



# Lessons Learned from Arctic Search and Rescue Exercises

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# Lessons Learned from Arctic Search and Rescue Exercises

- Why exercise in the Arctic?
  - The Agreement On Cooperation On Aeronautical and Maritime Search and Rescue In The Arctic (*The Arctic SAR Agreement*)
  - Article 9 *Cooperation Among the Parties*:
    - ❖ 3. The parties ***shall*** promote mutual search and rescue cooperation by giving due consideration to collaborative efforts including, but not limited to:
      - ❖ *(d) carrying out joint search and rescue exercises and training*

Source: <https://oaarchive.arctic-council.org/handle/11374/531>



# Lessons Learned from Arctic Search and Rescue Exercises

- Why exercise in the Arctic?
  - According to the Arctic Council Protection of the Arctic Marine Environment Working Group:
    - *during the six-year period between 2013 and 2019, the number of ships entering the Arctic Polar Code area grew by 25 percent. The total distance sailed by ships in this area grew by 75 percent, from 6.51 million nautical miles in 2013 to 9.5 million nautical miles in 2019*
    - *The majority (41 percent) of ships entering the Polar Code Area are fishing vessels. Some of the other most common ships to navigate the region include icebreakers and research vessels. In line with the increase in [Arctic marine tourism](#), 73 cruise ships sailed in the Arctic Polar Code area in 2019*
    - *The distance sailed by bulk carriers in the Arctic Polar Code area has risen 160 percent between 2013 and 2019*

Source: <https://www.arctic-council.org/news/first-arctic-shipping-status-report-increase-shipping-traffic/>



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- The first Arctic Council sponsored Tabletop Exercise (TTX):
  - Hosted by Canada on October 5-6, 2011, in Whitehorse, Yukon
    - ❖ *The aspect of moving and tracking people from incident site to final destination was suggested for future discussions and practice*

Source: Arctic SAR Table-Top Exercise (TTX) October 2011 Post Exercise Report



# Lessons Learned from Arctic Search and Rescue Exercises

- The first large scale joint Arctic cruise operators and search and rescue (SAR) responders' joint SAR workshop and TTX
  - Initiated by the Association of Arctic Expedition Cruise Operators (AECO), who organized it in cooperation with the Icelandic Coast Guard and Norwegian cruise liner, Hurtigruten, AS held in Reykjavik, Iceland April 6-7, 2016
    - ❖ *Use simple systems for counting of passengers (e.g. clickers). Be prepared for difficulties in keeping control of passengers by name*

Source: <https://www.aeco.no/wp-content/uploads/2018/09/2016-AECO-Joint-Arctic-SAR-workshop-and-TTX.pdf>



# Lessons Learned from Arctic Search and Rescue Exercises

- The second AECO joint Arctic SAR workshop and TTX
  - A cooperation project between AECO, the Icelandic Coast Guard, and JRCC Northern Norway held in Reykjavik, Iceland April 5-6, 2017
    - ❖ *Gaps: Tracking of souls, both when abandoning ships and when coming ashore*
    - ❖ *Improvement Suggestion: Opportunity for innovation in passenger tracking*
    - ❖ *Improvement Suggestion: Consider tracking people with bracelets or through other modes of modern technology*

Source: <https://www.aeco.no/wp-content/uploads/2018/09/Joint-SAR-TTX-2017-Report.pdf>



# Lessons Learned from Arctic Search and Rescue Exercises

- The fourth AECO joint Arctic SAR workshop and TTX
  - A cooperation project between AECO, the Icelandic Coast Guard, and JRCC Northern Norway held in Reykjavik, Iceland April 9-10, 2019
    - ❖ *Counting passengers: keeping track of all the passengers in an operation is very challenging – need for new technology*

Source: [https://www.aeco.no/wp-content/uploads/2020/04/joint-arctic-sar-workshop-and-ttx-report\\_2019\\_final.pdf](https://www.aeco.no/wp-content/uploads/2020/04/joint-arctic-sar-workshop-and-ttx-report_2019_final.pdf)



# Lessons Learned from Arctic Search and Rescue Exercises

- Arctic Coast Guard Forum (ACGF) Search and Rescue Exercise POLARIS 2019
  - A Joint SAR and damage control exercise in the Bay of Bothnia, Finland March 29 – April 3, 2019
    - ❖ *The SAR Mission Coordinator (SMC) should delegate the responsibility for tracking numbers of casualties to a dedicate Casualty Tracking Officer*



Source: POLARIS 2019 Final Exercise Report 2.02\_Signed





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- Arctic Guardian Combined ACGF/EPPR LIVEX/Seminar 2021
  - Based on discussions during the exercise, there is a general viewpoint that further exploration is required to integrate the digital systems and analog-based systems that are used for passenger tracking outside of the vessel
    - ❖ *Recommendation: Future exploration is required for standardization / compatibility of systems across organizations. Consider convening a Task Force (combined ACGF COWG and EPPR SAR EG) to explore various analog and digital technologies to standardize passenger/casualty tracking and make recommendations on implementation*



Source: Draft ACGF/EPPR LIVEX Arctic Guardian After Action Report



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- SARex Spitzbergen, April 2016 Search And Rescue Exercise Conducted Off North Spitzbergen
  - The exercise was conducted as part of the cooperation between institutions in the Roald Amundsen network, involving the University of Stavanger and UiT – The Arctic University of Norway. Other partners in this network are IRIS, Stavanger, and research institutions in Northern Norway (Norut and Aquaplan-niva).
    - ❖ It is **unlikely** that the majority of the people evacuated to a life raft and lifeboat (engine shut off) would survive for a minimum of five days according to the Polar Code criteria

Source: <https://uis.brage.unit.no/uis-xmlui/handle/11250/2414815>



# Lessons Learned from Arctic Search and Rescue Exercises

*What do we do now?*




# Lessons Learned from Arctic Search and Rescue Exercises

- Three areas of interest are being explored by the Arctic Council Emergency Prevention, Preparedness, and Response Search and Rescue Expert Group (EPPR SAR EG)
  - Lesson Learned Arena
    - ❖ *A project sponsored by Norway, co-sponsored by the United States, to develop a library/repository for all Arctic incident and exercise after action reports*
  - IMO Polar Code Survivability Validation
    - ❖ *A project sponsored by the United States to verify International Maritime Organization (IMO) Polar Code Survival Time Requirement*
  - Passenger Tracking
    - ❖ *The first combined ACGF/EPPR project (led by Canada and the United States) to identify and evaluate passenger tracking technology*







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*Questions?*