*, 38.

Company, as well as a British steamship concession was brought to the governmental agenda. Thanks to the concession and the merger of an Ottoman and a British institution, the CUP expected to receive the needed loan from the British government.<sup>209</sup> This scheme, however, created a cabinet crisis in addition to strong reactions by the opposition press and the local notables of Baghdad. Dozens of telegrams were sent to the imperial center by the Iraqi people from various social and religious groups, under the leadership of the Baghdadi merchants. In these telegrams, it was generally emphasized that the British concession might harm Ottoman political and economic interests in the region, and it was recommended that the concession be given to an Ottoman subject. The Baghdadi merchants also expressed that, despite having adequate capital themselves to afford this concession, the constitutional government did not ask their opinion and protect their commercial rights, reminiscent of the autocratic policies of the Hamidian regime. The concession was not only rejected by the merchants but also by Unionist and non-Unionist parliamentary members. An Iraqi deputy and prominent figure of the CUP, Babanzade İsmail Hakkı Bey, as opposed to the Lynch concession, claiming that it would only help to strengthen the hands of the British over Iraq.<sup>210</sup> Another deputy of Baghdad, a Jewish financier, and ex-director of the Hamidian Board of Steamships, Sason Hasqail, also warned against the possible threats that the scheme could bring.<sup>211</sup>

Social reactions against the British concession were not limited to written complaints but evolved into widespread demonstrations. On 20 December 1909, a massive protest was organized in *Azime* square in midtown Baghdad, during which both Turkish and Arabic speeches were made.

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<sup>209</sup> Hasan Kayalı, *Arabs and Young Turks: Ottomanism, Arabism, and Islamism in the Ottoman Empire, 1908-1918* (Berkeley: University of California Press, 1997), 64.

<sup>210</sup> Kurt, *İngiliz Nüfuzuna Tepkiler*, 21–26, 29; Kayalı, *Arabs and Young Turks*, 64.

<sup>211</sup> Mahmoud Haddad, “Iraq Before World War I: A Case of Anti-European Arab Ottomanism,” in *The Origins of Arab Nationalism*, ed. Rashid Khalidi et al. (New York: Columbia University Press, 1991), 129.

Two days later, a demonstration with 20,000 people was held in Kâzimiya, near İmam Kâzım's tomb, which was sacred for Shi'i pilgrims. During the protests, speakers mentioned the possible harm of the British concession to Iraqi society and made demands to cancel the scheme. Craftsmen in the region also supported the protests by lowering the shutters of their shops. On the 26<sup>th</sup> of the same month, a large crowd of people gathered in front of the British consulate in Baghdad and the Lynch Company building, then dispersed without incident to obey a government order.<sup>212</sup>

The most salient aspect of the social reactions against the Lynch concession was its heterogeneous character. It seems that both in the petitions and the protest marches, local inhabitants from different socio-economic and religious backgrounds took sides with each other. Moneylenders, landholders, peasants, as well as Muslims, Christians, and Jews in Iraq, reacted similarly regarding the *Nahriyya*-Lynch amalgamation. The CUP Club in Baghdad was one of the places where the opposition movement was organized. An argument could be that these reactions were nothing more than self-defense by the upper social classes regarding their economic interests in Iraq vis-à-vis the British. However, the heterogeneity of the reaction and frequent references to "Ottomanism" in the written complaints indicated that the Ottoman Empire continued to be, albeit weak, an umbrella under which the local society of Iraq could meet, until the Empire's end in 1918.<sup>213</sup>

Under the circumstances, the imperial center had no choice but to respond to the public demands in Iraq. In January 1910, the CUP government declared that the Ottoman Empire was retreating from the concession agreement with the British.<sup>214</sup> It was a partial success for local

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<sup>212</sup> Kurt, *İngiliz Nüfuzuna Tepkiler*, 28–31.

<sup>213</sup> Kurt, 39–41.

<sup>214</sup> Kayalı, *Arabs and Young Turks*, 65.

society in Ottoman Iraq.<sup>215</sup> Just like the Lynch concession, William Willcocks' irrigation schemes were also approached with suspicion by some groups of the local population. The British consul-general at Baghdad reported that during the demonstrations in Baghdad, protestors described the British irrigation enterprises as a sign of sinister intentions.<sup>216</sup> Additionally, rumors were spreading that "Iraq was sold to the British government."<sup>217</sup>

Irrigation, however, was not perceived negatively by the entire local population. Babanzade İsmail Hakkı Bey, for instance, an opponent to the Lynch concession, saw the irrigation scheme as necessary for the agricultural development of Iraq. According to Babanzade, Willcocks was recalcitrant to British customs and quite sympathetic to Ottomanism since he had an Ottoman flag in front of his residence. İsmail Hakkı seemed not to consider Willcocks as a "British imperialist," as he did the Lynch brothers. Rather, Babanzade identified Willcocks as a compatible man whose only purpose was to complete his barrage project to distribute the water flow between the Hilla and Hindiya branches.<sup>218</sup> Furthermore, Sason Efendi, a parliamentary deputy from Baghdad, made a statement to a British newspaper, saying that Willcocks' schemes would provide proper irrigation in Mesopotamia and restore its prosperity. Thus, Sason Efendi believed that about one and a half million of the nomadic Arab tribalists could be settled and persuaded to cultivate.<sup>219</sup> This relatively positive attitude towards Willcocks' projects among the notables of Baghdad could

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<sup>215</sup> It was a partial success because the concession draft was not completely annihilated. In 1913, a concession draft with more severe conditions was accepted and signed by the Young Turk government. This time, public reactions were not taken into consideration. Nevertheless, the outbreak of the First World War prevented the agreement from being implemented. Kurt, *İngiliz Nüfuzuna Tepkiler*, 46, 50.

<sup>216</sup> Haddad, "Iraq Before World War I," 126. By the statement of "sinister intentions," demonstrators could possibly mean the imperial ambitions of the British government over Iraq.

<sup>217</sup> Cole, "Hydraulics and the New Imperialism of Technology," 56.

<sup>218</sup> İsmail Hakkı Babanzade, *Beyrut'tan Kuveyt'e: Irak Mektupları*, ed. Murat Çulcu (İstanbul: Büke Yayıncılık, 2002), 103–6.

<sup>219</sup> "Progress in Mesopotamia," *London Evening Standard*, July 19, 1909.

be related to the fact that irrigation was indeed a valuable enterprise for landed interests in the area, unlike the Lynch concession which seriously threatened the commercial interests of the notables.

### *The Second Hindiya Barrage*

In 1911, William Willcocks resigned from the Hindiya project because of the complaints by notables, cultivators, and landholders who blamed him for the mismanagement of irrigation and lasting water shortages. Baghdad merchants complained that Willcocks supplied all the materials for the Barrage from Britain, incurring large expenses.<sup>220</sup> Furthermore, there was a disagreement between Willcocks and the Ottoman administration about the delay of the payment and the inadequacy of cash for the project. As Willcocks complained, the construction site and residential areas were far from each other, and the material had to be ordered some time before the construction started. When the payments were delayed or not paid in full, the completion of the project became endangered. Willcocks said that many times he had to pay urgent expenses from his own pocket. "I would give up this job already," Willcocks said, "but people will say that I quitted because of my incompetence."<sup>221</sup>

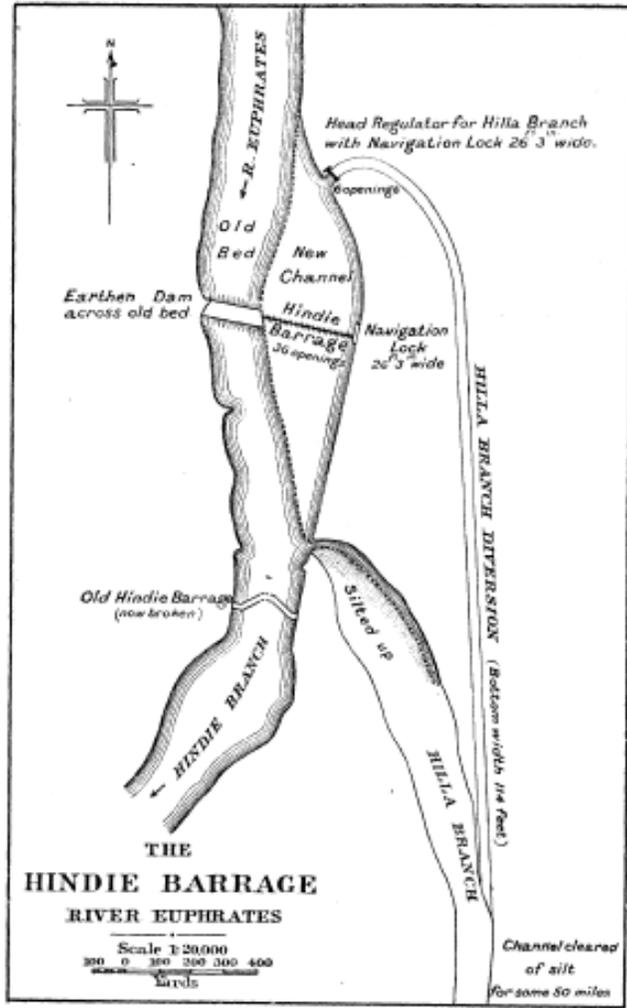
Yet, Baghdad was still suffering from widespread water shortage due to the dried channels, and the local population did not seem to have many expectations from the project anymore. According to one of the travel writings serialized in the journal *Sebilü'r-Reşâd*, it is quoted from the local inhabitants that they believed all the expenditures for the Barrage would eventually go to waste.<sup>222</sup>

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<sup>220</sup> Cole, "Hydraulics and the New Imperialism of Technology," 46–47.

<sup>221</sup> Babanzade, *Beyrut'tan Kuveyt'e: Irak Mektupları*, 104.

<sup>222</sup> "... Ahâli-i mahalliyenin ifâdesine bakılırsa bütün bu ameliyâtın fâidesiz olduğu ve yapılan masrafların cümlesinin ifnâ edileceği gösteriliyor ise de, hakikat-i hâl büsbütün başka..." S. M. Tevfik, "Hind Yolunda -8 : Haleb-Bağdad Yolculuğu," *Sebilürreşâd*, 1912, 74.



“The Hindie (Euphrates) Barrage,” *The Geographical Journal* 43, no. 4 (1914): 417.

The provincial officials in Iraq always approached Willcocks' financial demands with caution and they thought that the imperial treasury would suffer huge losses due to Willcocks' financial demands. Provincial officials were concerned that Willcocks wasted more money on narrow-scoped and locally-based irrigation projects neglecting the Hindiya Barrage.<sup>223</sup> Thereupon, the Ottoman government made a contract with the Sir John Jackson Company to prevent the construction from being interrupted. For the imperial center, if the construction were delayed only one year, the treasury would incur 60,000 or 70,000 *liras* of financial loss, and the local people would rightfully complain about the lack of water.<sup>224</sup>

Information on the details of the construction, however, is absent in the Ottoman state archives. Even the inauguration ceremony was not recorded or was just lost, probably because of the war conditions. Thus, the existing information derives from either Ottoman periodicals such as *Şehbal* or British archives and newspapers. The Hindiya Barrage, 250 meters long, was completed on 12 November 1913. The opening ceremony was conducted with the participation of the Ottoman Governor-General, Arab sheikhs, local inhabitants, and a military band. Among the guests were the representative of the Sir John Jackson Company. After the prayer was said, the Governor-General addressed the crowd stating that they can benefit the water “without losing time to turn to the lands their verdant colours.”<sup>225</sup>

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<sup>223</sup> Cole, “Hydraulics and the New Imperialism of Technology,” 46–47; Şahin, “Osmanlı Dönemi (19 ve 20. Yüzyıllar) Irak Vilâyetlerinde Sulama Projeleri: Sir William Willcocks ve Sir John Jackson Şirketi'nin Faaliyetleri,” 72.

<sup>224</sup> BOA, *İDUİT (İrade Dosya Usulü)*, 84/27 (Receb 1331).

<sup>225</sup> “Reinaugurating the Garden of Eden: Interesting Ceremonies at the Barrage Works on the Euphrates,” *The Sphere*, January 31, 1914, 137.



“A Committee at the Hindiya Barrage (*Hindiye süddesinde bir hey'et*),” *Şehbal* 76 (15 Mayıs 1329).<sup>226</sup>

The cost of the Barrage was 15,000,000 Ottoman *liras* which were provided by taking credit from the precursor National Bank of Turkey (*Türkiye Millî Bankası*), the financial supporter of the Sir John Jackson Company.<sup>227</sup> The most important difference between the new barrage and the old was the use of steel gates and sluices, which made the barrage more of a regulator of the flow than a passive obstruction. The arches above the sluices carried a new roadway from one bank to the other, and a swing bridge let pedestrians cross over the barrage. With these functions, it became possible to manage the supply of water into the Hindiya and Hilla channels, without upsetting the natural balance of flow between the two courses. Accordingly, after the opening of the Barrage, the Ottoman administrators adopted an irrigation system that allowed all the water to

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<sup>226</sup> According to the newspaper, the committee consisted of Ottoman provincial officials like the *vali* of Baghdad Mehmed Zeki Pasha, and representatives of the Sir John Jackson Co which undertook the Hindiya project.

<sup>227</sup> Irmak Karabulut, “Osmanlı’dan Cumhuriyet’e Türkiye’de Yabancı Bankaların Çalışmaları: Türkiye Milli Bankası Örneği,” *The Journal of Academic Social Science*, no. 85 (2018): 388–89.

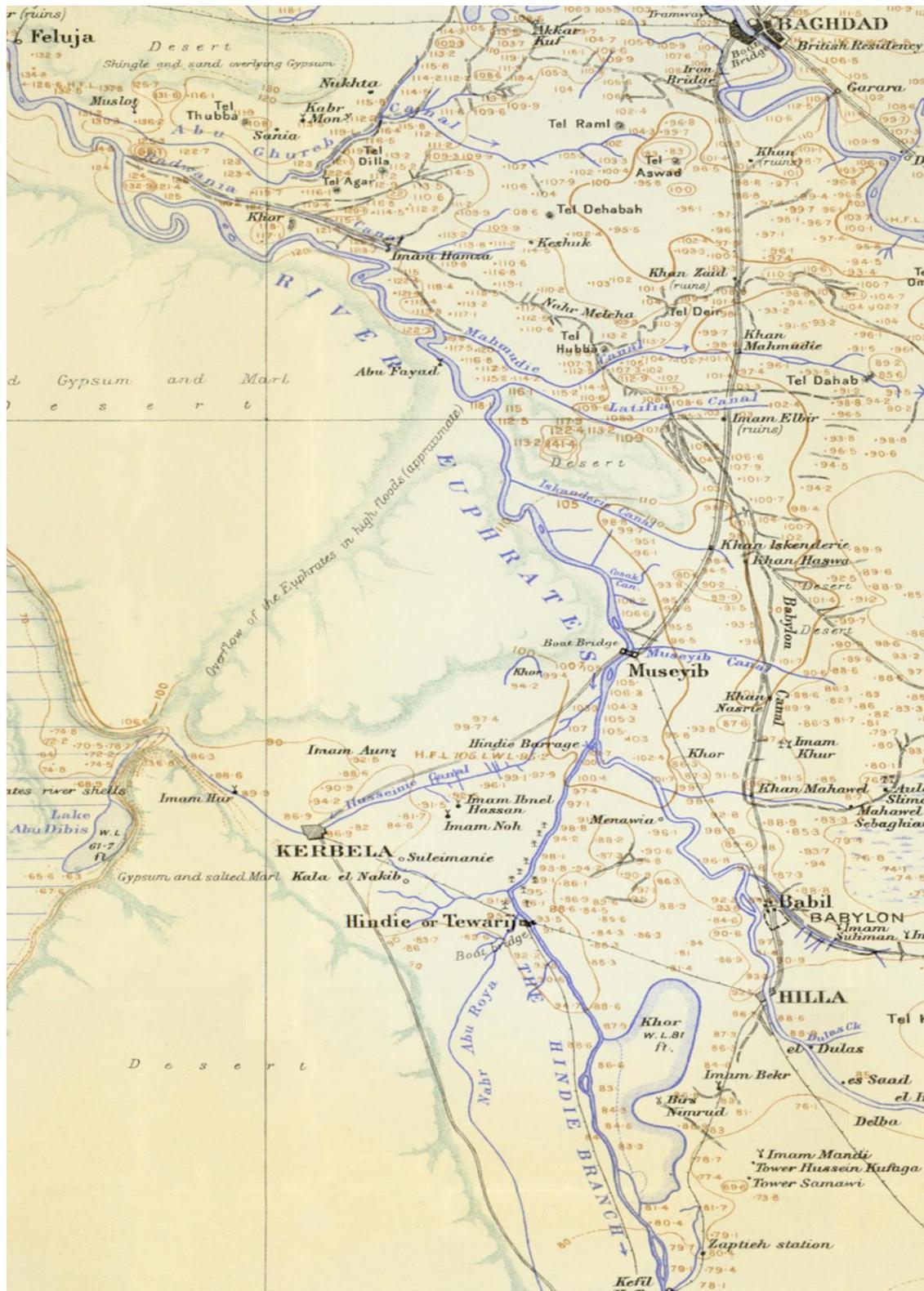
flow into Hindiya during the summer, and into Hilla during the winter, guaranteeing enough water for the most important summer crop, rice.

After the British occupation of Baghdad in 1917, British irrigation officers changed the Ottoman style of seasonal irrigation to a weekly rotation system, allowing the water to flow into each channel in alternative weeks. This newly-introduced irrigation adjustment, however, proved detrimental to the rice cultivation in Shamiya since it substantially cut the regular flow of summer water to the land. Before the British captured the region in 1917, the rice crop produced 90,000 tons gross, but in the first year of British control, rice production fell to 600 tons, and in 1918, it was only 20,000 tons.<sup>228</sup> The most visible impact of the Barrage on the Hilla region was the increasing tendency to settlement by many nomadic and pastoralist tribes for cultivation activities. In Shamiya, for instance, rice production increased, and the tribes began to reclaim lands. Shamiya also attracted migrants who came from neighboring areas seeking permanent farming opportunities. By 1913, over a million acres (*dönüm*) of agricultural lands were estimated to have been opened for cultivation in the newly settled regions. Thanks to the changes in the water distribution, both the Hilla and Hindiya branches provided clean drinking water, replacing the insanitary bore water which people had been forced to use beforehand.<sup>229</sup>

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<sup>228</sup> “The Hindie (Euphrates) Barrage,” *The Geographical Journal* 43, no. 4 (1914): 416–18; Robert I. Money, “The Hindiya Barrage, Mesopotamia,” *The Geographical Journal* 50, no. 3 (1917): 220; “The Progress of the Great Barrage,” *The Sphere*, December 6, 1913, 254; Ghassan R. Atiyah, *Iraq (1908-1921): A Socio-Political Study* (Beirut: The Arab Institute for Research and Publishing, 1973), 259.

<sup>229</sup> Atiyah, *Iraq (1908-1921): A Socio-Political Study*, 257; Haj, *The Making of Iraq*, 23.



Part of the map that was prepared during Willcocks' irrigation survey in Iraq. See H. G. Lyons, "Sir William Willcocks's Survey in Mesopotamia," *The Geographical Journal* 40 (1912).

*The “Old” versus the “New:” Repercussions of the Hindiya Barrage in the British Media*

Irrigation investments in Iraq were also echoed in the British media during the period of construction of the Hindiya Barrage. British newspapers’ attitudes towards the Ottoman Empire, however, were different before and after WWI. It seems that Britain continued to adhere politically to Ottoman sovereignty in Iraq until WWI. Accordingly, British officers who worked in Iraq, such as Willcocks, claimed that the only goal of their financial and technical support for the Hindiya Barrage was to enhance agricultural development in the Ottoman Empire. In other words, the British attitude before the war seemed to promote Ottoman interests in the area. Nevertheless, the British government appeared also to have foreseen that the Empire would lose Iraq in the short run, and was determined to build up its political and economic position in Iraq in advance, expecting to be the successor of the Ottomans in the region, since it is possible to argue that the British waited to take over the province only in case of war or the collapse of the Ottoman Empire.<sup>230</sup>

When WWI broke out, British officers began to explicitly express their intention to take over the former Iraqi provinces of the Ottoman Empire. Even though the British policy to promote Ottoman economic and political interests had already been given up after the Treaty of Berlin (1878), the media continued to seem to promote Ottoman political and economic interests in Iraq in reports about irrigation. After WWI, however, British imperial interests in Iraq were more clearly manifest. This change of attitude towards Ottoman integrity before and after the war was

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<sup>230</sup> Atiyah, *Iraq (1908-1921): A Socio-Political Study*, 77.

well represented in the British newspapers through articles about irrigation works and the Hindiya Barrage.



“The arch of the barrage is under construction” *Şehbal* 92, 1 Mart 1330



“The Great Hindia Barrage Showing Some of the Sluices in Position between the Long Series of Arches which Stretch from Bank to Bank of the Euphrates” (*The Sphere*, December 6, 1913, 254).

After Sir William Willcocks was appointed as the Ottoman irrigation advisor in Iraq, the British media insistently emphasized that his schemes aiming to restore agricultural prosperity only served Ottoman economic interests in the area.<sup>231</sup> Willcocks was represented as “an irrigation wizard” who would regulate the floodwaters with dams or barrages through which the desolate valley of the Euphrates would eventually turn into a productive outlet, linked to European markets. Thus, the Empire would gain, as the British media suggested, a large amount of revenues beyond its expectations as one of the greatest grain producers worldwide.<sup>232</sup>

In addition to focusing on Ottoman interests, the British press also favored the declaration of the Second Constitution through which British economic enterprises became more active in Iraq’s irrigation. It was frequently emphasized that with the overthrow of Abdulhamid II, who was suspicious towards British entrepreneurship in Iraq, and with the employment of Willcocks as the irrigation advisor, great schemes of prosperity became possible for Mesopotamia. The discrepancy between “the old” and “the new” Ottoman regimes was also evident from the perspective of each newspaper towards development and irrigation in Iraq.<sup>233</sup> *The Leeds Mercury*, for instance, wrote: “For two things needed to restore population are good government, now assured under the new regime and an extensive system of irrigation. It was the old Turk who achieved the desolation; the Young Turk will accomplish the renovation.”<sup>234</sup> It appears that “the old Turk” represented the Hamidian government, while “the Young Turk” was the CUP. In addition, *Pall Mall* wrote that, if the Young Turk government put Willcocks’ irrigation schemes into practice, the Ottoman Empire

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<sup>231</sup> “The Euphrates Valley Railway,” *Truth*, November 17, 1909, 1161.

<sup>232</sup> “An Ancient Chapter to Be Reopened,” *The Western Times*, November 20, 1909, 2; “Resources of Asia Minor: Development Means Much to the Turkish Empire,” *The Leicester Daily Post*, January 15, 1909, 2.

<sup>233</sup> “An Ancient Chapter to Be Reopened,” 2; “The Future of Turkey,” *The Manchester Courier*, December 4, 1908, 2; “Progress in Mesopotamia,” 8.

<sup>234</sup> “The Garden of Eden: Desert That Should Be a World’s Granary,” 4.

would claim its place among the “progressive nationalities.”<sup>235</sup> These manifestations of joy on the British side were, to a large extent, related to the long obstruction of the British schemes by the Hamidian government. Both British financial and technical contributions to the Hindiya Barrage were rigorously prevented by Abdulhamid II, asserting that the British aimed to take over the Iraqi provinces from the Ottoman Empire. The Young Turks, on the contrary, encouraged British experts to actively engage in irrigation projects in Iraq, as a part of the policy to restore diplomatic relations with the British government.

British newspapers also quoted Ottoman deputies’ statements referring to prospective cooperation between the Ottoman and British governments, related to development in Iraq. *The London Evening Standard* quoted the deputy İsmail Hakkı Bey saying: “*One of the most precious things the late regime had robbed us the cordial relations with England... The friendship for England amounts almost to a passion, but unlike most passions, it is based upon a very solid foundation of common interests, as it is almost as much to the advantage of Great Britain to have a tranquil and enlightened Turkey as it is to benefit of the people of Turkey themselves.*” According to the quote, İsmail Hakkı’s approach to increasing British technical and financial penetration in Iraq was not negative, at least in terms of irrigation. Moreover, İsmail Hakkı saw the British schemes in Iraq as serving the “common interests” from which the Ottoman government would have economic benefits as well. Another Ottoman deputy quoted was Sason Efendi who, for the newspaper, “was the representative of large interests in Mesopotamia.” Similar to İsmail Hakkı’s statements, Sason Efendi expressed his gratitude towards the employment of Willcocks, saying

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<sup>235</sup> “The Mesopotamian Test,” *Pall Mall Gazette*, July 28, 1911, 7.

that by employing irrigation schemes, one and a half million nomadic Arabs who were loyal to the constitution could be settled and persuaded to help in the development of the region.<sup>236</sup>

As the British newspapers claimed, Willcocks's irrigation schemes particularly the Hindiya Barrage, would not only benefit the notables but also the tribal population. With this aspect, irrigation was presented as a win-win activity for the Ottomans and the British. According to *The Westminster Gazette*, sheikh Khazal, the chief of the Arabs in Khuzistan province, was very worried about the possible impacts of irrigation works in his own territory. Whereas the causes underlying the sheikh's worries were unknown, he probably feared that either the lands under his command or the surrounding water resources could be seized by the government. According to the *Gazette*, Willcocks convinced the sheikh that the project would also serve the tribesmen's interests, explaining that almost a hundred thousand acres of land could be irrigated near Khuzistan. In the article, sheikh's response remained uncertain, however, Wilcock's impression of him was reflected as positive and complacent. Cooperation between the British and the tribes in irrigation projects appears to have supported the sympathetic image which the British hope to draw in Iraq.

After WWI broke out, the British attitude towards Ottoman sovereignty in Iraq changed significantly. The emphasis on "Ottoman-British cooperation" was replaced by the justification of the British military campaign in the newspapers. The irrigation works in Iraq began to be presented as essentially British efforts, rather than Ottoman. According to the *Dundee Courier*, the importance of the British expedition in Mesopotamia lay in the "protection of several millions of British capital invested in this quarter."<sup>237</sup> The newspaper also stressed it was the British who

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<sup>236</sup> "Progress in Mesopotamia," 8.

<sup>237</sup> "The New Fight for the Garden of Eden: Britain's Campaign on Biblical Soil in Mesopotamia," *Dundee Courier*, February 3, 1915, 2.

reinvigorated the region with modern scientific techniques and enhanced the productivity of the lands fifty-fold. It seems that British irrigation investments now began to be used to legitimize the British occupation of Ottoman territories in Iraq. Whereas the pre-war articles in the newspapers emphasized the protection of Ottoman political and economic interests in the region, the post-war ones mentioned only the benefit of the local Arab inhabitants and their welcoming attitude towards the British forces.<sup>238</sup>

In 1917, after the Sykes-Picot Agreement which envisaged a British-led Arab kingdom in Iraq was signed, Iraq was mentioned in the media as a potential outlet for India's surplus population under the British Empire. An Indian migrant would opt for Iraq to settle because of the geographical proximity between the two regions and the similarity of the climate. The inhabitants of both regions were quite compatible since Arab tribes in Iraq were "at the same stage of civilization as the nomadic tribes of North-Western India," and both peoples had "racial affinity." Furthermore, the Indian people would be the most appropriate settlers in Iraq because of their superior abilities in irrigation to turn the "Mesopotamian desert" into "a world's granary."<sup>239</sup> It appears that the representations of Iraq and the irrigation works in the media underwent a significant change in accordance with the transformation of the British political attitude towards Ottoman sovereignty in the area. The prewar emphasis on the "common interests" between the Ottomans and the British in Mesopotamia then turned into the justification of the British imperial domination over the region. Accordingly, the irrigation investments by the British government proved a central justifying tool to pave the way for further political interventions.

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<sup>238</sup> Ibid; "Future of Mesopotamia: 'One of the World's Largest Granaries,'" *The Globe*, June 7, 1915, 3.

<sup>239</sup> St. Nihal Singh, "Mesopotamia: An Arm of the Indian Empire," *Pall Mall Gazette*, March 31, 1917, 4; Michael Provence, *The Last Ottoman Generation and the Making of the Modern Middle East* (Cambridge: Cambridge University Press, 2017), 63–64.

### *The Hindiya Barrage as a Theatre of War*

Apart from being used for irrigation and flood control after its opening, the Hindiya Barrage was also used as a war front with the function to control the water supply of the enemy. Thanks to its location that was surrounded by water channels and dikes, the Barrage provided a suitable place for functioning as a front. Furthermore, with the possibility to manipulate the water flow through either channel, the regulators of the Barrage could be used as a trump against the enemy. The British forces made use of both functions of the Barrage to overcome the widescale tribal rebellions that broke out in 1920.

The British occupation of Iraq in 1914 brought about large-scale tribal grievances. The major purpose of the British forces was to maintain order in the region until the future status of Iraq was determined. After Britain finally declared the mandated status of Iraq in 1920, a series of localized uprisings erupted among the tribes of the Middle Euphrates including Hilla and Hindiya. These tribal warriors were fighting in separate formations each under their own leaders and in some areas, they were able to defeat the British garrison. In return, Anglo-Indian forces undertook a punitive campaign against those “insurgents.” During the sieges in Iraq, a major strategy of the British was to cut off the commercial supplies to the tribes and to deprive them of water by capturing the surroundings of the Hindiya Barrage.<sup>240</sup>

To cordon off and secure the Hindiya Barrage was particularly important for water control and the command of important crossings over the Euphrates. Furthermore, the weekly irrigation system of the British irrigation officers had the power to deprive the Hilla or Hindiya branches of

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<sup>240</sup> Sir James Haldane, “The Insurrection of Mesopotamia, 1920” (London, England: W. Blackwood and Sons, 1922), 147; Amal Vinogradov, “The 1920 Revolt in Iraq Reconsidered: The Role of Tribes in National Politics,” *International Journal of Middle East Studies* 3, no. 2 (1972): 133–35; Atiyah, *Iraq (1908-1921): A Socio-Political Study*, 265.

water by closing the regulators. On 13 July of the same year, British forces took over the Hindiya Barrage and allotted the surroundings as a military garrison. According to General Aylmer Haldane, the commander of the Anglo-Indian forces in Iraq, the position at the bifurcation of the Euphrates at Hindiya was a perfect place for passive defense since the channels decreased the chances of any tribal attack. To strengthen the defense, the regulators of the Barrage were also closed and surrounded by blockhouses, aiming to demoralize the enemy with the lack of vital resources. In particular, the district of Shamiya, as the rice store of all of Iraq, was expected to be influenced by the lack of water, forcing the rebels to give up. These strategies eventually gave concrete results when the fear of scarcity, drought, and the possibility of plague made the tribal leaders withdraw and surrender. Interestingly, even after the rebellion, the British army continued to use the Hindiya Barrage as a military garrison, in order to obstruct any future attempt of upheaval by the Iraqi tribes.<sup>241</sup>

It is interesting to note here that water proved vital not only for the agricultural development of the area but also for its function as a trump when used against the enemy at war. The water provided by the Hindiya Barrage after 1913 was utilized for both aims. During the 1920 insurrection especially, the British forces used the Barrage in some cases to prohibit the enemy from water, and in other cases to flush water towards the garrisons of the rebellious tribes. By this means, the British expected to discourage and frustrate the tribes by thirst or flood. Through the scarcity of water for drinking, cultivating, and animal breeding, in addition to the floods which prevented the use of terrain for fortification or habitation, the insurgents were to be outmaneuvered. General Haldane envisaged that these strategies would eventually push the battles to end in favor

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<sup>241</sup> Haldane, “The Insurrection of Mesopotamia, 1920,” 140–47, 151; Vinogradov, “The 1920 Revolt in Iraq Reconsidered: The Role of Tribes in National Politics,” 136–38; Scott Jones, “Occupation and Resistance in Southern Iraq: A Study of Great Britain’s Civil Administration in the Middle Euphrates and the Great Rebellion, 1917-1920” (M.A. diss., DePaul University, 2018), 82.

of the British, and he proved right.<sup>242</sup> Moreover, the environs of the Barrage served as a perfectly guarded place for the British army to deploy, which gave it a further advantage over the tribes. With all these functions, the Hindiya Barrage seems to have served British interests far more than the Ottoman Empire's agricultural welfare in the long run.

### *Conclusion*

The two constructions of the Hindiya Barrage became an example through which one can observe the changing economic and political aims behind perennial irrigation in Iraq. During the construction of the first Barrage, the most prominent motivations were to ensure the integration of the Iraqi provinces with the Ottoman center, to compensate the losses of the Balkans and Egypt economically, and to increase the productivity of the *saniyya* lands through irrigation facilities. Under the Young Turks, on the other hand, the *saniyya* lands lost their importance to a large extent, and the Barrage was expected to extend the arable soils and increase the agricultural capacity of the state lands. More importantly, in this period, the Barrage was regarded as a tool to restore Ottoman-British relations and political partnership until the British changed their minds during WWI. When the British captured the surroundings of the Barrage, it functioned as a war tool to be used against the enemy, with its ability to cut off or pour forth water. British forces were well aware of these functions and took advantage of them during tribal rebellions as well.

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<sup>242</sup> Haldane, "The Insurrection of Mesopotamia, 1920," 151.

## CONCLUSION

This thesis examined the Ottoman centralization process in Iraq with a focus on irrigation projects that took place between 1890 and 1913, tracing the political, economic, and environmental challenges the government faced in this period. In doing so, it focused on the project of the Hindiya Barrage, demonstrating how the project underwent a technological change in parallel with the change of political and economic aims behind the irrigation policies.

Although Iraq was captured by the Ottoman Empire in 1534 under Sulayman the Magnificent, it could not be totally integrated into the Empire politically and economically. Iraq's process of integration into the Empire began with Midhat Pasha's reorganization of the provincial administration along the lines of the Tanzimat reforms. Among the most obvious acts of Midhat during his term of office in Baghdad was to replace the communal landownership practice with individual landholding by title deed. In doing so, Midhat Pasha also aimed to help the settlement process of tribes and transfer the revenues of the lands directly to the state treasury. Midhat Pasha also undertook irrigation works in Baghdad by opening water channels and strengthening river banks, as well as by regulating the share of water resources that were under the authority of local sheikhs before the reform process. Just like the lands, water resources were also organized as part of the *mülk* regulations and subjected to private ownership. The most obvious beneficiary of these land and water rights was Abdulhamid II who personally appropriated large arable lands and water resources to guarantee the irrigation of his lands. The project of the Hindiya Barrage emerged in this period targeting both to irrigate the *saniyya* and the state lands and to increase the agricultural commodities produced in these lands.

First constructed in 1890, the Hindiya Barrage was one of the most prominent irrigation projects in late Ottoman Iraq. During the Hamidian period, irrigating the *saniyya* lands and the *çiftlik*s and boosting the agricultural revenues from these lands were of top priority for the Ottoman government. Creating an “alternative Egypt” out of Iraq arose as an important motivation behind the irrigation reforms in this period, including the Hindiya project. The fertile lands and abundant water resources of Egypt were frequently shown in the irrigation reports as a model for Iraq to turn the latter region into a wealthy and improved province. All these irrigation efforts under the Hamidian rule, nevertheless, remained mostly on paper, except the opening of the Hindiya Barrage in 1890. Even after the Barrage’s opening, it needed regular and thorough repair which the imperial center could not afford because of the ongoing financial crises. Nevertheless, the center was aware that the lack of water would cost more than the expenditure for the repairs. Thus, following the construction of the Barrage, attempts were made to deal with water shortages with small-scale and temporary solutions such as opening waterways (*jadwal*) and repairing old weirs by the labor of the local people.

When the Young Turks came to rule in 1908, the fate of the Hindiya Barrage significantly changed. The increase of British financial and technical impact on the project led to the improvement of the Barrage concerning the quality of both materials and engineering techniques. In this period, material for the Barrage was brought from Britain, the construction was directed by Willcocks and Sir John Jackson Co., and the expenditures were sponsored by the National Bank of Turkey. This growing British impact in Iraq, however, met with reactions from the local population whose economic interests conflicted with those of the British in terms of concessions on irrigation and navigation along the Euphrates. Irrigation in the form of the Hindiya Barrage,

nevertheless, did not cause a widespread disturbance since irrigation was considered as a revenue-generating practice that would enhance the prosperity of the province.

The Barrage did not live long enough to bring concrete yields to the Ottoman Empire on account of the outbreak of WWI shortly after its construction. When the war began, the British policy which had seemed to support the Ottoman sovereignty in Iraq changed to an explicit intention to take over the province. The British policy to promote Ottoman economic and political interests had already been given up during the Treaty of Berlin (1878), and British imperial interests in Iraqi provinces became even clearer during the war. This change of attitude of Britain towards the integrity of the Ottoman Empire after the war was well represented in British newspapers through articles about irrigation works and the Hindiya Barrage.

When the Ottomans lost control of Iraqi provinces, the Hindiya Barrage and its surroundings were seized by British military forces. It is not within the scope of this thesis to examine the full range of clashes between Ottoman and British forces nor the tribal rebellions against the British occupation. But it was evident that the expected results of the Hindiya Barrage for Ottoman prosperity in Iraq completely vanished during the war. British forces built their military headquarters near the Barrage to control the flow of water and cut the stream when required. The Barrage thus became a sort of warfare tool in the hands of the British to use against the rebellious tribes in depriving them of water and preventing any future uprising.

Even though the Hindiya Barrage did not benefit the Ottoman Empire in the long run, it is still useful to examine Ottoman imperial interests over a frontier province like Iraq in a period during which the Empire lost the Balkans and Egypt and shrank to the Asian provinces. Irrigation was indeed a central aspect of the imperial interests which were embodied in the provincial reform

process focusing on the political and economic integration of Iraq. The continuity of the Hindiya project under both the Hamidian and the CUP regime was a clear demonstration of the fact that irrigation was vital for the integration of Iraq into the Ottoman Empire. Ongoing political, financial, and environmental challenges, nevertheless, ensured that irrigation reforms remained either confined in provincial reports or improvisational in character. Only through British sponsorship and technical support was that the Hindiya Barrage reconstructed and began to control the water flow between the channels of the Euphrates. Even though the Barrage did not last long to bear fruit for the Ottomans, it still offers a unique example of irrigation through which the Ottoman Empire sought to achieve a renewed territorial integration with its Iraqi provinces.

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