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Traffic Separation Scheme Feasibility Study

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Traffic Separation Scheme Feasibility Study



Environmental Policy
Transport Canada



Transport
Canada

Transports
Canada

Canada

Drivers and Past Efforts

- Both a Canadian Science Advisory Secretariat (CSAS) report and a science-based whale review identified re-routing of vessel traffic or “moving” shipping lanes as options that should be explored to help protect and recover the species.
- JASCO Applied Sciences report ‘*Assessment of Vessel Noise within Southern Resident Killer Whale Critical Habitat*’ (2018) investigated specific sub-regions and identified potentially effective areas for more research.
- ‘*Ship Noise Mitigation Risk Assessment*’ report by Greenwood Maritime (2018) identified changes to the TSS as a potential option needing further study.
- A preliminary workshop held in 2018 (Marysville, Wa) focused on identifying key factors of importance for inclusion in further study on potential TSS amendments



Marysville Workshop

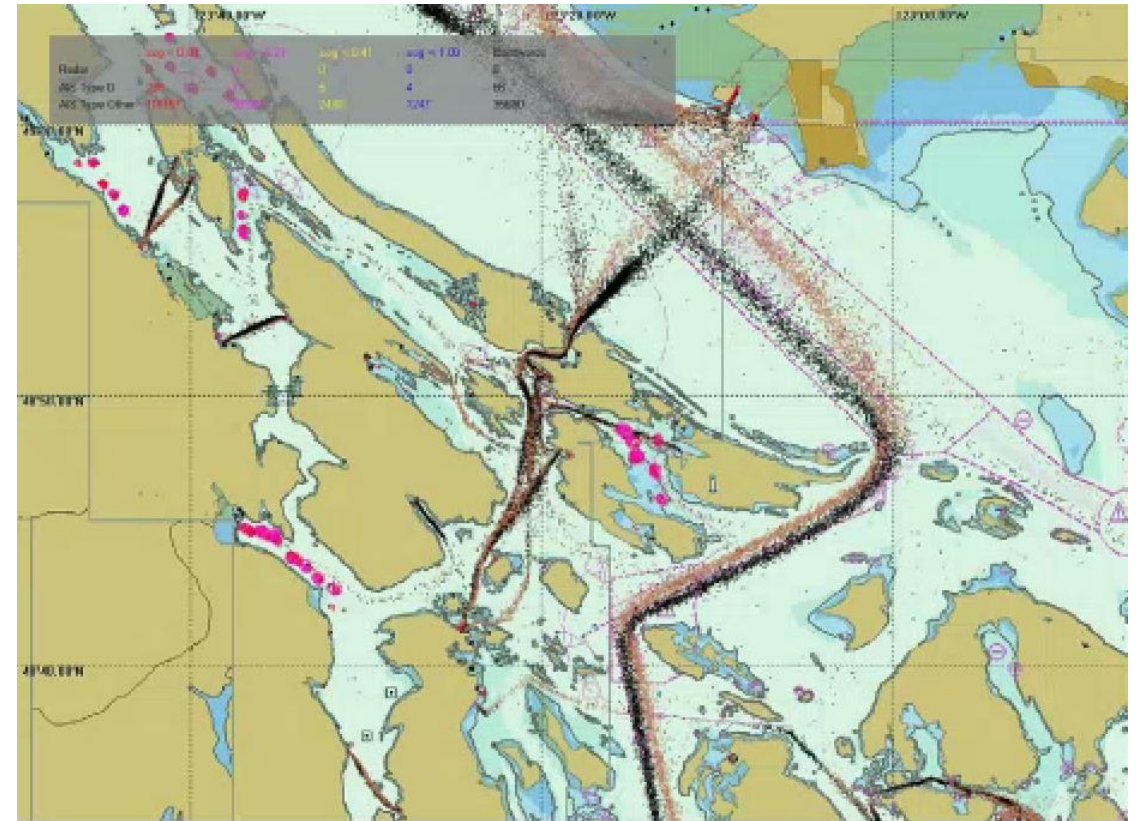


- A preliminary workshop held in 2018 focused on identifying key factors of importance for inclusion in further study on potential TSS amendments
- Included many participants from Indigenous Groups, Canada and the United States.
- Discussion of lessons learned from previous amendments made to the TSS.
- Workshop outcomes lead to the development of the TSS feasibility study currently underway.

Traffic Separation Scheme (TSS) Feasibility Study

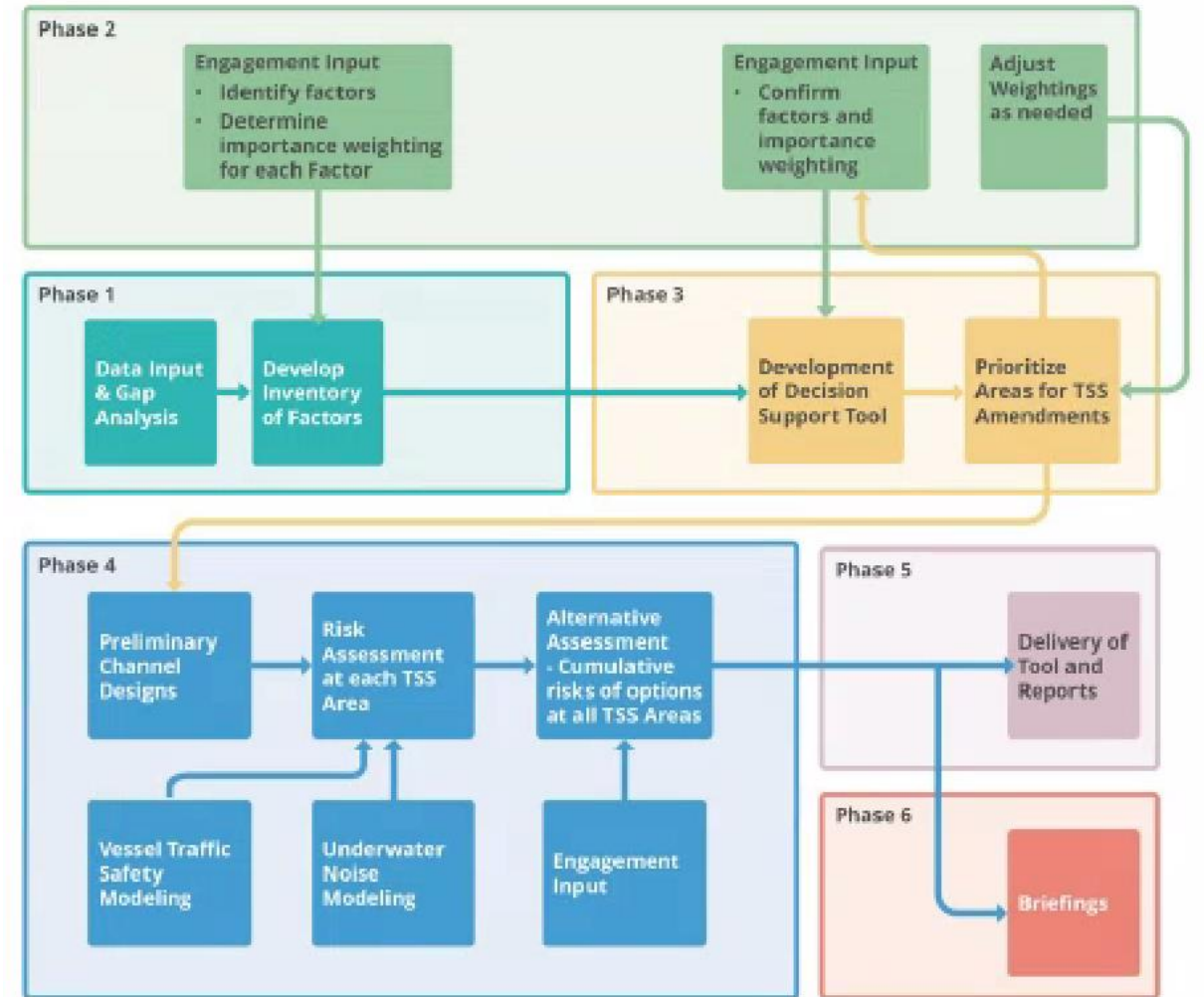
Objective:

- To assess whether potential amendments to the TSS are technically feasible, and if so, to recommend options to amend the TSS that balance the protection of the SRKW populations with other factors of importance, including marine safety and use, environmental, socio-economic, and cultural.



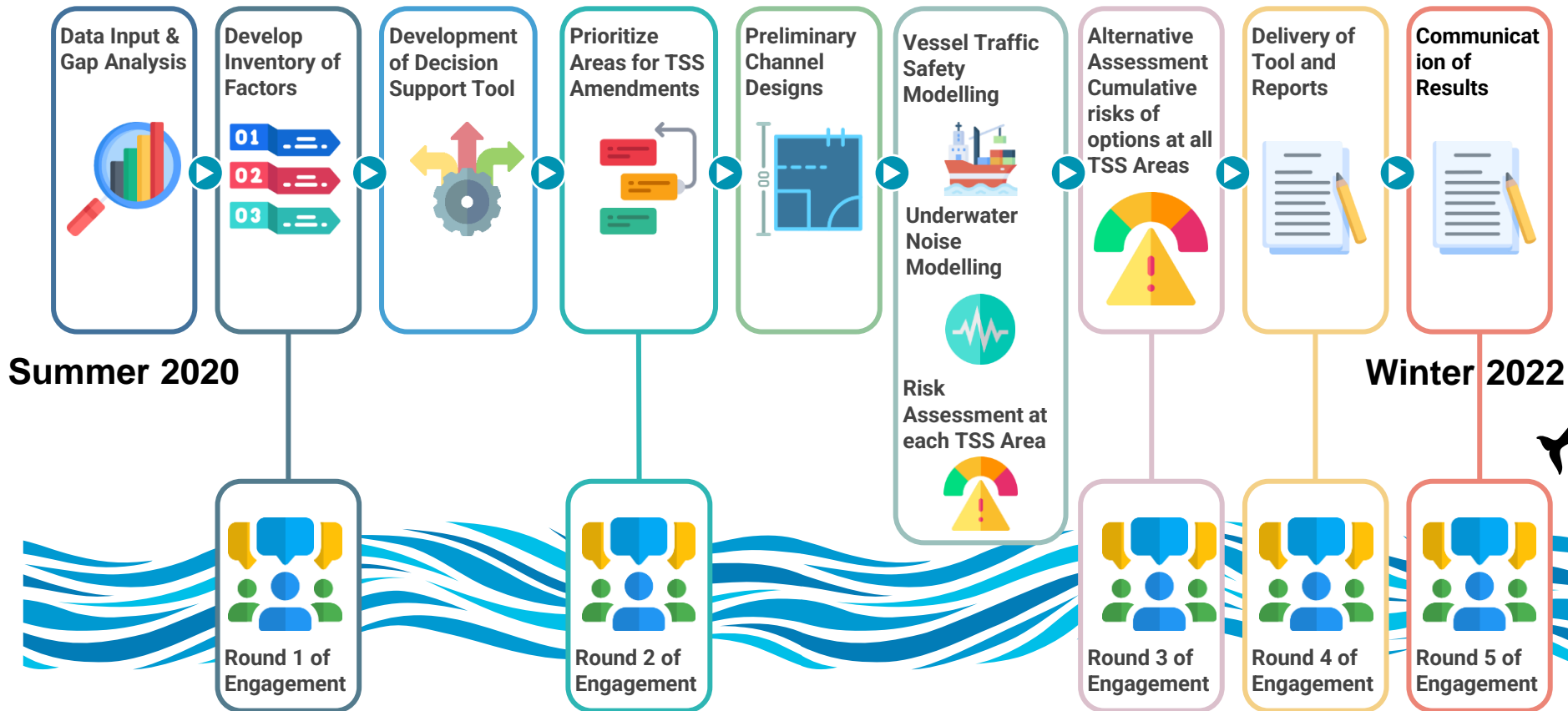
TSS Feasibility Study

- **6 phases of work:**
 1. Data gathering and gaps
 2. Engagement and factors
 3. Development of tools and screening
 4. Technical Analysis
 5. Delivery of tools and reports
 6. Communication of results and next steps



Project Process & Engagement

Technical Timeline



Engagement Timeline



Overall Factor	Sub Factors
Safety	<ul style="list-style-type: none"> • activities within the ISZs. Specifically, if the ISZs are modified or become permanent. • Compatibility of modifications with the IMO, CCG Navigable Waters, and USCG requirements. • Potential impacts on current international agreements. • Navigational risks of changes to TSS. • Increased navigational risks of moving smaller vessels from the Inshore Zone to the TSS or in close proximity to the TSS. • Use of larger crude oil carrier vessels and its impact on traffic. • Changes in vessel sizes based on new designs and implications on vessel traffic patterns. • Impacts of moving both pilot stations to the entrance. • Consideration must be given to safe distance between inbound and outbound vessels if TSS is narrowed. • Proximity of dangers (e.g. rocks, shoals, etc.) in the event of loss propulsion or steering after any move of lanes. • New TSS should not be more difficult to navigate than existing one (turns, width of lanes, etc) • Impacts to Canadian Hydrographic Service / Canadian Coast Guard (CCG) in updating Notice to Mariners (NOTMARs), charts, etc. • Safety considerations where there are sites that have a high likelihood of intersecting with other users (Gulf Islands – narrow shipping route and heavy use by recreational boaters). • Impact of changing traffic lanes on the efficacy of the new CCG Spill response teams/ stations.
Environmental	<ul style="list-style-type: none"> • Proximity to area-based conservation measures e.g rockfish conservation areas, glass sponge reef areas. • Unintended consequences (e.g., increased accident and oil spill risk). • Possible impact to changes in SRKW foraging patterns near the mouth of the Elwha River. • Evaluate the combined impact of noise when multiple vessels are in an "enclosed" area like Haro Strait or Boundary Pass. • Minimize impacts on SRKW sanctuary areas. • Evaluate the noise impact of different types of vessels e.g, tankers, tugs, container ships, etc.

Factors of Importance

- Nation to Nation
- Legal and Regulatory
- Safety
- Environmental
- Socio-economic
- Cultural
- Methodological



What We Learned...

- Engagement and input at each phase of the study were crucial to taking a novel approach to developing amendment options.
- TC will be able to continue to evaluate options as new information becomes available because the tools developed (TOPSIS decision support tools) form part of the final deliverables.
- An increased understanding of the existing TSS and the safety/benefits it provides.
- An increased understanding of feasible options, and the impacts on multiple factors that are important.
- Options that can improve safety, efficiency and other factors in addition to reducing impacts on SRKW (win-win scenarios).

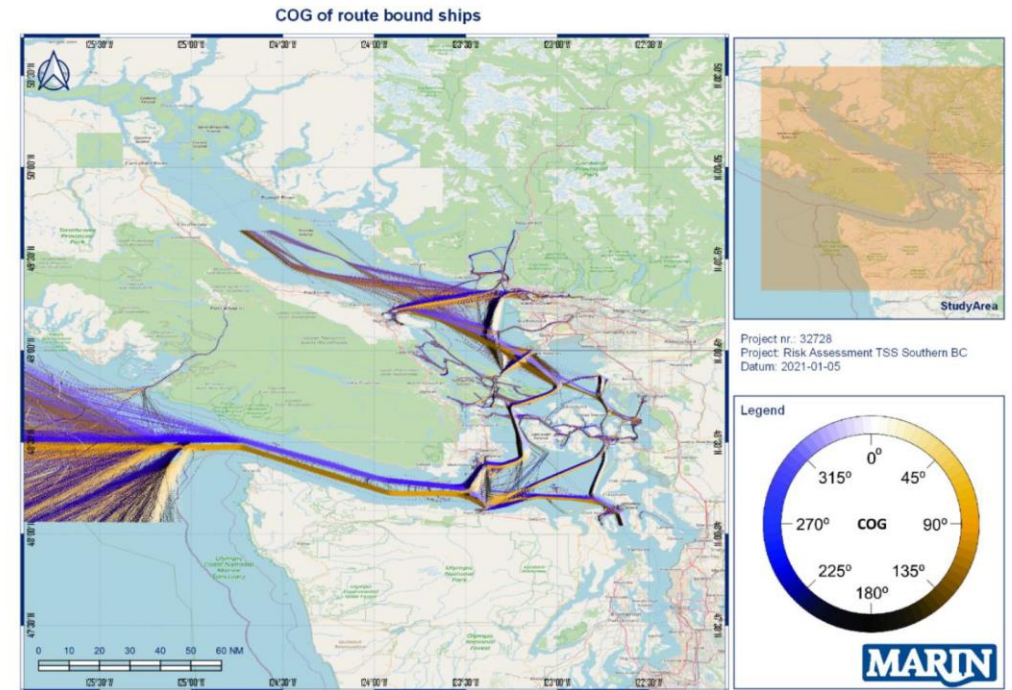


Figure 2-4 Positions and COG's of individual AIS signals from the route bound traffic

Conclusion and Next Steps

- In conclusion, Jasco found several options that would result in changes in noise levels, although minimal in some cases, that are favorable to SRKW.
- Some options would also result in improved navigation safety and could have mixed impacts on all other factors of importance.

Next Steps:

- TC will fully review the report recommendations and the decision support analysis to identify and prioritize next steps.
- TC will take steps to share publicly the summary report and findings.

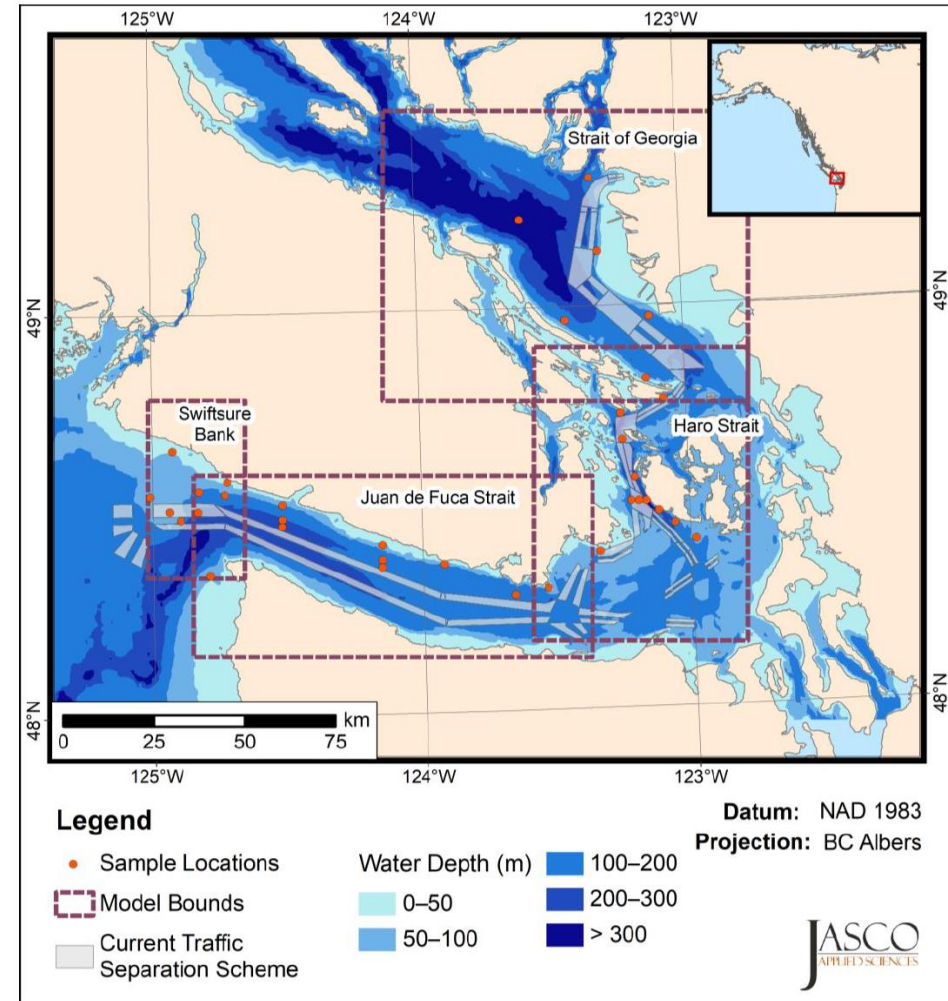


Figure 9. Extent of the study area (dash purple line) and overview of the sample locations (orange dots).



Thank You



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