

**A Science-industry study of the Distribution of  
Community Benefits in Atlantic Canadian Fisheries**

Daniel Mombourquette, MSc. Candidate

*School of the Environment, Saint Mary's University,  
Halifax, NS*

*Supervisors: Anthony Charles and Robert Stephenson*

Réseau canadien de  
recherche sur la pêche



Canadian Fisheries  
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# Context

- CFRN Project 1.1 is developing an 'Evaluation Framework for Sustainable Fisheries'
  - Indicator selection based on Canadian and International policy objectives
  - Required to move closer to Ecosystem Approach to Fisheries (EAF)
    - Social and Economic Aspects
    - Community
    - Distribution

# Research Objectives



- Thesis focuses on:
  - Developing indicators to measure the changing distribution of community benefits
    - Response to policy and industry objectives
  - Testing indicators on three cases in Atlantic Canada
    - To inform the CFRN evaluation framework
  - Collaborating and verifying data with experts

# Distribution

*“Examines the degree to which components of society share units of the social system (Coulter, 1989)”*

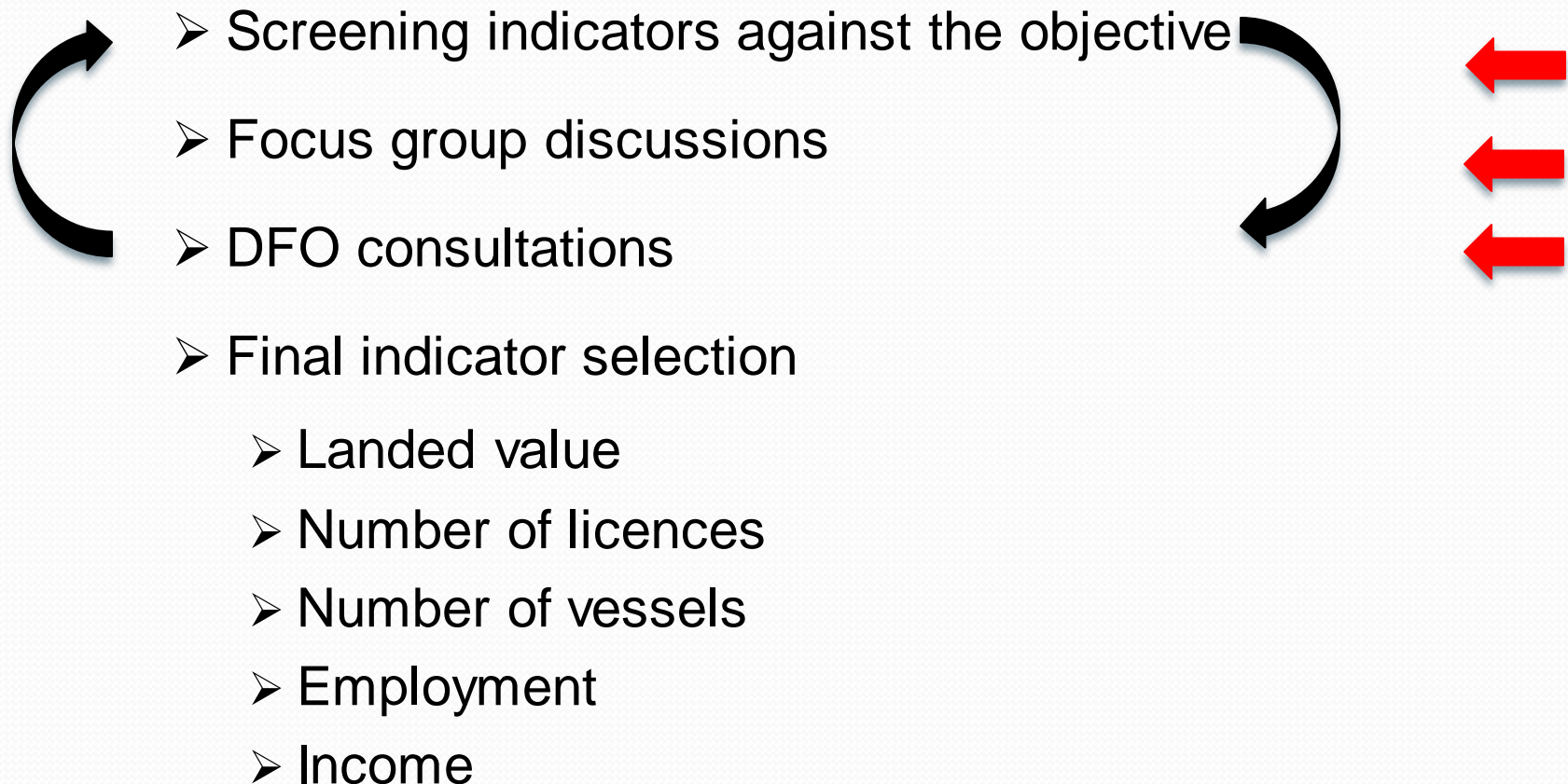
- Units = whatever is divided into parts, from a whole (e.g. money)
- Components = possess shares of the units

# Indicator Selection

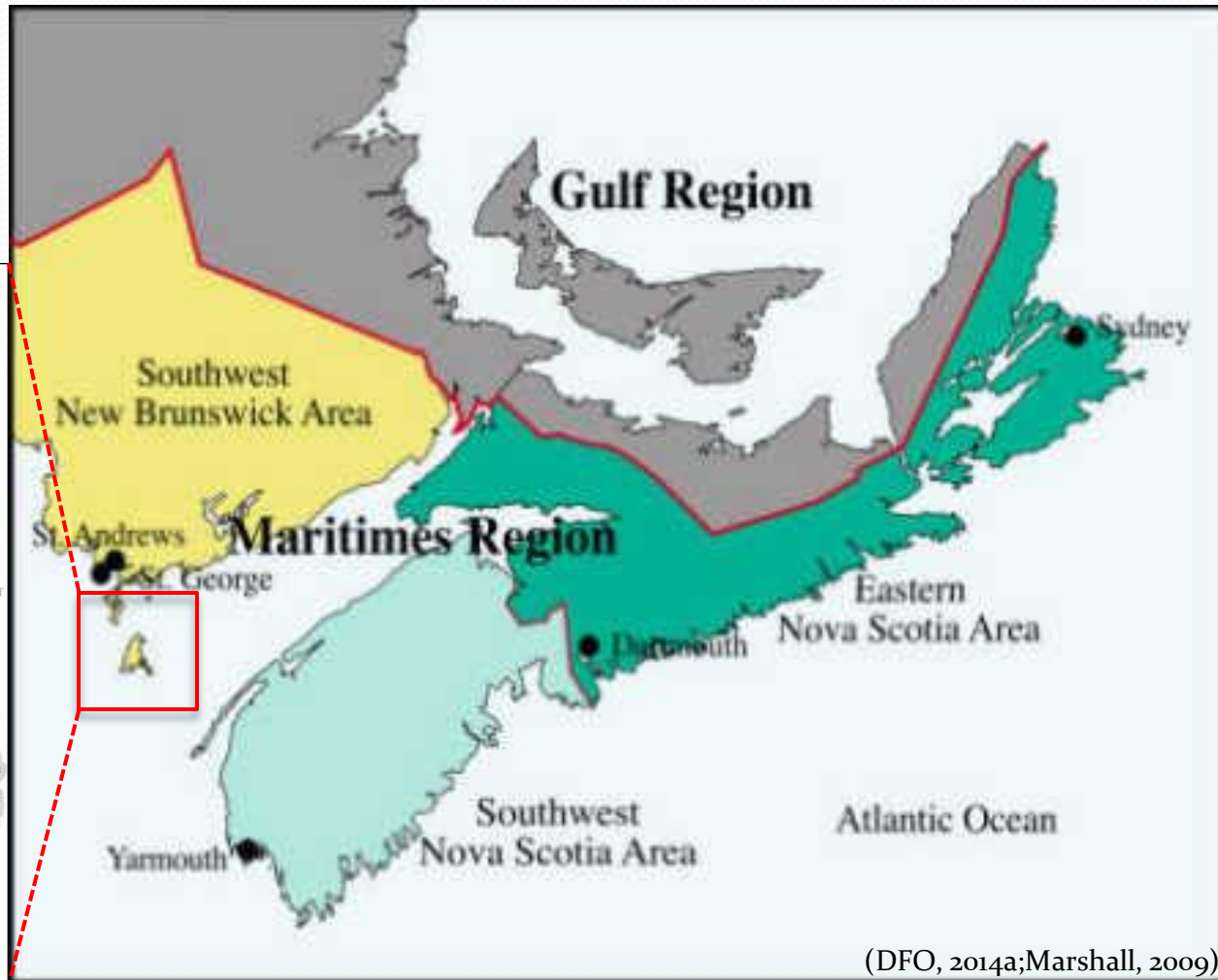
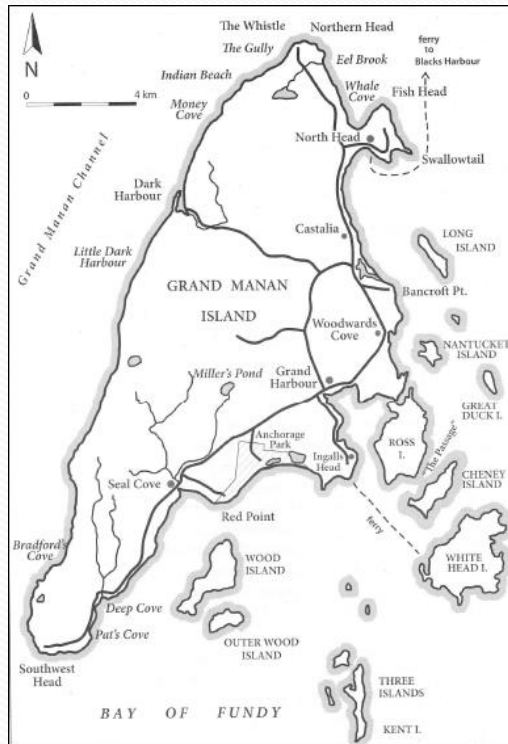
- Research objective development and literature review 
- Research scope and identification of research collaborators 
- Aggregating global candidate indicators
- Indicator gap analysis

 Indicates collaboration

# Indicator Selection

- 
- The diagram illustrates the indicator selection process. It features a central list of steps, with a large black curved arrow on the left pointing right towards the list, and another large black curved arrow on the right pointing left towards the list. To the right of the list, three red arrows point left, indicating a feedback loop from the final selection back to the initial screening stage.
- Screening indicators against the objective
  - Focus group discussions
  - DFO consultations
  - Final indicator selection
    - Landed value
    - Number of licences
    - Number of vessels
    - Employment
    - Income

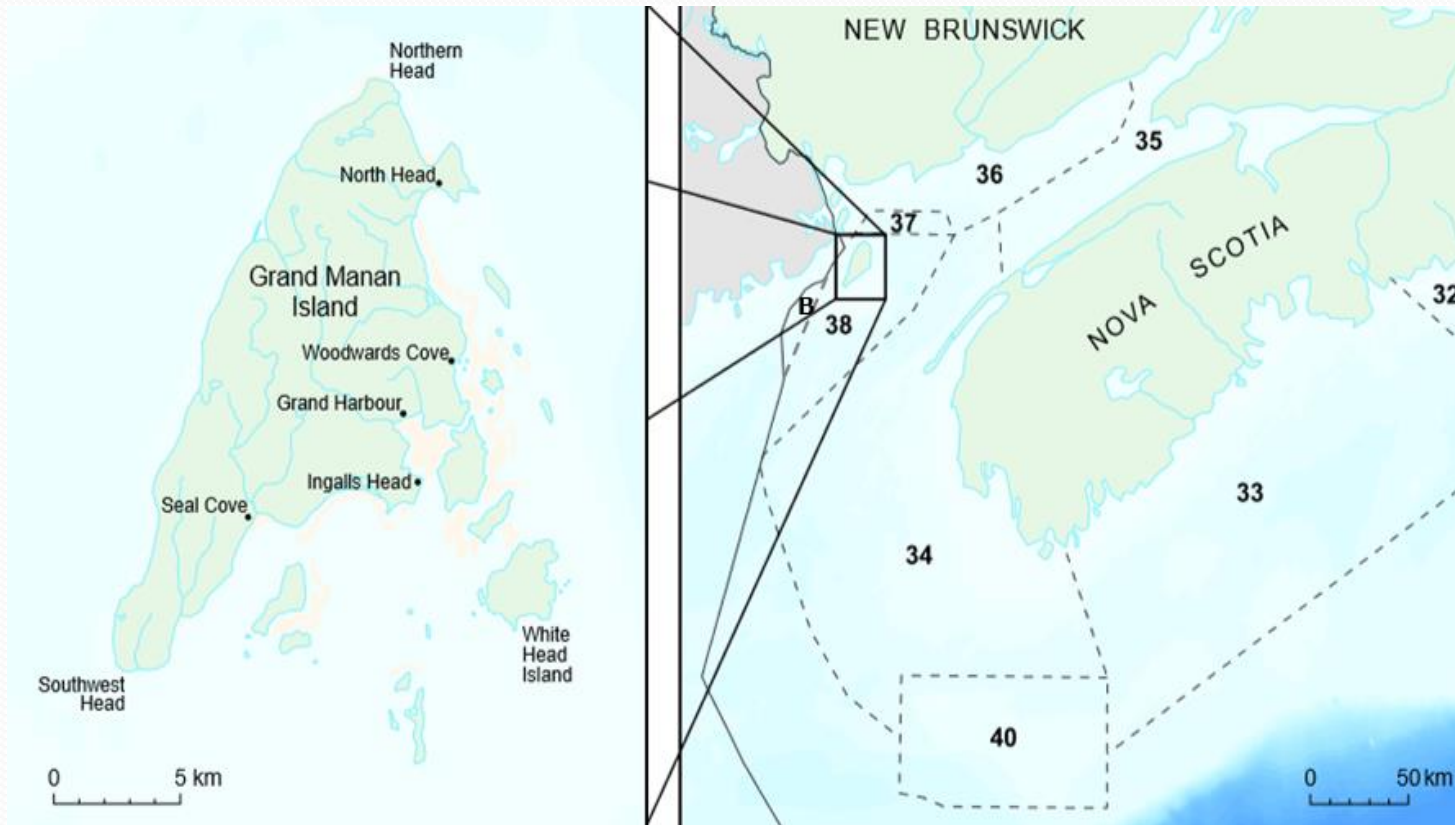
# Scope: Grand Manan, New Brunswick





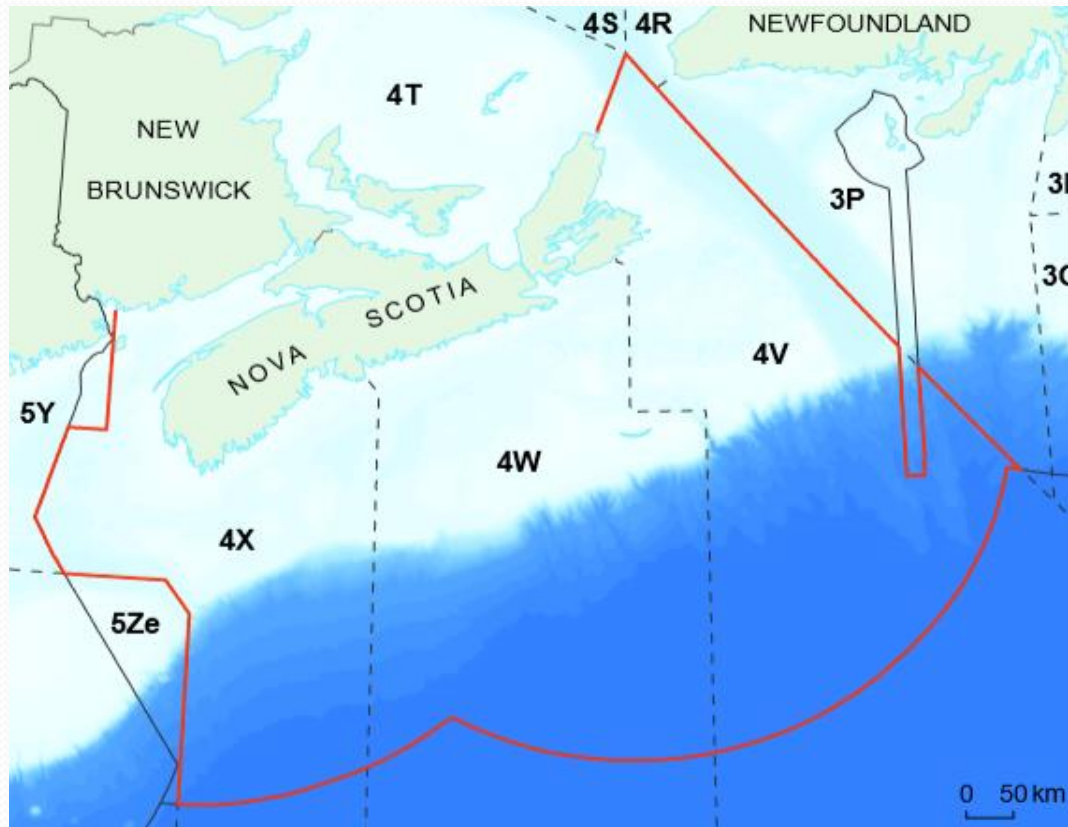
# Scope: Case Fisheries

Lobster - LFA 33-38B (including 'Grey Zone')



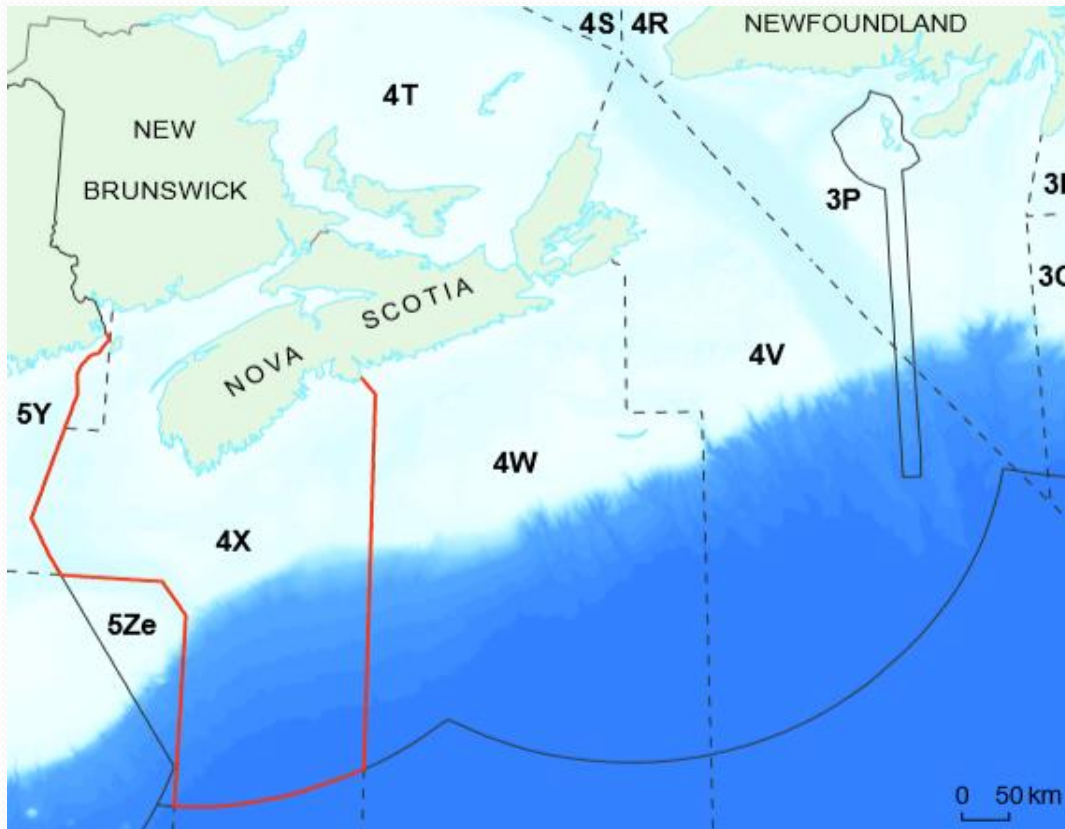
# Scope: Case Fisheries

## Herring Purse Seine - NAFO 4VWX



# Scope: Case Fisheries

< 65ft Mobile Groundfish - NAFO 4X + 5Y



# Methods: Primary Data Analysis

- Conducted 21 'face-to-face' interviews
- 22 questions
  - Participant's history with case fisheries
  - Perception of indicator distribution trends
    - Grand Manan and other communities
  - Perception of management changes
  - Perception of overall distribution of benefits (1960s-2014)

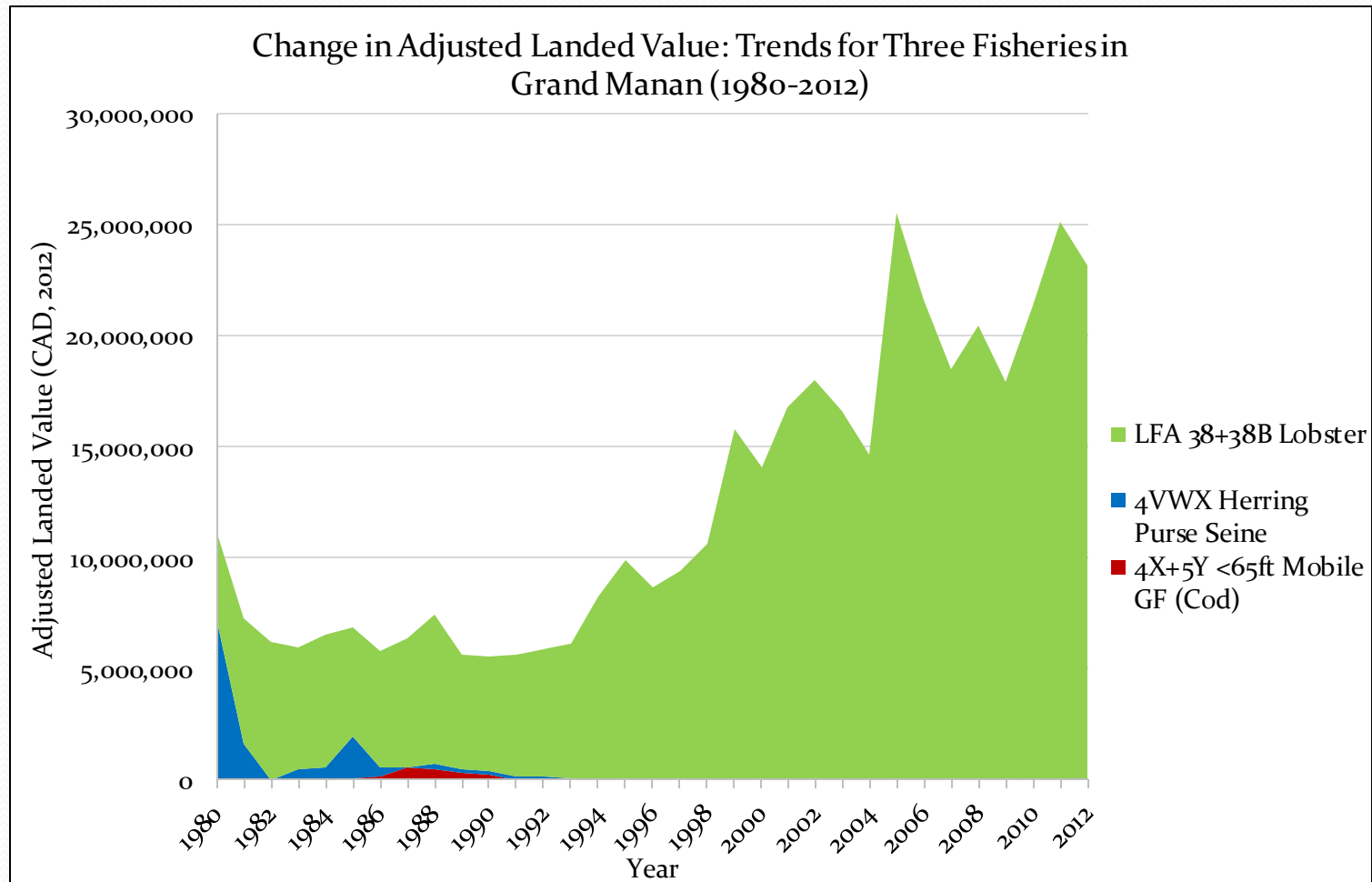


# Methods: Secondary Data Analysis

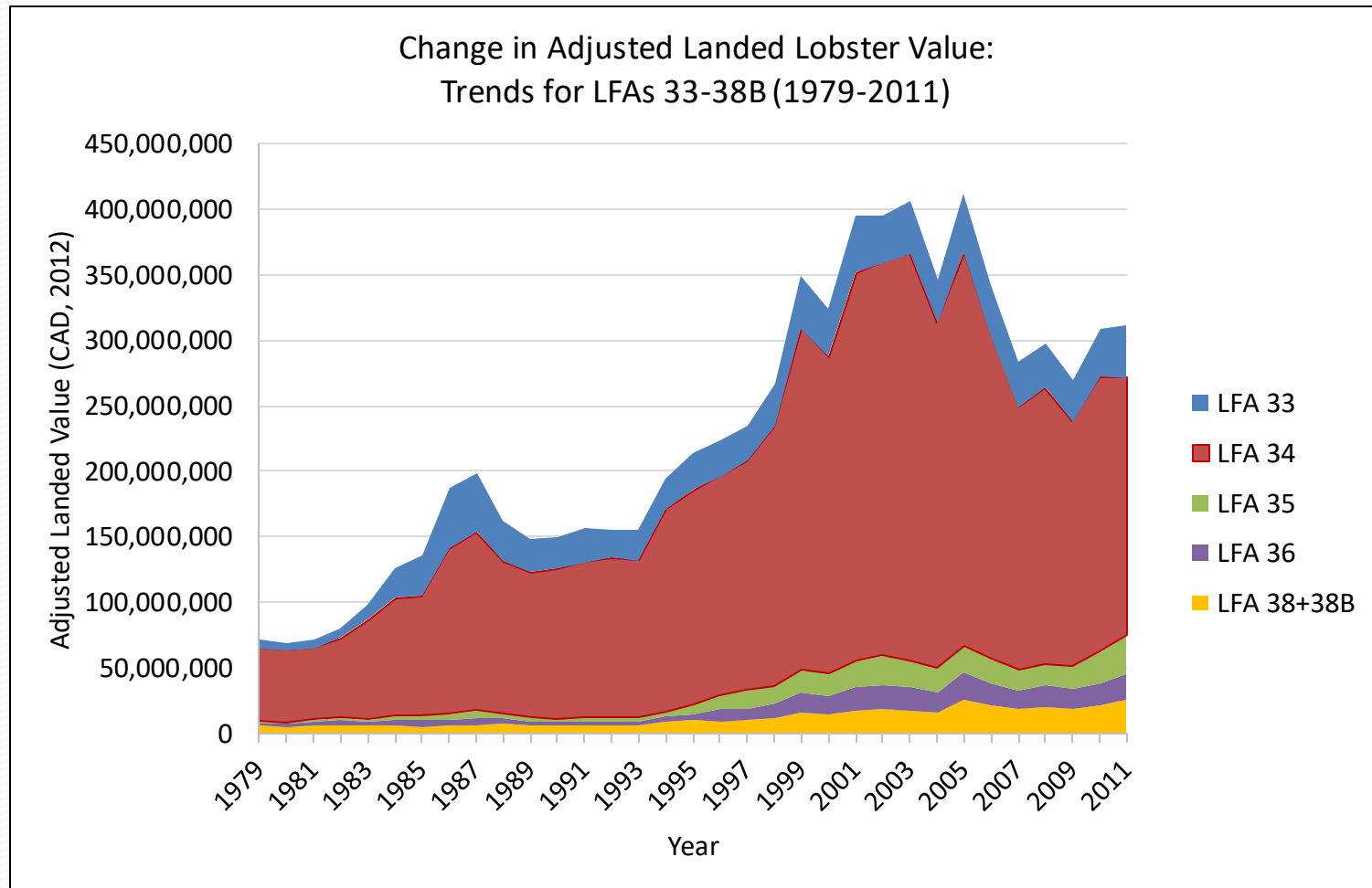
- Collected DFO data
- Proportional trend, Lorenz Curve, and spatial distribution analyses
- 'Communities' = smallest spatial scale
- Academic, industry, and government collaborators verified the results



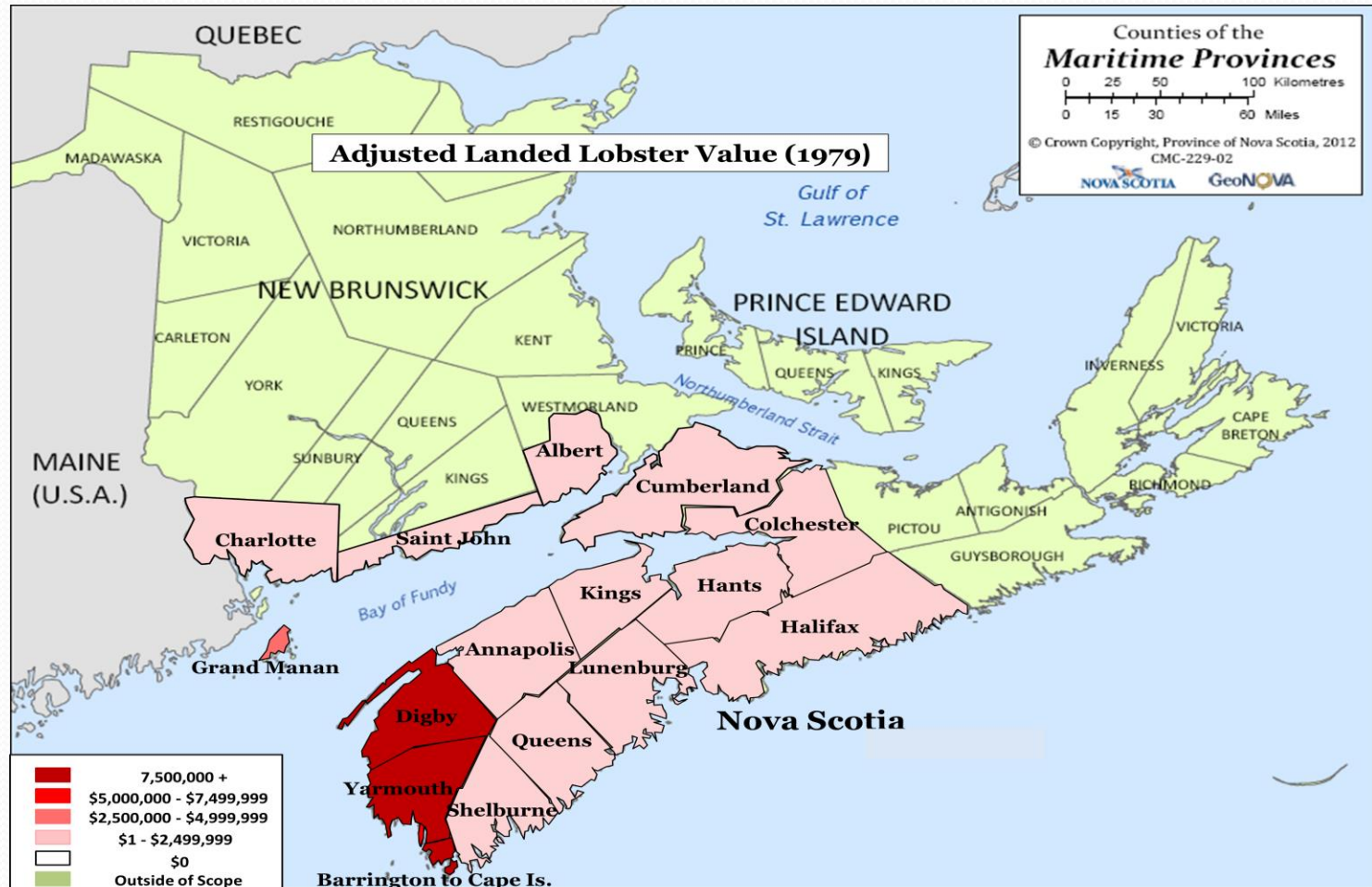
# Results



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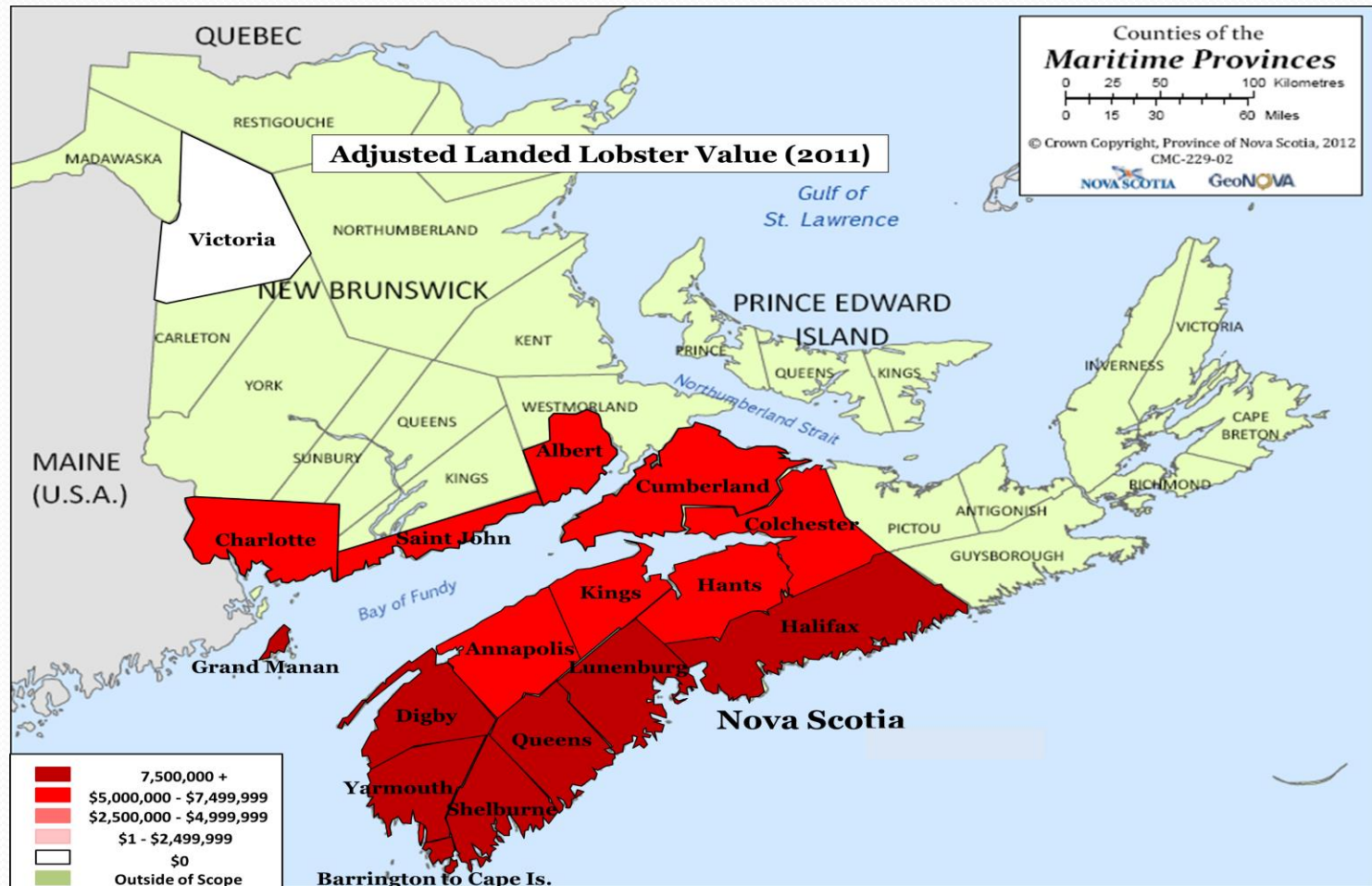


# Results

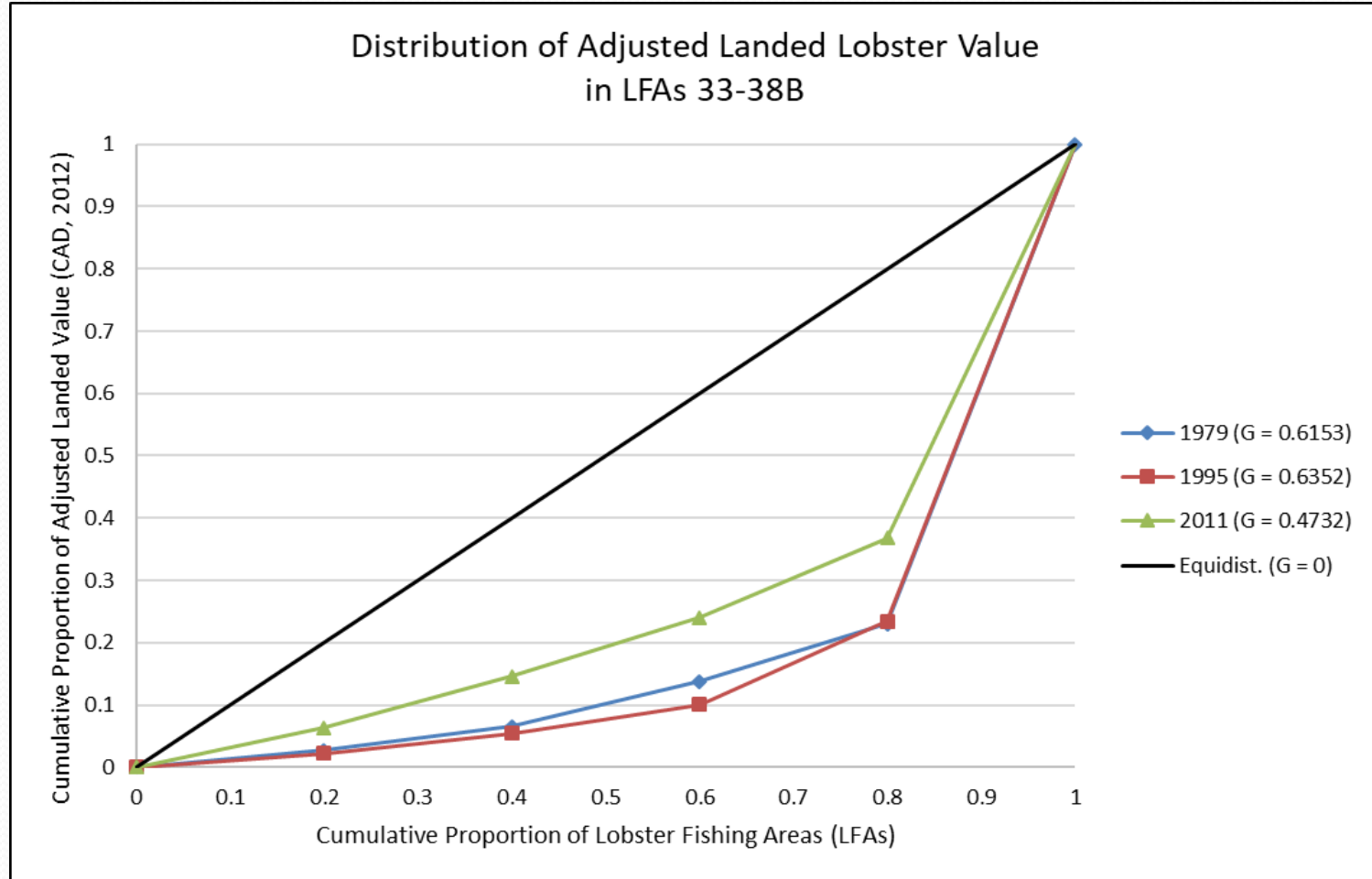




# Results



# Results



# Results Summary

- Grand Manan maintained benefits from lobster fishery
- Lost all access and benefits to herring fishery
- Lost benefits from groundfish fishery
- Trends resulted in:
  - Net loss of community benefits
  - Benefits redistributed to other communities
  - Destabilization of local economy and resilience

# Conclusion

- Analysis of distributional change of community benefits
  - Policy/industry drivers
- Provides systematic understanding
  - Changing community distribution
  - Managers and stakeholders
- Methods rigorously verified
  - Collaboration and triangulation
- Complete analysis limited by data and scope

# Implications

- Partially, DFO's vision aims to promote economic prosperity and growth
  - Signals of negative economic trends in Grand Manan
  - Research may inform policy and research to reduce inequality
- Other projects, in Canada and abroad, may use methods for guidance
  - Expanded data, access to information, and broad scopes are needed

# Industry Feedback from GMFA

- Very positive experience
- Open to future collaborations
- In contrast, they felt:
  - Their views were biased
  - Information overload may be detrimental to research

# My Perspective

- Adaptive
- Successful at balancing viewpoints
- Disclosure and collaboration increased
  - Trust, validity, and social capital
- Future work could alleviate constraints

# Acknowledgements

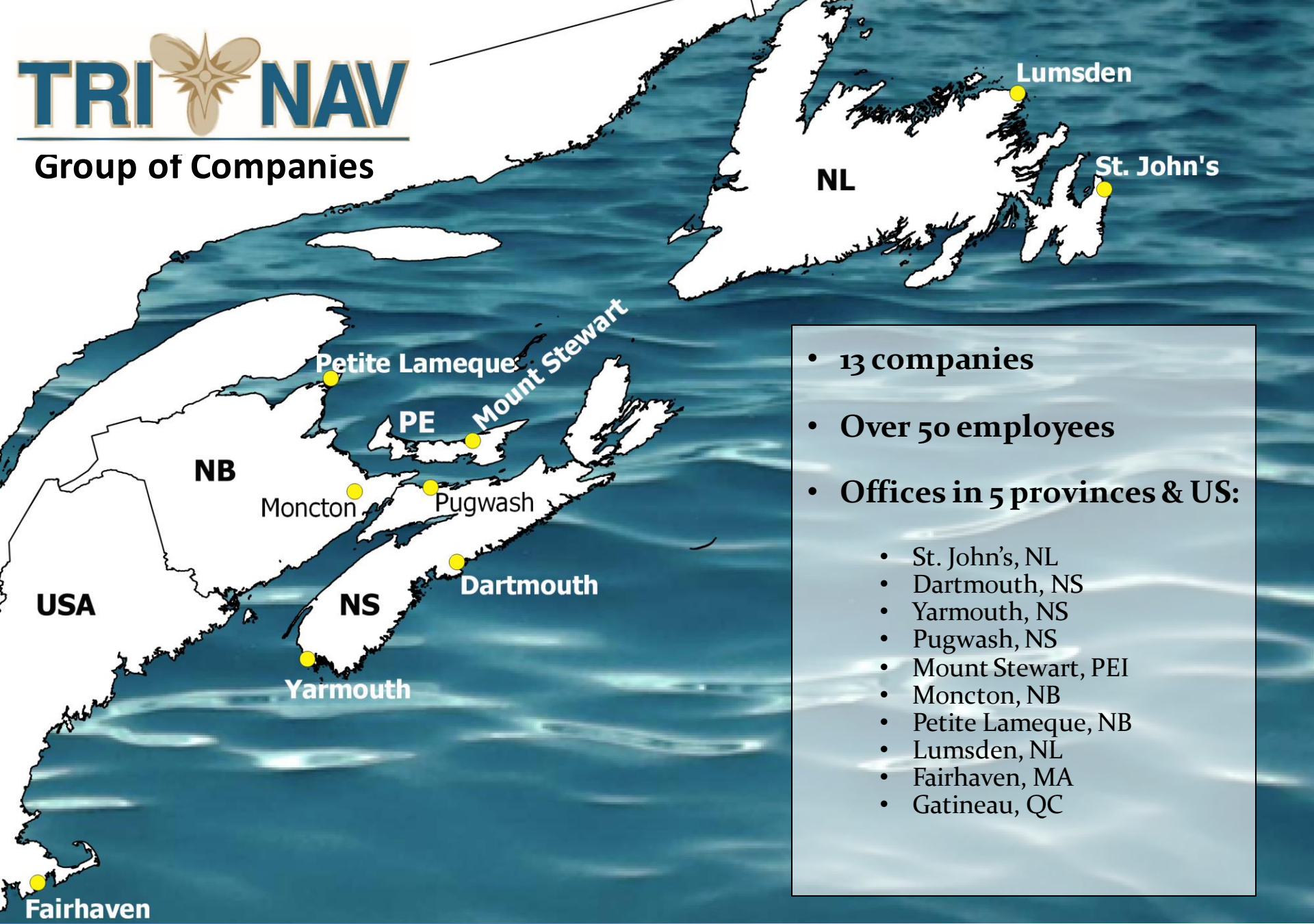
- The CFRN, SMU
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**Thank you!**





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