Guidelines for Breakout Sessions
on
Ship Underwater Radiated Noise (URN)

November 25, 2020

Transport Canada (TC) has sponsored a number of projects in the broad area of vessel underwater radiated noise (URN), most of which concern the full-scale measurement of URN from ships. CISMaRT is assisting TC in identifying potential follow-on projects, particularly those that make use of full-scale measurements, both dedicated and opportunistic, gathered in projects sponsored by TC. These and other related projects have been summarized in the workshop. These projects are part of a long-term objective of reducing the negative effects on marine life of vessel underwater radiated noise in Canadian waters in a cost-effective manner.

The objective of this breakout session is to seek the recommendations of the marine community for research goals and objectives for TC consideration when developing their next call for proposals under the Quiet Vessel Initiative. As a follow up, CISMaRT, in its role as the Canadian network for researchers in this field, will facilitate collaborations between members who may wish to respond to the next TC call for proposals.

For context, in its last call for proposals, TC identified the following research goals:

A. Safety Assessments and Technology Scans
- Impact of Underwater Radiated Noise on Compliance with EEDI Criteria
- Feasibility of Real-Time Shipboard Cavitation Monitoring and Management

B. Development of Models and Predictive Tools
- Standards for Measurement of Underwater Noise from Ships in Shallow Water

C. Testing and Evaluation of Technologies
- Preference was given to projects that addressed technologies applicable to ferries, tugs, fishing vessels and whale watching vessels.

In order to provide some structure for the breakout sessions the subject matter to be covered will be considered in the following categories

1. General
2. Full-scale measurements – dedicated trials

3. Full-scale measurements – opportunistic measurements
4. URN and GHG

Participants should feel free to suggest follow-on work, consistent with overall TC objectives, in subject areas beyond those implied in the questions below.

Questions

1. General

   a. What research goals complementary with existing projects, and broadly consistent with TC objectives, could be considered?

2. Full-scale measurements – dedicated trials

   a. Can the gathered data be used to help develop models for the prediction of ship URN especially if combined with other similar data? Are there other specific data collection efforts required to do this? If yes, please suggest projects.

3. Full-scale measurements – opportunistic measurements

   a. Identify the types of projects, consistent with overall goals noted in the opening paragraphs above, that can extract the most value from the measured data.

4. Synergies with GHG issues

   a. What follow-on projects are suggested to extract useful information from current projects related to URN and GHG?

   b. Based on current TC projects suggest follow on projects that can the employ the gathered data to develop models that relate URN and GHG