

Submitted by: USA

Summary: The CMTS (USA) report “A Ten-Year Projection Of Maritime Activity In The U.S. Arctic Region, 2020—2030” is being finalized for release on our about October 1, 2019. An Executive Summary of the report has been provided to inform the ARHC of high level conclusions.

## BACKGROUND

The Committee on Marine Transportation System (CMTS) “serves as a Federal interagency coordinating committee for the purpose of assessing the adequacy of the marine transportation system, promoting the integration of the marine transportation system with other modes of transportation and other uses of the marine environment, and coordinating, improving the coordination of, and making recommendations with regard to Federal policies that impact the marine transportation.”<sup>1</sup> Details of the organizational structure and committee membership can be found at <https://www.cmts.gov/about/organization>.

On July 1, 2019, the CMTS made available for public comment its Draft of “*A Ten-Year Projection Of Maritime Activity In The U.S. Arctic Region, 2020—2030*.” The 90-page document provides valuable perspective, DATA, analysis and information that may be of interest in discussions of hydrography in the Arctic.

While the public comment period is concluded and revisions to the draft are now being made, the CMTS has provided the ARHC an Executive Summary of its efforts. The Executive Summary outlines the scope and structure of the report, including statistical and time series highlights of its research of maritime traffic in the US Arctic. Historical and four maritime traffic scenarios are presented.

The revised full document is expected to be posted and available at [www.CMTS.gov](http://www.CMTS.gov) on or about October 1, 2019. The USA will share news of that posting when the revised document is available.

## RECOMMENDATION

The ARHC is invited to:

1. Note the forthcoming final report
2. Note the Executive Summary
3. Take any action appropriate.

Attached

- “A Ten-Year Projection Of Maritime Activity In The U.S. Arctic Region, 2020—2030” Executive Summary

---

<sup>1</sup> <https://www.cmts.gov/>



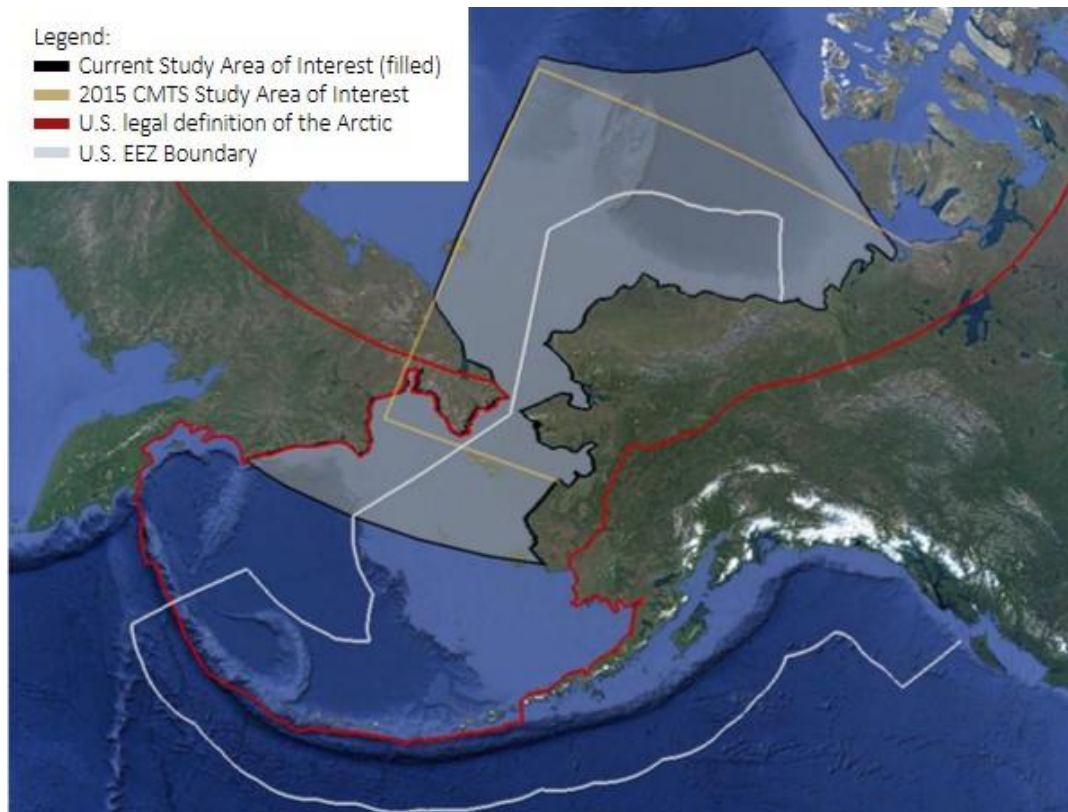
## U.S. Committee on the Marine Transportation System

Arctic Marine Transportation System Integrated Action Team's  
Report: "A Ten-Year Projection of Maritime Activity in the U.S.  
Arctic Region, 2020-2030"

### Executive Summary

The Arctic is undergoing unprecedented change on multiple fronts, including the region's growing maritime traffic. In the last decade, the number of vessels operating in waters north of the Bering Strait around the Chukchi and Beaufort Seas has increased by 128% or 2.3 times larger than the number of ships passing through the region in 2008. These vessels have been engaged with a variety of activities, including natural resource exploration and extraction, commercial shipping, oceanographic research, and tourism in waters which previously were plied only by ships resupplying remote communities along the sparsely populated coastlines of western and northern Alaska.

This report by the U.S. Committee on the Marine Transportation System (CMTS) U.S. Arctic Marine Transportation Integrated Action Team (Arctic IAT) is an update to the 2015 CMTS report, "A 10-Year Projection of Maritime Activity in the U.S. Arctic". It provides a detailed account of past and present vessel activity patterns in the northern U.S. Arctic and surrounding waters around the Bering Strait (the study area of interest is depicted in Figure 1). The report also projects how many additional vessels might be expected in the region over the next decade through four scenarios.



1: Map of the study's area of interest with other relevant regions of interest in the Bering Strait region.

Efforts to update the 2015 CMTS report began in November 2018 with a 2-day technical workshop hosted by the CMTS, together with the U.S. Arctic Research Commission (USARC), about drivers of vessel activity in the Arctic, included in Section II of this report. Workshop participants included experts from government, the shipping industry, academia, and the Arctic region and provided the report with a rich data set of quantitative sources of vessel growth, as well as new perspectives about how non-quantitative factors may affect vessel activity in the region. The workshop informed the guiding assumption of the projections featured in the report: a predictable operating environment is required to support growth of vessel activity in Arctic region, whereas unpredictable conditions may also have growth, but it might be sporadic, limited to specific sectors, and/or regions of the Arctic.

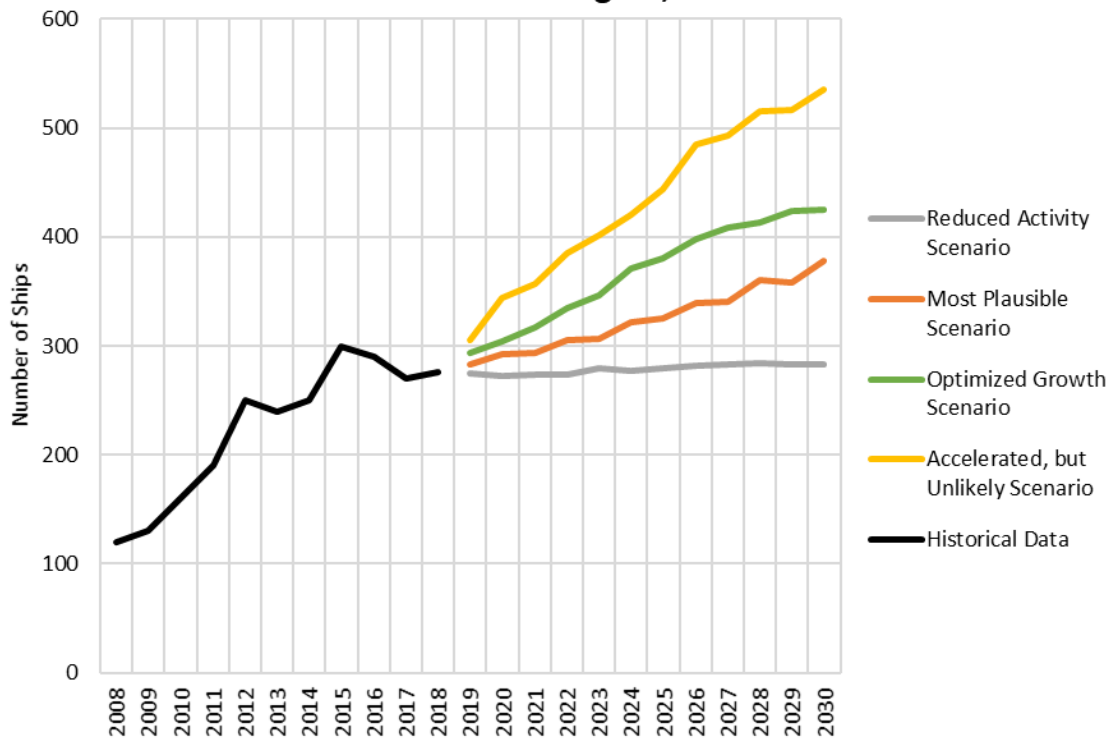
Section III of this report provides an overview of recent vessel activity trends in the U.S. Arctic region. Automatic identification system (AIS) data revealed that  $255 \pm 26$  unique vessels

transited through the U.S. Arctic and surrounding region from 2015–2017. By vessel type, over 50% of these vessels are tug, towing, and cargo vessels; other vessels included fishing vessels (10%), tourism (9%), tankers (7%), government/law enforcement/search and rescue (6%), research (5%) and other vessels (5%). By flag, U.S. flag vessels are the largest fleet in the U.S. Arctic region, by a considerable margin, but the number of flag states transiting through the region has climbed from 25 flag states in 2015 to 32 in 2017. This shift reflects that the region is undergoing a transition from primarily regional operations to an increasingly diverse and international set of users.

Furthermore, vessel traffic in the region has grown steadily over the last decade, according to U.S. Coast Guard data, but after Royal Dutch Shell PLC (Shell Oil) withdrew from offshore exploration in 2015, growth in the region has slowed. Despite no major changes in the total number of ships using these waters during this period, however, the length of the navigation season has been growing by as much as 7–10 days each year. Extrapolated out over the next decade, the navigation season in and around the Bering Strait may extend 2.5 months longer than present, potentially upending the region’s highly seasonal navigation season.

Section IV of the report provides a detailed overview of the method used for this report, which brings together both qualitative and quantitative data about the region for four projection scenarios of vessel activity. This method estimates the number of ships expected in the region over the next decade and was developed specifically for this study and utilizes publicly available data from 36 different sources of additional vessels. These sources of growth include new ice class vessels, rerouted shipping through the Arctic, planned infrastructure projects, and natural resource activities.

## Historical and Projected Vessel Counts by Scenario in the Northern U.S. Arctic Region, 2008–2030



2: Summary of historical and projected vessel counts for the study area of interest.

The four scenarios included in this study are the Reduced Activity Scenario, Most Plausible Scenario, Optimized Growth Scenario, and Accelerated, but Unlikely Scenario. Each provides a different possibility for vessel activity in the northern U.S. Arctic and surrounding waters to change over the next decade, ranging from annual growth rates of 0.3% to 4.9% and total annual vessel counts of 284 ships to 535 vessels. The conservative estimates from the Most Probable Scenario indicate that the number of vessels operating in the U.S. Arctic is likely to be more than double the activity in 2008, while the highest estimates from the Accelerated, but Unlikely Scenario project more than three times the 2008 numbers and twice the number we see today. The total transits and movements into, out of, and within the U.S. Arctic will likely more than double the vessel numbers, underscoring the urgency to take on planning and evaluation exercises to be prepared for a changing Arctic maritime environment.

Over the next decade, it is anticipated that natural resource activities in the Arctic, particularly the growth of liquefied natural gas (LNG) shipments from Russia and vessels needed

to resupply mining operations in northern Canada, will play a large role in the volume of traffic transiting through the Bering Strait. Ice-strengthened ships and vessels engaged in trans-Arctic shipments are also expected to steadily increase the volume of vessel traffic in the region over the next decade. Infrastructure development, repair, modification, and relocation activities will also contribute to vessel activity in the region. This growth, however, will be better measured by the large numbers of transits or longer operating hours instead of by additional ships, due to the unique logistical challenges of transporting materials to the region. Additionally, because of rapidly changing environmental conditions which threaten the viability of infrastructure in the region, this source of growth may rapidly change over the next decade, leading to uncertainty in the projections included here.

Finally, while this report has aimed to be as comprehensive as possible, its reliance on AIS data means that this report does not account for or project smaller crafts, such as those used in small commercial fishing operations or subsistence hunting activities. Excluding subsistence hunting, for example, may underrepresent actual vessels in the U.S. Arctic region by 40% or more, according to estimates featured in Section III. Understanding both the magnitude and diversity of vessel activities in the region is critical to deconflicting the current uses of these waterways, planning for future changes in the northern U.S. Arctic region, and improving maritime domain awareness of the Arctic region.