

Water Development and State Building in Oman

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## Introduction

By now a familiar narrative to many, the Omani ‘renaissance’ which followed Sultan Qaboos’s accession in 1970 was characterized by the rapid development of the state through infrastructure and social services. Contrary to the prevailing state narrative of near-instantaneous and miraculous prosperity stemming from the wisdom and benevolence of a single individual (Sultan Qaboos), development in the Sultanate of Oman gained in both organization and momentum with the improvement of state security and the development of state administrative capacity. It also functioned as a critical tool for consolidating the Omani state and earning political loyalty. Water development experienced particular complexity as a source of political, economic, social, and cultural capital. This paper explores the history of early Omani water infrastructure and development policy. The critical role of the British in early development, and the evolving character of the Omani state help explain how environment, imperial priorities, and traditional socio-political structures uniquely shaped development planning under Sultan Qaboos as he sought to consolidate power and construct a national identity.

## Literature Review

The development of Oman is embedded in the historical narrative of British imperialism and the formation of post-colonial nation-states. In the 1960’s, there were many locations on the Arabian Peninsula which remained ‘undefined’ by modern borders. Oman’s borders were among these. Indeed, the modern territory of Oman would not have qualified as a ‘state’ yet. Rather, power had been shared between the Sultan and the Imamate since the 1920 Seeb Agreement through a complicated and ambiguous arrangement brokered by the British in order to secure their regional interests. (Valeri, 32-33) The British-facilitated coup ushered Oman into the international club of territorial nation-states. British saturation of Omani governance and heavy reliance of Sultan Qaboos’s government on foreign military, finances, and expertise in the early years of the new state demonstrates the continuing role of imperial powers in shaping the post-colonial state. This British influence was indispensable to the establishment and protection of the Qaboos Sultanate, and at the same time represented the most tenacious objection to the Sultanate made by Dhofari rebels.

“Fundamentally, our struggle is not just about economic development. We are principally strugglers for freedom and independence, fighting for the liberty of our Omani people... What is the point of all of these reforms if the people does not have a say in anything, even in the choice of its own rulers?” (Takriti, p. 308)

At the heart of the rebel’s objection is a concern that those who govern them should work in service of Omani interests, and that Omanis should be able to determine for themselves what those interests are. As Shiraz Dossa notes, “It is striking that the development of the South became their priority just as the colonizers were leaving for home.” (Dossa, p. 887) Dossa argues to consider development as a neocolonial activity, rather than a post-colonial activity. While Oman was never strictly speaking a British colony, the British sustained a long and meddlesome presence in the region and assumed the role of political powerbroker. The sudden push for Omani development by the British in the twilight of their time in Oman resonates with Dossa’s argument. Abdel Razzaq Takriti’s arguments in his book *Monsoon Revolution* hint that the

Dhofari rebels constituted Oman's last native gasp against the onslaught of neocolonial forces embodied by a British-installed British-educated Sultan. Nearly 50 years later, Oman has developed a foreign policy which asserts fierce independence and neutrality, and its aggressive push to develop sustainably has drawn international acclaim and admiration. Whatever the end results may be, the early years of Oman's development add unique perspective to the literature on colonialism/post-colonialism/neocolonialism and development.

In order to understand Oman's early development we also consider the environmental factors which challenged and facilitated political consolidation, incentivized foreign interference, and shaped the new Sultanate's development priorities. This narrative borrows from both environmental history and political ecology by acknowledging the role played by water scarcity and oil resources in Oman. Paul Robbins argues that political ecology evolved as a result of a synthesis of many disciplines in the late 20<sup>th</sup> century (Robbins 2004, p. 10). The term was first used in Eric Wolf's article, "Ownership and Political Ecology", in which he stressed the need for studying ecological contexts with social and political history, and inter-group relations (Wolf 1972, p. 205). These definitions include varying emphases on political economy, formal political institutions, and environmental change. This paper investigates the way that water resources shaped, and were shaped by, Qaboos's efforts to consolidate power under the conditions of extreme water scarcity. This relationship was strongly affected by the recent utilization of rich oil deposits. Similar to the approach of Timothy Mitchell in *Rule of Experts* and Alan Mikhail in *Under Osman's Tree*, this work reveals a highly interactive process in which the architecture of causality between environmental factors and human actions becomes increasingly complex as environment and human action mutually shape social, economic, and political dynamics.

### Historical Background

Most of Oman's terrain, with the seasonal exception of a narrow portion of the Dhofar coastline, is extraordinarily arid and hot. At first glance, it seems remarkable that any life could eke out an existence under these conditions, and yet the deserts and mountains support a range of wildlife based on seasonal rains and seepages from underground reserves. The human presence in Oman's territory up to about the time of Sultan Qaboos's coup, though limited by these conditions, displayed extreme ingenuity in the use of technological and behavioral adaptation. In *Monsoon Revolution*, Abdel Razzaq Takriti illustrates complex seasonal movements of various segments of Dhofari society, and the interdependent economy which had evolved in support of these specialized movements. (Takriti, p. 1-9) Likewise, B.R. Pridham refers to the complex socio-economic networks of the inhabitants of the northern mountains, "...between large agricultural towns, more scattered cultivators in the Jabal Akhdar, shawawi herders, true badu and providers of specialized services such as the 'Awamir falaj-diggers.'" (Pridham, p. 21) The population at the time of Sultan Qaboos's succession stood at less than a million. (Peterson, p. 135)

The previous sultans and imams were not supremely wealthy beyond a degree of personal wealth, nor did they see it as part of their duties to provide infrastructure and social services. Before Oman began to receive income from oil in 1969, the majority of the Sultan's wealth came from taxes on maritime merchant trade. (Valeri, p. 41) However, this income could not have supported the dramatic transformation achieved under Sultan Qaboos. This indicates that both

governing capacity and environmental conditions served to restrain Omani development before 1969.

Another key factor which changed just prior to the 1970 coup was the British understanding of what was required to secure their interests in Oman. Before oil was discovered, Oman's key importance lay in its geographical location at the Straits of Hormuz and as a waypoint to British interests in India. As British capacity to manage its colonial empire waned, it looked to secure its interests with minimal investment. Up until the latter part of Sultan Qaboos's father's rule (Sultan Said bin Taimur), Britain was content to maintain the ambiguous, politically diffuse status quo in Oman. However, escalating political interest in Oman's interior borders (from Saudi Arabia and the UAE), and the political unrest in the Dhofar province and Jabal Al Akhdar region convinced the British that the status quo would be harmful to British interests. (Takriti, p. 23, 169, 188, 193) As early as 1949, the head of the Eastern Department at the Foreign Office worried about Sultan Said bin Taimur's inefficacy and the potential transfer of Oman's oil assets to Saudi Arabia through loss of territory:

“Moreover, if the Sultan does not extend his authority in the interior some of the tribes will probably tend to give their allegiance to Ibn Saud. If his claims to the territory were established this would mean that the oil companies would automatically pass to the Arabian American company.” (Takriti, p. 23)

Sultan Said bin Taimur's political weakness threatened the extremely favorable oil concession which the British had signed with him in 1937. (Takriti, p. 23) Alienated from the general Omani population, he kept to his palace. Sultan Said bin Taimur inherited a government deeply in debt, and implemented an effective but harsh program of austerity throughout his rule. (Takriti, p. 33, 35, 42) However, Sultan Said's repressive rule stemmed from more than a desire to regain financial stability, as he implemented policies which suppressed the development of the Omani population and neglected their welfare in times of hardship. (Takriti, p. 42, 232) The British also lamented the Sultan's poor investment in and outright obstruction of “civilian development”. (Takriti, p. 160) The few projects the Sultan did authorize seemed to meet with disaster regularly (e.g. a water scheme in Sur which resulted in salinating the water supply; two hospitals in Ruwi and Tan'am built but left without equipment, staff, or medicine). (Clements, p. 81; Takriti, p. 161) Given that Britain had seen fit to remove Sheikh Shakhboub of Abu Dhabi in 1966 for, “being anti-developmental,” (Takriti, p. 187) it is fair to assume that Sultan Said's abysmal record on development contributed to the eventual British-backed coup.

### The ‘Renaissance’ Narrative

On July 23, 1970, Sultan Qaboos seized power from his oppressive and tyrannical father. A bloodless coup was carried out by a small number of Omanis loyal to the Sultan, the former Sultan whisked away to a comfortable retirement in England, and the new Sultan welcomed with widespread adulation and happiness. A benevolent and wise leader, Sultan Qaboos was everything the people demanded of both tradition and modernity. It was Sultan Qaboos who single-handedly shepherded his ‘backward’ country to a prosperous and secure future. At least, this is how the Omani government, and the British, told the story. (Clements, p. 65; Takriti, p. 254-55) Indeed, most of the material written about Oman's history post-1970 suffers from

questionable integrity due to the absolute control of the narrative of the Omani state, facilitated by the British. While some authors have managed to diverge in part from wholehearted endorsement of the state narrative, Takriti's recent work *Monsoon Revolution* is the most rigorous treatment of the subject yet which manages to salvage a more useful version of events. This balancing proves critical for understanding Oman's subsequent political consolidation and development.

### Politics First: The 1970 Coup

While there is some ambiguity about who first proposed the idea to the other party, it is clear that the 1970 coup was mutually agreed upon by the British and Sultan Qaboos, with the burden of responsibility for the final decision landing squarely in Britain's lap. (Takriti, 188; Valeri, p. 3, 69, 71) Even the British press had advocated for action, declaring,

“...it should be recognized in London that the region's chances of stability are poor so long as the Sultan remains in power. The government can no longer afford to shut its eyes to the dangers of the situation in Muscat. The Sultan and his advisors will have to be persuaded to go before it is too late for an alternative ruler to hold the country together.” (Takriti, p. 188)

Indeed, the coup required remarkable British coordination and was effectively enforced by British military might. (Takriti, p. 190-93, 196, Clements, p. 65) Sultan Qaboos, who had been living in isolation, much to British chagrin, had no experience or knowledge of governing the Omani state, and was relatively unknown to the Omani population. (Allen, p. 34; Takriti, p. 181-7) As such, he had no independent recourse to military resources.

The outgoing Sultan took up arms to defend his position, but contrary to what sometimes amounts to an almost comical account in which the Sultan accidentally shoots himself in the foot as he fumbles his gun, the Sultan received four bullet wounds before the fighting concluded (including the accidental foot wound) and one of his guards was killed. (Takriti, p. 191) Granted, this is relatively bloodless as coups go, and certainly would have been worse had there been any significant source of opposition, but this is a reflection of the balance of power and not an indication of a peaceful or amicable transfer of power.

Further contradicting the official image of the new Sultan, Takriti's account includes evidence of brutal militarism. A British advisor to the Sultan, Brigadier Graham, commented, “The Sultan seems impatient for military action; also distinctly blood-thirsty. He has told me not to have any compunction about hurting civilians in enemy held areas.” (Takriti, p. 274) Civilian casualties are not particularly remarkable during a military conflict, and certainly it pales in comparison to some of the accounts of authoritarian violence taking place in Oman's regional neighbors, and yet the utter lack of concern for civilian life which Brigadier Graham describes suggests a cold and unsympathetic ruler. Another moment of incongruity occurred with the Sultan's decision to execute those found guilty of sedition in 1972, which received resounding criticism. (Allen, p.37) When placed alongside the idealized official narrative these anecdotes clash with the widely promoted image of a kind, benevolent, and beloved leader.

## Early Priorities

While the official narrative portrays this program of Omani development and service provision as strictly originating from Sultan Qaboos, his reliance on British advisors for the running of the country leaves the impetus for this vision of state power in some doubt. At first, an Interim Advisory Council of expatriate advisers ran the country, with the Sultan's blessing. In the initial years of the Omani Sultanate British advisors were fully integrated into the Omani government structure, as they had been before the coup, and filled most key government posts. (Clements, p. 65; Allen, p. 34)

With heavy British involvement, the new government undertook a massive state-building project. "...with almost no resources in construction and civil administration besides the heritage of a glorious past.... His Majesty Sultan Qaboos opted for rapid but controlled development, and has been was able [sic] to lead Oman, within two decades, from alarming backwardness to the forefront of the twentieth century to enjoy the benefits of the great cultural achievements of our times." (Sultanate, p. 15) However, contrary to the official rhetoric, development in Oman initially got off to a slow and haphazard start. In the Sultanate's own words, it took until the third five-year plan, which covered the years 1986-90, to expand the development program to the entire Sultanate. (Sultanate, p. 140) This delay can be attributed to three possible reasons: The Sultan's personal priorities, military commitments, and a lack of administrative capacity.

The Sultan's personal priorities are officially undifferentiated from the state narrative and can be difficult to discern, but a glance at Oman's early state budget provides some clues. Having ballooned the 'national' income practically overnight, 100% of which was directed to Sultan Qaboos's personal coffers, Sultan Qaboos was uniquely positioned to distribute this national wealth. (Valeri, p. 92) The choices he made as to how to spend that money, and the extent to which it matched his rhetoric, illustrate some discrepancies in the narrative.

For the first five years military expenditures consume a significant portion of the budget. In 1971, military spending absorbed a full 40% of the state income from oil. (Takriti, p. 218) In 1972, defense spending accounted for a whopping RO 30 million out of a total state income of RO 51 million. (Takriti, p.285) In 1974 the military budget rose to 300 million pounds. (Clements, p. 101) It is frequently noted that Sultan Qaboos was steeped in military training, having studied at Sandhurst. (Takriti, p. 274; Allen, p. 217) His preparation for governance is equally notorious for his lack of preparation. The Sultan received a short course at the Royal Institute of Public Administration, but following his return from abroad was isolated in confinement with no exposure to the Omani state processes. (Takriti, p. 181-187) Certainly, the new Sultan would have understood and valued the need to exert military control of politically restive territories.

The new Sultanate had to contend with external threats as well as internal threats which immediately preceded the coup and continued to be a source of potential instability until long afterwards. The change of Sultan did not alter the determination of the Dhofari rebels, and the Sultan and the British would both have been sensitive to the past interest of Saudi Arabia in border dispute, the long history of political conflict with the Imamate, and the prior Buraimi conflict. Indeed, the Dhofar rebellion dragged on for an additional 5 years. This military

involvement was not only absorbed the majority of state spending, it also directed a disproportionate amount of development spending to restive and unstable regions.

While the Sultan's early public speeches promote an idealistic program of public welfare and national development, but that same development also served a strategic purpose in facilitating military access and population control. (Clements, p. 101-2, 105) The installation of infrastructure such as roads, electrical power, and telecommunications, which comprised the largest portion of initial development efforts, is particularly instrumental for this purpose. Roads allow the easy and swift penetration of vehicles and supplies. Electrical power and telecommunications facilitate the use of technology and implementation of strategy. Telecommunications are also useful for the dissemination and control of information.

Indeed, while the large amount of military spending might give the appearance of a robust and powerful military operation, the new Sultan heavily relied on external military power to fight his battles. (Takriti, p.306) The Omani military was, in fact, quite small at the time of the coup, and not particularly strong. The majority of support originated from the British army, but significant assistance, in the form of troops and funding, was also supplied by the Shah of Iran and King Hussein of Jordan. The reliance on foreign military might underscored a crisis of legitimacy for the Sultan. (Takriti, p. 32) In addition to the precariousness of this lack of independence, the Sultan's main source of support, the British, were increasingly eager to extract themselves from their historical role as Sultan's protector in Oman, so long as they could preserve their interests there. (Takriti, p. 23, 31) A member of the Omani royal family, Sayid Badr Bin Hamad bin Hamood Al Bu Said, noted that,

“...the coup reflected the anxieties of the British government, in light of its 1968 decision to withdraw militarily by 1971 from the Arabian Gulf. Thus, the coup, carried out in the name of Oman, at the expense of one Omani Sultan and to the benefit of another, embodied... the involvement of outside powers in the affairs of the Sultanate,” (Takriti, p. 188)

In light of this absolute reliance on a reluctant power, Sultan Qaboos needed to earn Omani loyalty, quickly. (Allen, p. 37)

The next largest category of spending, after the military budget, was, surprisingly, not development projects. Rather, it was the Sultan's own personal expenditures. Indeed, he had quite an appetite for the finer things in life. Accounts indicate that his British advisors expressed frustration at the Sultan's lavish personal expenditures, and that they were often in the position of pressuring the Sultan to prioritize development initiatives. In 1971, the Omani state had to dip into its reserves by 7 million pounds in order to cover developmental and military costs. That same year Sultan Qaboos was absorbed in construction for no less than three fancy palaces. (Takriti, p. 217) These palaces and their associated expenses, singlehandedly amounted to 20% of the state income from oil that year, and this did not encompass the Sultan's other expenses, such as travel and luxury vehicles. (Takriti, p. 218-19, 229)

As Allen and Rigsbee relate, an early water development project for Al Ghubrah (a suburb of Muscat) was planned in 1974 and constructed in 1975. (Allen, p. 160) The project demonstrates

the incredible inefficiencies of the new government, and the Sultan's distinctly selfish priorities. Water consumption in the capital area alone had increased from 9 million gallons in 1970 to 63 million in 1971, and 185 million gallons by 1973. (Skeet, p. 138) The original estimate for the project anticipated a price tag of \$57 million. As part of this estimate, the planners included capacity of 1 million gallons per day exclusively for the Sultan's private gardens. After the project exceeded its budget by 500 percent and weathered multiple delays, the final installation's capacity proved insufficient for the total needs of the area. While the Sultan was able to receive his daily 1 million gallons of water, regular Omanis had to wait until 1986 (after multiple upgrades) for the desalination plant to reach a total capacity of 24 million gallons. (Allen, p. 160)

### Water Wealth

The Sultan's dedication to his private gardens indicates supreme self-interest at the expense of his subject's basic needs, but it also suggests the degree to which water was valued in Oman and the symbolic value of water wealth and water-fed greenery. In a land where water had never been available in such abundance before, a garden such as this was a lavish display of the prestige acquired by those with access to water. The social position of water in Omani society gave it a special role in the 'Renaissance' narrative. Traditionally, water was understood as a gift from God. (Skeet, p. 140) The rich invocations of water and gardens in the Qu'ran juxtaposed with desert imagery reflect the cultural and practical understandings of the value of water. While it was considered inappropriate to sell drinking water, the distribution and sharing of water resources was ultimately at the discretion of tribal leadership. (Zimmerman, p. 112) According to Ian Skeet, the provision of water was even sometimes associated with "virility". (Skeet, p. 140) By sponsoring water development projects, Sultan Qaboos inserted his government between tribal leaders and their dependents. These projects demonstrated his superior ability to provide for people's most economic and culturally significant needs.

Sultan Qaboos's ability to increase the quantity and quality of water supply was an unprecedented development with profound political and social consequences. These changes would not have been possible without the sudden influx of oil wealth, and the significant investment of foreign expertise and aid, which were also mostly attracted by oil wealth. It was oil which caused the drawing of state borders, oil which motivated the conflicts over political control manipulated by foreign interests, oil which funded and motivated massive infrastructural development, and oil which allowed Sultan Qaboos to forever change Omanis relationship with water. The extreme water scarcity and the ability to alleviate it provided Sultan Qaboos with environmental tools for political manipulation and coercive power. Without water, development was limited and survival difficult. The promise of water was therefore a powerful incentive, with transformative consequences.

### Development Planning

There were early indications that the Sultan Qaboos government (or at least his British advisors) recognized the need to develop, and the public statements of the Sultan and other government representatives frequently emphasized the importance of developing water, roads, housing, electricity, healthcare, etc. for the benefit of Omani citizens. On the surface Sultan Qaboos laid out an ambitious and progressive agenda of social welfare. However, the journey from public declaration to action proved challenging.

Water management provides a perfect case study for this conundrum. The Omani government went through multiple reorganizations over the 20 years following 1970, sometimes rotating management through multiple administrative structures in a year. Initial surveys and projects were contracted out to an array of private companies, UN agencies or foreign governments (US, UK, Japan). (Skeet, p. 139) It took two years before an Interim Planning Council was created in March of 1972, which was quickly supplanted by the Supreme Council for Economic Planning and Development in September of 1972. Before the End of 1972, planning was handed off to a Centre for Economic Planning and Development, but that would cease to exist at the beginning of 1973. It then became the General Development Organisation briefly, before finally establishing itself as the Ministry of Development in November of 1973. However, this arrangement only lasted for 12 months until a general reorganization of the ministries. (Clements, p. 71-2)

Specific institutions for water management came much later. In 1977, a Council on Water Resources was established, and then replaced by a Ministry of Environment and Water Resources in 1981. In 1986 this was again replaced, this time with a Council for the Conservation of Environment and Water Resources, and again in 1989 with a Public Authority for Water Resources. Finally, in 1990 a Ministry of Water Resources was established. At the same time, jurisdiction over water resources was also shared with institutions like the Ministry of Electricity and Water and the Ministry of Agriculture. (Skeet, p. 139) The evolution of water management shows how the government struggled to coordinate a unified development plan, particularly in the early years. In order to explain these delays in service provision blame has been laid at Oman's shortage of skilled labor, but with so many foreign advisors and foreign skilled labor, and the widespread practice of contracting out development projects to foreign companies, this seems inadequate. The most convincing argument, initially, is that strategic and security concerns took precedence over liberal-economic values and social welfare.

Development, particularly in contested areas, provided a powerful tool for this endeavor. The Sultan's demonstrated ability to provide services and wealth served as an incentive for accepting his authority. This targeted approach to development did not require general coordination, but proceeded on an ad-hoc project basis. The case of water development in the remote Musandam Peninsula, demonstrates the effectiveness of this strategy. Musandam was the recipient of some of the earliest desalination facilities in Oman in 1978/9. A remote and difficult to access area with only 3,000 inhabitants scattered among small fishing settlements, Musandam's primary value lay in its strategic geographic position at the bottleneck of the Straits of Hormuz. Historically, Musandam's settlements needed to import a significant portion of their drinking water by boat from the nearest major developed areas with abundant water supply, Dubai and Ras Al Khaymah, in present-day UAE. Reliance on these shipments meant that before the 1970 coup, many of these settlements were leaning towards unification under the auspices of the UAE. (Zimmerman, 112-124)

Sultan Qaboos's government then implemented a comprehensive water management plan in the Musandam peninsula which definitively altered local allegiances. Several desalination plants were built in the region and used to supplant the previously imported water. Official Omani government ships regularly commuted between the desalination plants and more remote

settlements to distribute water. In addition, recharge dams were constructed in some settlements which further supported these communities' independence from their UAE suppliers. (Zimmerman, 112-124) The Sultanate's use of oil wealth to purchase loyalties in contested regions reinforces the conclusion that strategic security concerns in fact took precedence over liberal-economic values or social welfare.

The policy of development approached the issue of political legitimacy at a deeper level as well. In a society where the legitimacy of tribal leadership in large part rested on the provision of security and the means to survival in a harsh environment, power was highly social. (Pridham, p. 240) The short game might have been to buy the support of key players through the strategic provision of services and sometimes the offer of lucrative governmental positions, but the long game was much more subtle. Omani politics had long turned on the shifting alliances of various tribal groups. According to Ibadi doctrine, leadership required the consent, and consultation, of the governed (which here meant only tribal leaders). (Valeri, p. 10, 45-7) In attempting to consolidate political control over both the coast and the interior, and lacking the absolute military might to do so wholly on his own terms, Sultan Qaboos needed to accommodate the historical precedents which shaped political power, namely the Imamate and tribal factionalism.

Contrary to the outside perception of present-day Oman, Oman's population encompassed a wide variety of diversity in religion, language, and ethnicity. (Pridham, p. 21-23) However, by taking over the provision of essential services such as water, employment, healthcare, and housing, and by reducing the isolation of Omani populations through the construction of roads and communications networks, the Sultan effectively undermined previous structures of power and security and put them to work in service of the Sultan's new centralized absolutist system. (Takriti, p. 267; Clements, p. 67; Valeri, p. 4, 72) It was for these reasons that the Sultan's Dhofar Development Officer, Robin Butler, selected the drilling of a water hole in Barsa for loyal Kathiri Sheikhs in 1970 as the first of many development projects. The project was, "...meant to increase the local leverage of the Sheikhs as well as the government," (Takriti, p. 268).

Sultan Qaboos's British advisors were apparently often at great pains to impress upon him the urgency of development efforts. Modeling off of their own European and post-colonial experience with the consolidation of power by means of a bureaucratic state, the British felt strongly about the importance of development work and the creation of a bureaucracy. (Takriti, p. 209) They advocated, as they long had, to ameliorate economic and social grievances which had been sources of unrest. (Takriti, p. 31, 32) Qaboos, for whatever reason, seemed to feel that these matters were less pressing, as evidenced by his previously discussed spending habits. While Sultan Qaboos indicated his priorities by spending the vast majority of the state budget on military and luxury, he and his British advocates worked diplomatically to source additional funding for development with foreign aid. (Takriti, p. 285-7) His British representatives and other government officials then pursued development efforts with positive but inefficient results, largely due to a lack of coordination. (Skeet, p. 109, 138-9)

## Conclusion

The end of open military conflict in Oman, the consolidation of bureaucratic capacity, and the increase in funding (from increased oil revenues and foreign aid) eventually delivered on Sultan Qaboos's extravagant speechmaking and his grand plans for development. As Sultan Qaboos and his country gained experience and autonomy these plans became more nuanced, coordinated, and savvy to the complex and precarious situation of Oman's economy. While the story of how Oman's oil wealth transformed the country and the decisive role of the British in Oman's political formation are both well reported, the story of how Oman's water resources and development planning facilitated political control, and, conversely, shaped the Omani state, is less acknowledged. Neither is the story of Oman's water fully resolved. As Oman faces increasing water insecurity in the future, it would do well to remember the nuanced role that water plays in Omani society and politics.

## Bibliography

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Al Sajwani, T. B. 1998. "The desalination plants of Oman: past, present and future". *DESALINATION*. 120 (1-2): 53-59.

This article summarizes the desalination plants established in the Sultanate of Oman between 1970 and 1998. The material is divided by decade and discusses individual plants and capacities. Al-Sajwani shows the distribution of desalination plant establishment skews to the 80's and 90's, with only three plants established prior (in 1976). It also includes discussion of government policy as regards desalination, areas of concern and future consideration, and notes the establishment of the Middle East Desalination Research Center in Muscat.

Anderson, Ewan W. 1986. "Water problems in the Sultanate of Oman". *GeoJournal*. 13 (3): 269-273.

A survey of the water geography by region. The author describes the geography of each region and briefly discusses water management challenges and options.

Clements, Frank A. 1980. *Oman the reborn land*. London: Longman.

Dossa, Shiraz. 2007. Slicing up 'Development': colonialism, political theory, ethics. *Third World Quarterly*. 28 (5): 887-899.

Drake, C. 1988. Oman: Traditional and modern adaptations to the environment. *Focus*.

Drake writes a profile of Oman circa 1988 and discusses the climate and traditional lifestyle practices, including water management. Drake also captures a verbal snapshot of Omani development and governance practices. She notes the mixture of traditional and modern, and mentions ways in which new technology is adapted to traditional contexts and mixed with traditional practices.

Miller, Duncan R. 1991. *Economic development planning in the Sultanate of Oman*. Ruwi, Sultanate of Oman: United Media Services.

Miller presents a straightforward documentation of the major socio-economic development trends as set forward by each of the five-year development plans between 1970 and 1990. Miller presents the structure of each five year plan and then analyzes progress towards the goals of each five-year plan. The report is data-heavy and light on normative characterizations.

Pridham, B.R. 2016. *Oman: economic, social and strategic developments*.

This book is a collection of essays by various authors on various topics under the thematic umbrella of the book's title. In general, the material tends to avoid over-indulgence in the mythologizing of the Omani renaissance, and instead take a more pragmatic approach to the issues facing Omani development at that time (1987). It

provides insight into Oman's development trajectory and status as it approached 1990. Of particular relevance to this paper were three chapters: "Complications of Geography, Ethnology and Tribalism" by Fredrik Barth, "Updating Agriculture and Associated Rural Enterprises" by R. W. Dutton, and "Oman's Development Strategy" by John Whelan. Barth discusses the strategic dimensions of ethnic/tribal identities and the pursuant consequences for Omani development. Dutton discusses the challenges of agricultural modernization characterized as a tension between conservation (modernly termed sustainability) and development. Whelan provides a historical account of the major players in Omani development and describes the top priorities of Omani development policy.

Robbins, P. (2012). *Political ecology: A critical introduction*. Chichester, U.K: J. Wiley & Sons.

Robbins chronicles the history of the theory of political ecology, reviews the definitive literature which shaped the field, and discusses current discourses on political ecology. This book is designed as an introductory textbook on political ecology.

Skeet, I. *Oman: Politics and Development*. Place of publication not identified: Palgrave Macmillan, 2014. Print.

Part travelogue, part analysis of development and politics, Ian Skeet's snapshot of Oman covers the economic and political development of Oman through 1990 and aims to show, "...how a country starts from, as it were, nothing and becomes a respected member of the international community within 20 years." While Skeet's analysis is heavily biased toward dominant British narratives of Omani development, with a healthy dose of post-colonial condescension, his book serves as an example of how these narratives function, and includes objective data relating to development progress which is useful. While water barely figures into his account of Oman's transition, his concluding chapter looks toward the future and discusses areas of concerns. It is in this section that Skeet addresses the importance of water and reviews past and present development challenges. It is a rare moment of critical analysis in a heavily biased account.

*Sultanate of Oman Throughout 20 Years: The Promise and The Fulfilment*. 1990. Ministry of Information, Sultanate of Oman.

Valeri, Marc. 2015. *Oman: politics and society in the Qaboos state*.

Wolf, E. (July 01, 1972). Ownership and Political Ecology. *Anthropological Quarterly*, 45, 3, 201-205. Washington, 45(3), 201-205.

Wolf analyzes anthropological studies that found linkages between local ecosystems and the parameters of ecological change. The article focuses on case studies in the Alps. Wolf's article is relevant to our research as he first proposed the need for the theoretical field that would later become political ecology.

Zimmerman, Wolfgang. 1984. "Cistern, Well, and Water Tanker: The Stride from Traditional to Modern Means of Water Supply in the Sultanate of Oman." *Applied geography and development : a biannual collection of Recent German Contributions*. 24: 112-126.

Zimmerman's article maps the provision of water to fishing settlements on the Musandam Peninsula in order to identify the change which occurred following the 1970 coup which installed Sultan Qaboos. Zimmerman describes high freshwater insecurity in the peninsula, which frequently relied on imported water from nearby UAE sheikhdoms. While Musandam fishermen once favored political integration with the UAE based on these arrangements, the development of modern water infrastructure drew praise and forever altered this dependence. State-provided water is now (as of 1984) provided free of charge by desalination plant, improved storage, and government managed tankers. Notably, Zimmerman's source of funding is Sultan Qaboos's late uncle, Tariq bin Taimur, who served as Oman's first prime minister. Regardless, this article demonstrates the desire of the Omani government to at least be seen to be providing services and improving livelihoods of its citizens. Given that all these efforts benefited a total population of approximately 3,300 persons, it further emphasizes the way that these services were extended to some of the most rural and removed areas of Oman.

Takriti, Abdel R. *Monsoon Revolution: Republicans, Sultans, and Empires in Oman, 1965-1976*. , 2013. Print.

Takriti offers an alternative history of the Dhofar conflict, couched in a globalist history of revolution and decolonization. At the same time, the author offers some of the most intensively researched material on early Omani nation-building. His account illustrates the role the Dhofar revolution and other rebellions played in the shaping of the modern Omani state, and the heavy influence of the British in the early years of Sultan Qaboos's rule. This perspective counters the official narrative of an instantaneous 'Renaissance' of the Omani state beginning in 1970. The book also characterizes the revolution, coup, and subsequent Omani state-building as globalized processes.