MARITIME

Zero Point Four:

New Book Highlights Need for Maritime Strength

"ZERO POINT FOUR" is a new book exploring how the U.S. — a maritime nation — finds itself on a precipice. After World War II over half the world's ocean-going commercial ships flew the U.S. flag. Today, it is less than 0.4%, hence the book's title "ZERO POINT FOUR." This work scrutinizes the U.S. maritime industry's significance to America through five principles: national, economic, energy and food, climate, and workforce security. From shortages in military support vessels to threats against U.S. dollar-denominated trade, and from insufficient numbers of U.S. mariners for food and energy security to the urgent need for climate-resilient maritime operations, the book breaks each issue down to its root causes. The authors don't just identify problems but present a 57-point action plan to revolutionize the U.S. maritime sector. TSI will be featuring excerpts from the book's introduction in this and future issues. The book can be purchased on Amazon.

There are 50,000 commercial, ocean-going vessels currently operating around the world, yet only 180 fly the U.S. flag. This represents 0.4% of the global fleet, or about 0.57% of total tonnage. By contrast, in 1950, the organizations based in the United States owned and operated more than 1,000 private and 2,200 government vessels, commanded 50% of the world's total tonnage and carried 80% of global trade. From half of all, to half a percent. To put this more starkly, the U.S. has the largest economy in the world, and yet around 98% of all U.S. imports and exports are transported on vessels controlled by foreign countries and operated by foreign mariners. This striking imbalance exposes the U.S. economy to undue external influence, introduces complex security risks and diverts billions of dollars away from U.S. businesses and citizens every year.

Where is the U.S. maritime industry today, and where does it need to be? A new book, "ZERO POINT FOUR" takes a look at the role the U.S. maritime industry could play in maintaining a rules-based international order, introducing technologies that could revolutionize the industry and ensuring fair and safe navigable passages around the world. Over the course of the next several issues of TSI, we will run an excerpt of the book's introduction which outlines the concerns and offers a 57-point action plan to address their concerns. Here is the first excerpt.

From the New Book 'Zero Point Four'

The United States is a maritime nation. It has always been highly dependent on a well-functioning international shipping system. Shipping is essential to every aspect of U.S. life, in particular, national security, economic security, energy and food security, climate security and workforce security. A dollar invested in the U.S. maritime sector should yield over five times this amount back in return in terms of greater security across each of these five domains.

However, the U.S. maritime sector finds itself at its weakest point than at any point in U.S. history. From a peak of over half the world's ocean-going vessels being U.S.-flagged after WWII, to less than 0.4% percent today.

This book is not just about identifying vulnerabilities but proposing actionable solutions. The concluding chapter of this book identifies a 57-point action plan to turn around the fortunes of the U.S. maritime sector within a decade. These are solutions that have been vetted by experts and industry leaders and present several "no-regret" proposals for leadership at the highest levels of the country to consider as part of a new and holistic National Maritime and Blue Economy Strategy.

With the world in an increasingly volatile and uncertain state, the U.S. needs a reliable and robust maritime sector unlike any time in recent history. The Covid-19 pandemic, European migrant boat crisis, growing number of extreme weather events, conflicts in Ukraine, Israel, the Red Sea, and rising tensions in Asia represent considerable concerns for stability in the near future with the probability of unexpected Black Swan events rising.

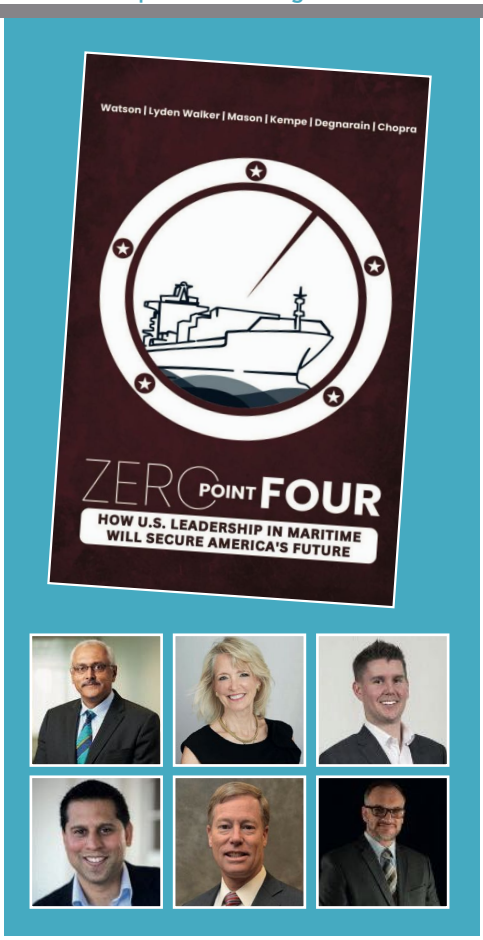
National Security

The weak state of the U.S. maritime industry risks national security in five major ways:

- **Significant shortfall of military support vessels from the commercial fleet:** The U.S. requires up to 1,120 commercial vessels in the event of a prolonged international conflict around the world without losing its economic competitiveness or harming domestic energy or food security. This is over six times the number of "militarily useful" vessels that have been identified in the current U.S.-flag commercial fleet (180 vessels). These vessels would be commercially operational in peacetime, and not be a drain on the public purse. Specifically, of these 1,120 vessels, the U.S. military may need access to 1,000 militarily useful commercial container, vehicle transport (RORO) and other support ships in a major conflict but currently only has access to 180. Not all of these 180 vessels are considered militarily useful (i.e., can be used to support military operations). There is also a need to include enough commercial vessels to backfill essential domestic transport needs that would have been redirected to support military forces during times of conflict. In addition, the U.S. would require 100 tankers to meet its refueling needs during a conflict but can only access fewer than ten today. With an increasingly ice-free Arctic, more icebreakers are needed to escort or rescue vessels (e.g., around Alaska). The U.S. needs at least five icebreakers but has fewer than two available today. The U.S. economy and military are dependent on subsea internet cables and infrastructure, but the U.S. has only three cable-laying and repair ships should this infrastructure be attacked. Hence, the U.S. is likely to need access to around 15 other specialty ships (such as cable laying and repair ships, heavy lift ships, and salvage ships). In essence, the U.S. needs to

radically scale up its access to U.S.-owned commercial vessels by 6X. This would benefit the U.S. both during peacetime and in the event of a major and sustained conflict around the world. This does not necessarily mean these new vessels should be purchased or managed by the U.S. government. Creative measures and incentives to "re-flag" suitable commercial vessels, sourced from values-aligned partners, may form part of the solution to rapidly solve this shortfall.

- **Wasteful government support programs creating Zombie Assets:** The U.S. has three major maritime logistics support programs that are wasteful and have led to vessels that cannot be used effectively in the event of conflict but which the U.S. military assumes they can rely on. One program includes the Ready Reserve Force (RRF), which has declined from 2,277 vessels at its peak in the 1950s to fewer than 100 today. Recent military exercises revealed that fewer than 40% of these RRF ships could depart port and operate effectively with the military. Most of the RRF vessels are over 45 years old, spend their time idle in storage, are barely operational, and are operated by skeleton crews. Another program, the Maritime Security Program (MSP), costs $300 million a year to provide 60 vessels to the Department of Defense for Emergency Sealift operations, but these vessels do not match military requirements, nor does this program support the expansion of U.S.-built, owned or operated vessels. Yet another program, the Voluntary Intermodal Sealift Agreement (VISA) Program, where commercial vessels support national programs (such as U.S. Defense Department cargo movements and the distribution of food aid) is insufficient to provide the right type and number of vessels. On top of this, none of these programs meaningfully address the serious shortfall of U.S. mariners required to operate commercial vessels that can support the U.S. military during a time of conflict or national emergency, forcing the U.S. to rely heavily on non-U.S. vessels and mariners.
- **Significant foreign ownership of the U.S. maritime sector:** For such a strategic sector, the U.S. is highly dependent on non-U.S.-owned and operated vessels, non-U.S. mariners, and non-U.S.-owned port infrastructure (such as terminals and cranes). This represents a major vulnerability to national security during peacetime, and especially during times of conflict. In addition, and as a result, the U.S. military and commercial fleet have reduced their collaboration at a time when other countries are blending commercial and military interoperability. If conflict arises, the U.S. military has assumed that it can simply appropriate commercial vessels from the domestic supply chain for military purposes (for example, vessels servicing Hawaii, Alaska, Puerto Rico, U.S. Virgin Islands, Guam, Mississippi River, and around the Great Lakes). This would cause significant domestic economic harm, and such vessels would need to be rapidly backfilled (e.g., tankers, container vessels, bulk carriers) to sustain productivity and output, which may not be possible if such assets are not easily accessible. We refer to this as the U.S. maritime "Double Counting Conundrum." The result of significant foreign ownership of the U.S. maritime sector is an anemic commercial maritime industrial base that is unable to drive the next generation of maritime innovation.
- **Growing vulnerabilities from emerging technologies:** New systems being deployed in the digital domain, cybersecurity capabilities, emerging satellite and space technologies, increased critical infrastructure automation (e.g., ship-to-shore container cranes), and the rise of asymmetric warfare (e.g., the rise of unmanned aerial and maritime vehicles) have altered the balance of power. New capabilities are required to defend against modern threats, but such capabilities are being built too slowly. There is also insufficient engagement of the private sector despite some of the leading emerging technologies being pioneered in Silicon Valley and implemented in other adjacent transportation sectors such as automotive, aviation and private space flight.
- **The rise of China as a maritime power:** China has rapidly increased its influence in the international maritime sector. While some policy objectives may be aligned with U.S. interests (e.g., on reducing the impact of climate change), others are not (e.g., human rights and the status of sovereignty over Taiwan). This represents an unstable relationship upon which very high stakes depend and where a weak U.S. maritime industry exposes several major vulnerabilities. China's rapid rise raises important questions for U.S. national security in eight domains: the relative strength of each country's naval power, strength of each country's commercial maritime fleet, operational readiness of each respective country's commercial mariners; each country's shipbuilding capabilities; access to shipping containers; influence over international ports, terminals, and waterways; domestic maritime industrial capacity; and use of each nation's fishing fleets.



About the Authors

The authors of Zero Point Four are six leaders in the maritime field, each with a unique track record navigating global complex challenges. They are Rear Admiral James Watson (USCG, Ret.), Carleen Lyden Walker, Rich Mason, Jonathan Kempe, Nishan Degnarain and Captain Anuj Chopra. Their experience spans pivotal roles such as setting new environmental standards in the U.S. Coast Guard, managing U.S. vessels in warzones, leading global sustainability initiatives and handling shipping's response to the Covid-19 pandemic. Together, they pooled their expertise to uncover why America went from ruling the seas after WWII, to commanding just 0.4% of the world's commercial, ocean-going ships today. From this analysis, the authors propose a bold strategic blueprint that can restore U.S. maritime leadership once more. This is the first of a series of excerpts from their collaboration, "ZERO POINT FOUR." TSI