



LOOKING TO THE FUTURE

Vessel Traffic Forecasting  
in Canada's Pacific Region

August 2025

[clearseas.org](http://clearseas.org)

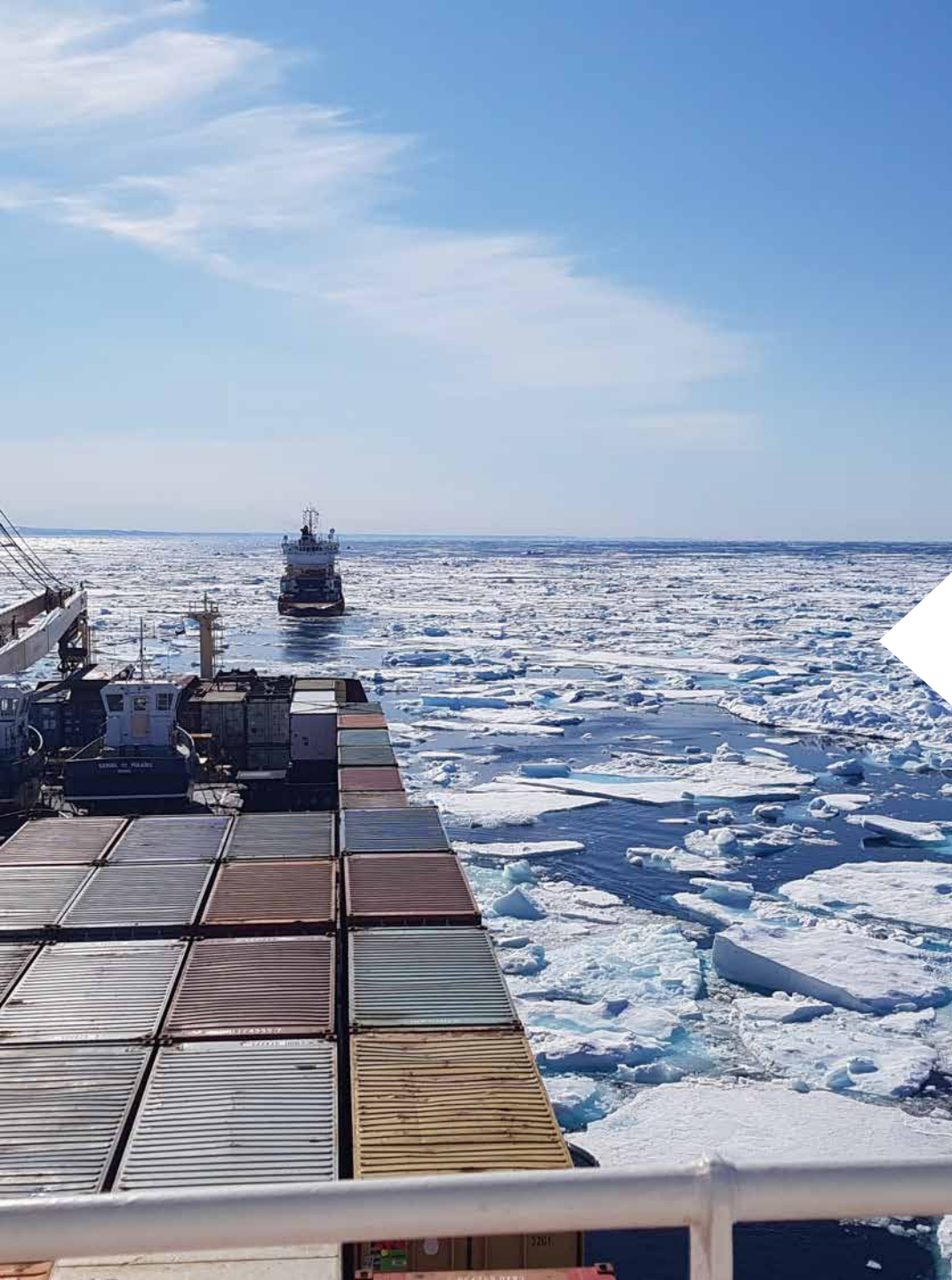
# Territorial Acknowledgement



# ABOUT CLEAR SEAS

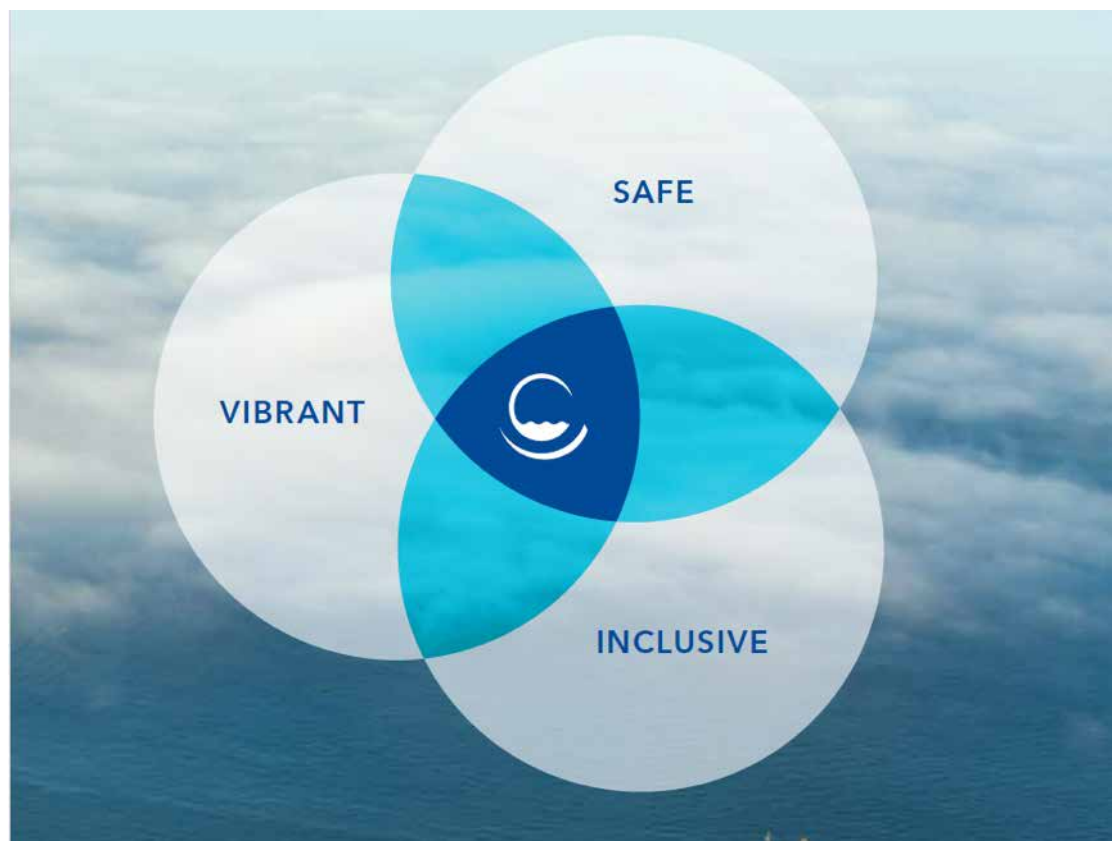
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- Canadian non-profit organization
- Provides independent fact-based information on marine shipping issues to governments, industry and the public
- Considers impacts to people and the environment in support of a safe, vibrant, sustainable, and inclusive marine shipping sector that all people can feel a part of and trust
- Committed to uphold and advance relationships with Indigenous peoples and communities through research and career pathways to advance Indigenous participation in the maritime industry and wider blue economy

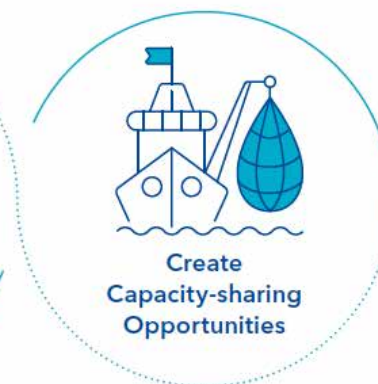
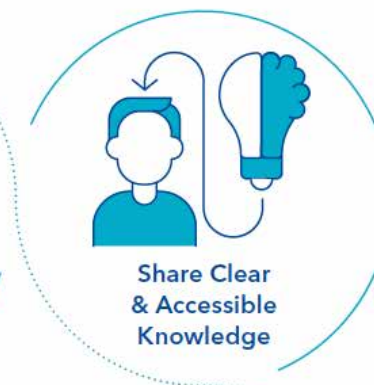


# VISION AND PURPOSE

A sustainable marine shipping industry that is:



To achieve it, Clear Seas will:



# DIRECTORS AND ADVISORS

## BOARD OF DIRECTORS

- Aldo Chircop
- Ginny Flood
- Julie Gelfand (Vice-Chair)
- Serge Le Guellec (Chair)
- Capt. Shri Madiwal
- Richard Sparrow
- Anthony Teo
- Jane Weldon
- Udlu Hanson NEW

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- Donald Bouchard
- Alain Brophy
- Gary Drouillard
- Capt. Christopher Hearn (Chair)
- Debbie Murray
- Capt. Ivan Oxford
- Francis Wiese (Vice-Chair)



# Context: Development on the Pacific Coast

Politics

## Ottawa planning 'up-front' approval for projects deemed in the national interest

Internal federal documents suggest legislation could be tabled as early as next month



By [David Thurton](#), [Darren Major](#) · CBC News · Posted: May 29, 2025 1:54 PM PDT | Last Updated: May 29

POLITICS

## BC NDP's contentious fast-track legislation passes in tight vote



By [Simon Little](#) & [Richard Zussman](#) · Global News

Posted May 28, 2025 5:40 pm · Updated May 28, 2025 8:24 pm · 4 min read

## First LNG carrier arrives in Kitimat, B.C., as \$40B liquefied natural gas plant prepares to start

By Andrew Kurjata



CBC · Apr 3

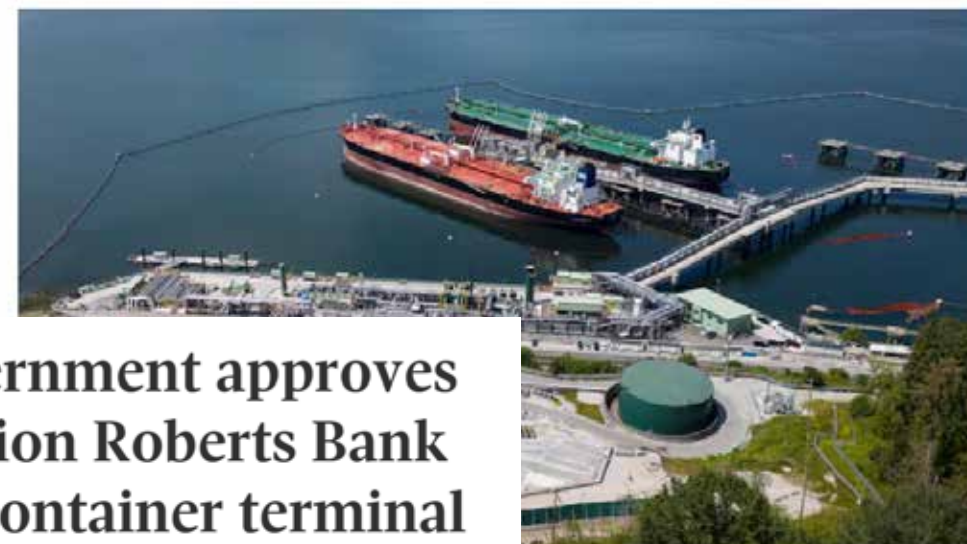


Business

## China emerging as top customer for Canadian oil shipped via Trans Mountain Pipeline

Shift occurring amid a trade war and U.S. sanctions on crude from Russia, Venezuela

Thomson Reuters · Posted: May 16, 2025 1:37 PM PDT | Last Updated: May 16



## Federal government approves B.C. \$3.5-billion Roberts Bank West Coast container terminal

# VESSEL TRAFFIC FORECAST TO 2040 FOR CANADA'S PACIFIC REGION

March 2025



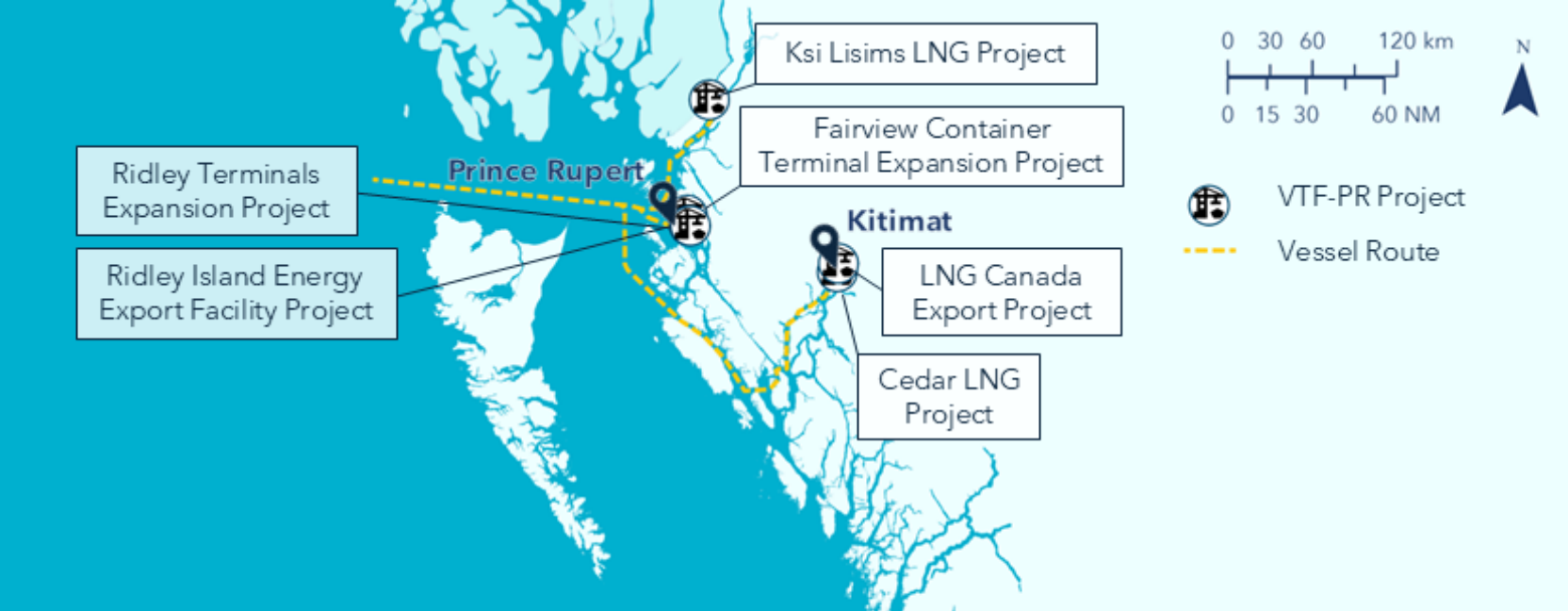
## What we found:

- International vessel traffic could increase 60% by 2040
  - Ø Current average: 3,186 vessels per year
  - Ø 2040 forecast: 5,299 vessels per year
- Tanker traffic will increase significantly (as much as 611%), mainly LNG tankers
- Major growth on the North Coast of British Columbia (217%)
- Escort tug traffic will increase as more vessels will require assistance to safely navigate through coastal waters



## Types of vessel traffic included in the study:

- Commercial vessels > 300 GTs
  - Bulk carriers
  - Container ships
  - LNG/LPG carriers
  - Oil tankers
- Tugs greater than 15 m in length
- Cruise ships excluded

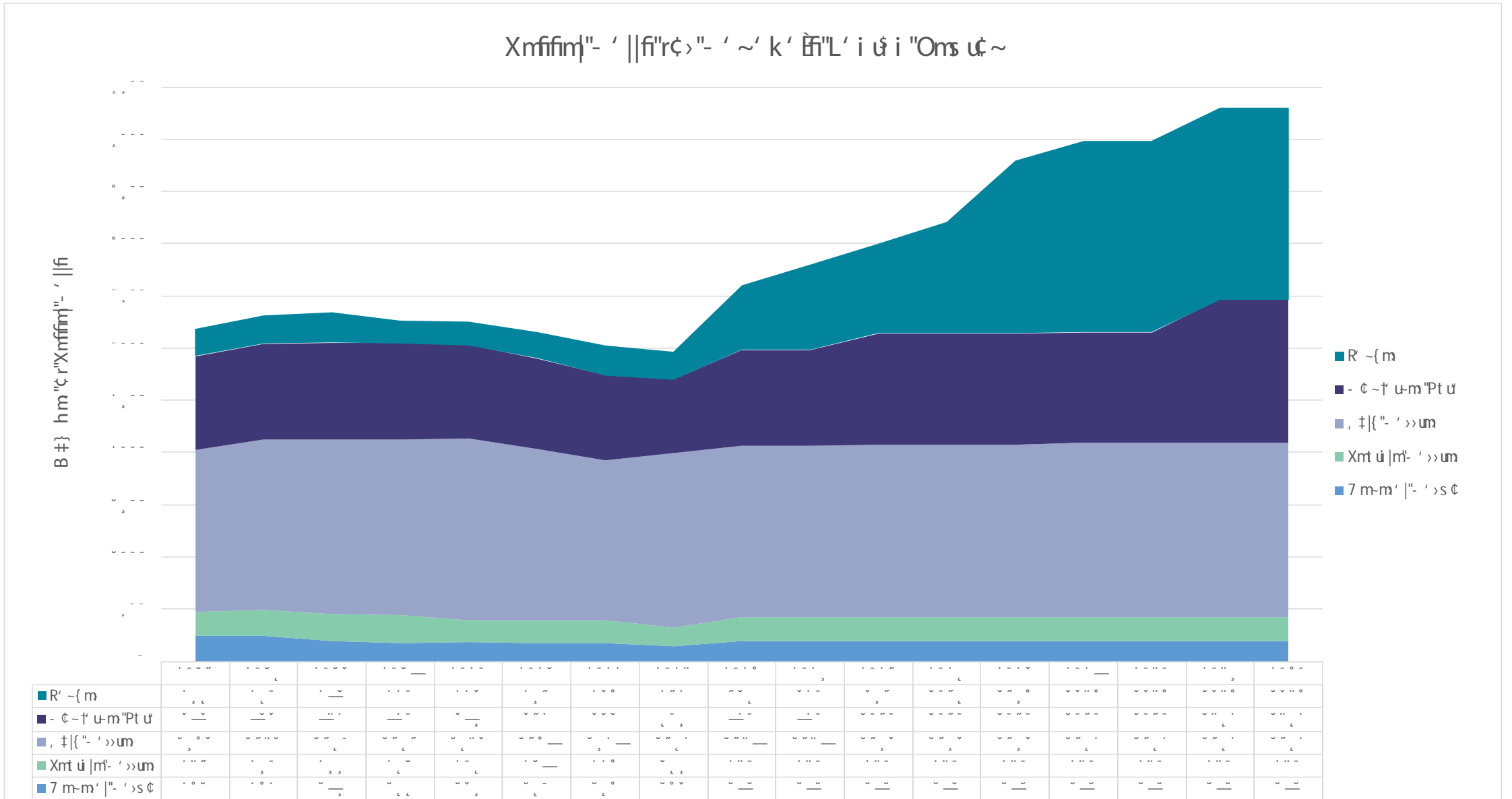


South Coast Inset Map



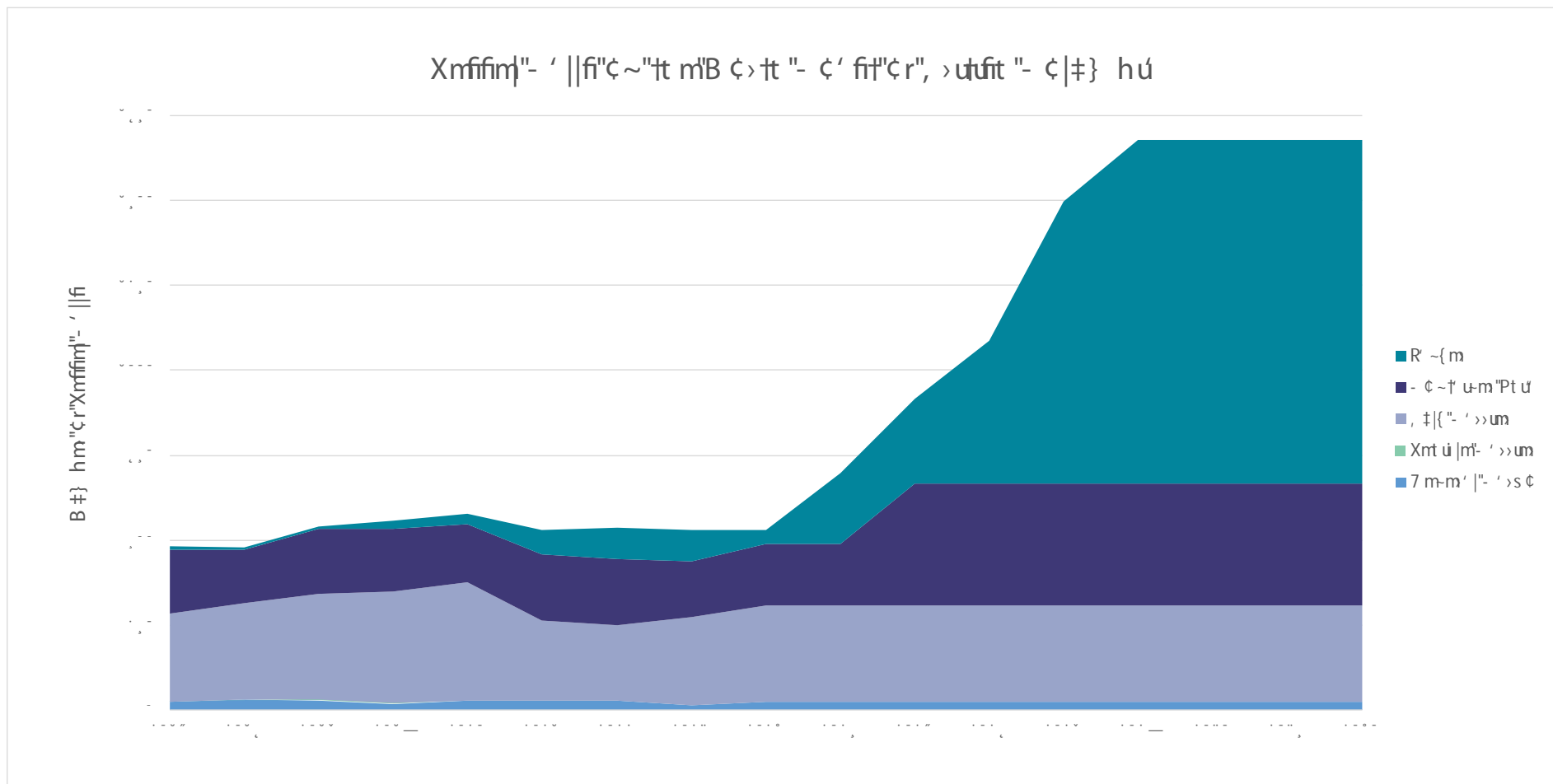
Projects included in the VTF-PR

### Maximum number of vessels for each project added to the average traffic from 2016 – 2023.



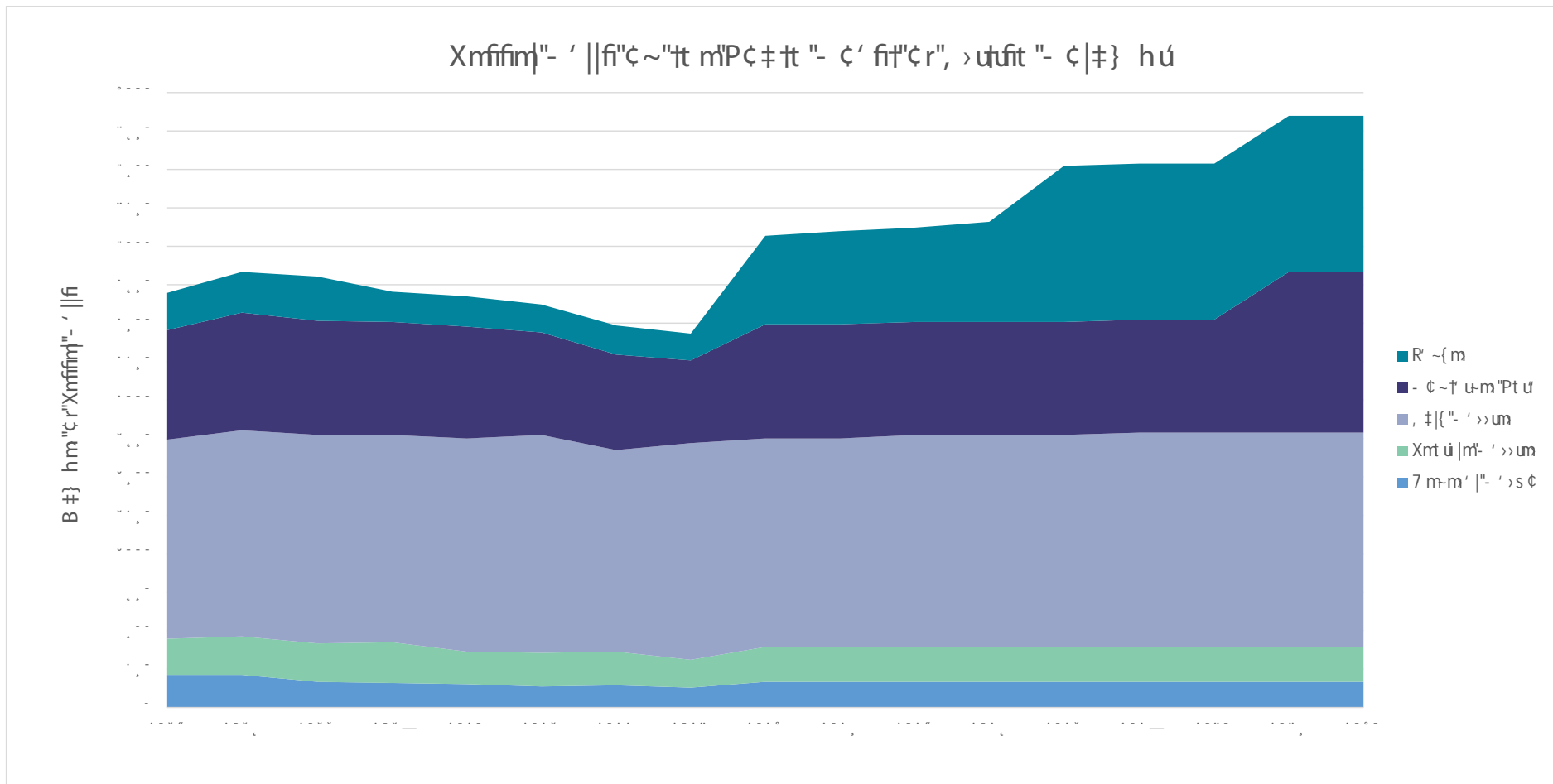
Maximum number of vessels for each project added to the average traffic from 2016 – 2023.

# North Coast in Focus



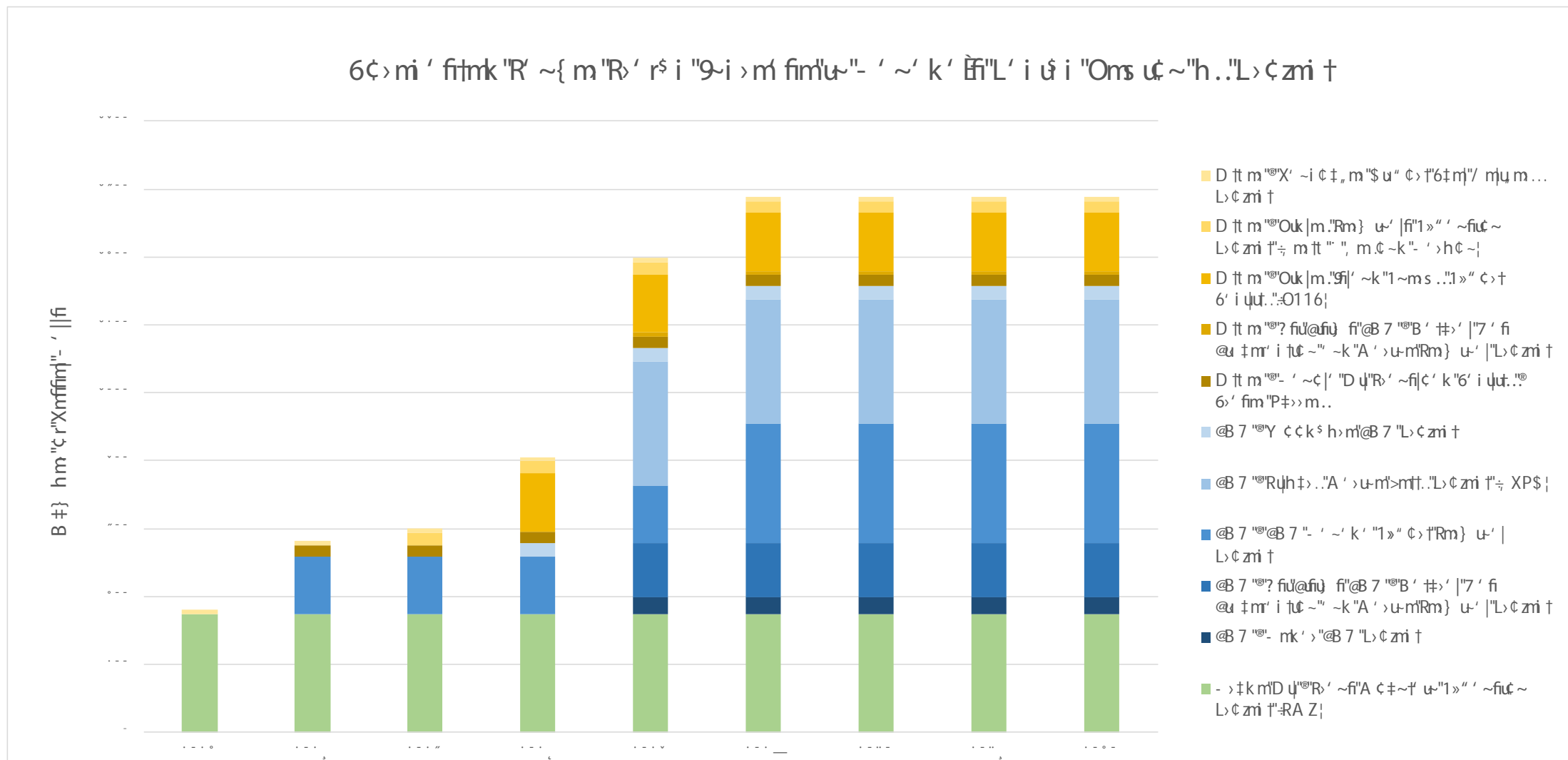
Forecast for vessel traffic on the North Coast of British Columbia 2024 – 2040 based on the maximum number of vessels for each project added to the average traffic from 2016 – 2023.

# South Coast



Forecast for vessel traffic on the South Coast of British Columbia 2024 – 2040 based on the maximum number of vessels for each project added to the average traffic from 2016 – 2023.

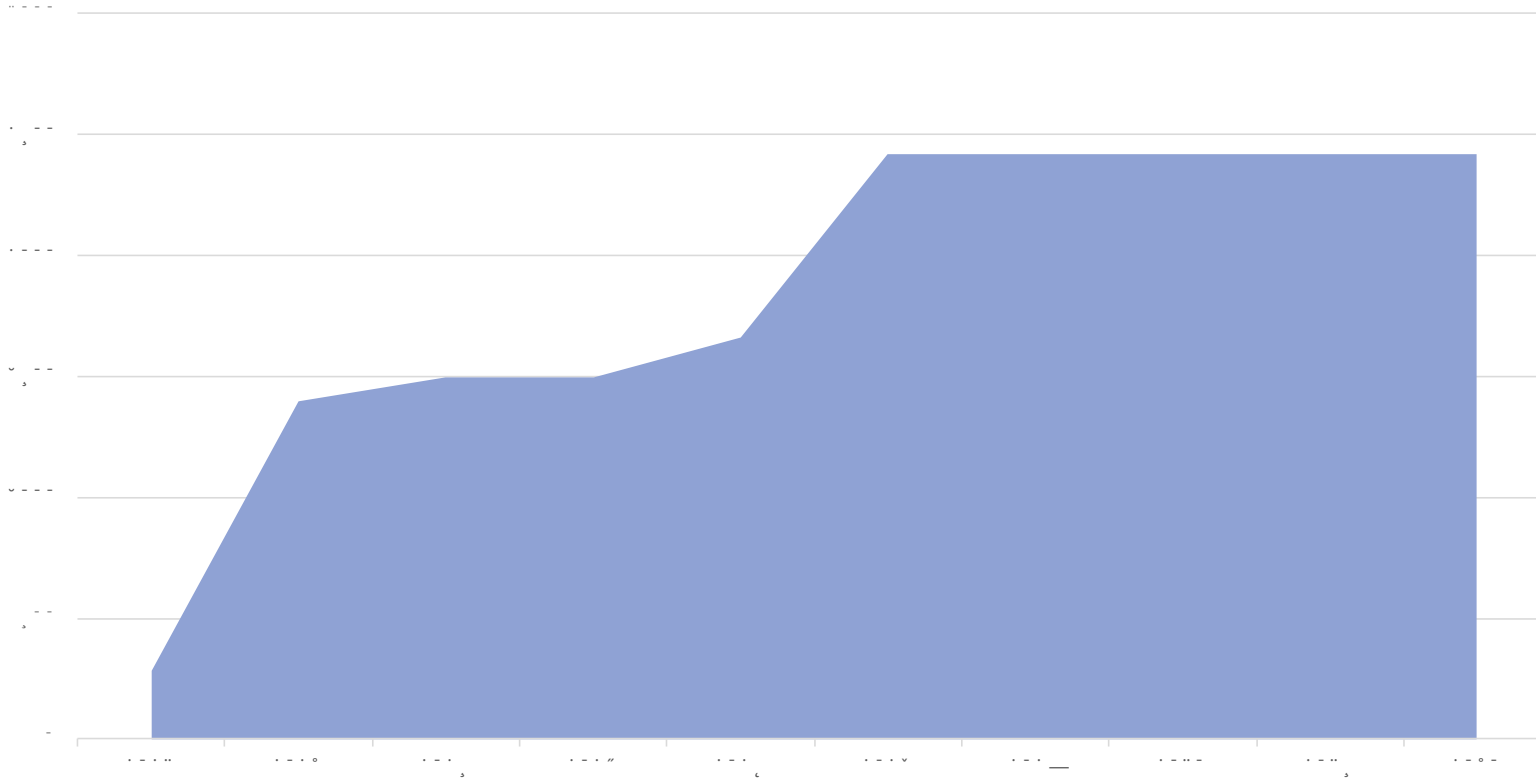
# Understanding Forecasted Growth in Tanker Traffic



# Increase in Escort Tug Traffic

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Forecasted increase in escort tug traffic in the Salish Sea 2023 – 2040.



<https://www.seaspan.com/stories/a-decade-in-the-making-haisea-guides-first-lng-carrier-into-kitimat/>

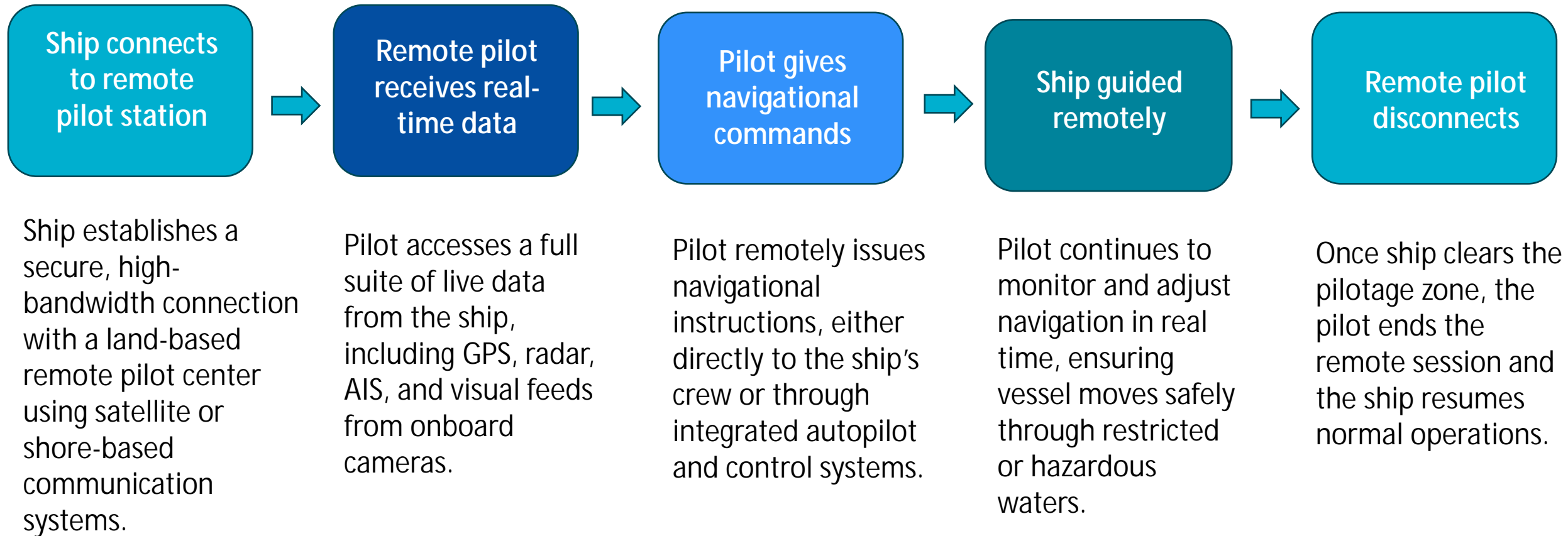
# Application: Ecosystem Impacts of Vessel Traffic

Vessel count and traffic forecast as a starting point for analysis

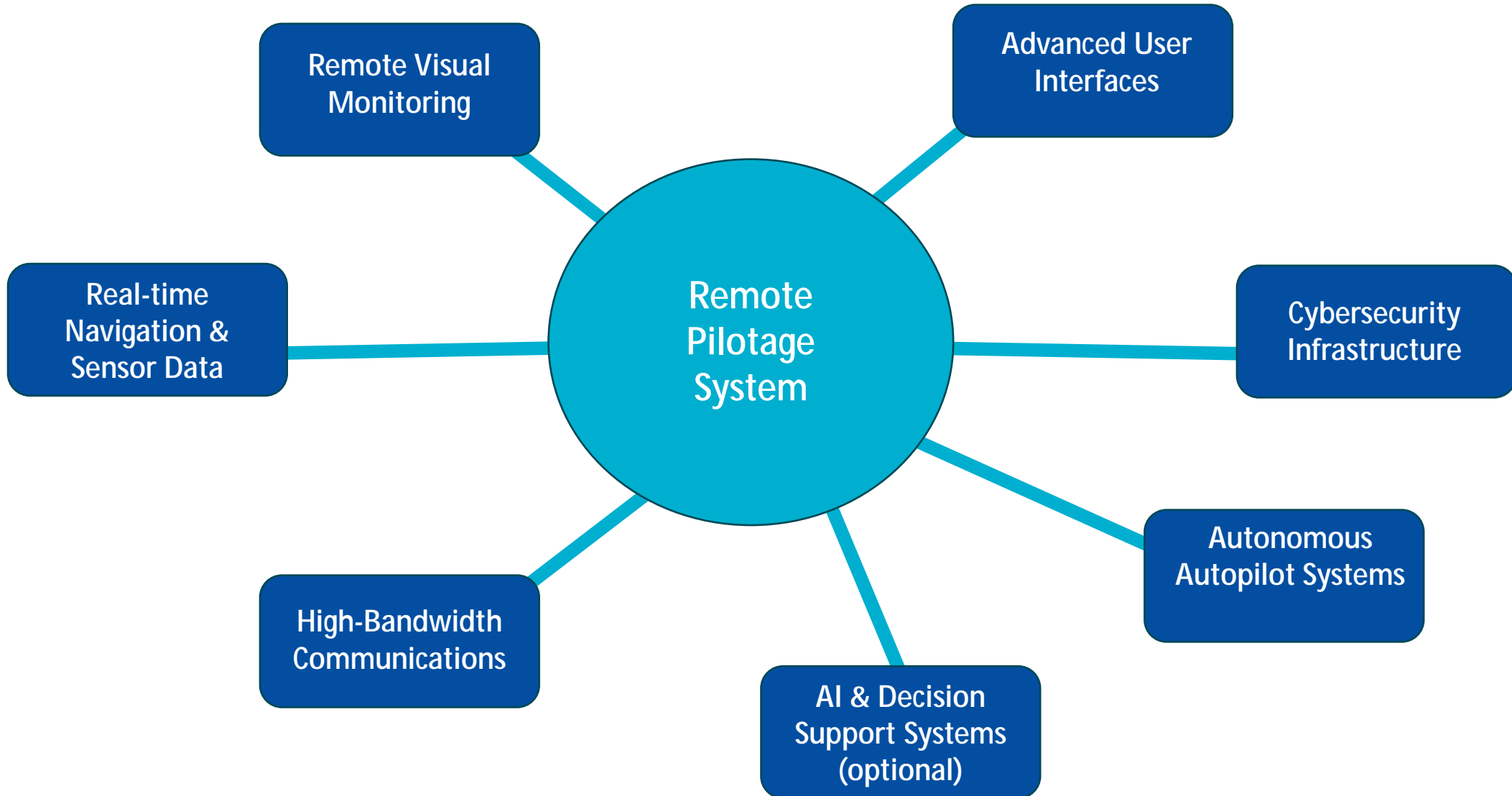
- Engage in region-wide planning
- Prioritize infrastructure investments
- Improve understanding of risks
- Assess future environmental impacts
- Incorporate changing economic considerations

# Example Application: Remote Pilotage

## How *could* pilotage work?



# Technology Overview For Remote Pilotage





# QUESTIONS & DISCUSSION

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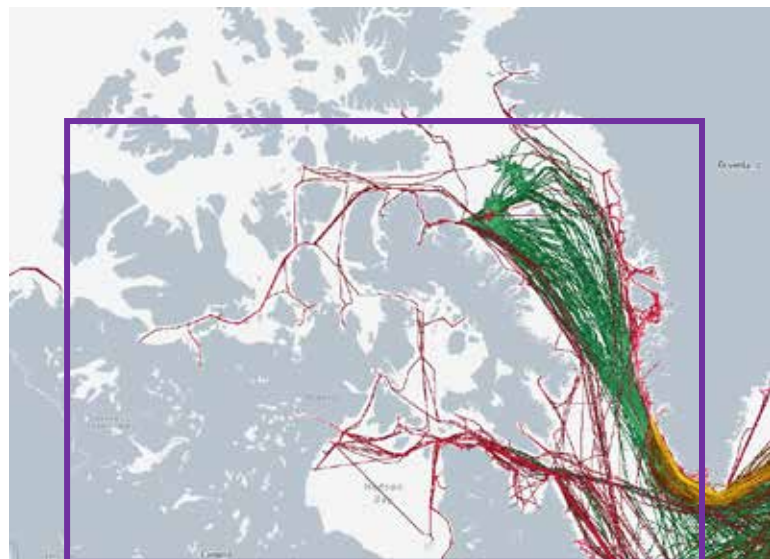
[clearseas.org](https://clearseas.org)

## Projects not included in the VTF-PR

1. Swamp Point Aggregate Mine, near Stewart, BC – no new data
2. Proposed Second Terminal, Prince Rupert, BC – not in regulatory approval yet
3. Tilbury Phase 2 LNG Expansion, Delta, BC – no traffic projections
4. Prince Rupert Marine Fuels Project, Prince Rupert, BC – local area traffic only
5. DP World Nanaimo Duke Point Terminal Expansion, Nanaimo, BC – no traffic projections available
6. Trigon Pacific LPG Project, Prince Rupert, BC – not yet in review phase
7. SeaPort Sound Plant Modernization Project, Tacoma, WA – no vessel route information
8. Terminal 5 Modernization, Seattle, WA – no net vessel increase anticipated
9. Terminal 46, Seattle, WA – no vessel traffic projections available
10. Cherry Point Refinery Renewable Diesel Optimization, Cherry Point, WA – existing terminal
11. M-5 Coastal Connector - Bellingham Shipping Terminal, Bellingham, WA – no traffic projections available

# Application in Other Regions

- Container Ships
- Tankers
- Cargo Vessels



ARCTIC

GREAT LAKES & ST. LAWRENCE



ATLANTIC

# Current Status of Project

VTF-PR Project Name	Under Review	Final Investment Decision	Construction	VTF-PR Forecast Start Date (min)
Centerm Expansion Project				2023
Vancouver Airport Fuel Delivery Project				2023
Trans Mountain Expansion Project				2024
Canola Oil Transload Facility - Fraser Surrey				2025
LNG Canada Export Terminal Project (Phase 1)				2025
Fairview Container Terminal Stage 1B (North) Expansion Project				2026
New Potash Export - Westshore				2026
Ridley Terminals Expansion Project (Berth 2 Beyond Carbon)				2026
Ridley Island Energy Export Facility (REEF)				2027
Woodfibre LNG Project				2027
Cedar LNG Project				2028
Ksi Lisims LNG - Natural Gas Liquefaction and Marine Terminal Project				2028
Tilbury Marine Jetty Project				2028
Delta Grinding Facility Project				2029
LNG Canada Export Terminal Project (Phase 2)				2029
Delta Grinding Facility Project (Phase 2)				2034
GCT Deltaport Expansion - Berth Four Project				2034
Roberts Bank Terminal 2 Project				2035

# Limitations

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It is important to recognize that this forecast cannot predict the future, and there are limitations to the methodology:

- This study does not consider the likelihood of any of the projects going ahead nor does it alter start dates in an attempt to anticipate delays or accelerations in proposed timelines
  - Since the completion of this report, the Fairview Container Terminal Stage 1B (North) Expansion Project was terminated
- New projects that have not commenced regulatory or environmental approval are not considered
- Geopolitics and economics will shift plans and timelines
  - The forecast data is presented in a transparent and downloadable format so that users can create their own scenarios that adjust timings and probabilities based on the evolving economic and political climate