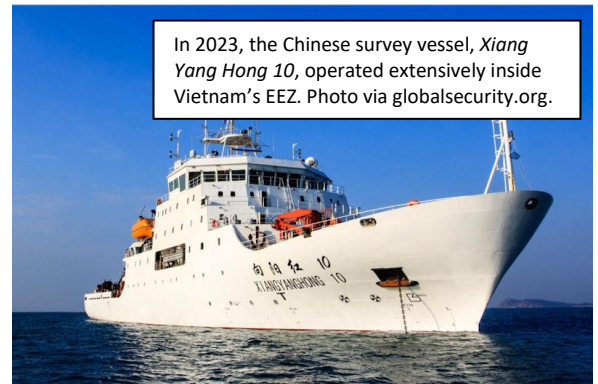


TOPIC: MARINE DATA COLLECTION

BOTTOM LINE

- Chinese flagged survey vesselsⁱ are reportedly conducting **marine data collectionⁱⁱ on an unprecedented scale.ⁱⁱⁱ**
- According to a study by the Center for Strategic and International Studies (CSIS), a fleet of 64 survey vessels conducted hundreds of thousands of hours of operations globally over the last four years, with over 80% of those vessels demonstrating **“dual-use” behavior** or links to the People’s Republic of China’s (PRC) geopolitical agenda.^{iv}
- Reporting shows that the PRC employs its survey vessels for military purposes;^v to advance **excessive claims;^{vi} to obstruct coastal states** from exploring and exploiting natural resources;^{vii} and to uncover ancient shipwrecks^{viii} as evidence of **manufactured historical narratives^{ix}** and debunked claims to “historic rights”^x in the dashed-line claim.
- Much of this reported activity is occurring in foreign or contested exclusive economic zones (EEZs), which seemingly reflects a **double-standard** given the PRC’s excessive restrictions on foreign activities in its EEZ.^{xi}
- The PRC’s use of “scientific research vessels” within the dashed-line claim (often alongside China Coast Guard and maritime militia) and without coastal state consent in the EEZ indicates that such vessels are **a tool to advance the PRC’s excessive maritime claims**, rather than or in addition to serving a legitimate scientific purpose.
- The United States and many other countries^{xii} have active marine data collection programs^{xiii} for a broad range of peaceful purposes, including the study of climate change and marine life.
- The PRC’s purposes may be similarly peaceful in some cases, but the vast scale of the PRC’s marine data collection, “dual-use” behaviors, lack of transparency,^{xiv} and propensity to flout international law^{xv} is fomenting a **“gray zone”** in which coastal states are obfuscated from identifying legal transgressions and taking enforcement action.
- Protecting against noncompliance, encroachment, and intimidation requires coastal states to distinguish between the various types of marine data collection and **apply the appropriate legal framework.**
- International law reflected in the United Nations Convention on the Law of the Sea (UNCLOS) permits coastal states to **regulate certain types of foreign marine data collection**, depending on the nature of the activity and the maritime zone where it is conducted.^{xvi}
- Coastal states should continue to share information, illuminate concerning behavior, demand compliance, exercise lawful jurisdiction, and **cooperate on measures that comport with international law.**



WHY THIS MATTERS

- There is concern that the PRC’s actions are **infringing on coastal state security interests and sovereign rights.**
- The PRC’s approach appears to **blur lines** between the different types of marine data collection, **complicating the ability of coastal states to uphold their rights** under international law.
- Marine data collection that does not comport with international law **risks destabilizing the security environment.**
- If left unchallenged, the PRC could be emboldened to use the **vener of marine data collection to advance excessive claims and erode international law**, rules, and norms that are essential to peace and security.
- International law on marine data collection is complicated, but addressing questions surrounding the PRC’s marine data collection requires applying the appropriate legal framework – **this TACAID is intended as a reference tool for broader understanding of the various legal considerations applicable to marine data collection.**

DETAILED DISCUSSION



Marine Data Collection under International Law

- **All nations enjoy high seas freedoms** of navigation, overflight, and other internationally lawful uses of the sea in waters beyond the territorial sea of any coastal state.
- Marine data collection is generally considered an **internationally lawful use of the sea**.^{xvii}
- However, international law reflected in UNCLOS permits coastal states to **regulate certain types of foreign marine data collection**, depending on the nature of the activity and the maritime zone where it is conducted.^{xviii} Other types of foreign marine data collection are not subject to coastal state regulation.
- It is therefore imperative for coastal states to **properly characterize foreign marine data collection**, such that the **appropriate legal framework** may be applied.
- Similarly, it is incumbent on the state carrying out the marine data collection to **exercise due regard for the rights and interests of the coastal states**, to include abiding by the relevant articles of UNCLOS and **not using marine data collection as a subterfuge** for other unlawful objectives – e.g., advancing excessive maritime claims.
- There are four general categories of marine data collection and distinct legal rules applicable to each:
 - **Marine scientific research (MSR)**
 - MSR is subject to coastal state consent and opportunity to participate/receive data from activities undertaken in the EEZ/continental shelf (CS).^{xix}
 - **Exploration & exploitation** (natural resources; underwater cultural heritage/shipwrecks)
 - Exploration & exploitation is subject to coastal state exclusive control in the EEZ/CS.
 - **Surveys** (military surveys; hydrographic surveys)
 - Non-commercial surveys are not subject to coastal state regulation in the EEZ/CS.
 - **Operational oceanography** (ocean state estimation; weather forecasting; climate prediction)
 - Operational oceanography is not subject to coastal state regulation in EEZ/CS.

Marine Scientific Research (MSR)

- MSR generally refers to **activities in the ocean to expand knowledge of the marine environment and oceanic processes**.^{xx} International law requires that MSR be conducted exclusively for peaceful purposes.^{xxi}
- All states have a right to conduct MSR, subject to the rights and duties of other states.^{xxii}
- MSR must not unjustifiably interfere with a coastal state's exercise of sovereign rights in its EEZ.^{xxiii}
- **Coastal state rights in the EEZ include jurisdiction over foreign MSR**.^{xxiv} As such, foreign states seeking to conduct MSR in the EEZ must provide **notification and receive consent** from the coastal state.^{xxv}
- Under international law reflected in UNCLOS Article 246(5), **coastal states may withhold consent** to MSR in the EEZ/CS if the request:
 - is of direct significance for the exploration and exploitation of natural resources;
 - involves drilling into the continental shelf, the use of explosives or the introduction of harmful substances into the marine environment;
 - involves the construction, operation or use of artificial islands, installations and structures referred to in UNCLOS Articles 60 and 80; or
 - contains inaccurate information regarding the nature and objectives of the project or if the researching state has outstanding obligations to the coastal state from a prior research project.
- UNCLOS distinguishes MSR conducted for scientific purposes from hydrographic surveys done in support of resource extraction for commercial purposes.^{xxvi}
- International law reflected in UNCLOS Article 248 establishes **a duty for states wishing to conduct MSR in a foreign EEZ/CS to provide notice at least 6 months in advance and provide details** including:
 - the nature and objectives of the MSR;
 - the method, including the name, tonnage, type, and class of the vessel(s) to be used and their associated scientific equipment;
 - the precise geographic area;
 - the start date of the MSR and departure date of the vessel(s);

- the name of the sponsoring organization, its director, and the person in charge of the MSR project; and
- the extent to which the coastal state should participate or be represented in the project.^{xxvii}
- A coastal state may request that MSR be suspended or cease at any time.^{xxviii}
- A coastal state is **entitled to data** and reports resulting from MSR in its EEZ/CS.^{xxix}
- The United Nations (UN) maintains implementation guidance for MSR in foreign EEZs/CSs and coastal state consent regimes, to ensure the uniform and consistent application of the law of the sea by UN member states.^{xxx}
- The U.S. Department of State's Office of Oceans and Polar Affairs (OPA), within the Bureau of Oceans and International and Scientific Environmental and Scientific Affairs, coordinates requests from privately and publicly funded U.S. researchers seeking consent to conduct MSR in foreign EEZs/CSs.^{xxxi}
- OPA screens applications to ensure they do not include requests to conduct hydrographic surveys for seabed and sub-seabed resource extraction.
- While most Indo-Pacific nations conduct only limited MSR outside of their territorial seas (TTS), **responsible researching states follow notice and consent requirements** and use vessels controlled by research institutions or civilian scientific agencies.^{xxxii}

Exploration and Exploitation

- **Exploration for and exploitation of natural resources** (living and non-living) is subject to the **exclusive control of the coastal state** in the EEZ/CS.
- The EEZ extends no more than 200 nautical miles seaward of the baseline that establishes the TTS.^{xxxiii} **All states enjoy high seas freedoms** including navigation, overflight, and other internationally lawful uses of the seas in the EEZ. However, coastal states are entitled to exercise "**sovereign rights**" that pertain to "exploring, exploiting, conserving and managing" natural resources, both living and non-living.^{xxxiv}
- Specifically, every coastal state has the **exclusive right to explore, exploit, conserve, and manage living and non-living resources in its EEZ**, including the seabed and subsoil.^{xxxv}
- The **continental shelf** (CS) of a coastal state comprises the seabed and subsoil of the submarine areas that extend beyond its TTS throughout the natural prolongation of its land territory to the outer edge of the continental margin.^{xxxvi} Like the EEZ, the coastal state exercises sovereign rights over the CS for the purpose of exploring it and exploiting its natural resources.^{xxxvii}
- **Underwater cultural heritage (UCH) is not considered a natural resource** in the UNCLOS sense and is therefore not covered by UNCLOS-derived sovereign rights over the EEZ/CS. UCH includes resources of cultural value, historical significance, or archeological interest in the marine environment.^{xxxviii}
- The silence of UNCLOS on UCH was addressed by the 2001 Convention on the Protection of the Underwater Cultural Heritage ("UCH Convention"). Among other things, the UCH Convention **requires reporting to a coastal state upon the discovery of UCH or an intention to engage in activity directed at UCH** in the EEZ or CS.^{xxxix}
- Although not signatory to the UCH Convention, the United States has stated its support for most of the text, supported the development of the agreement, and participated in the negotiation process.^{xl}

Surveys (Military & Hydrographic)

- Military survey operations (MSO) may encompass **various forms of non-commercial military marine data collection**, such as reconnaissance, bathymetric, and hydrographic surveys necessary for the safe operation of military vessels at sea. International law reflected in UNCLOS exempts, "any warship, naval auxiliary and other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service" from coastal state regulation in the EEZ/CS.^{xli}
- Such vessels are entitled to sovereign immunity under international law.^{xlii} Sovereign-immune vessels are **not bound by coastal state notification and consent requirements in the EEZ/CS**.
- All states therefore have a **right to employ sovereign-immune vessels for MSO** and other internationally lawful uses of the sea beyond the internationally recognized TTS of other states, which includes the EEZ/CS.^{xliii}
- The U.S. Navy conducts MSO from *Pathfinder*-class (T-AGS) survey ships operated by the Military Sealift Command.
- U.S. Navy survey vessels are marked and identified as naval auxiliaries. Responsible state actors likewise conduct

MSO from vessels under military control and/or clearly identified as sovereign-immune.^{xiv}

- **Hydrographic surveys** are undertaken to obtain information for making **nautical charts and for safety of navigation**.^{xlv} Such information may include determinations of water depth, configuration and nature of the sea floor, direction and force of currents, heights and times of tides and water stages, and hazards for navigation.
- The necessity for hydrographic surveys is **consistent with the requirement to carry “adequate and up-to-date charts” to assist in navigation** under the International Convention on the Safety of Life at Sea (Chapter V) and International Maritime Organization regulations.^{xlvi}
- The U.S. view is that hydrographic surveying is **not subject to coastal state regulation in the EEZ/CS**.^{xlvii}

Operational Oceanography

- Operational oceanography involves the **routine collection of ocean observations**, such as temperature, pressure, current, salinity, and wind for the purpose of meteorology and climatology – collected data is typically shared publicly in near real time.^{xlviii} Operational oceanography is **not subject to coastal state regulation in the EEZ/CS**.
- Ocean data buoys are one example of a platform used to conduct operational oceanography.^{xlix}
- The U.S. view that operational oceanography is **distinct from MSR** is reflected in U.S. Senate reports and U.S. Navy instructions.^l

Marine Data Collection Legal Reference Chart

Category	Description	Applicable Regime	Considerations for Scrutinizing the Lawfulness of Marine Data Collection	
Marine Scientific Research	<ul style="list-style-type: none"> • Activities undertaken to expand scientific knowledge of the marine environment and its processes • Includes physical oceanography, marine chemistry, marine biology, scientific ocean drilling and coring, geological/geophysical research, as well as other activities with a scientific purpose 	<ul style="list-style-type: none"> • UNCLOS Part XIII • MSR in TTS, EEZ, CS, AWs is subject to coastal state's consent • Coastal state establishes procedures for obtaining consent w/in contours of UNCLOS • Data generally to be made available in public domain • Differs from data collection for resource exploration 	<ul style="list-style-type: none"> • Is the purported purpose MSR? • If so, has the coastal state consented? • Is the researching state allowing the coastal state to observe/participate and making the data publicly available? • Is the MSR a subterfuge for commercial/recourse exploration in another state's EEZ/CS? Does the timing or proximity to the coastal state's resource exploration suggest an ulterior motive other than MSR? 	
Surveys	Hydrographic	<ul style="list-style-type: none"> • Activities undertaken to obtain information for making navigational charts and for safety of navigation • Includes the determination of the depth of water, configuration and nature of the sea floor, direction and force of currents, heights and times of tides and water stages, and hazards for navigation • Information is used for production of nautical charts and similar products to support safety of navigation 	<ul style="list-style-type: none"> • All nations enjoy high seas freedoms of navigation, overflight, and other internationally lawful uses of the sea in waters beyond the territorial sea of any coastal state • US/UK View: Not subject to coastal state regulation - may be conducted in EEZ/CS without consent as an internationally lawful use of the sea under UNCLOS Art. 58(1) • Subject to due regard for coastal state's EEZ/CS rights and navigational rights and freedoms of all other nations 	<ul style="list-style-type: none"> • It can be difficult to distinguish hydrographic surveys from MSR because non-hydrographic data is often collected incidentally as part of hydrographic surveys • Note: The PRC considers hydrographic and military surveys to be MSR and has criminalized survey activity in its own EEZ. Despite the PRC's domestic legal posture, it conducts survey activity freely in other countries' EEZs, including the United States
	Military	<ul style="list-style-type: none"> • Activities undertaken for military purposes (e.g., not shared with general public) • Can include oceanographic, hydrographic, marine geological, geophysical, chemical, biological, acoustic, and related data 	<ul style="list-style-type: none"> • All nations enjoy high seas freedoms of navigation, overflight, and other internationally lawful uses of the sea in waters beyond the territorial sea of any coastal state • Not subject to coastal state regulation - may be conducted in EEZ/CS without consent • Subject to due regard for coastal state's EEZ/CS rights and navigational rights and freedoms of all other nations 	<ul style="list-style-type: none"> • Is the purported purpose military surveys? Note: The PRC attempts to restrict/regulate foreign military activities in its EEZ, yet may be availing itself of the right to conduct military surveys in other's EEZs • Is the observed activity subterfuge for collecting commercial data about other states' EEZs/CSs? Is the state actor providing data to commercial or state-owned enterprises? • Is the observed activity a subterfuge for intimidation or interference with coastal state's exploring their own EEZs/CSs? Or to enforce excessive maritime claims?

Operational Oceanography		<ul style="list-style-type: none"> Routine collection of ocean observations, e.g., temperature, pressure, current, salinity and wind Used for monitoring and forecasting of weather, climate, and ocean state (e.g., currents) Data transmitted from sensor to shore, and made publicly available, in near real time 	<ul style="list-style-type: none"> All nations enjoy high seas freedoms of navigation, overflight, and other internationally lawful uses of the sea in waters beyond the territorial sea of any coastal state Not considered MSR Does not require coastal state consent in EEZ if truly operational oceanography 	<ul style="list-style-type: none"> Is a state actor or organization asserting this characterization? If so, do circumstances indicate that the activity is actually for some other purpose – e.g., resource exploration or MSR? Is the state actor or organization making the data available to public near real time as would be indicative of true operational oceanography? Are the data collectors operating independently of the users of the data? If not, then more likely the collection is MSR.
Exploration & Exploitation	Natural Resources	<ul style="list-style-type: none"> Exploration for and exploitation of living or non-living natural resources 	<ul style="list-style-type: none"> Not considered MSR Subject to coastal state's exclusive control in TTS, archipelagic waters, EEZ, and CS 	<ul style="list-style-type: none"> Do circumstances (e.g., timing, location) indicate the true purpose of the observed activity is to explore for or exploit resources? Or to infringe that state's lawful exploration/exploitation of resources in its EEZ/CS? Or to enforce illegitimate or disputed maritime claims?
	Underwater Cultural Heritage (UCH)	<ul style="list-style-type: none"> Involves the search for, recording of, and removal of items of cultural heritage, such as artifacts from shipwrecks 	<ul style="list-style-type: none"> UNCLOS does not grant coastal states sovereign rights over UCH in EEZ/CS, but UCH Convention and custom requires reporting to a coastal state upon the discovery of UCH or an intention to engage in activity directed at UCH in the EEZ or CS. See also UNCLOS Articles 149/303 	<ul style="list-style-type: none"> Do circumstances indicate the purported search or discovery of shipwreck as subterfuge for resource exploration in other states' EEZ/CS? Or as pretext for presence intended to intimidate coastal state or advance claims to sovereignty over disputed territory?

Examples of the PRC's Marine Data Collection Activities

- PRC-flagged survey vessels are reportedly conducting **marine data collection on an unprecedented scale**.^{li}
- A recent CSIS study found that the PRC's survey vessel fleet conducted hundreds of thousands of hours of operations globally over the last four years, with over 80% of those vessels demonstrating **"dual-use" behavior**.^{lii}
- The report described how survey vessels ostensibly engaged in scientific research conducted military-affiliated port visits and repeated instances of **"spoofing"** (providing falsified identification information) and **"going dark"** (turning off automatic identification system signals for extended periods).^{liii}
- Other reports have described the PRC's use of survey vessels to advance **excessive claims**,^{liv} to **obstruct coastal states** from exploring and exploiting natural resources;^{lv} and to uncover ancient shipwrecks^{lvi} as evidence of **manufactured historical narratives**^{lvii} and debunked claims to "historic rights"^{lviii} in the dashed-line claim.
- Below is a non-exhaustive snapshot of open-source reports on concerning marine data collection activities by the PRC. This review represents only a sampling of the PRC's marine data collection activities.

- **Indonesia**

- From August through October 2021, the PRC's survey vessel *Haiyang Dizhi 10* spent approximately seven weeks inside Indonesia's EEZ in the Natuna Sea area of the South China Sea.^{lix}
- Together with China Coast Guard (CCG) vessels, *Haiyang Dizhi 10* was dispatched shortly after a private semi-submersible arrived to drill appraisal wells in the Tuna Block oil and gas reserve with the consent of the Indonesian government. *Haiyang Dizhi 10* operated in the D-Alpha block, an adjacent oil and gas reserve valued at \$500 billion by Indonesia, moving in a slow grid pattern consistent with a survey for oil and gas exploration.^{lx}
- The PRC reportedly requested Indonesia cease drilling and reiterated assertions that the area in question was "Chinese



Chinese survey vessel *Haiyang Dizhi 10* pictured during a 2019 visit to Pakistan. Source: [RFA](#).

territory” encompassed within its so-called dashed-line claim.^{lxvi} The UN Permanent Court of Arbitration’s landmark 2016 ruling, however, found the dashed-line claim to be without legal basis and contrary to UNCLOS.^{lxvii}

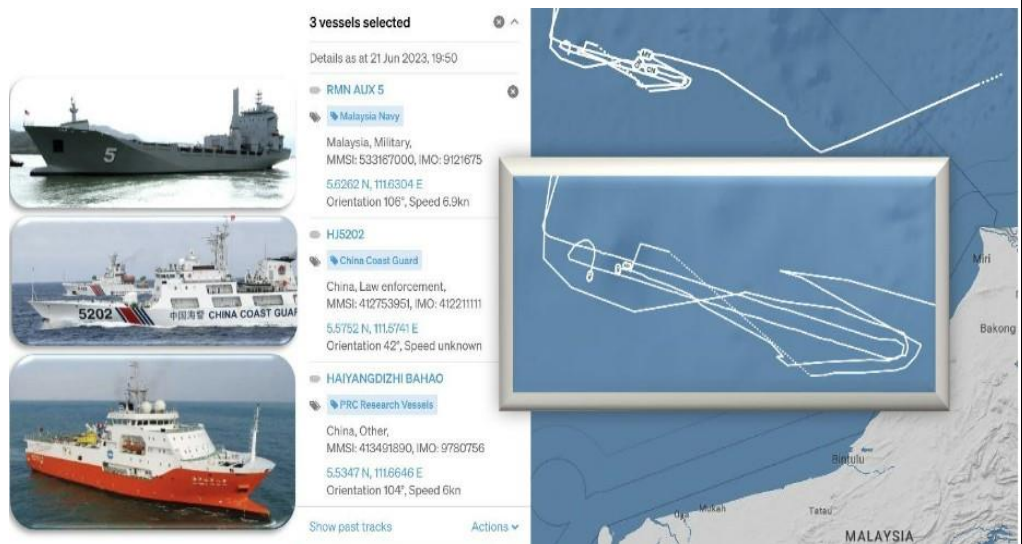
- In January 2023, the PRC deployed its largest CCG vessel to patrol the same area in an apparent response to an agreement by Indonesia and Vietnam resolving the limits of their respective EEZs.^{lxviii}

○ **Indian Ocean**

- In November 2019, the Indian Navy ordered the PRC-flagged survey vessel *Shiyan 1* out of its EEZ after the vessel was reportedly found to be conducting MSR without prior consent.
- More recently, in October 2023, India raised concerns regarding the activity of the PRC-flagged research vessel *Shiyan 06* in the vicinity of Sri Lanka during the vessel’s Indian Ocean operations.
- Although Sri Lanka allowed *Shiyan 06* to conduct a port call, it later announced a one-year pause on foreign research vessels entering Sri Lankan waters.^{lxiv}
- On the heels of Sri Lanka’s decision, the Maldives authorized Chinese survey vessels to dock in its ports^{lxv} and inked a defense cooperation agreement with the PRC.^{lxvi}
- As recently as March 2024, as many as four PRC survey vessels were observed operating in and around India’s EEZ.^{lxvii}
- Recent trends suggest increased activity by the PRC survey vessel fleet toward the Indian Ocean and a corresponding uptick in marine data collection activities across the Indian Ocean.^{lxviii}

○ **Malaysia**

- In September and October 2021, the PRC survey vessel *Da Yang Hao* operated in the EEZs of Brunei, Malaysia, and the Philippines. The Malaysian Ministry of Foreign Affairs protested and issued a public



Stanford University’s [Gordian Knot Center](#) plotted the positions of PRC survey vessel *Haiyang Dizhi 8*, its CCG escort, and KA Bunga May Lima (BM5), the Malaysia vessel sent to monitor unlawful PRC survey activity in Malaysia’s EEZ in 2023.

statement condemning the PRC’s actions.^{lxix}

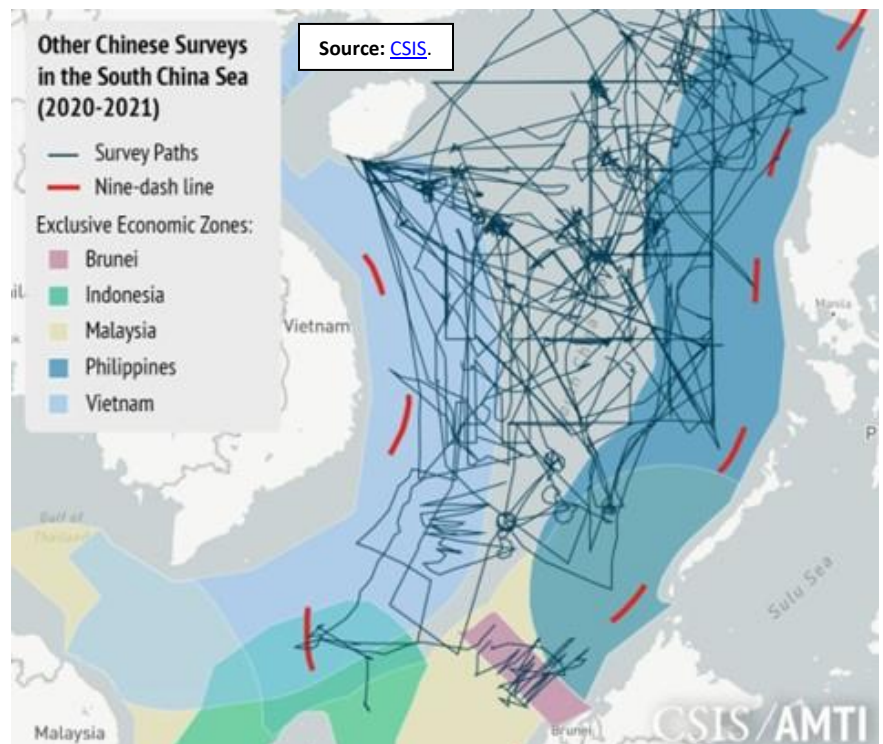
- In June and July of 2023, the PRC-flagged survey vessel *Haiyang Dizhi Ba Hao 8*, accompanied by CCG and maritime militia vessels, operated for over a month near Luconia Shoals in Malaysia’s EEZ.
- Analysis suggests the maritime militia vessels were on station to support *Haiyang Dizhi 8*’s activities (one CCG vessel reportedly screened *Haiyang Dizhi 8* from Royal Malaysian Navy auxiliary vessel *KA Bunga May Lima* (BM5), deployed to the area to monitor).^{lxx}

○ **Palau**

- In November and December 2021, *Da Yang Hao* operated within Palau’s EEZ, including in an area designated part of Palau’s national marine sanctuary.^{lxxi}
- The Government of Palau requested support from the U.S. Coast Guard, invoking a U.S.-Palau bilateral maritime law enforcement agreement. The U.S. Coast Guard helped locate and monitor the *Da Yang Hao* via aircraft while it remained in and around Palau’s EEZ.^{lxxii}
- In May 2023, the PRC survey vessel *Hiayang Dizhi Liu Hao 6* entered Palau’s EEZ without approval and appeared to survey Palau’s undersea fiber optic cable system. Similar activity by PRC-flagged research vessels in the Palauan EEZ has continued into 2024.^{lxxiii}

○ **Vietnam**

- Since January 2022, the Vietnam-based South China Sea Chronicle Initiative (SCSCI) has reported on over 40 entries by Chinese survey vessels, CCG, and maritime militia into energy exploration blocks within Vietnam’s EEZ.
- In March 2023, the Chinese survey vessel *Haiyang Dizhi Si Hao 4* along with maritime militia vessels reportedly conducted marine data collection of an unspecified characterization within Vietnam’s EEZ.^{lxxiv}
- In May and June of 2023, the Chinese survey vessel *Xiang Yang Hong 10* and a mix of civilian and military escort vessels operated in and around oil and gas fields near Vanguard Bank in Vietnam’s EEZ. Vietnam made numerous requests for the PRC’s vessels to leave the area. The PRC refused to comply and dispatched additional CCG vessels to operate inside of Vietnam’s EEZ near Vanguard Bank and oil drilling initiatives.^{lxxv}



Assessment of the PRC’s Position

- The PRC appears to operate its survey vessel fleet under the auspice of its Ministry of Natural Resources and Chinese Academy of Sciences and **presumably characterizes much of its activity as MSR**.^{lxxvi}
- Following a recent port call by the “Chinese scientific research vessel *Xiang Yang Hong 03*” in the Maldives, a PRC Foreign Ministry spokesperson said “China’s scientific research activities in relevant waters are for peaceful purposes and aimed at contributing to humanity’s scientific understanding of the ocean. The activities are in strict compliance with the terms of the United Nations Convention on the Law of the Sea.”^{lxxvii}
- This characterization, however, is **incongruent with the PRC’s reported activities in and around oil and gas exploration areas** – these activities imply a commercial purpose that would preclude immunity from coastal state regulation in the EEZ/CS. Likewise, there are **no indications that the PRC adheres to the requirements for MSR** specified in UNCLOS Article 248, particularly when engaged in marine data collection **within the dashed-line claim**.
- The PRC’s extensive use of “scientific research vessels” within the dashed-line claim (often alongside CCG and maritime militia) and without coastal state consent in the EEZ/CS indicates that such vessels are **a tool to advance the PRC’s excessive maritime claims**, rather than or in addition to serving a legitimate scientific purpose.
- The PRC’s actions represent a **double-standard** given the assertiveness with which the PRC enforces its own MSR regulations and attempts to excessively regulate data collection in its EEZ.^{lxxviii}
- Specifically, the PRC purports to require other states to request and receive permission to conduct any form of marine data collection within its EEZ, including through its 1998 Law on the Exclusive Economic Zone and Continental Shelf and its 2002 Surveying and Mapping Law and associated implementing regulations.^{lxxix}
- The PRC’s attempts to restrict lawful marine data collection in its claimed EEZ has led to a **series of unprofessional interactions** between Chinese vessels and vessels from the United States, Vietnam, Japan, and elsewhere.^{lxxx}

PROPOSED COUNTER-LAWFARE APPROACH

This section offers a summary of suggested language and key points for incorporation into communication strategies

- ***The PRC's extensive and often dubious marine data collection activities merit further scrutiny for compliance with international law.*** The PRC appears to use marine data collection as a mechanism to assert its excessive claims and deny other states from exercising their sovereign rights.
- ***MSR must be undertaken exclusively for peaceful purposes*** in accordance with international law reflected in UNCLOS. It should not be used as a veneer to advance excessive claims or impede lawful uses of the sea by others.
- ***MSO in foreign EEZs is permissible*** if conducted by properly identified warships, auxiliaries, and other vessels wholly owned and operated by a government ***for exclusively non-commercial purposes.***
- Marine data collection activities that mix scientific research with broader geopolitical objectives may ***increase the risk of miscalculation and destabilize the security environment*** throughout the region.
- Protecting against noncompliance, encroachment, and intimidation requires coastal states to distinguish between the various types of marine data collection and ***apply the appropriate legal framework.***
- International law reflected in UNCLOS permits coastal states to ***regulate certain types of foreign marine data collection,*** depending on the nature of the activity and the maritime zone where it is conducted.
- The PRC's approach appears to ***blur lines*** between the different types of marine data collection, ***complicating the ability of coastal states to uphold their rights*** under international law.
- Marine data collection that does not comport with international law ***undermines the rules-based international order and threatens regional security.***
- Coastal states should continue to share information, illuminate concerning behavior, demand compliance, exercise lawful jurisdiction, and ***cooperate on measures that comport with international law.***
- ***USINDOPACOM is committed to countering the erosion of international law, rules, and norms*** caused by marine data collection that fails to comply with legal obligations and disregards the sovereign rights of coastal states.
- ***USINDOPACOM will continue to work with allies and partners to uphold international law*** and to expose and oppose unlawful activities.
- ***No state should be intimidated or coerced into giving up rights and freedoms*** guaranteed by international law, including the right of a coastal state to explore, exploit, conserve, and manage resources within its EEZ.
- ***USINDOPACOM opposes activities that impede lawful exploration, exploitation, conservation, and management of natural resources*** to the detriment of peace and security.
- ***Upholding the international law of the sea and the rules-based international order*** is an enduring interest for USINDOPACOM and one that is vital to peace, security, and prosperity.
- ***USINDOPACOM supports and defends international law,*** seeks to preserve peace and stability, and opposes any attempt to use coercion or force to settle disputes.

- ⁱ The term “survey vessel” is used in this TACAID to refer to any vessel ostensibly engaged in survey or marine scientific activity.
- ⁱⁱ “Marine data collection” is a general term referring to all types of survey or marine scientific activity (e.g., military surveys, hydrographic surveys, and marine scientific research). See U.S. Navy, OPNAVINST 3128.9G.
- ⁱⁱⁱ Matthew P. Funaiolo, et al., *Surveying the Seas China’s Dual-Use Research Operations in the Indian Ocean*, Center for Strategic and International Studies (CSIS), 10 Jan 2024, <https://features.csis.org/hiddenreach/china-indian-ocean-research-vessels/>.
- ^{iv} *Id.* The “dual-use” aspect of the PRC’s activity is central to its Military-Civil Fusion Development Strategy. Under this strategy, civilian entities are required to work on behalf of State priorities, making it impossible to have confidence that any nominally civilian research will not be applied toward military purposes. See [https://2017-2021.state.gov/military-civil-fusion/#:~:text=What%20is%20Military-Civil%20Fusion,world%20class%20military"%20by%202049](https://2017-2021.state.gov/military-civil-fusion/#:~:text=What%20is%20Military-Civil%20Fusion,world%20class%20military).
- ^v *Id.*
- ^{vi} Ray Powell, *China Has Been Surveying Malaysia’s Waters for Over a Month*, 23 Jul 2023, SeaLight, <https://www.sealight.live/posts/china-has-been-surveying-malaysia-s-waters-for-over-a-month>.
- ^{vii} Govi Snell, *Tensions High as Chinese Vessels Shadow Vietnam’s Oil, Gas Operations*, 17 Jun 2023, VOA News, <https://www.voanews.com/a/tensions-high-as-chinese-vessels-shadow-vietnam-s-oil-and-gas-operations-/7141273.html>.
- ^{viii} Mandy Zuo, *Chinese Researchers Begin Deep Dives to Study Ming-era Shipwrecks Found in South China Sea*, 22 May 2023, South China Morning Post, <https://www.scmp.com/news/china/science/article/3221318/chinese-researchers-begin-deep-dives-study-ming-era-shipwrecks-found-south-china-sea>.
- ^{ix} Victoria James, *How China Reinvented an Ancient Kingdom to Advance Its Claims in the Himalayas*, 17 Dec 2022, The Diplomat, <https://thediplomat.com/2022/12/how-china-reinvented-an-ancient-kingdom-to-advance-its-claims-in-the-himalayas/>.
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- ^{xiii} Asia Maritime Transparency Initiative (AMTI), *A Survey of Marine Research Vessels in the Indo-Pacific*, 16 Apr 2020, <https://amti.csis.org/a-survey-of-marine-research-vessels-in-the-indo-pacific/>.
- ^{xiv} Funaiolo, *supra* note iii (describing PRC behavior at sea to obscure survey vessel presence and activity).
- ^{xv} *Id.* (describing MSR conducted within the EEZs of coastal states without prior approval under UNCLOS).
- ^{xvi} J. Ashley Roach et al., *Marine Data Collection, Excessive Maritime Claims*, 3rd ed. (2012).
- ^{xvii} UNCLOS Art. 87 (incorporated into Part V (EEZ) by Art. 58(2)).
- ^{xviii} Roach, *supra* note xvi.
- ^{xix} UNCLOS Art. 246(6) (“coastal States may not exercise their discretion to withhold consent under subparagraph (a) of that paragraph in respect of marine scientific research projects to be undertaken in accordance with the provisions of this Part on the continental shelf, beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, outside those specific areas which coastal States may at any time publicly designate as areas in which exploitation or detailed exploratory operations focused on those areas are occurring or will occur within a reasonable period of time.”)
- ^{xx} Although UNCLOS does not explicitly define “MSR,” this is a commonly accepted definition. See Roach, *supra* note xvi.
- ^{xxi} UNCLOS Art. 240(a).
- ^{xxii} UNCLOS Art. 238.
- ^{xxiii} UNCLOS Art. 246 (8).
- ^{xxiv} UNCLOS Art. 56(1)(b)(ii).
- ^{xxv} UNCLOS Art. 246 (3).
- ^{xxvi} UNCLOS Art. 246(5)(a).
- ^{xxvii} UNCLOS Art 248 (a)-(f).
- ^{xxviii} UNCLOS Art. 253.
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- ^{xxx} Division for Ocean Affairs and Law of the Sea, United Nations Office of Legal Affairs, “Marine Scientific Research: A revised guide to the implementation of the relevant provisions of the United Nations Convention on the Law of the Sea,” (2010), https://www.un.org/depts/los/doalos_publications/publicationtexts/msr_guide%202010_final.pdf.
- ^{xxxi} Office of Ocean and Polar Affairs, U.S. Department of State, “Marine Scientific Research Consent Overview.” See <https://www.state.gov/marine-scientific-research-consent-overview/>.
- ^{xxxii} For example, since 1967, Japan, through the Japan Meteorological Agency, has conducted MSR along the 137-degree East meridian in the Pacific. It uses two scientific research vessels, the *Ryofu Maru III* and the *Keifu Maru II*. Japan makes the results of this MSR widely available as a scientific resource for the international community. See https://www.data.ima.go.jp/gmd/kaiyou/db/vessel_obs/data-report/html/ship/ship_e.php.
- ^{xxxiii} The breadth of EEZs vary based on geography, particularly for states with opposite and adjacent coasts where full 200 nm EEZs would overlap.
- ^{xxxiv} UNCLOS Art. 56.
- ^{xxxv} UNCLOS Part V.
- ^{xxxvi} UNCLOS Art. 76
- ^{xxxvii} UNCLOS Art. 77
- ^{xxxviii} See UNCLOS Arts. 56, 77; Eden Sarid, *International Underwater Cultural Heritage Governance: Past Doubts and Current Challenges*, 35 Berkeley J. Int’l L. 219, 229 (2017).
- ^{xxxix} See The UNESCO Convention on the Protection of the Underwater Cultural Heritage, Nov. 6, 2001, 2562 U.N.T.S. 3 at [article 9\(1\)](#). There are presently 76 signatories to the UCH Convention, but few nations in the Indo-Pacific region have signed on. Neither the United States nor the PRC is a party to the UCH Convention.
- ^{xl} See Ole Varmer, et al., *United States: Responses to the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage*, J Mari Arch (2010) 5:129, 141, https://www.gc.noaa.gov/documents/2012/varmer-2010-mari_arch.pdf.
- ^{xli} UNCLOS Article 236. See also UNCLOS Arts. 32, 95, 96.
- ^{xlii} Warships are those that bear external markings of such class of ship, under the command of an officer, “and manned by a crew which is under regular armed forces discipline.” Auxiliary vessels normally fulfill supporting roles (unable to commit belligerent acts), are not warships, but are “owned by or under the exclusive control of the

armed forces of a State and used for the time being on government non-commercial service.” See *San Remo Manual on International Law Applicable to Armed Conflicts at Sea* art. 13(g) and 13(h). See also UNCLOS Art. 29.

^{xliii} UNCLOS Art. 58

^{xliv} AMTI, *supra* note viii.

^{xlv} National Ocean Service, National Oceanic and Atmospheric Administration, Hydrographic Surveying, last accessed 17 Apr 2024, <https://oceanservice.noaa.gov/navigation/hydro/>.

^{xlvi} International Maritime Organization, Hydrographic data, nautical charts and nautical publications, last accessed 17 Apr 2024, <https://www.imo.org/en/OurWork/Safety/Pages/Charts.aspx>.

^{xlvii} U.S. Navy OPNAVINST 3128.9G at para. 5.b.

^{xlviii} Roach, *supra* note xvi.

^{xlix} *Id.*

ⁱ Senate Ex. Rep. 110–9, 19 December 2007, at 13, <https://www.congress.gov/110/crpt/erpt9/crpt-110erpt9.pdf>; OPNAV Instruction 3128.9G at para. 4. d.

ⁱⁱ Funaiole, *supra* note iii.

ⁱⁱⁱ *Id.*

ⁱⁱⁱⁱ *Id.*

^{liv} Powell, *supra* note vi.

^{lv} Snell, *supra* note vii.

^{lvi} Zuo, *supra* note viii.

^{lvii} James, *supra* note ix.

^{lviii} LIS 150, *supra* note x.

^{lix} Radio Free Asia, *Chinese Survey Ship Reenters Indonesian Waters After Week of Retreat*, 5 Oct 2021, <https://www.rfa.org/english/news/china/ship-10052021151118.html>.

^{lx} Tom Allard, et al., *Exclusive: China Protested Indonesian Drilling, Military Exercises*, 1 Dec 21, Reuters, <https://www.reuters.com/world/asia-pacific/exclusive-china-protested-indonesian-drilling-military-exercises-2021-12-01/>.

^{lxi} *Id.*

^{lxii} PCA 2016 Arbitration Award.

^{lxiii} Radio Free Asia and Benar News Staff, *Indonesia Sends Warships to Monitor Chinese Coast Guard Vessel*, 17 Jan 2023, <https://www.rfa.org/english/news/china/indonesia-china-coast-guard-01172023061935.html>.

^{lxiv} Finaiole, *supra* note iii.

^{lxv} Krishin Kaushik, *Another Chinese Research Vessel Spotted off India, Fueling Unease*, Reuters, 11 Mar 2024, <https://www.reuters.com/world/india/another-chinese-research-vessel-spotted-off-india-fuelling-unease-2024-03-11/>.

^{lxvi} David Brewster, *Mapping the Oceans is the New Front in the Battle for Influence in the Indian Ocean*, The Lowy Institute, 27 Mar 2024, <https://www.lowyinstitute.org/the-interpretor/mapping-oceans-new-front-battle-influence-indian-ocean>.

^{lxvii} Amrita Nayak Dutta, *Uptick in Chinese Vessels’ Presence in Indian Ocean Region: Official*, The Indian Express, 28 Mar 2024, <https://indianexpress.com/article/india/chinese-vessels-presence-in-indian-ocean-region-9237134/>.

^{lxviii} Finaiole, *supra* note iii.

^{lxix} Radio Free Asia, *Malaysia Calls in China Ambassador to Protest Ships in its EEZ*, 4 Oct 2021, <https://www.rfa.org/english/news/china/malaysia-survey-protest-10042021152636.html>; see also Malaysia Ministry of Foreign Affairs, *Malaysia Protests the Encroachment of Chinese Vessels into Malaysian Waters*, 4 Oct 2021, kln.gov.my/web/guest/-/malaysia-protests-the-encroachment-of-chinese-vessels-into-malaysian-waters.

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^{lxxi} HI Sutton, *Illegal Strategy: China Suspected of Unauthorized Seafloor Survey in Pacific*, Naval News, 8 Dec 2021, <https://www.navalnews.com/naval-news/2021/12/illegal-strategy-china-suspected-of-another-unauthorized-sea-floor-survey/>.

^{lxxii} The Maritime Executive, *U.S. Coast Guard Helps Palau Track Chinese Research Vessel in its EEZ*, 10 Dec 2021, <https://maritime-executive.com/index.php/article/u-s-coast-guard-helps-palau-track-chinese-research-vessel-in-its-eez>.

^{lxxiii} Radio Free Asia, *Palau says Chinese vessel slowed over undersea cable during incursion into waters*, 31 May 2023, <https://www.rfa.org/english/news/pacific/palau-china-cable-05312023014251.html>.

^{lxxiv} Radio Free Asia, *Chinese Ships ‘Swarming’ Vietnamese Waters, Think-Tank Says*, Radio Free Asia, 16 Mar 2023, <https://www.rfa.org/english/news/vietnam/swarming-03162023152450.html>.

^{lxxv} Bangkok Post, *Chinese ships ignore Vietnam demand to withdraw*, 26 May 2023, <https://www.bangkokpost.com/world/2579086/chinese-ships-ignore-vietnam-demand-to-leave-area-close-to-russian-run-gas-fields>; see also Snell, *supra* note vii.

^{lxxvi} See <http://www.ecns.cn/m/news/politics/2024-02-07/detail-ihcxnqiu4981139.shtml>.

^{lxxvii} *Id.*

^{lxxviii} James Kraska, *Intelligence Collection and the Law of the Sea*, 99 Int’l L. Stud. 602, 611 (2022), <https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=3023&context=ils>.

^{lxxix} PRC EEZ and CS Act, *supra* note xi; see also Law of the People’s Republic of China on the Surveying and Mapping (promulgated by the 29th Meeting of the Standing Comm. Ninth Nat’l People’s Cong., Aug. 29, 2002, effective Dec. 1, 2002). For analysis on why these laws are inconsistent with UNCLOS by purporting to regulate military marine data collection, see Raul Pedrozo, *Coastal State Jurisdiction over Marine Data Collection in the Exclusive Economic Zone: U.S. Views*, in *Military Activities in the EEZ: A U.S.-China Dialogue on Security and International Law in the Maritime Commons* 23–26 (Peter Dutton, ed. 2010).

^{lxxx} On 23 March 2001, a People’s Liberation Army Navy (PLAN) *Jianheu III*-class frigate aggressively intercepted *USNS Bowditch* (T-AGS 62), a clearly marked sovereign vessel engaged in lawful MSO, in the PRC’s claimed EEZ in the Yellow Sea, which resulted in it leaving the area. On 8 March 2009, five PRC vessels including a mix of PLAN surface combatants and fishing trawlers harassed *USNS Impeccable* (T-AGOS 23) while it was engaged in routine MSO in the PRC’s claimed EEZ. The PRC has engaged in similar harassment of Japanese and Vietnamese survey vessels. See *Japan Protests to Beijing over Chasing in East China Sea*, Agence France-Presse, 4 May 2010 (Japanese survey vessel pursued by PRC maritime surveillance ship and ordered to leave “Chinese waters” about 198 nautical miles northwest of Amami Oshima Island); *VN Demands China Stop Sovereignty Violations*, VIETNAMPLUS (29 May 2011) (PRC patrol vessels harass and cut the survey cable of a Vietnamese survey ship operating approximately 116 nautical miles off Dai Lan in Vietnam’s EEZ), <https://en.nhandan.vn/vietnam-demands-china-stop-sovereignty-violations-post2155.html>.