

THE WATER AGREEMENT OF 1927 AND SINGAPORE'S SUPREMACY: THE ORIGINS AND IMPLICATION FOR WATER SUPPLY BETWEEN JOHORE AND SINGAPORE IN THE COLONIAL PERIOD

A Rahman Tang Abdullah

Abstract

This article discusses the significance of the water agreement of 1927 in reference to the origins and historical development of water supply between Johore and Singapore during the colonial period. From historical perspective, this agreement is the first water agreement signed between Johore as a British protectorate and Singapore as the capital of the British Colony of The Straits Settlements. Despite the fact that this agreement had been abrogated in 1961 with the signing of the subsequent water agreements, most of its fundamental provisions still remains in effect. Thus, this article reveals the preceding events leading to the signing of the agreement, analyses the water agreements of 1927 and its implication for historical development of water supply to Singapore during the period from 1930's to the 1950's. It demonstrates that the issue of water supply between the two entities has tended to be in favour of Singapore because of Singapore's political economic supremacy derived from her status of being the British Imperial, in South East Asia and from being the bearer of capital expenditure in the water construction in Johore. Consequently, Singapore was able to continuously exploit the water deal as one of those economic means to preserving her advantage.

Keywords: Johore; Malaya, Singapore, water, British, colonial.

Abstrak

Makalah ini membincangkan kepentingan perjanjian air tahun 1927 dengan merujuk kepada sejarah permulaan dan perkembangan perbekalan air antara Johor dan Singapura pada zaman Kolonial. Daripada perspektif sejarah, perjanjian ini merupakan perjanjian air pertama yang termeteri antara Johor sebagai sebuah negeri naungan British dan Singapura sebagai pusat pemerintahan Negeri-Negeri Selat yang merupakan tanah jajahan British. Walaupun secara faktanya perjanjian ini telah terbatal pada tahun 1961 dengan termeterainya satu lagi perjanjian selepasnya, kebanyakan aspek asas perjanjian tersebut masih dipraktikkan. Sehubungan itu, makalah ini membincangkan peristiwa-peristiwa yang membawa kepada termeterainya perjanjian tersebut, menganalisis butiran perjanjian tersebut dan implikasinya terhadap perkembangan sejarah berkenaan perbekalan air antara Johor dan Singapura dalam tempoh dari dekad 1930-an sehingga 1950-an. Ia menunjukkan isu berkaitan perbekalan air ini lebih memberikan kelebihan kepada Singapura yang bersandarkan pelaburan modal dalam projek perbekalan air di Johor. Kesannya, Singapura secara berterusan dapat mengeksploitasikan urusan perbekalan air ini yang juga merupakan salah satu barangan ekonomi bagi tujuan memelihara kelebihan yang dinikmati oleh pihak mereka.

Kata kunci: Johor, Malaya, Singapura, air, British, kolonial.

Introduction

Johore as the most southern state in Malaysia and becomes the closest to Singapore due to the location of the two entities. In the historical development of British colonial sphere, Johor and Singapore had been classified as two different political entities within a political unit called British Malaya.¹ Before the outbreak of the second World War in 1941, Johore became a British Protectorate while Singapore was governed as a settlement in the British colony of the Straits Settlements. During the years of Japanese occupation (1942-1945) and British Military

Administration (15th September 1945-31st March 1946, Malaya and Singapore were governed as a single political entity. Then, from 1st April 1946 until 15th September 1963, Singapore was excluded from Malaya and was governed as a separate entity. After Malaya became independent in 1957, Singapore remained as a British Crown Colony until 1959 when she was proclaimed as the protectorate. Eventually, she obtained her independence and joined the Federation of Malaysia on 16th September 1963 (Tan, 2004). Despite the changing status-quo during the colonial period, Singapore was not only made as the capital of the Straits Settlement but was also acknowledged as the seat of the British imperialism in Southeast Asia (Emerson, 1964).

In conjunction with the historical context of the 19th and the first half of the 20th centuries, Johore and Singapore could indeed be perceived as one integrated economic entity, with Johor acting as a de facto extension to Singapore's economy. Singapore's economic supremacy was derived from its status as a British imperial seat in Southeast Asia. In order to sustain the colonial interests, all potential resources including water were perceived as valuable assets to Singapore, thereby reproducing Johore's role as a subject of Imperial albeit indirect rule. By dominating Johore's economy, Singapore was assured of economic advantages derived from the redistribution of surplus revenue from Johore to Singapore. The same dynamic was applied to the acquisition of water from Johor to cater for the domestic needs of Singapore. In this respect, most of the existing writings on the water supply between Johore and Singapore are focused on contemporary developments. In this context, the main issue underlying the water deal lies in the utilisation of raw water from Johor to cater for Singapore's water consumption, and Singapore's reciprocal provisioning of clean water to Johore. It is well known that water supply between Johor and Singapore has its origin in agreements dating back to the first half of the 20th century. However, this dynamic has not been explored in detail from a historical perspective.

Thus, this article will discuss the origins and historical development of water supply between Johore and Singapore during the colonial period. It reveals the preceding events leading to the signing of the agreement, analyses the water agreements of 1927 and its implication for the historical development of water supply to Singapore during the period from 1930's to 1950's. It demonstrates that the issue of water supply between the two entities had tended to favour Singapore because of her supremacy derived from capital expenditure in the water construction in Johore. Consequently, Singapore was able to continuously exploit the water deal as one of those economic means for her advantage.

The Prospect of Water Supply from Johore

Due to the population increase in the nineteenth and early twentieth centuries, water supply for domestic use was still far from sufficient for the town of Singapore. By the turn of the century, the average daily supply of water was about 4 million gallons per day, and given an estimated 5 percent increase annually, at least 6.5 million gallons a day would be required by 1910. The shortage of water became critical when Singapore was faced with long drought seasons in 1901, 1902 and 1904 (Yeoh, 2003: 178-9). At this point, the Singapore Municipality began to consider obtaining water supply from the neighbouring state of Johore where supply of fresh and clean water could be found in abundance. The first public reference to the possibility of obtaining water source from Johore for Singapore's domestic water consumption can be found in a report from 1904. The idea was firstly suggested by Robert Peirce, the Municipal Engineer, who was tasked with producing a report on the Kallang and Seletar Water Schemes. Singapore Island would, for all practical purposes, be exhausted. Thus, it was inevitable that the town of Singapore turn to the Johore mainland for its water supply.²

At this initial stage, it can be observed that Peirce's report did not reveal the practical means behind the idea of acquiring water sources from Johore. Certainly, in this context, the water supply to

Singapore would only be achieved by extending communication links from Johore to the island. In fact, the British authorities in the Colonial Office, especially the Colonial Secretary Joseph Chamberlain, also intended to see Singapore joined with the Peninsula through land communications (Moore, 1975: 162). At this juncture, it was evident that the establishment of water supply from Johore to Singapore would not materialise unless a means of land communication across the Johore Straits was constructed. Yet the next six years saw no significant development in the prospect of land communication across the Johore Straits. This meant that the water supply from Johore to Singapore remained elusive. This is because the FMS Railways and the Straits Government were preoccupied with the type and nature as well as the financial cost of the land communication across the Johore Straits.

Eventually in 1919, it was decided by the Singapore Government that the communication across the Johore Straits should be implemented by means of a granite causeway. This decision allowed the Singapore Municipal Commissioners to make arrangements with FMS Railways for the accommodation of a water main upon the causeway and under its lock.³ On 24th April 1920, the causeway's construction was officially inaugurated with the presence of Sir Laurence Guillemard, Governor of The Straits Settlements, and Sultan Ibrahim of Johore.⁴ This development led to the realisation of the prospect of obtaining water supply from Johore. The initial stage of formal negotiations took place between the Singapore Municipality and the Government of Johore who was represented by Hayes Marriott, the General Adviser.

Subsequently, in September 1920's, the Municipal Commissioners, with the consent of the Johore Government, decided to conduct an investigation into the water resources of the southern portion of Johore state. The work was entrusted to Mr. S. G. Williams, M.INST. C.E. (Manager. in Senior. Chief. Engineer.), then Water Engineer (Special Works). Williams spent the next two years studying two alternative sources of water supply which were from Pulau and Pelepah. Williams discovered that Pulau was to be the viable location.⁵ Subsequently in

1922, the Government of Singapore invited Messrs. Sir Alex. Binnie, Son & Deacon to study the information collected. They in turn reported that the development of the Gunong Pulai Scheme was more favourable.⁶ The report concluded that if the Pulai Scheme was to be carried out to its full extent, it could possibly generate up to 19 million gallons per day.⁷

The Water Agreement of 1927

It was in the course of the exploration process in the 1920's that negotiations on the subject of water supply between Johore and Singapore were held between the President of the Singapore Municipal Commissioners, R.G. Parr and the General Adviser of Johore, Hayes Marriott with the consent from Sultan Ibrahim.⁸ In 1923, the whole negotiation focused on the issues which became provisions of the draft agreement on the water supply. Those issues were related to land acquisition for public utilities involved in the waterworks, the quantity and the price of the water. The water agreement was eventually finalised on 5th December 1927 and was signed by His Highness the Sultan and Sovereign Ruler of The State and Territories of Johore as the first party, and the Municipal Commissioners of the town of Singapore as the second party.

It can be observed that the core issue of land acquisition for the waterworks utilities centred on the land rental involved in the scheme. The Johore Government was willing to grant a concession towards the rent for the initial period of the water scheme. They proposed that the annual rent payable under the water scheme would be 30 cents for an acre per annum until 1932 and only after that year, the rent of \$5.00 per acre would be applied to the land extended to each additional instalment per annum up to the year 1950.⁹ This rate was later stipulated in the water agreement of 1927. The implication is that the rent was only to be charged on the initial areas of the Pulai Scheme which covered just 2,100 acres of land; as such, the rent charge amounted to \$630 per annum stipulated in the Water Agreement of 1927, clauses 1, 3 and 7.¹⁰

The issue of land rental was also connected to the question of timber in the waterworks areas. During the negotiation process, the Singapore Municipality tried to explore the possibility of obtaining a revision on the rental rate by raising the issue of the utilisation of timber in the area. Accordingly, the 1927 water agreement stipulated that the Commissioners were permitted to use timber and firewood on the reserved land for waterworks purposes but they should not remove any timber or firewood from there. Furthermore, it was also stated that the Commissioners might use quarry and granite on the reserved land for waterworks purposes but not for any other purposes.¹¹ Before the conclusion of the agreement, the Commissioners also raised the question on the rent of \$5.00 per acre imposed on the land at Pulai which exceeded 2,000 acres. This was to prevent the premature holding up of land by the Singapore Municipal Commissioners; such landholding would be an impediment to industrial development. However, they argued that in this circumstance, the question of impeding development was irrelevant. In fact, by all means, they viewed that the reservation of this area for waterworks purposes would bring revenue to the Johore Government as well as helping them with their problems of water supply.¹² As mentioned, it was stipulated in the water agreement that the Commissioners would pay an annual sum of \$5 for every acre of land of the extended reserved areas.

Consequently, the Johore Government granted unto the Commissioners:

1. The right to enter upon, occupy and use the land lying within the said land other than public roads, public road reserves, government reserves, or government railway lines to lay and maintain pipelines and aqueducts and other works construction and things requisite or expedient or convenient for waterworks and the supply of water;

2. The right to lay and maintain pipelines and aqueducts along or under such parts of public roads, public road reserves, government reserves and government railway lines which had existed before the commencement of the waterworks.
3. In return, the Commissioners would make good all damage done to the roads and public works of the Johore Government in the course of laying, maintaining, renewing or repairing the said pipeline other than such damage as was to be attributed to fair wear and tear. Should the Commissioners fail to make good any such damage in accordance with the foregoing covenant to the satisfaction of the State Engineer, Johor, within one month from the receipt of a notice in writing from him to do so, the damage might be made good by the State Engineer, Johore and the cost thereof shall be recoverable from the Commissioners. The certificate of the State Engineer shall be conclusive evidence of the sum due by the Commissioners in respect of damage which they might be liable to make good but shall not be conclusive as to the liability of the Commissioners to make good the repairs carried out by the State Engineer.¹³

The most straightforward issue in the negotiation process was the quantity and the price of the water derived from the scheme given that the Johore government did not contribute to the capital expenditure from the process of exploration in 1920 to the completion of the waterworks scheme in 1932. At the end, the total cost for the works after the completion was \$22,000,000.¹⁴ It is pointed out by Mohamed Said bin Sulaiman that from Johore's point of view, the primary cause for the waterworks was to meet the domestic needs of Singapore whereas for Johore the water supply was only a secondary concern. The question of whether Johore would use the water from the scheme was not a major consideration before the construction began. The issues of the quantity and the price of the water were only raised after the process of installing the pipelines through Johor Bahru in 1925 (Mohamed Said, 1951: 250-1).

Since the water from Gunong Pulai to Singapore was to be laid in any part of Pasir Pelangi or Ulu Ayer Molek Estate, the Sultan of Johore inquired whether such arrangements would allow the estate to get free supply of water.¹⁵ In return, the Sultan was given an exemption on paying quit rent and water charge for two bungalows belonging to the Sultan at Woodneuk and Tanjong Katong in Singapore. In fact, at that time, it is pointed out by Mohamed Said bin Haji Sulaiman that the price of 25 cents for 1,000 gallons of treated water to Johor was considered low, despite the fact that there was no charge for the raw water used for Singapore's domestic purposes. He further stated that the concession of free charge of raw water enjoyed by Singapore was granted until the Municipal would be able to generate reasonable profit from the Gunong Pulai water schme (Mohamed Said 1951: 250-1).

Accordingly, it was stated in the water agreement of 1927 that the Johore Government was entitled to obtain the supply of 800,000 gallons of water daily but the Johore Government was not obligated to take the said quantity of water. The agreement also stipulated that if at any time or times after the end of the year 1929 the Johore Government was able to prove to the Commissioners that the said 800,000 gallons of water per day was insufficient to meet the proper and reasonable requirements of the inhabitants of the town of Johore Bahru, then the Johor Government was entitled to receive the supply of such additional quantity of up to 1.2 million gallons of water per day and the Commissioners were not in any event liable to supply the quantity of water greater than 1,200,000 gallons per day. Consequently, the Johore Government was to pay to the Commissioners the sum of 25 cents for every 1,000 gallons of water supplied by the Commissioners and was not liable for any other charge or sum in respect of the said supply of water and the Commissioners would only supply water within the state to the Johor Government.¹⁶

The Water Agreement of 1927 and Its Implications

Ultimately, it can be said that based on historical reality, the primary objective of the water scheme was for the purpose of supplying water

to Singapore rather than Johore. Although it cannot be denied that the water agreement of 1927 gave several advantages to Johore, it appears to be marginal. This standpoint is manifested by the provision of the water agreement of 1927 which referred to the maximum quantity of the water acquired by Johore and Singapore. The agreement stipulated that the maximum quantity of the water supply to Johore from the Pulai scheme was 800,000 gallons per day. Yet the additional 400,000 gallons per day to Johore never became a reality although it was explicitly stated in the agreement. In fact, the provision which stated that any dispute which might arise as to such insufficiency or as to such additional quantity was to be referred to arbitration never became a probability. Moreover, the agreement also stipulated that Johore was not entitled to obtain more than 1.2 million gallon per day whereas there was no limitation imposed on the Singapore Municipality to acquire the water supply from the scheme.¹⁷

Thus, in this regard, the provision which stated that Johore was not forced to acquire the prescribed quantity of the water derived from this scheme was insignificant. Even more, it is evident that the Government of Johore who theoretically possessed the right of monopoly over the water supply derived from the Pulai Reservoir was practically subjected to the decision-making made by the Singapore Municipality on the matter. In fact, Johore was only granted nominal concession. This is because the provision was only consequential if it were meant to be applied to the event in which the Singapore Municipality would supply the water to other parties who might offer a higher rate than 25 cent per 1000 gallon.¹⁸

From Singapore's point of view, the only detrimental prospect in the deal in the water supply from Johore was the depreciation in their capital investment. Nevertheless, this prospect was considered marginal compared to the advantages gained for Singapore in the deal. It was probable that upon the completion of the whole scheme, the water supplies from Johore together with the Singapore's own supplies, met all Singapore requirements for water until 1951. In 1932,

the water supply from Singapore alone was 11 million gallons per day (mgd). Potentially, Gunong Pulai and Pontian Kechil could each yield 5.5 million gallons and 9 million gallons per day respectively.¹⁹ This estimation was 4.5 Million gallons less than the quantity predicted in 1923.²⁰ The maximum quantity of water supply to Singapore acquired from Johore until the year before the outbreak of the Second World War was 12 million gallon per day, whereas as a comparison, the quantity supplied to Johore from this scheme was 800,000 Gallon per day.²¹ This exchange demonstrates that the quantity of water acquired from Johore to cater the domestic use in Singapore was 15 times more than the amount allocated to Johore. Moreover, it is reported that the quality of water in Singapore had tremendously improved compared to the situation before their engagement with the Pulai scheme. In 1939, a traveller described the water in Singapore as first-class drinking water which mostly due to the fact that it had been brought from a mountain in the Johore jungle (Wells, 1940: 119).

Another provision which remained elusive was related to the possible revision in the water agreement soon after the expiration of 15 years from the time when water was first supplied in Singapore from the reserved land. The Commissioners had to submit to the Johore Government the whole of their accounts comprising capital expenditure income and outgoings for the purpose of ascertaining whether or not profits that had been made by the Commissioners from the said supply of water from Johore were excessive. If any dispute arose between the two parties relating to the matter, they had to submit the questions to the Examiner who should look at the extent whether or not the said profits over the said period of 15 years had been excessive, and continued to be excessive. The Commissioners and the Johore Government should have the right to appear by any officer or by Counsel and to adduce evidence before the Examiner.²²

It is further stated that in considering the questions submitted to him, the Examiner should have regard to all circumstances including any capital expenditure that may be in contemplation and all proper

deduction of depreciation. If the Examiner were to find such profits to be and also to appear likely to continue to be excessive and if the Commissioners and the Johore Government were unable to mutually agree upon what modifications in the said respects to have been made then the matters in dispute or difference had to be referred to the Governor of the Straits Settlements who would have power to adjudge that either or both the following modifications: Firstly, the Commissioners should pay to the Johore Government a royalty on water taken from the State of Johore at a such rate from such date but not retrospective and for such period; Secondly, that the charge of 25 cents should be reduced to such sum from such date but not retrospective and for such period. In case of any arising dispute, difference or question between the parties touching the construction, rights or liabilities, or premises or the subject matter of those present, all those matters had to be referred to arbitration in accordance with the law of Johore.²³

In this respect, the issue of excessive profits made by the Singapore Municipality was not easily justified since it had to consider the capital expenditure and its depreciation as well as maintenance and operational cost sustained by them. In this instance, it appears that the possibility for the Government of Johore to obtain royalty for its raw water supplies to Singapore were to be subject to the changes of the price of treated water supplies to Johor. It can be observed that initially Johore authorities were not concerned with the price of the raw water since they did not contribute to fund the water works construction in Johor. Even moreover, from the beginning, Johore was more concerned with the prospect of gaining immediate return from the water deal such as rent for the reserved land and royalty on the timber derived from the catchment areas.²⁴ In addition, under the water agreement, the cost of repairs or damages to the main pipelines had to be borne by the Johore's engineer, which was to be recovered from the Commissioners. The Government of Johore was only responsible in furnishing the expenditure of constructing the pipelines connection from the main pipelines for the water supplies in the state.²⁵

In effect, it appears that the Johor authorities tended to overlook the reality that their refusal in contributing to financing the water works would certainly weaken their position to bargain on any issues if they were to arise. It appears that the prospect that the price of treated water supplies to Johore would be reduced due to the excessive profits gained by the Commissioners as stipulated under the status quo of the water agreement remained elusive. Ultimately, the success for Johor in gaining leverage to meet their ends in the process of arbitration remained highly unfeasible since it had to be subject to the adjudication by the Governor of the Straits Settlements. Certainly, it was difficult to imagine the event because there was no dispute to arise during the period before the Second World War.

Nevertheless, whether or not it was prejudicial to the Governor, he would have been inclined to consider the circumstance which favoured the Singapore Municipal Commissioners. This is partly due to the fact that the Singapore Commissioners were directly under the Governor's jurisdiction. More importantly, they would certainly have the advantage in dictating the situation due to their contribution to carry out all capital expenditure and cost maintenance of the water works in Johore was total.

Moreover, since the status quo of the water agreement was favourable to Singapore's end, it is understandable that the Commissioners were always inclined to further explore the opportunities to increase the quantity of the water supplies from Johor in order to cater to Singapore's domestic needs although they had to find additional money to finance the extension of water works construction in Johore. This inclination can be traced in 1939 when it was preceded in the meeting of the Singapore Municipal Commissioners that there was a necessity to finance waterworks extensions designed to increase the dry weather capacity of the waterworks from 22,000,000 to 31,000,000 gallons a day. The estimated cost of the works was \$5,670,000, and the Singapore Government had agreed that the proposed extensions would be defrayed from loan to the extent of \$5 million and the

balance of \$670,000 was to be met from revenue.²⁶ Under this water works extension, it was expected that the extra 9 million gallon per day for Singapore's domestic use was to be acquired from Johore and the money was required for this purpose.²⁷ Unfortunately, the water works extension scheme did not go ahead because the Colonial Office held the view that unless the money for the scheme was to be raised locally, the money was not to divert funnels away from the paramount object of financing the war.²⁸

Despite the refusal of the Colonial Office authorities to sanction the loan scheme The Singapore authorities continue to improve the facilities as the dependence on the water supply derived from the water works in Johor was adopted as a long term policy. In fact, the Singapore authorities were trying to install the pumps for pumping the water from Pontian to Pulau 2 in early 1942 i.e., before the fall of Singapore to the Japanese on 15th February 1942. The Japanese attack on Singapore was actually preceded by the action to blow up the pipeline carrying water from Johor to the island. Even more, it is explicitly stated by Lee Kuan Yew that the most fundamental factor that Singapore had to surrender in 1942 was due to the fact that the Japanese had captured the reservoirs in Johor in early February 1942. He believed that this event had demoralised the British soldiers even though there was still some water in the reservoirs in Singapore. He further stated that the Royal Engineers then blew open a gap in the Causeway on the Johore side and also blew up the pipeline carrying water from Johore to the island. He regarded that that was the beginning of the siege of Singapore (Lee, 1998: 22, 46).

Therefore, it is understandable that during the Japanese occupation of Malaya and Singapore, the improvement and maintenance of the water works had been neglected for 3 and ½ years. It could be construed that the pumps serving the Singapore Island Catchments had been running for years without attention. Meanwhile, the reservoir at PULAI 2 which is the main gravity food into the two service reservoirs in SINGAPORE was allowed to fall very low by the Japanese to

compensate for the reduced efficiency of the pumps from PONTIAN and PULAI reservoirs.²⁹ Consequently, the quantity of water supply from the Pulai Scheme declined. It was reported that in September 1945, the quantity of water stored at Pulai was found to be 94 million gallon which represented 5% of the total capacity compared to the prewar circumstances.³⁰

The Prospect of Water Supply after the Second World War

From September 1945 to March 1946, Malaya and Singapore were governed under BMA. BMA was a part of the Allied Force of Southeast Asia (AFSEA) military command. Under this military administration, the water issue was assigned to the Chief Engineer of AFSEA. Accordingly, it was urgent for Singapore to become more dependent on the water supply from Johore because of the sudden introduction of large military establishments in Singapore. Most of these military establishments were naturally heavy consumers of water and that establishment was located on high sites without regard to difficulties of supply to such areas at that time. This circumstance was also contrary to the immediate aim for providing water supply to all consumers. Moreover, the water sufficient in quantity and quality was also required for the measures to prevent the spread of disease and civil unrest. Furthermore, the limited engineer and subordinate staff members had been laboring under difficulties arising from lack of adequate transport.³¹

Under this circumstance, the military authority in Singapore adopted the policy which would accommodate the need to increase the quantity stored consistent with delivering as much as could be spared to Singapore. The policy laid down to attain this objective was to conserve all water entering the Impounding Reservoir until such time as the water storage reached to 185 mgd. The reason for selecting this level was based on the calculation for a reasonable reserve that would be assured to cope with a breakdown in pumping plants on which the remaining sources of supply were entirely channeled. It was also necessary to

ensure that water without some period of natural sedimentation would not be admitted to the filtration plant and the mains throughout the entire system.³²

The matter was further aggravated in October 1945 when the pumping station at SELETAR reservoir for supplying the British Naval Base in Singapore broke down. Therefore, the reservoir at PULAI 2 had to be brought into operation to supply the Naval Base direct with water. Due to the high volume of water consumption required by the Naval Base, this had slowed down the filling of PULAI 2 above the second draw-off and the situation was not likely to rapidly improve at that time. As a result of the low draw-off from PULAI and also the inefficiency of the sand filters, the chlorination was making a heavy demand on chlorine gas, and this was estimated to continue for a year at 4 tons of gas per month. Due to the negligence by the Japanese administration to maintain and sustain the Johore's water supply to Singapore during the war, the full benefit of the PULAI 2 reservoir was not to be felt until, firstly, PULAI 2 has filled to at least above the second draw off which had to take about two months, and secondly, until the three pumps on the PONTIAN Pumping Station were to be stripped and repaired and brought back to their original capacity of 3 million gallons per day each. Instead, they were at that time only pumping 2 million gallons a day each.³³

At the end of 1945, the circumstances of the water supply in Singapore were nearly restored to that of the prewar period. Water Supply for SINGAPORE obtained from the island catchments was 14 mgd. These were low level catchments and require to be pumped to service reservoirs. The water supply obtained from JOHORE Catchments notably PULAI filter beds was 12.3 mgd. This consisted of 3.5 mgd at PULAI reservoir and 8.9 mgd pumped from PONTIAN to PULAI. It was noted that PULAI filters had ample reserve capacity. The water consumption in SINGAPORE at that time was 24.6 mgd. This was considerably in excess of normal peace time requirements due to the increased civilian population and also to the large military

population. It was estimated that in the situation in June 1946, the water demand was likely to increase due to the increase in European establishments, repair of sanitary fittings and industrial rehabilitation. Estimated requirements at end of six months were expected to exceed 24 mgd.³⁴

It is evident that the effort taken by the British military authorities to restore the water supply in Singapore was simply motivated by the fact that the raw water derived from Johore continued to be obtained without any charge. However, it appears that the Johore authorities did not indicate any inclination to revise the provision which would enforce the Singapore authorities to pay for the raw water from Johore in order to cater for the domestic needs for Singapore. It could be construed that Johore was tied to the fact that they were dependent on Singapore to supply the clean water to the state as the 1927 Water Agreement stipulated that Johore was entitled to acquire 800,000 mgd which could be increased to 1.2 mgd with the charge of 25 cent per gallon. It could be construed that the Singapore authorities did not make this provision as compulsory as it was stipulated in the 1927 treaty that Johore was not obliged to subscribe the acquisition of clean water derived from the Pulai Scheme.³⁵ Moreover, it appears that the treaty gave the authority to Singapore not to fulfil Johore's demand for the supply of clean water exceeding 1.2 mgd although this point was not transparent at that time.

In contrast, it is a tendency for the Singapore authorities to increase the acquisition of the water supply from Johore as the 1927 treaty did not impose on them the limitation to the quantity of raw water acquired by them. The Singapore authorities expected to increase the water acquisition of raw water from Johore for Singapore's domestic use up to nearly 50 per cent. In 1948, it was estimated that the daily water consumption in Singapore was about 25 mgd, of which at least 12 mgd was derived from Johore.³⁶ Nevertheless, they discouraged Johore to increase the acquisition of clean water. This matter was raised in 1948 when Johore tried to ask the Singapore Municipality for the increase

of additional 400,000 mgd clean water. In fact, it was noted that the maximum quantity of the acquisition of clean water by Johore was 800,000 mgd.³⁷ This meant that the demand was still within the status quo of the 1927 treaty which gave the provision to Johore to acquire up to 1.2 mgd. The application from Johore was made coincidentally with the time frame of which the provision of the 1927 treaty stipulated that the matters related to the water supply was to be revised 15 years after the water from Johore has been directly supplied to Singapore. It is necessary to note here that the first direct water supply from Johore to Singapore took place after the completion of the pipelines linking the Pulai reservoir with Fort Canning Hill in 1932.³⁸

The Deadlock in the Revision of the Water Deal

It seems that the 1927 treaty seems to be a bad piece of management from Johore's perspective as a whole. In all circumstances, the fate of the Government of Johore in handling the issues and legality concerning the water supply between Johore and Singapore was consistently dictated by the Singapore authorities. This can be observed in the fact that the Singapore Municipality were not prepared to supply the additional clean water to Johore unless Johore were also prepared to give further concession to them. In this respect, the Singapore Municipality imposed a concession on Johore that the additional water supply would only be granted only if Johore permitted Singapore to have access to other water resources in Johore other than from the Pulai scheme. The Singapore Municipality proclaimed that the maximum quantity of clean water supply to Johore was 800,000 gallon per day due to the limited capacity of the Pulai scheme itself.³⁹ Then they proposed to establish a scheme at Sungai Tebrau as a prospect for generating the additional water to cater to the domestic need for Johore Baharu. They clarified that the suggestion was based on the close proximity of Sungai Tebrau to the town and the river was directly linked to the water catchment at Lubuk Pekan in Kota Tinggi. This proposal was also based on the financial consideration as they estimated that the capital expenditure for the scheme was considerably low, i.e., about \$2.5 million to \$3 million.⁴⁰

The extent in which the Sungai Tebrau scheme was brought up by the Singapore municipality as a concession is obscure. They argued that they were not able to fulfill the application from Johore for additional clean water supply exceeding 800,000 gallon per day simply because of the limitation of the Pulai scheme. In this situation, it is well understood that the commissioners of Singapore Municipality intended to secure the water supply to Singapore rather than fulfilling their legal commitment as stipulated in the 1927 agreement. This is simply based on the fact which reveals that the water supply to Singapore was more than 12 mgd while the additional 400,000 mgd of clean water to Johor was considerably marginal by comparison.

Even more, it can be presumed that the proposed Sungai Tebrau scheme was not solely intended for the purpose of supplying water to Johore Bahru. The reality is that the Singapore municipality was actually contemplating the prospect of acquiring additional water derived from Sungai Tebrau scheme in order to increase the water supply from Johore to Singapore. This was to cope with the increase in their domestic consumption due to the establishment of the naval base and the large increase of civilian populations in the island. Understandably, they were prepared to inject capital expenditure for this new scheme as it had been mentioned before; they had intended to pursue the similar measure by expanding the Pulai scheme in 1939. After the war, they were also faced with the desperation to increase the water supply in Singapore because of the breakdown of the pumping station at Seletar Reservoir in October 1945.⁴¹

Under the circumstances, it is evident that the Singapore municipality historically had an upper hand over Johore as they were able to exploit the bargaining process in order to fulfill their ends. This is simply due to the fact that they possessed the expertise in the construction and maintenance of the clean water facilities. Thus, the government of Johor had no choice and had to accept the proposal from the Singapore municipal Commissioner although it would give more advantage and privilege to Singapore. Certainly, the larger proportion

of the water derived from the Sungai Teberau scheme were to cater for Singapore's domestic consumption. This is based on the forecast by the BMA in 1945 that the water consumption in Singapore was to increase from 27.5 mgd to 45 mgd few years after.⁴²

In contrast, despite the fact that Johore was not able to acquire additional quantity of clean water derived from the scheme, it seems that the government of Johore were not able to manipulate the situation as their advantages over Singapore over the jurisdiction on the land areas reserved for the water scheme at Gunong Pulai was nominal. The duration for the concession rate for the land rental was to be expired on 5th December 1948. The concession rate for the land of 30 cent per acre was applied for 21 years from the date when the 1927 agreement was ratified by both parties on 5th December 1927. This is because the government of Johore had to give the priority for continuing to rely on the Singapore municipality for the management of the water scheme. In fact, the government of Johore only negotiated the concession for the increase in the quantity of clean water supply to Johore on 25 cent per 1000 gallon that is similar to the status quo of 1927 water agreement. In this case, Johore applied for the increase of clean water supply up to 2 mgd after 1948, 3 mgd in or after 1955 and 4 mgd in 1960.⁴³

Initially, this term was to be accepted by the Singapore Municipal commissioner because the Singapore municipality continued to enjoy the concessions stipulated in the 1927 water agreement and it was hoped that the similar concessions would be applicable to them if the new agreement on the Sungai Teberau scheme was to be signed by both parties.⁴⁴ Nevertheless, the irony was that W. Blythe, the President of the Singapore Municipal commissioner then highlighted several matters which certainly made the situation complicated. Blythe made a reference to the necessities incurred from the new additional works, the certainty of the legal status of the land in the Pontian-Pulai areas and the application for the increase in the quantity of water supply for southern Johore. This led to the decision as the Singapore municipality was not willing to fulfill the application from Johore for the water supply of 2 mgd for the years from 1949 to 1955.⁴⁵

Consequently, it is a matter of fact that neither the new agreement was finalized nor the old agreement of 1927 was revised. In principle, the new agreement with several amendments should have been ratified in 1948 but this did not materialize. Moreover, the failure to reach any conclusion meant that the 1927 water agreement was not abrogated and still went into effect. This status quo automatically gave more advantage to the Singapore municipality because the failure to achieve mutual agreement meant that they were still able to enjoy all the concessions stipulated in the 1927 water agreement. In other word, they were not subjected to any restriction on acquiring Johore's raw water without any charge and the government of Johore was not able to acquire the additional clean water supply from the scheme. Moreover, the Singapore municipality still enjoyed the concession rate for land rental of 30 cent per acre and the government of Johore were not able to impose the normal land rental of \$5 per acre although it had exceeded 21 years.

Nevertheless, it is striking to notice that the Singapore municipality continued to explore the possibility to expand the water acquisition from Johore to cater for the continuing increase of their domestic water consumption. Despite the failure to break the deadlock in the negotiation, the Singapore Municipality managed to pursue the acquisition of additional water supply derived from Tebrau River which commenced in 1948. Accordingly, the river intake, filtration plants and pipeline from Tebrau to Singapore was eventually completed in 1953. Meanwhile, the Singapore Municipality which managed the water affairs in Singapore was changed to City Council of Singapore (CCS) when the Town of Singapore was granted city status in 1951. Moreover, the CCS also managed to expand the land areas for water catchment surrounding the Pulai scheme. In the 1950's, both parties tried to reach the agreement on the issue of annual rent for the lands located within the scheme areas in Pontian Kecil, Pulai and Ayer Hitam.⁴⁶

Accordingly, in 1955, the matter was resolved when both the CCS and the Government of Johore agreed that the rent for the land at Gunong Pulai was 30 cent per acre and \$5 per acre for other areas. It was

specifically stated that these terms were applied from 1st March 1955 to 28th February 1961.⁴⁷ However, it was found that the areas subjected to the scheme had increased from 7580 acres in 1932 to 9094 acres in 1955.⁴⁸ Otherwise, the provisions on the acquisition of raw water by Singapore and clean water by Johore still remained the same despite the revision of the agreement that should have been made in 1948. The water deal related to the matter was totally neglected and Johore was not able to obtain additional clean water of 400,000 MGD which had been raised since the expiry date for the 1927 water agreement would have been on 5th December, 1948.

However, it is evident that the Singapore authorities were determined to push forward further concession on the increase for the water supply from Johore. Although they were also not prepared to give in any additional concession concerning the supply of additional clean water to Johore, they were able to expand the water works in Johor in the 1950's. The deadlock in the reaching any mutual agreement by both parties meant that the status quo under the 1927 Water Agreement as a whole would remain in effect as long as the new agreement was not yet to be ratified. Despite the fact that they were heavily dependent on the supply of raw water from Johore, they were in the better position in the bargaining process due to their capital superiority compared to Johore. In fact, they were seeking for a better terms and conditions in order to suit their interests in the water deal as a whole. Notably, this can be seen in terms of extending the waterworks areas in order to increase the volume of raw water supply to Singapore for the longer duration than the 1927 agreement. This premise can be seen when both parties had eventually come to terms with the signing of the new water agreement in 1961 followed by another similar agreement in 1962. Both agreements would grant water concession to Singapore for the period of 50 and 99 years respectively compared to only 21 years in the 1927 agreement.⁴⁹ The 1961 agreement also granted the larger areas for the waterworks scheme compared to 1927 agreement by incorporating Sungai Teberau and Sungai Sekudai which had actually been brought into operation in the 1950's.

Thus, it is evident that the Singapore counterpart had manipulated the signing of the 1961 agreement in order to obtain the permission to expand the areas for the waterworks which would vastly increase the quantity of the raw water acquired from all schemes. Based on the disagreement and deadlock in the negotiations before the signing of the 1961 water agreement which had been discussed before, it is a revealing fact that the CCS had refused to give additional quantity of clean water to Johore under the old rate. This can be found in the provision of the 1961 agreement that the new charge and rate for raw and clean water had actually been applied dating back to the 1st March, 1955, six and half years earlier than the date of the 1961 water agreement.⁵⁰ It seems that Johore benefited from the charge of raw water of 3 cents per 1000 gallon but they had to pay the 50 cents for the same quantity of clean water, i.e., the increase of 25 cent before the new agreement was to go into effect in 1961. Only by this means, they finally agreed to increase the clean water supply to Johore. It is stipulated in the 1961 agreement that the CCS would supply to the Government of Johore a daily quantity of water no exceeding at time 12 per cent of the total quantity of water supplied to Singapore over the causeway and in any case not less than 4 mgd.⁵¹

Conclusion

Having observed the historical development of the water supply between Johore and Singapore after 1927, it can be concluded that the 1927 treaty seems to be a bad piece of management from Johore's perspective as a whole. In all circumstances, the fate of the Government of Johore in handling the issues and legality concerning the water supply between Johore and Singapore was consistently dictated by the Singapore authorities.

Ultimately, it can be said that based on historical reality, the primary objective of the water scheme was to supply water to Singapore rather than Johore. It was Singapore who was desperate to acquire the supply of raw water from Johore to cater for her domestic

consumption. However, Johor was obliged to conform to Singapore's will which was secured under the 1927 water agreement. This is due to the fact that the Government of Johore was not able to exploit its advantage over Singapore despite the fact that the scheme was located within the territory of Johor and the raw water belonged to Johore. This weakening position was due to Singapore's supremacy in injecting capital investment in the water scheme in Johore in order to exploit the cheap raw material, i.e. water, as a surplus from Johore.

From Johore's perspective, the situation remained stagnant from 1948 to 1961. This was the period when Johore began to explore the possibility of acquiring additional 400,000 mgd of clean water to cater the consumption in Johore Bahru as stipulated in the 1927 water agreement. In this respect, it is obvious that Johor failed to bring Singapore to terms of fulfilling this particular provision due to the refusal from the Singapore municipality to increase the clean water supply to Johore without additional concession of acquiring raw water from Johore, even though there was no charge on the raw water supply to Singapore. It is peculiar to observe the historical reality that the failure of the government of Johore to bring Singapore into terms meant that the 1927 water treaty continued to be in effect although legally, it could be considered as null or void as the duration of the agreement lapsed in 1948. Instead, the agreement was only abrogated when the water agreements applicable to the same scheme was signed in 1961 which further Singapore's supremacy in the water deal.

Notes

- ¹ For the concept of British Malaya, see Swettenham (1948).
- ² Singapore Municipal Commissioner hereafter referred as SMC, Singapore Water Works, Water Supply from Johor, 28th Feb. 1932, CO 1069/561, National Archive at Kew, United Kingdom, hereafter referred as NAK .
- ³ SMC, Singapore Water Works, Water Supply from Johor, 28th Feb. 1932, CO 1069/561.
- ⁴ See the subject on Laying of foundation stone at Johor Causeway, GAJ 270/1920.
- ⁵ SMC, Singapore Water Works, Water Supply from Johor, 28th Feb. 1932, CO 1069/561.
- ⁶ Report by Messrs Sir Alexander Binnie, Son, and Deacon', Submitted to the Singapore Municipal Commissioners in 1922, GAJ 757/23.
- ⁷ SMC, Singapore Water Works, Water Supply from Johor, 28 Feb. 1932, CO 1069/561.

- ⁸ The correspondence to Sultan Ibrahim of Johor (r. 1895-1959) on the water issue was mostly conveyed from the president of the Singapore Municipal Council to Mohamed Said bin Haji Sulaiman who served as the Private Secretary to the Sultan from 1910-1955. See Mohamed Said (1951: 250-1).
- ⁹ Agreement as to water rights at Gunong Pulai, Paper to be laid on the table of the council of state at the meeting, 24th Oct. 1923, GAJ 757/23.
- ¹⁰ The Agreement as to Water Rights at Gunong Pulai, 5th Dec. 1927, hereafter known as The Water Agreement of 1927, The Johor Branch of The National Archives of Malaysia, Johor Bahru, hereafter referred as Johor Archives. The Malay translation version of this agreement is written in the Malay Jawi script.
- ¹¹ Water Supply from Johor, 17 July 1923, GAJ 757/23.
- ¹² Water Supply from Johor, 17 July 1923, GAJ 757/23.
- ¹³ See section 7, 10 and 20 in The Water Agreement of 1927.
- ¹⁴ SMC, Singapore Water Works, Water Supply from Johor, 28th Feb. 1932, CO 1069/561.
- ¹⁵ See the proceeding on the water supply from Johor in the Council of Minister of Johor of 1925, CLMJ 704/25.
- ¹⁶ See sections 22, 23 24 and 28 in The Water Agreement of 1927.
- ¹⁷ See clauses 22 and 23 in The Water Agreement of 1927.
- ¹⁸ See clause 28 in The Water Agreement of 1927.
- ¹⁹ SMC, Singapore Water Works, Water Supply from Johor, 28th Feb. 1932, CO 1069/561.
- ²⁰ Water Supply from Johor, 17th July 1923, GAJ 757/23.
- ²¹ Water Supply and Singapore, 10th October 1945, WO 203/4118.
- ²² See clauses 20 and 21 in The Water Agreement of 1927.
- ²³ See clause 21 in The Water Agreement of 1927.
- ²⁴ Agreement as to water rights at Gunong Pulai, Paper to be laid on the table of the council of state at the meeting, 24th October 1923, GAJ 757/23.
- ²⁵ See clauses 27 and 29 in The Water Agreement of 1927.
- ²⁶ Extract from the minutes of proceedings of the Municipal Commissioners of the Town of Singapore at an Ordinary Meeting, the 28th July 1939, CO 273/659/3.
- ²⁷ From R. B. Willmot, H. M. Trade Commissioner to the Comptroller – General in London, 2nd August 1939, CO 273/659/3.
- ²⁸ Extract from the Straits Settlements Legislative Council Proceedings (Extraordinary Meeting), 26 September 1939, CO 273/659/3.
- ²⁹ Water Supply and Singapore, 10th October 1945, WO 203/4118.
- ³⁰ Major A.C. Wilson, Singapore Water Supply: Review of Position as at 16th November 1945, WO 203/4118.
- ³¹ 14 Army letter from Brig. B.L.L.A. Collins 1661/05 of 26th Sep. 1945, WO 203/4118.
- ³² Major A.C. Wilson, Singapore Water Supply: Review of Position as at 16th November 1945, WO 203/4118.
- ³³ Water Supply and Singapore, 10th October 1945, WO 203/4118.
- ³⁴ From Major General to Chief Engineer, Allied and Forces, No. 70802 34 of 28th Dec. 1945, WO 203/4118.
- ³⁵ See clauses 22, 23 24 and 28 in The Water Agreement of 1927.
- ³⁶ Memorandum of water supply to Johore Bahru, 7th February 1948, CLMJ 60/48, ANMJB.
- ³⁷ Water Supply and Singapore, 10th October 1945, WO 203/4118.
- ³⁸ SMC, Singapore Water Works, Water Supply from Johor, 28th Feb. 1932, CO 1069/561.
- ³⁹ L. Raymon, President of the Singapore Municipal Commissioner to Resident Commissioner of Johore, 21st Jan. 1948, MBJ 282/41.
- ⁴⁰ Teberau Water Scheme, 7 February 1948 MBJ 404/41.
- ⁴¹ Water Supply and Singapore, 10 October 1945, WO 203/4118.

- ⁴² From Major General to Chief Engineer, Allied and Forces, No. 70802 34 of 28th Dec. 1945, WO 203/4118.
- ⁴³ Memorandum of water supply to Johore Bahru, 7th February 1948, CLMJ 60/48.
- ⁴⁴ Temporary water scheme of Teberau River, 15th April 1948, CLMJ 60/48.
- ⁴⁵ W. Blyth to Johor Under-secretary, 22th June 1948, CLMJ 60/48.
- ⁴⁶ Extension of Singapore Supply (1951-53)CO 1022/220.
- ⁴⁷ New Waterworks Agreement with City Council of Singapore 20th September 1955, SSJ 8/48, ANMJB.
- ⁴⁸ See the comparison between SMC, Singapore Water Works, Water Supply from Johor, 28 Feb. 1932, CO 1069/561 and New Waterworks Agreement with City Council of Singapore 20th Sept. 1955, SSJ 8/48, ANMJB.
- ⁴⁹ Johor-Singapore Agreement, The 1961 Indenture (Gunung Pulai, Sg. Skudai & Sg. Tebrau), hereafter referred as 1961 Water Agreement. See also Johor-Singapore Water Agreement, The 1962 Deed (Sg. Johor), 29th Sept. 1962. Both documents are available at The Johor Archives.
- ⁵⁰ See section 16 especially clauses (I), (II) and (V), 1961 Water Agreement.
- ⁵¹ Section 14, 1961 Water Agreement.

References

- Emerson, R. (1964). *Malaysia: A study in direct and indirect rule*. Kuala Lumpur: University of Malaya Press.
- Lee, Kuan Yew. (1998). *The Singapore story: Memoir of Lee Kuan Yew*. Singapore: Times Edition Pte Ltd..
- Mohamed Said bin Haji Sulaiman (Mejar Dato' Haji). (1951). *Hikayat Johor yang kedua: Tawarikh Yang Maha Mulia Ibrahim Sultan Johor dari permulaan hingga kedatangan Jepun (1941)*. Johor Baharu: Pejabat Cetak Kerajaan Johor.
- Moore, Donald. (1975). *The story of Singapore: The magic dragon*. St. Albans: Granada Publishing Ltd.
- Swettenham, F. A. (1948). *British Malaya: An account of the origins and progress of British influence in Malaya*. London: George Allen and Unwin.
- Tan, Tai Yong. (2004). The grand design: British policy, local politics, and the making of Malaysia, 1955-1961. In Marc Frey, Ronald W. Pruessen and Tan Tai Yong (eds.), *The Transformation of Southeast Asia: International Perspectives on Decolonization*. Singapore: Singapore University Press.
- Wells, Carveth. (1940). *North of Singapore*. London: Jarrolds Publications Ltd.
- Yeoh, Brenda S. (2003). *Contesting space in colonial Singapore: Power relations and urban built environment*(2nd ed.). Singapore: Singapore University Press.