

# HYBRID WARFARE – A LOW-COST, HIGH-RETURNS THREAT TO SINGAPORE AS A MARITIME NATION

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## Abstract:

The advent of hybrid warfare has raised concerns for Singapore with the potential challenges that it may bring. Being a nation surrounded by water on all sides with no natural resources, maritime trading has not only become a way to maintain sustenance, but a key contributor to Singapore's economy. An attack on Singapore's maritime sector would not only affect the way of life, but undermine the shipping and erode confidence in Singapore as a transshipment hub. While the SAF is already well-prepared against a conventional threat, a hybrid threat could inflict equal or even more damage than any conventional means and, at a lower cost to the adversary. This essay discusses the vulnerabilities in Singapore's maritime domain, and how an aggressor could exploit this to their gain through hybrid means, evading the SAF's conventional defence methods. The rationale behind a potential aggressor attacking Singapore through the maritime domain is also discussed, providing examples as to how a sabotage could affect the populace in Singapore. Various hybrid methods were also discussed while explaining the ineffectiveness of responding through conventional means to a hybrid threat. Lastly, the author provides recommendations on how the SAF can augment the Republic of Singapore Navy (RSN) to better combat a hybrid threat.

*Keywords: Hybrid Threat; Maritime Industry; Economic Strangulation; Social Stability; Information Warfare; Whole-of-Government*

## INTRODUCTION

The term 'hybrid warfare' is a relatively recent term that was coined during the 2006 Israel-Hezbollah War, where the Hezbollah was able to effectively combine both guerrilla-type tactics as well as conventional warfare in the form of rocket and anti-ship strikes on their Israeli adversaries. More recently, the appearance of masked and unmarked 'little green men' in the Crimean region, as well as the ISIS campaign in Syria and Iraq, have refuelled discussion about hybrid warfare, what it actually looks like in practice, and

its implications for the modern battlefield. Indeed, while some commentators believe hybrid warfare to be illustrative of modern warfare, others claim that the term causes confusion instead of being representative of reality.<sup>1</sup>

However, despite the wide ranging debate about what hybrid warfare is and what it entails, there is little conversation of it in Singapore's context. The discussion below will seek to explore why a potential aggressor may seek to utilise hybrid warfare, and how it may go about doing so. The concept of hybrid

warfare and its potential to enhance the ability of an aggressor to achieve broader strategic objectives will be explored, with examples used to substantiate the hypothetical tactics that may be employed.

First, a working definition of hybrid warfare as it is understood and practised in the current context will be proposed. Thereafter, Singapore's particular strategic vulnerabilities in the maritime domain will be discussed, and in particular, how the added dimension of hybrid warfare in the maritime domain represents a low-cost, high-return strategy that a hypothetical aggressor may seek to utilise. This will also highlight the possibility of an aggressor circumventing Singapore's relatively significant conventional capabilities. Finally, several means to meet the hybrid challenge will be recommended.

## DEFINING THE NATURE OF HYBRID WARFARE

Commentators such as Dr. Frank Hoffman have described hybrid warfare as a 'blend of the lethality of state conflict with... irregular warfare', incorporating 'conventional capabilities, irregular tactics and formations, terrorist acts including indiscriminate violence and coercion, and criminal disorder.'<sup>2</sup> These conflicts are also seen to be unconventional, high intensity, and protracted.<sup>3</sup> The United States (US) Army has similarly defined hybrid threats as 'the diverse and dynamic combination of regular forces, irregular forces, criminal elements, or a combination of these forces and elements all unified to achieve mutually benefitting effects.'<sup>4</sup> Beyond this, the US Army Special Operations Command (USASOC) recognises that hybrid warfare is 'whole-of-government (WoG) in nature,' places a 'particular premium on unconventional warfare,' and involves 'all available diplomatic, informational, military, and economic means to destabilise an adversary.'<sup>5</sup>

While proponents of hybrid warfare argue that it represents a novel and significant development, detractors contend that it is simply not new. Some observe that the use of hybrid warfare as it is understood today extends back at least as far as the Peloponnesian War in the fifth century B.C.<sup>6</sup> Others opine that hybrid warfare is at best simply a 'subset of irregular warfare,' given that irregular warfare already highlights the use of a full range of military and other capacities.<sup>7</sup> Such critics note that the concept of hybridity is timeworn and that all wars are hybrid with only their specific features changing over time.<sup>8</sup>

Without wading too much into the debate, there are several evident characteristics of hybrid warfare that are relevant to the discussion. First, it encompasses an effective range of conventional and unconventional tactics, as a means to achieve political objectives that may include destabilising and fomenting disorder in a target state. A second key facet of hybrid warfare that distinguishes it from mere unconventional or irregular warfare is its deliberate ambiguity. This contributes to the possibility of an aggressor achieving its political and strategic goals without necessarily asserting a clear military victory through direct confrontation. A third distinguishing characteristic of hybrid warfare is its overriding emphasis that war cannot be confined to a specific dimension. Rather, conflict should always be viewed as a battle for influence, and can therefore be waged in any element, including the legal, diplomatic, economic and informational realms.

## WHY THE MARITIME DOMAIN AS A SIGNIFICANT THREAT AXIS?

Maritime security (MARSEC), without even taking into consideration hybrid threats, has already been of concern for some time for maritime states such as Singapore. The attacks on the *USS Cole* in 2000, the



*The Military Sealift Command fleet ocean tug USNS Catawba towing USS Cole after the bombing.*

MV Limburg in 2002, and the 2008 Mumbai attacks represent just a few of the many incidents that have clearly demonstrated the devastating effects of unconventional attacks from the sea. In Singapore's context, this maritime vulnerability is two-fold. First, Singapore's status as a maritime nation and open nature as a port underscores the significance of its maritime sector while highlighting its high level of exposure to threats from the maritime axis. Worst-case scenarios envisage the use of ships as floating bombs or as delivery vehicles for explosive devices.<sup>9</sup>

The security of Singapore's territorial waters and port limits must be managed despite the high volume of shipping that passes through, including the safety of its key installations (KINs) and infrastructure against potential unconventional attacks or sabotage. The fact that many such KINs, including petroleum and chemical industries, are located on the offshore Jurong Island makes the task more challenging given its close proximity to maritime traffic.

Second, beyond its shores, Singapore must be able to ensure its Sea Lines of Communication (SLOCs) remain constantly open to shipping. These SLOCs serve as key economic lifelines, given that the maritime industry in Singapore alone accounts for 7% of its Gross Domestic Product (GDP) and employs more than 170,000 people.<sup>10</sup> Beyond serving an economic purpose, these SLOCs are literally vital to Singapore's survival, providing its people with access to daily necessities such as food, oil and other material goods. The SLOCs can be seen as a key strategic vulnerability when the disproportionate ramifications of a single successful attack are considered, and when taking



*Port of Singapore*

into account that high-value shipping is a relatively soft target for such attacks. Furthermore, ensuring the SLOCs remain open is a daunting task, given their characteristics that render them vulnerable to disruption. For example, at the narrowest point in the Philips Channel located to the west of Singapore, the Malacca Strait is only 1.7 nautical miles wide, creating a natural chokepoint that can easily be exploited.<sup>11</sup> To the east, the SLOC extends through the hotly contested South China Sea up towards the Sea of Japan, making any maritime incident a potential flashpoint that could drastically affect seafaring, in turn resulting in negative implications for Singapore and its maritime economy.

## THE ADDED DIMENSION OF HYBRID THREATS

*"Be extremely subtle, even to the point of formlessness. Be extremely mysterious, even to the point of soundlessness. Thereby you can be the director of the opponent's fate."*

*-Sun Tzu, The Art of War<sup>12</sup>*

While a potential adversary would have multiple avenues to consider how to best impose its will on Singapore, it is likely that it would elect to seek the means that best allow it to circumvent Singapore's conventional capabilities as a head to head military confrontation could prove overly costly to any aggressor. Furthermore, an adversary would strongly consider the maritime domain as its main attack axis given Singapore's existing maritime vulnerabilities, as already highlighted. Taking the above into account, a potential approach for a hybrid aggressor could be to conduct economic strangulation by weaving disparate unconventional actions into an extended and ambiguous period of tension at sea to deter and discourage trade and shipping. By ensuring its

tactical actions remain unattributable, a potential aggressor could also potentially paralyse decision-making and bypass direct military confrontation.<sup>13</sup> The consequences of extended economic strangulation would undoubtedly affect the psychological will of the populace over time, undermining societal solidarity through an extended period of hardship.<sup>14</sup> Further supplementing these tactics with offensive information operations would also contribute towards sapping the national morale. On the whole, this represents a low-cost, high-return strategy against Singapore as a maritime nation that a potential adversary would strongly consider.

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There are several hypothetical possibilities open to the hybrid aggressor to achieve economic strangulation. For example, much like the unidentifiable 'little green men' in the Crimean region, unmarked Special Forces personnel operating under the guise of pirates or hijackers on fast craft could harass specific merchant ships, either Singapore-flagged merchantmen, or simply those with vital shipments bound for Singapore. Such information on cargo and ship destinations is readily obtained, even from open sources including the satellite-based Automatic Identification System (AIS) and Long-Range Identification System (LRIT).<sup>15</sup> Given that piracy and hijacking attempts are not uncommon in the region, it would not be difficult to ensure that these actions remain unattributable. If necessary, the aggressor could also introduce an element of 'terrorism' by attacking vulnerable shipping along the SLOCs,



particularly at narrow chokepoints, with portable missile systems or rocket-propelled grenades.<sup>16</sup> Such tactics have been previously employed by Egyptian militants operating along the banks of the Suez Canal. The risk of transiting through the targeted areas, coupled with the increased costs, would adversely affect shipping confidence, inevitably resulting in the reduction of trade and a negative impact on Singapore's economy. There is certainly precedence—Lloyd's of London declared the Malacca Straits a high war-risk area in 2005 for insurance purposes due to multiple incidents of piracy and sea robbery, resulting in additional premiums on ships transiting in the area and increasing the cost of shipping.<sup>17</sup> The economic impact will also be exacerbated by the negative societal implications arising from the reduced availability of food, oil and daily necessities over an extended period of time.

While the idea of using naval blockades to literally starve a target state into submission is not original, the concept of exploiting unattributable and non-conventional actions to avoid potential international backlash and to paralyse the target state would be a novel and effective way of achieving the same strategic goal. As the Russian Chief of the General Staff, General Valeriy Gerasimov noted, "the role of non-military means of achieving political and strategic goals has grown, and, in many cases, they have exceeded the power of force of weapons in their effectiveness."<sup>18</sup>

An effective hybrid aggressor would also supplement the above with information warfare, which could be extremely effective in eroding social stability and the national will to fight. The importance of information warfare can be observed from the Israel-Hezbollah war, where the battle for 'perception dominance' was critical.<sup>19</sup> As observers noted, the

incisive use of 'the camera and the computer [as] weapons of war' in information operations allowed Hezbollah to come out of the conflict stronger in ideological appeal.<sup>20</sup> Adversarial propaganda and information operations utilising selective reporting and the power of social networks, could be used to incite and exacerbate existing social unrest generated as a result of the scarcity of material goods, and even undermine the government by fomenting further population discontent with the deteriorating situation.

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Even if a conventional military response were to be successfully mounted, a successful hybrid aggressor would be able to mitigate and counter these actions by exploiting constraints imposed on conventional armed forces like the SAF. This would include rules of engagement, political will, and norms of warfare.<sup>21</sup> As observers have noted, fishing vessels can serve as intelligence collecting vessels, acting as a potent tool to 'dominate the seascape without the risk of open conflict.'<sup>22</sup> This is because the destruction or harassment of these 'innocent' vessels by the target state would surely become the focus of propaganda that portrays it in an unflattering light, thereby causing it to lose the moral high ground.<sup>23</sup> In the hypothetical context above, the harassment of merchant shipping bound for Singapore could be conducted from similarly 'neutral' vessels that could then easily vanish among the multiple fishing fleets that ply the South China Sea and Straits of Malacca. If and when confronted, these same vessels can easily

turn the tables in the public sphere through the clever manipulation of information and imagery.

### WHAT CAN BE DONE?

In terms of military preparation, military training should be revamped to take irregular and unconventional tactics into greater consideration. Given the ambiguity and versatility of hybrid threats, such training should be conducted to prepare the men and women of the SAF to be similarly adaptable. As observers note, there is a need to focus on the cognitive skills required to recognise, react and adapt to new situations, complemented by a greater emphasis placed on continual organisation learning and adaptation.<sup>24</sup> Soldiers, sailors and airmen must be ready and able to perform wartime roles in peacetime, and peacetime roles in wartime effectively, without being paralysed into inaction by the seeming dissonance. Crucially, the military must grasp the need to be media savvy in the new information age. They must not only know how to defend themselves and their actions, which will come under greater scrutiny especially in the online sphere,

but be shrewd enough to use new media to their own advantage in tactical situations. If the camera and computer are no different from a rifle or missile as weapons of war, it is only prudent and logical that our personnel are similarly trained and equipped to use them effectively.

Since it is evident that one of Singapore's greatest strategic vulnerabilities lies in its exposure to maritime threats, the navy in particular must be well-equipped and sufficiently resourced. In the first place, the navy must not be inadvertently shackled by its own norms and rules. In practical terms, the naval vessels of today should be equipped with a spectrum of weapons and equipment that allows them to calibrate their responses out at sea. For example, the use of water cannons, which have been installed onboard the new *Independence*-class Littoral Mission Vessels (LMV), gives the navy expanded options for calibrated responses that may help it avoid accusations of disproportionate force when responding to 'peacetime' incidents.



*RSN's Littoral Mission Vessel RSS Independence*

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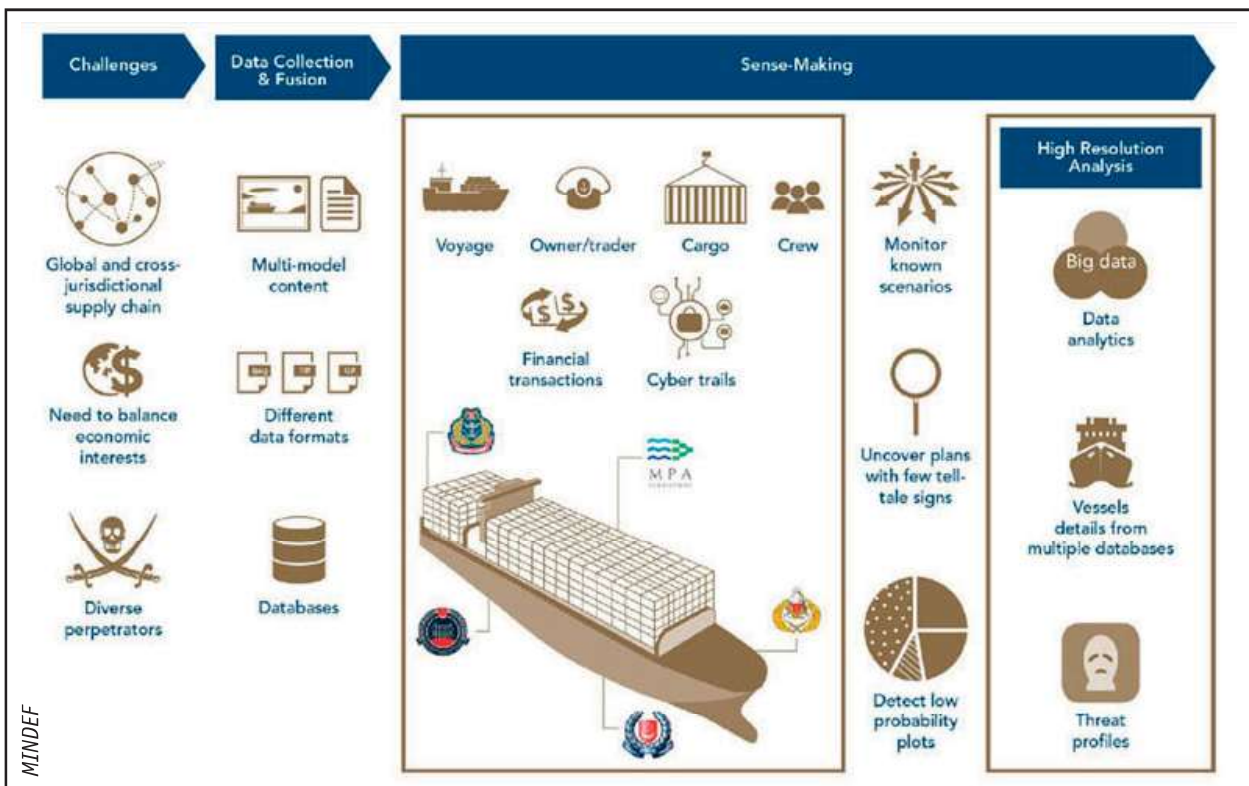
These responses must in turn be supported by a robust framework of Rules of Engagement (ROE), which should be expanded to deal with the widening spectrum of potential incidents that can occur. A robust ROE framework that caters for a wide range of incidents and responses will empower on-scene commanders with greater autonomy and enhance their ability to deal with irregular and unexpected threats in peacetime and troubled peace. At the same time, to close decision loops more expeditiously, shore-sea data networks must be enhanced and capitalised on to facilitate real-time updates and allow commanders on shore to better grasp the situation and react appropriately. The navy must therefore also be prepared to become an increasingly deployed one, with vessels that are able to put to sea at a moment's notice to react to incidents at sea.<sup>25</sup>

That being said, the navy must be able to take the initiative rather than merely being reactive. Beyond being prepared to go to sea, the idea of becoming increasingly deployed also connotes the need to have the 'legs' to be able to maintain a continuous presence. This is necessary if the navy wants to adopt a proactive posture through show-of-presence patrols and escorts in order to project a deterrent posture and prevent incidents from taking place, and to police the SLOCs over a protracted period of tension. When taking into account the navy's

future manpower, resource and logistics constraints, it is imperative to leverage technology. In this instance, conventional naval vessels would need to be significantly augmented with unmanned surface vessels (USVs). This is not implausible—for example, the *Venus 16* unmanned surface craft was recently unveiled at the 2015 edition of Exercise Highcrest. Featuring in-built collision-avoidance protocols, it has already demonstrated its ability to autonomously conduct patrols.<sup>26</sup>

The task of defeating a hybrid threat cannot fall on the shoulders of the military alone, and must involve a WoG response that is co-ordinated and synergised. In this respect, Singapore has already taken steps to address its maritime vulnerabilities through implementing WoG measures such as the setting up of the Maritime Security Task Force (MSTF) in 2009 and the establishment of the Singapore Maritime Crisis Centre (SMCC) in 2011 to institute a synchronised approach to MARSEC. The SMCC in particular is able to build profiles of vessels based on data sharing with the rest of the shipping industry, thereafter conducting analysis to determine anomalous behaviour.<sup>27</sup> However, while such measures may be able to address single or short-term MARSEC threats, it would arguably be challenging to deal with a spectrum of maritime threats taking place over an extended duration of time, as part of a deliberate hybrid campaign to undermine the national will to fight.

Here, the concept of 'Total Defence' in peacetime will be useful, given that the development of societal resilience does not occur overnight. By focusing on building up social and psychological defence in peacetime, Singapore can create an emotional and psychological buffer for its populace that will play an important role in defending the national psyche and



Infographic on how Singapore's Maritime Security Task Force deal with challenges.

will against attacks, while simultaneously helping society withstand the stress of an extended duration of economic and material privation.

Furthermore, the WoG response must be complemented with offensive and defensive information campaigns. Offensive information campaigns should serve the purpose of penetrating the shroud of disinformation and exposing the enemy on multiple media platforms once they are identified. These campaigns must also be complemented by diplomatic initiatives to garner and exert international pressure on the aggressor to cease and desist. However, these offensive information campaigns are insufficient. Even if the perpetrators are identified, there must also be defensive information campaigns to sustain a spirit of resilience within the population, a quality that would undoubtedly be required to deal with the economic and social instability that comes with an extended period of uncertainty.

## CONCLUSION

*"Whether it be the intrusions of hackers, a major explosion at the World Trade Center, or a bombing attack by bin Laden, all of these greatly exceed the frequency band widths understood by the American military."*

*-Qiao and Wang  
Unrestricted Warfare<sup>28</sup>*

With remarkable insight, Qiao and Wang, two Chinese colonels, predicted the World Trade Center attacks before they occurred. Much like General Gerasimov, Colonels Qiao and Wang argued that alternative, non-military methods of warfare could achieve the same effect of forcing states to give in to demands, thereby having similar or even greater destructive force than military warfare.<sup>29</sup>



They commented that given the American inability to contemplate non-traditional means of warfare, selecting non-military or non-direct concepts of operation would enable such attacks to succeed.<sup>30</sup>

It is not far-fetched to believe that potential adversaries would similarly choose to avoid a direct confrontation and opt instead for other forms of warfare to achieve the same strategic goals, exploiting Singapore's maritime strategic vulnerabilities while simultaneously avoiding its relatively significant conventional capabilities. It may be true that the term and practice of 'hybrid warfare' is merely an embellishment of a long-established way of conflict. However, the implications of alternative, unconventional and irregular means of warfare being coupled with modern day technologies and techniques are grave, and would be a formidable tool in the hands of an adversary, especially one seeking to avoid a direct confrontation. As such, while the SAF continues to hone its conventional edge, it must also be wary and cognisant of other means of warfare that seek to bypass its strengths while allowing an aggressor to achieve the same strategic goals at a much lower cost.

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