

Maritime **A**ctivity & **R**isk **I**nvestigation **N**etwork

Industrial Engineering, Dalhousie University

Maritime Traffic Database

- Comprehensive: shipping, fishing, recreational, etc.

Maritime Traffic Simulation

- Geographic Information System (GIS) display
- Vessel path generation from point data
- Land avoidance routines

Maritime Traffic Analysis

- Spatial patterns, traffic congestion & distribution analysis
- Trends & categorization by types of traffic

Maritime Risk Analysis

- Probability of incidents
- Consequences of incidents
- Statistical analysis of risk factors

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Sponsors



Geomatics for Informed Decisions
(Network of Centres of Excellence)



Dalhousie University
Halifax, Nova Scotia, Canada



Canadian Coast Guard



**National Search &
Rescue Secretariat**

Maritime **A**ctivity & **R**isk **I**nvestigation **S**ystem

Software

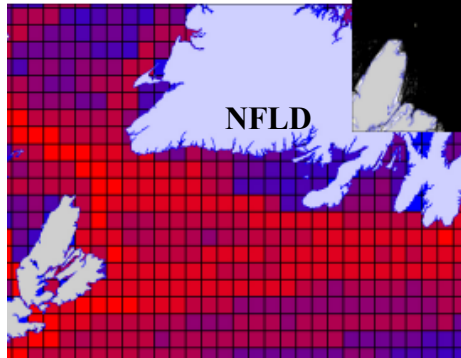
MARIS is a GIS application designed for use by the Canadian Coast Guard, primarily for maritime risk analysis and resource allocation.

MARIS permits manipulation and analysis of GIS data layers to model maritime activity and show trends over time.

Data

The software is supported by various data that model maritime activity in Canadian waters. Some of this data includes but is not limited to:

- search & rescue incidents
- commercial fisheries
- commercial shipping
- aquaculture & non-traditional fisheries
- recreational boating
- ecotourism
- offshore petroleum exploration & development



Features

- view data by
 - activity
 - time
 - location
- simulate, aggregate and quantify maritime activities
- group activity types together
- query specific data (i.e. SAR incidents, fishing vessel classes, temporal and/or spatial characteristics, etc.)
- charting/graphing
- thematic mapping
- risk analysis

Applications

- search & rescue resource planning
- incident prevention programmes
- maritime safety analysis
- pollution response planning
- coastal security planning