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Towards a 'Forward Defence' for Singapore: Revisiting the Strategy of the Singapore Armed Forces, 1971-1978

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ABSTRACT
Conventional narratives emphasise Singapore's defence policy from 1965 to the early 1980s as defensive-oriented. Drawing on previously under used research materials from Australia, Britain and the United States, this article examines Singapore's defence strategy during the 1970s and argues that during that period Singapore's Armed Forces (SAF) focused on acquiring the capability to conduct an offensive military campaign within Malaysia in the event of threats to Singapore's security or the continuity of its water supply from Malaysia. The United States termed this strategy forward defence. The article also discusses Australian, British, and the United States' contributions towards Singapore's 'forward defence' strategy.

Introduction

In July 1975, after the communists came to power in Cambodia and South Vietnam, defence officials from Singapore and United States met to discuss Singapore's threat perceptions and requirements for additional military aid that the United States could provide to the small island-state. More significantly the meeting confirmed the United States' suspicion that Singapore was shifting its defence posture towards an offensive-oriented strategy. In other words, Singapore was rushing to build the Singapore Armed Forces (SAF) into an offensive-oriented force, capable of launching a pre-emptive military campaign within Malaysia with the setting up of defensive lines in Johore, the Malaysian state located north of Singapore. This strategy, which the United States termed forward defence, would be implemented if there was a threat from Malaysia to either Singapore's security or the continuity of Singapore's water supply from reservoirs in Johore.

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Drawing on archive materials from Australia, Britain and the United States, this article argues that Singapore's quest to prepare the SAF for forward defence shaped the island-state's actions during the 1970s. The primary factor that influenced Singapore's decision to adopt the forward defence strategy was Singapore's lack of strategic depth and the need to secure continuity of the water supply from Malaysia. From 1975 onward, Singapore moved quickly to ensure the SAF could implement that forward defence strategy within the next three years. The primary reason for haste was the perceived threat of a communist insurgency in West Malaysia, which by 1975 had caused the security situation there to deteriorate.

This article covers the period from 1971 to 1978 and begins in November 1971 when Singapore assumed full control for its defence following Britain's withdrawal from previous defence commitments. Seven years later in December 1978, Singapore's security environment changed again when the Third Indochina War began with the Vietnamese invasion and occupation of Cambodia. The military conflict in Cambodia significantly influenced Singapore's threat perceptions and defence strategy, but that is an area beyond this article's scope.

This article begins with an overview of the debates concerning Singapore's military history. It then moves on to examine the Singapore's forward defence strategy, tracing the development of the strategy and the rationale behind it. Drawing mainly from declassified British intelligence reports, the third part discusses the likely SAF operational plan to intervene in West Malaysia. The fourth part examines the SAF modernisation programme during the 1970s. It focuses on three broad areas that would be critical for the SAF to successfully implement the forward defence strategy.

The Debates on Singapore's Military History

The conventional debates on Singapore's military history describe Singapore's defence strategy after its independence from Malaysia in 1965 as that of a 'poisonous shrimp – any predator swallowing the shrimp would have to pay a high price.[1] According to Tim Huxley in his book *Defending Singapore*, this strategy acted as a deterrent to any potential external hostile power as the cost to invade and occupy Singapore would

[1]The argument that Singapore's defence policy rested on the concept of a 'poisonous shrimp' has been advanced by several scholars, Singaporeans or otherwise. For examples see; Mohamad Faisol Keling and Md Shuib, 'The Impact of Singapore's Military Development on Malaysia's Security', *J. Pol. & L.,* 2: 68 (2009), p. 70; Ron Matthews and Nellie Zhang Yan, 'Small Country 'Total Defence: A Case Study of Singapore', *Defence Studies*, 7:3, (2007), p. 380; Tan See Seng, 'Mailed Fists and Velvet Gloves: The Relevance of Smart Power to Singapore's Evolving Defence and Foreign Policy', *Journal of Strategic Studies*, 38:3, (2015), p. 335.

outweigh the benefit.[2] Bernard Loo observes that due to Singapore's urbanised terrain, the 'poisonous shrimp' strategy meant that any would-be aggressor would be deterred by the potential high human and material costs of fighting the SAF in Singapore's urban areas.[3] Although there is a general agreement amongst scholars that the post-independence Singapore later adopted a 'poisonous shrimp' strategy, there are divergent views on the exact point when Singapore shifted its strategy from one of defence towards an offensive-oriented strategy. Many works consider the early 1980s as the period when the SAF shifted from 'poisonous shrimp' towards an offensive-oriented strategy.[4] However, a few conclude that Singapore shifted its defence strategy towards an offensive-oriented one before the 1980s. For example, Andrew Tan advances the theory that the communist victories in Cambodia and South Vietnam in the mid-1970s led Singapore to shift to a more offensive-oriented defence strategy which called for a 'pre-emptive conventional capability that emphasised airpower, armour, and mobility'.[5] Tan's position, therefore, places 1975 as the turning point. Conversely, Ng Pak Shun argues that the SAF had been undertaking an offensive-oriented build-up since the late 1960s.[6]

There is still a lack of historical work on the post-1971 period because Singapore's defence-related records for this period remain classified. This situation makes such work difficult, a point acknowledged by Bernard Loo.[7] Having said that, historical work on Singapore's military covering the period up to 1971 does exist. Two are Chin Kin Wah's *The Defence of Malaysia and Singapore* and *Between Two Oceans: A Military History of Singapore from the First Settlement to Final British Withdrawal*, a collection of essays

[2]Tim Huxley, *Defending the Lion City: The Armed Forces of Singapore,* (St Leonards: Allen and Unwin, 2000), p. 56.

[3]Bernard Loo Fook Weng, 'Goh Keng Swee and the Emergence of a Modern SAF: The Rearing of a Poisonous Shrimp', in Emrys Myles Khean Aun Chew and Kwa Chong Guan (eds), *Goh Keng Swee: A Legacy of Public Service,* (Singapore: World Scientific, 2012), p. 127.

[4]Ho Shu Huang and Samuel Chan, *Singapore Chronicles: Defence* (Singapore: Straits Time Press, Singapore, 2015), p. 55; Bilveer Singh, *Arming the Singapore Armed Forces: Trends and Implications,* (Canberra: Australian National University, 2003), p. 26; Bernard Tay, 'Is the SAF's Defence Posture Still Relevant as the Nature of Warfare Continues to Evolve', *Pointer, Journal of the Singapore Armed Forces,* Vol 42, No 2, (2016), p. 25.

[5]Andrew Tan, 'Singapore's Defence: Capabilities, Trends, and Implications', *Contemporary Southeast Asia*, Vol. 21, No. 3, (1999), p. 458.

[6]Ng Pak Shun, *From Poisonous Shrimp to Porcupine: An Analysis of Singapore's Defence Posture Change in the Early 1980s,* (Canberra: Australian National University, 2005), p. 1.

[7]Bernard Loo Fook Weng, 'Goh Keng Swee and the Emergence of a Modern SAF', p. 127.

written by Singapore-based scholars such as Malcolm Murfett and Brian Farrell.[8] Relying primarily on non-Singaporean documents, these works provide an excellent and in-depth study of Singapore's military history, covering the period before and after Singapore's separation from Malaysia. In the absence of access to Singapore's archives all scholarly work must therefore rely either on strategic theory or an examination of the SAF's actions during this period. A case in point is Andrew Tan's article written in 1999 which seeks to explain the trend in Singapore's military build-up from 1965, its argument is framed by concepts such as a Revolution in Military Affairs (RMA).[9] Although Tan briefly discusses the forward defence strategy from an operational perspective, he also uses evidence from Singapore's defence budget and arms procurement programmes.

Similarly, Ng Pak Shun argues that the SAF had undertaken an offensively oriented build-up since the late 1960s. However, he does not provide any evidence to support the argument. Instead, his argument is framed through organisational behaviour theories such as Rational Actor and Organisational Process.[10]

One major work on Singapore's defence policy written at the turn of the 21 Century is Huxley's *Defending Singapore.* Although Chapter Two discusses Singapore's forward defence strategy, it has been framed from a military-strategy perspective, focusing on implementation at the operational level. Furthermore, the sources cited come mainly from newspaper articles and an interview with Singapore's Defence Minister, rather than from any archive data.[11]

This brief review of the literature on Singapore's general military history, and Singapore's forward defence strategy in particular, reveals a gap in the post-1971 debate, and this is significant given Singapore's change in its defence orientation. This article attempts to fill that gap and contribute to the debate on Singapore's military history.

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[8]For the discussion on defence related issues concerning Singapore from 1965 and 1971, see Chapter 7 to 9 in Chin Kin Wah, *The Defence of Malaysia and Singapore the Transformation of a Security System, 1957-1971*, (Cambridge: Cambridge University Press, 1983); and Chapter 11 in Malcolm Murfett et al., *Between Two Oceans: A Military History of Singapore from First Settlement to Final British Withdrawal*, (Singapore: Marshall Cavendish Editions, 2011).

[9]Andrew Tan, 'Singapore's Defence', p. 457.

[10]Ng Pak Shun, *From Poisonous Shrimp to Porcupine,* pp. 1-6.

[11]For a detailed discussion on the likely scenario of a military conflict between Singapore and Malaysia, see Chapter Two of Tim Huxley, *Defending the Lion City.*

The Forward Defence Strategy

Since the late 1960s, British military intelligence and diplomatic staff in Singapore suspected that Singapore was shaping the SAF's orientation towards forward defence to be carried out in West Malaysia. In 1969, British intelligence conducted a study on Singapore's arms procurement patterns and concluded that Singapore was adopting a strategy that would enable the SAF to fight outside the island. The report highlighted that the military equipment the SAF had, or planned to acquire, was increasingly offensive-oriented. Some of that equipment included self-propelled artillery, amphibious vehicles, bridge laying tanks, and minefield breaching tanks, equipment with no obvious utility for a defensive posture within an urban environment like Singapore.[12] The British assessed that the equipment might 'have a use for offensive operations against Malaysia'.[13] Critically, the British came to this assessment after receiving information from classified sources suggesting that Singapore had military contingency plans to move its forces into Johore. A military intervention in Johore would likely occur if Malaysia's internal security situation worsened to the point that there was a threat to either Singapore's security or the continuity of the water supply from Johore.[14]

Besides observing the pattern of Singapore's arms procurement and information from classified sources, the British closely monitored statements made by Singapore's political leaders, some of whom had publicly advocated a forward defence strategy. For example, during one of the budget speeches in the late 1960s, Singapore's first Defence Minister Goh Keng Swee stated that 'Singapore could not be defended by sitting tight on the island but that it would be necessary to base the defence on Malaysian beaches – e.g. to hold the peninsular against attack from the North or from the sea.'[15] Goh's statement reflected his view that Singapore's successful defence would require the SAF to form defensive lines in West Malaysia, although we cannot be sure if this was Goh's personal view or was reflective of Singapore's policy

The United States shared Britain's suspicion of Singapore's military intentions in Malaysia. When Singapore attempted to buy Centurion tanks from Britain in 1970, the Americans were convinced that Singapore's interest was based on an intent to conduct a military campaign in Malaysia. Charles Cross, then the United States Ambassador to

[12]The UK National Archives (Hereinafter TNA) FCO 24/568, Singapore Interest in Acquiring 'Sharp Weapons', 7 November 1969.
[13]Ibid.
[14]Ibid.
[15]TNA FCO 24/568, Singapore - Possible Future Armed Purchases, 14 November 1969. Goh had also alluded to the need for 'forward defence' in his Parliamentary speech in 1968. See *The Straits Times,* 'How S'pore hopes to bridge that $300 mil. gap in defence', 4 December 1968, p. 8.

Singapore, said, 'what else the Singaporeans would do with the tanks but to use them over the causeway' i.e., in Malaysia.[16] The SAF already had 72 AMX-13 light tanks purchased from Israel in January 1968.[17] Besides the Centurion tanks, Singapore was also interested in acquiring amphibious load-carrying vehicles.[18] Such vehicles would be suitable for crossing the narrow Johore Strait that separates Singapore from Johore, and would enable the SAF to move its troops into Malaysia even if the Malaysians had destroyed the causeway.

Why Forward Defence?

Two critical factors influenced Singapore's political leaders and defence planners to consider a forward defence strategy. Firstly, with a land area of less than 700 square kilometres Singapore lacks the strategic depth needed to defend itself, Singapore cannot therefore be defended based on a defence in depth or by guerrilla warfare.[19] Securing defensive lines in West Malaysia, especially in Johore, would provide Singapore with some strategic depth and could protect Singapore's main island from direct enemy attack. The new Republic of Singapore was not of course the first to recognise the need to set Singapore's defensive lines in West Malaysia to deal with threats from the north. Before the Japanese invasion of West Malaysia, then known as Malaya, in 1941 the British had recognised the significance of West Malaysia to Singapore's defence. In the late 1930s, Major-General William Dobbie, then the General Officer Commanding (Malaya), was concerned that enemy forces establishing themselves in Johore could attack Singapore.[20] Writing on the British defence strategy for Singapore during the Second World War, the historian Ong Chit Chung writes, 'the defence of Singapore and Malaya was indivisible; the defence of Singapore meant in effect the defence of Malaya'.[21] Nearly thirty years after the Second World War had ended, the British assessment was that Singapore's security was intertwined with that

[16]TNA FCO 24/906, Telegram Number 25 Addressed to FCO Telno 25 of 12 January RFI to POLAD, Kuala Lumpur and Washington, 12 January 1970.

[17]Barzilai, Amnon, 'A Deep, Dark, Secret Love Affair: A team of IDF officers, known as the Mexicans, helped Singapore establish an army. It was the start of a very special relationship', *Haaertz*, 16 July 2004, https://www.haaretz.com/1.4758973. Accessed on 21 January 2020. See also Stockholm International Peace Research Institute (Hereinafter SIPRI) database, Transfers of major weapons: Singapore.

[18]TNA FCO 24/906, Defence Equipment for Singapore, 14 January 1970.

[19]Mak Joon-Num, *ASEAN Defence Reorientation 1975-1992: The Dynamics of Modernisation and Structural Change,* (Canberra: Australia: Australian National University, 1993), p. 95.

[20]Karl Hack and Kevin Blackburn, *Did Singapore Has to Fall?* (London: Routledge, 2004), p 38

[21]Ong Chit Chung, *Operation Matador- World War Two: Britain's Attempt to Foil the Japanese Invasion of Malaya and Singapore,* (Singapore: Marshall Cavendish, 2011), p. 55.

of West Malaysia i.e. 'no force could defend Singapore indefinitely against a strong attack from neighbouring territories'.[22] The Americans had a similar assessment. As John Holdridge observed, the Singaporean political leaders remembered the island-state's vulnerability during the Second World War when the Japanese military advanced down West Malaysia before capturing Singapore, and they too recognised that defending Singapore would be impossible if Johore was in enemy hands.[23]

Secondly, Singapore relied on Johore for most of its water supply, even before Singapore's independence from Malaysia in 1965. The first agreement on water supply from Johore to Singapore was signed on 5 December 1927 between the municipal commissioners of the town of Singapore and the Sultan of Johore. Singapore's growing reliance on water supply from Johore was reflected in two additional water agreements signed in 1961 and 1962 between the city council of the state of Singapore and the Johore state government.[24] By 1974, Johore was supplying about 75% of Singapore's daily water consumption.[25] After Singapore separated from Malaysia in 1965, its critical reliance on water from Malaysia had been used as leverage by Malaysian politicians. At times, Malaysian politicians sought to coerce Singapore by threatening to cut the water supply from Johore.[26] It was, therefore, crucial for Singapore to build up the SAF's capabilities to secure Singapore's water supply from Johore, a point Singapore's Prime Minister Lee Kuan Yew highlighted to then Malaysian Deputy Prime Minister Mahathir Mohamed in 1978.[27]

Communist Insurgency in West Malaysia

While the need to establish strategic depth and secure its water supply influenced Singapore to look at forward defence, the increasing tempo of communist insurgency

[22]TNA FCO 15/1912, Singapore Armed Forces, 18 March 1974.

[23]Access to Archival Database, National Archives and Records Administration (Hereinafter AAD NARA), Document Number 1976SINGAP01046, Film Number D760082-0461, U.S. Policy Review of Singapore Purchases of Military Equipment, 4 March 1976. Holdridge was the American Ambassador to Singapore in the second half of the 1970s.

[24]Joey Long, 'Desecuritizing the Water Issue in Singapore—Malaysia Relations', *Contemporary Southeast Asia*, Vol. 23, No. 3 (2001), p. 510; Valerie Chew, 'Singapore-Malaysia water agreements', *Singapore National Library Board*, https://eresources.nlb.gov.sg/infopedia/articles/SIP_1533_2009-06-23.html. Accessed 2 February 2021.

[25]TNA FCO 15/1912, Singapore Armed Forces: Part I, 18 March 1974.

[26]Joey Long, 'Desecuritizing the Water Issue in Singapore—Malaysia Relations', p. 103-104.

[27]Lee Kuan Yew, *From Third World to First, The Singapore Story: 1965-2000,* (New York: Harper Collins, 2000), p. 243.

in West Malaysia during the 1970s triggered Singapore to accelerate its military-build up. The insurgency was led by the Communist Party of Malaya (CPM), which aimed to establish a communist state in 'Malaya' that covered both West Malaysia and Singapore.[28] First active in the post-war period it relaunched its armed insurgency against the Malaysian government in 1968, and during the 1970s, had stepped up an armed campaign in West Malaysia. As a result, the security situation in West Malaysia had deteriorated by the second half of 1975.[29] The CPM's threat led Singapore's defence planners to consider the insurgency as a security threat.[30] It also prompted Singapore to seek United States' assistance to build up the SAF's capabilities and allow it to implement a forward defence strategy.

In July 1975, Singapore's defence planners met their visiting counterparts from the United States to discuss additional military assistance, and Singapore's perception of the ongoing communist insurgency in West Malaysia. Singapore's delegation to the meeting was led by SR Nathan, the Director of Security Intelligence Division (SID), part of Singapore's Defence Ministry, and Colonel Winston Choo, the SAF's Director of the General Staff.[31]

Based on a United States' report of the meeting, Singapore had requested the United States to supply the SAF with the following equipment: helicopters, transport planes, Armoured Personnel Carriers (APCs), howitzers, and riverine craft, amongst others. Singapore also requested the United States conduct a seminar and share with the Singaporean military, police, and internal security officials American counter-insurgency knowledge and experience from the Indochinese conflict. The report noted that the primary reason for Singapore's requests for American military equipment and training was Singapore's perceived threat of a growing communist insurgency in West Malaysia. According to the report, Singaporean officials planned for the SAF to have the capability to intervene in West Malaysia by as early as 1978.[32]

From the report, this article identifies three issues. Firstly, Singapore was concerned that the communist insurgents in Malaysia could gain the upper hand in their armed campaign and pose a threat to Singapore's security or the water supply from Johore. Secondly, due to a risk that Malaysia's security situation might deteriorate, Singapore wanted the SAF to have the capability to intervene in Malaysia within three years.

[28]National Archives of Australia (Hereinafter NAA) A13883 213/1/9/5/1 Part 2, The Threat to Airbase Butterworth to the End of 1975, September 1974.
[29]NAA A703, 564/8/28 Part 8, Security Butterworth, 3 October 1975.
[30]AAD NARA, Document number 1975SINGAP03216, Film Number D750258-0951, Visit of U.S. Team to Discuss Counterinsurgency Equipment and Training, 26 July 1975.
[31]Ibid.
[32]Ibid.

Thirdly, the SAF had to be able to launch a military intervention in Malaysia, with or without the Malaysian government's consent, if Singapore assessed its security or its water supply to be under threat., This article suggests that the SAF was planning a two-stage military campaign in West Malaysia. In the first stage, the SAF would move forces into Johore and engage the Malaysian armed forces (if the Malaysians resisted) in conventional warfare. In the second stage, SAF forces would engage the communist insurgents in Johore through counter-insurgency operations.

Although the United States was initially hesitant, declassified documents suggest that the Americans changed their position sometime in 1976. In March that year, Holdridge cabled Washington and argued the United States should support Singapore's forward defence strategy via arms sales. Holdridge suggested that any arms sales to Singapore, 'should be sufficient to support at least some form of credible defense which would necessarily entail the development of some capability to take up a defense beyond the causeway… We would suggest that the development and equipment of armed forces sufficiently strong to contemplate a defense perimeter across roughly the southern third of the state of Johore.[33]

A month later, on 6 April 1976, Holdridge recommended approval of Singapore's request to procure 217 APCs. Holdridge justified the sale on the basis that Singapore would only implement its forward defence strategy in the event of a significant and irreversible worsening of the security situation in West Malaysia. Significantly, he also stated that it would be in the United States' interest that Singapore be able to defend itself in such a situation.[34]

Likely Scenario of a Military Intervention in Johore

This section outlines Singapore's strategy and the SAF's critical capabilities for a successful military campaign in West Malaysia. As Singapore's defence documents remain classified, the analysis in this section draws on declassified diplomatic and intelligence documents and reports from Australia, Britain, and the United States.

Located north of Singapore, Johore is the southernmost Malaysian state in West Malaysia. It is separated from Singapore by the narrow Johore Straits. The only overland transport link between Singapore and Johore during the 1970s was the causeway, which also carried Singapore's water supply from Johore. At the end of the causeway on the Johore side was Johore Bahru, the Malaysian state's administrative centre. In the 1970s, only one main road linked Johore Bahru to the reservoirs that

[33]AAD NARA, Document Number 1976SINGAP01046 Film Number D760082-0461, U.S. Policy Review of Singapore Purchases Of Military Equipment, 4 March 1976.
[34]AAD NARA, Document Number 1976SINGAP01673 Film Number D760129-0138, US Response to Singapore Request, 6 April 1976.

supplied water to Singapore. This road also linked Johore Bahru to Kuala Lumpur, the Malaysian capital.[35]

According to a British intelligence assessment, the SAF would likely first seek to secure Singapore's water supply from Johore in the event of a Singaporean military intervention in Malaysia. There were two routes the SAF could use to reach the water reservoirs located about 50 km north of Johore Bahru. The primary route would take the SAF through Johore Bahru via the causeway. From Johore Bahru, the SAF could then rapidly move using the Johore Bahru-Kuala Lumpur Road to reach the reservoirs. A secondary route to the reservoirs would involve an amphibious landing about 20 km southwest of Johore Bahru. The SAF units would then move towards the reservoirs using minor roads in the western parts of Johore.[36] This strategy would require the SAF to conduct amphibious landings using Landing Ship Tanks (LSTs) and other vessels.

From the British intelligence assessment, the SAF would advance into Malaysia without any warning or after a warning had been given. Without a warning it was expected the Malaysians would be caught off guard, with the SAF having little difficulty in advancing rapidly to the reservoirs and deploying its forces to deal with any Malaysian counterattacks. The British calculated that advanced SAF units could reach the reservoirs in in under two hours, with the remaining SAF troops fully deployed inside Malaysia within 24 hours. The SAF would then form defensive lines to protect the reservoirs and their physical infrastructure such as pipelines, and communication lines. In the event of a warning having been given the British expected the Malaysian armed forces to defend southern Johore, which would include troop deployment, preparing bridges for demolition, and defending the reservoirs in Johore. Without any element of surprise, the Malaysian forces operating in the jungles and plantations of Johore would slow down the SAF's advance.[37]

The British assessed that Singapore had an advantage in the air given the Malaysian air force's minimal operational capability in surveillance from the air and in ground attack. Singapore possessed an adequate air defence capability comprising air defence radar, Bloodhound surface-to-air missiles and anti-aircraft guns. On the ground, Malaysian artillery had a range of 10 km while SAF artillery could engage targets more than 20 km away. If the SAF could form defensive lines more than 10 km deep inside Johore, the Malaysian artillery could not threaten SAF bases in Singapore. The probability of Malaysia posing a naval threat was also seen as minimal. The main Malaysian navy base

[35]TNA FCO 15/1912, Singapore Armed Forces: Part I, 18 March 1974.
[36]TNA FCO 15/1912, Singapore Armed Forces: Operational Capability – Part III, 18 March 1974.
[37]Ibid.

was located in Singapore, and the six warships in the naval base could easily be rendered non-effective. By 1975 the Republic of Singapore Navy (RSN) was armed with Gabriel anti-ship missiles and the British view was that the RSN could deal with any threat from the Malaysian navy.[38]

In the British assessment the SAF needed a sizeable ground force of up to three brigades to have a reasonable chance of securing the water supply in Johore, together with the tanks and APCs needed for the SAF ground units to race from the border to the reservoirs. SAF air superiority would be needed to successfully make an inroad into Johore and repulse any Malaysian counterattacks using the three main roads located in the East, West, and Central Johore.[39]

In the same assessment, the forward defence strategy required the SAF to acquire an edge over Malaysian forces in these capabilities: airpower, armour, mobility and amphibious operations. Possessing superior airpower Singapore could dominate the sky over West Malaysia, which was necessary to suppress Malaysian ground and air defences and provide Close Air Support (CAS) for SAF ground units advancing into Johore. On the ground, tanks and APCs were necessary for the SAF to have the firepower, speed, and mobility for an offensive campaign inside Malaysia. Armour would spearhead the ground invasion and overcome Malaysian army units, which did not possess any tanks. The APCs would provide speed, mobility and protection while ferrying SAF infantry to their objectives, especially the reservoirs in Johore. The LSTs would enable SAF landings on Malaysian territory across the Johore Strait. Finally, the SAF needed sufficient manpower for this strategy to be successful.

During the post-independence period and until the mid-1970s, the SAF did not have sufficient manpower or equipment such as combat aircraft, or tanks and APCs, or LSTs to mount an offensive military campaign of these types. According to a declassified Central Intelligence Agency (CIA) assessment of the SAF's capabilities in the early 1970s, the SAF was seen as capable of maintaining internal security but had only a limited defence capability against external threats. The report assessed that Singapore would require significant outside assistance to defend against a major external attack, and it highlighted several shortcomings faced by the SAF from its small-size, and a lack of experienced officers and equipment.[40] These shortcomings were seen as preventing Singapore from undertaking a forward defence strategy before the

[38]Ibid.
[39]Ibid.
[40]Central Intelligence Agency Library, Freedom of Information Electronic Reading Room (Hereinafter CIA Library FOIA), Document Number CIA-RDP01-00707R000200090007-9, National Intelligence Survey 44c; Singapore; Armed Forces, May 1973.

second half of the 1970s. In the short term, therefore, it was logical for the SAF to adopt a defensive approach, the 'poisonous shrimp' strategy described earlier.[41] In the long term, as will be shown below Singapore modernised and expanded the SAF to acquire the capabilities consistent with a forward defence strategy.

Expanding the Capabilities of the SAF

Arguably, a critical phase in Singapore's military build-up took place around 1975 with the communist victories in Cambodia and South Vietnam. According to Andrew Tan, the events 'raised the spectre of communist invasion through Thailand and Malaysia down to Singapore', and this led to a regional military build-up in Thailand and Malaysia, and in turn resulted in Singapore's own military build-up.[42] Tan's argument suggests Singapore's military build-up was in fact driven by Malaysia's military expansion.

Primary source data however suggests Malaysia did not undergo a substantial military build-up between 1975 and 1978. On the contrary, Malaysia's annual defence spending as a percentage of Gross Domestic Products (GDP) in that period dropped from 4.7% to 3.7%.[43] In terms of absolute figures, the number of personnel (active and reserves) in the Malaysian Armed Forces or *Angkatan Tentera Malaysia* (ATM) fell by 10,000 between 1972 and 1978. In the same period, the number of Malaysian combat aircraft increased by only 4, to 34. The Malaysian army did not acquire any tanks but did double its inventory of Commando APCs to 400.[44] Arguably, the ATM did not pose a conventional military threat to Singapore during the 1970s. Furthermore, due to the increasing tempo of the communist insurgency in West Malaysia, the ATM had focused its resources on domestic insurgency threats.[45]

The absence of a significant Malaysian conventional military build-up during the 1970s could not explain the rapid Singaporean military expansion and modernisation programmes. Therefore, Singapore's military build-up can be argued as being shaped by its longer-term objective to acquire an offensive-oriented capability consistent with a forward defence strategy. For example, the SAF tripled its army personnel (active and reserves) from 25,000 to 75,000 between 1972 and 1978.[46] Besides expanding its

[41]Andrew Tan, 'Singapore's Defence: Capabilities, Trends, and Implications', pp. 457-458.
[42]Ibid, p. 458.
[43]Data from Stockholm International Peace Research Institute (SIPRI) Military Expenditure Database.
[44]International Institute of Strategic Study (Hereinafter IISS), *Military Balance,* 1972-1973 and 1977-1978.
[45]AAD NARA, Document Number 1975KUALA02563, Film Number D750164-0812, Military Training and Procurement Assistance – Malaysia, 10 May 1975.
[46]IISS, *Military Balance,* 1972-1973 and 1977-1978.

manpower during the 1970s, the SAF further developed its capabilities in power projection, combat and command capabilities, and point-defence capabilities.

Power Projection

Power projection – the ability to transport air, sea, and land power into Malaysian territories – was one of the capabilities which the SAF sought to develop during the 1970s. The efforts to acquire a power projection capability is evidenced by the pattern of military acquisition across the three branches of the SAF – air, land, and sea. Air dominance would be critical for a successful SAF military intervention in West Malaysia. It would protect SAF ground and naval units moving into Malaysian territories from any aerial threats. Air superiority could potentially dictate the outcome on the battlefield by providing CAS to SAF ground units and interdiction of Malaysian military bases and supply lines located deeper in West Malaysia.

By 1978, Singapore had achieved a quantitative edge over Malaysia in combat aircraft. In the early 1970s, Singapore purchased 27 British-made Hawker Hunter combat aircraft, in addition to 20 it had acquired in 1969. However, the Hawker Hunter along with a few British Strikemaster attack aircraft operated by the Singapore Air Defence Command (SADC) had only limited capabilities. They could provide sub-sonic clear weather interception capabilities but by 1970 were an aging asset in terms of capability.[47] By 1972, Singapore had turned its attention to American combat aircraft, and between 1972 and 1976, it ordered 68 A-4 Skyhawk and F-5E Tiger combat aircraft from the United States.[48] The acquisition of Skyhawks reflected the SAF's plan to equip itself for a forward defence strategy. According to a CIA report, Singapore's purchase of the Skyhawks in the early 1970s signalled the importance Singapore placed on the ground support role which might even be more important than a primary air defence function.[49] The Skyhawks were ideal for CAS operations. Although the Skyhawks acquired by Singapore were ex-United States Navy (USN) aircraft, they had been refurbished and had the latest communication and weapon systems.[50] The acquisition of the F-5E Tigers, which were more advanced than either the Skyhawks or the Hawker Hunters, reflected Singapore's aim to acquire higher technology arms and weapons systems in response to Malaysian acquisition of 16 F-5E Tigers between 1974 and 1976.[51] Critically, however, the Malaysians had to divide its smaller fleet of

[47]CIA Library FOIA Document Number CIA-RDP01-00707R000200090007-9, National Intelligence Survey 44c; Singapore; Armed Forces, May 1973.
[48]SIPRI database Transfers of major weapons: Singapore.
[49]CIA Library FOIA Document Number CIA-RDP01-00707R000200090007-9, National Intelligence Survey 44c; Singapore; Armed Forces, May 1973.
[50]Peter Kilduff, *Douglas A-4 Skyhawk,* (London: Osprey Publishing, London, 1983), p. 150.
[51]SIPRI database Transfers of major weapons: Singapore.

combat aircraft to cover both West and East Malaysia. Whereas Singapore could concentrate its air assets within a smaller area.

By the late 1970s, the Singapore air force, renamed the Republic of Singapore Air Force (RSAF) in 1975 had also gained substantial airlift capabilities. Assuming a 100 per cent operational readiness of its transport platforms, the RSAF could transport 716 troops or 110.8 tonnes of cargo over a distance of 240 km in a single airlift.[52] This meant that the RSAF could airlift a substantial number of troops to capture and hold the reservoirs in Johore while awaiting SAF ground reinforcement. This airlift capability also allowed the SAF to reinforce and re-supply the frontline quickly.

The SAF received an additional 150 AMX-13/75 and 24 Centurion-3 tanks from India between 1973 and 1975 and 300 M-113 APCs from the United States in 1974.[53] A further 40 V-150 Command APCs and 500 M-113 APCs were ordered or received from the United States between 1974 and 1978. Although these tanks and APCs were second-hand, they provided the SAF with a capability and technological edge over the Malaysian army, which still did not possess any tanks.[54] With more than 200 tanks and 800 APC units, the SAF armoured formation had a distinct quantitative edge over Malaysia.[55] The acquisition of a large number of tanks and especially the APCs arguably reflected SAF's emphasis on offensive-oriented capabilities. According to the Singapore Defence Ministry's assessment, tanks could be deployed to achieve victory through manoeuvre. However, tanks were also vulnerable to anti-tank weapons. Any armoured spearhead needed to be followed closely by the APCs. The SAF assessed that the APCs' infantry would suppress enemy infantry attempting to engage the SAF tanks with anti-tank weapons. Additionally, the APCs could rapidly move infantry under protection to secure their objectives.[56] Therefore, the tanks and APCs were ideal for an offensive campaign in Malaysia, especially during the initial phase when the SAF needed to rapidly move and secure the reservoirs in Johore. The army also extended the reach of its artillery during this period. The SAF received 72 mortars

[52]NAA, A1838, 3024/12/1 Part 7, Military Study – Singapore: JIO Study No. 4/77 Amendment No 1, n.d.
[53]SIPRI database, Transfers of major weapons: Singapore.
[54]IISS, *Military Balance,* 1972-1973.
[55]IISS, *Military Balance,* 1977-1978.
[56]Ministry of Defence, *The Singapore Armed Forces,* (Singapore: Ministry of Defence, 1981), pp 56-57.

and 81 M-68 155mm towed guns from Israel.[57] The SAF M-68 guns could hit targets up to 23.5 km away, more than twice the range of Malaysian artillery.[58]

The Republic of Singapore Navy (RSN) enhanced its sealift capabilities with the delivery of 5 former United States County-class LSTs at a token cost of US$1 each.[59] The LSTs could transport troops, equipment, tanks and APCs. Although the LSTs' primary function was claimed to be in support of SAF overseas training expeditions, they also gave the SAF a capability to mount an amphibious operation against Malaysia.[60]

Combat and Command Capabilities

Besides expanding its inventory of equipment, the SAF began to train its troops for the terrain in West Malaysia. This included preparing them for jungle warfare and counterinsurgency operations and enhancing command capabilities in overseeing a military campaign in West Malaysia.

Singapore is largely urbanised, so jungle warfare would not be required if the SAF's strategy was to fight defensive battles within Singaporean territory. According to a United States intelligence report on Singapore's military geography during the early 1970s, Singapore's terrain was densely built-up with residential, commercial, and industrial buildings and its rural areas were poorly suited for irregular force operations.[61] If Singapore's defence strategy had centred on fighting within Singapore, only a capability to fight in built-up areas, and not in jungles, would be needed. As this section has shown Singapore moved quickly to equip the SAF with a jungle warfare and counter-insurgency capability suited to the terrain in West Malaysia.

[57]SIPRI database Transfers of major weapons: Singapore.
[58] Weapon System, 'Soltam M-68', https://old.weaponsystems.net/weaponsystem/DD03%20-%20M-68%20(155mm).html. Accessed 8 February 2021.
[59]SIPRI database: Transfers of major weapons: Singapore; Singapore's Defence Ministry Website, 'Tracing Our Origin', https://www.mindef.gov.sg/oms/navy/Tracing_our_Origins.HTM. Accessed 20 January 2021.
[60]James Goldrick and Jack McCaffrie, *Navies of Southeast Asia: A Comparative Study,* (Oxford: Routledge, 2013) p. 140.
[61]CIA Library FOIA Document Number CIA-RDP01-00707R000200090012-3, National Intelligence Survey 44C; Singapore; Military Geography, May 1973.

In 1975, Singapore coordinated directly with the Bruneian government to use its facilities for SAF training.[62] There was even a plan to train about 1,000 SAF troops in jungle warfare in Brunei within that one year. The Bruneian government was receptive to having SAF troops train in its jungles and offered to pay the expenses for the construction and staffing of a Jungle Warfare Centre (JWC) in Brunei, which would be open to both the SAF and Bruneian military.[63] As Britain was responsible for Brunei's defence and foreign affairs, Singapore also sought British permission to proceed with SAF jungle training in Brunei. In October 1975 Britain informed Singapore that it had no objection to the JWC.[64] By 1976, Britain, Brunei and Singapore had agreed on jungle warfare training in Brunei for the SAF. Under the agreement, Britain would train SAF instructors at its training facilities in Brunei, following which the SAF instructors would train Singaporean troops in another camp, and up to infantry company level.[65]

In 1975 Singapore requested the United States to train SAF military, intelligence units and the Singaporean police in counter-insurgency operations.[66] The United States agreed to do so and made plans to commence the training in February 1976 at Fort Bragg, North Carolina. The training program was scheduled to run for three weeks involving up to 40 of Singapore's security officials.[67] Lee Kuan Yew took a personal interest in the counter-insurgency program and was concerned about its high cost, estimated to be about USD$225,000.[68] Henry Kissinger, then the United States Secretary of State, informed the United States embassy staff in Singapore to explain to Lee that the United States Congress had specified the cost of the counter-insurgency program. Despite the high cost, Kissinger also directed the embassy staff to assure Lee that the United States would consider ways to lower the training cost.[69] Defence

[62]Menon, K U, 'A Six-Power Defence Arrangement in Southeast Asia?', *Contemporary Southeast Asia*, Vol. 10, No. 3, (1988), p. 309.
[63]AAD, NARA Document Number 1975KUALA04763 Film Number D750279-0313, Military Activity in Brunei, 12 August 1975.
[64]AAD NAR, Document Number 1975SINGAP04620 Film Number D750370-0243, Brunei Jungle Warfare Training Center, 24 October 1975.
[65]AAD NARA Document Number 1976SINGAP05405 Film Number D760443-0398, Jungle Warfare Training For Singapore Armed Forces in Brunei, 30 November 1976.
[66]AAD NARA, Document Number 1975SINGAP03216 Film Number D750258-0951, Visit of U.S. Team To Discuss Counterinsurgency Equipment And Training, 26 July 1976.
[67]AAD NARA Document Number 1975STATE250586 Film Number D750365-1007, Counterinsurgency Equipment And Training, 21 October 1975.
[68]AAD, NARA Document Number 1976SINGAP01235 Film Number D760096-1149, Implementation of Counterinsurgency Course, 15 March 1976.
[69]AAD, NARA Document Number 1976STATE020485 Film Number D760031-0456, Counter-Insurgency Training Course for Singapore, 27 January 1976.

Minister Goh Keng Swee agreed with Lee Kuan Yew's assessment of the importance of counter-insurgency capabilities in Singapore's defence strategy. In his meeting with General William Moore, the Chief of Staff to the Commander in Chief Pacific Fleet (CINCPAC), Goh said that Lee Kuan Yew considered the course to be a significant feature of Singapore's defence strategy.[70] At this point, it is essential to note that, unlike Malaysia, Singapore was not at that time facing an armed insurgency as its urbanised territory was unsuitable for a conventional insurgency campaign. The emphasis on counter-insurgency training is further evidence of Singapore's plan to deploy the SAF within Malaysian territory.

Besides acquiring jungle warfare and counter-insurgency capabilities, the SAF sought to prepare its commanders with the skills and capability needed to conduct a military campaign in Malaysia. According to Huxley, SAF commanders had been conducting command-post exercises in preparation for a military intervention in Malaysia since the late 1960s.[71] A critical piece of evidence that signalled Singapore's intention to equip the SAF for a military campaign in Malaysia took place in Australia during the late 1970s. According to intelligence sources in Australia, both Australia and Singapore were preparing contingency plans for military intervention in Malaysia if the communist insurgents succeeded in taking control of the southern parts of West Malaysia.[72] In building up the SAF's capability to implement a forward defence strategy, a major military exercise involving Singapore's army commanders was planned for January 1978 in Queensland, which has similar jungle terrain to the southern parts of West Malaysia. Australia trained Singapore's army commanders in scenario-planning for an advance into Malaysia and then securing gains made.[73]

Point Defence Capabilities

To mitigate potential threats from a Malaysian air attack on Singapore's key facilities, the SAF developed a point-defence capability.[74] The SAF possessed an air defence system based on Britain's Bloodhound surface to air missile (SAM) system.[75] Bloodhound used continuous carrier-wave transmission, making detection difficult and

[70]AAD NARA Document Number 1976SINGAP02038 Film Number D760157-0550, CINCPAC Chief Of Staff's Call On Singapore Deputy Prime Minister/Defense Minister, 26 April 1976.
[71]Tim Huxley, *Defending the Lion City,* p. 59.
[72]*The Canberra Times,* 'Australia, Singapore prepare to defend Malaysia', 10 May 1977.
[73]Ibid.
[74]Robert Aldridge, *First Strike! The Pentagon's Strategy for Nuclear War,* (Boston: South End Press, 1992), p. 192.
[75]IISS, *Military Balance,* 1972-1973.

it also had an electronic countermeasures capability.[76] The SAMs were deployed across different areas - Seletar airbase, Tuas and Amoy Quee - to reduce their vulnerability to Malaysian air attack.[77] To further boost its air defence capability Singapore acquired 34 GDF 35mm towed anti-aircraft guns in 1978.[78] The GDF 35mm had an advantage over the Bloodhound missiles as these had fixed launchers and were therefore vulnerable to air attack. The GDF 33mm guns were mobile and could be redeployed quickly, thus reducing vulnerability. That mobility also meant the GDF guns could be deployed to Malaysia to protect the water facilities and SAF troops deployed along defensive lines inside Johore.

The intention to transform the SAF into a force that could occupy vast areas of West Malaysia was highly ambitious and never fully realised. The SAF still faced challenges that might limit its capability to intervene in West Malaysia. There were morale issues, especially amongst SAF conscripts, and according to an Australian assessment, about 5% of SAF conscripts had taken drugs.[79] Furthermore combined operations training was limited, and the political and diplomatic consequences of such radical action were unknowable.

Conclusions

From the late 1960s to the final years of the 1970s, Singapore had shifted its defence policy from defending the island of Singapore to one of forward defence. Given Singapore's lack of strategic depth and its reliance on water supply from Malaysia, the city-state understood that any threat advancing down the Malay peninsula needed to be met as far north as possible, well before these forces came close to the Straits of Johor. This was well understood in the 1960s and early 1970s, but the security of West Malaysia was not in doubt in this period. However, it was only in the mid-1970s, when Singapore perceived the armed communist insurgency in West Malaysia as a clear and present danger, that Singapore hastened the transformation of the SAF into an offensive-oriented military force for the first time.

The understanding of the SAF as a reactive and defensive military force during the Cold War has not taken account of the reality that Singapore was prepared for a radical forward defensive posture. This history has not been captured in the existing literature and the SAF's offensive capabilities and intentions have gone unconsidered.

[76]NAA A1838 3024/12/1 Part 7, Military Study – Singapore: JIO Study No. 4/77 Amendment No 1, n.d.

[77]CIA Library FOIA Document Number CIA-RDP01-00707R000200090007-9, National Intelligence Survey 44c; Singapore; Armed Forces, May 1973.

[78]SIPRI database: Transfers of major weapons: Singapore.

[79]NAA A1838, 3024/12/1 Part 7, National Servicemen's View of the SAF, 13 May 1977.