

# **Towards a Canadian Policy on Places of Refuge for Ships in Need of Assistance**



# Canada's Regions of Maritime Commerce





# **Research Questions**

- **What should Canada do to meet the challenges of ships in need of assistance seeking a place of refuge in its waters?**
- **In providing places of refuge, how should Canada prepare itself to prevent the degradation of its maritime natural resources, while promoting and encouraging economic development?**



# **Research Methodology**

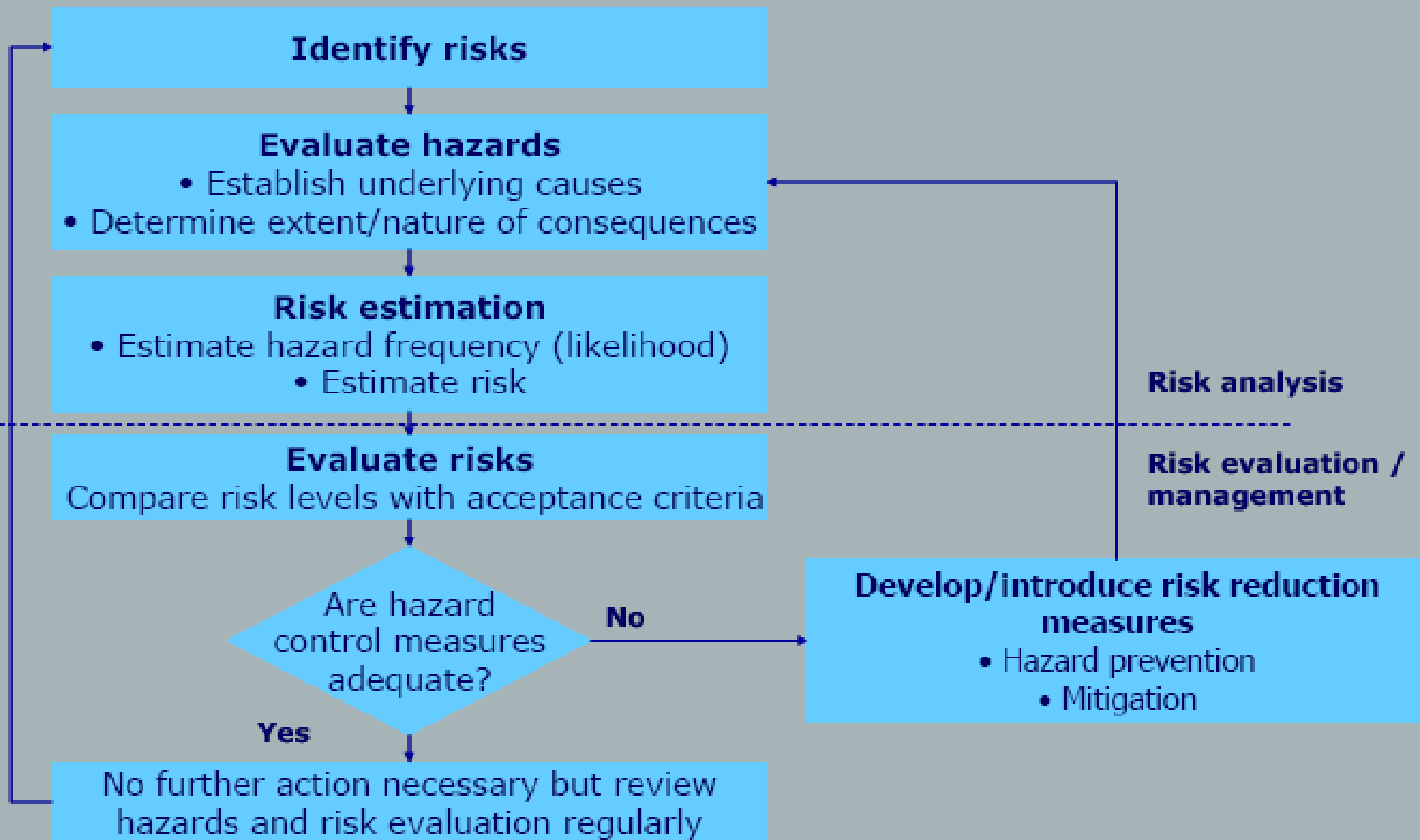
- **Desk Research**
- **Field Research - Other Maritime Nations**
- **Field Research – Study of Ports in Eastern Canada (provinces of Quebec, New Brunswick, Nova Scotia and Newfoundland)**
- **Questionnaire Development and Survey of Ship Management and Port Management Personnel**
- **Analysis of Data, Policy Framework and Risk Assessment procedure development and testing**
- **Evaluation of Results**



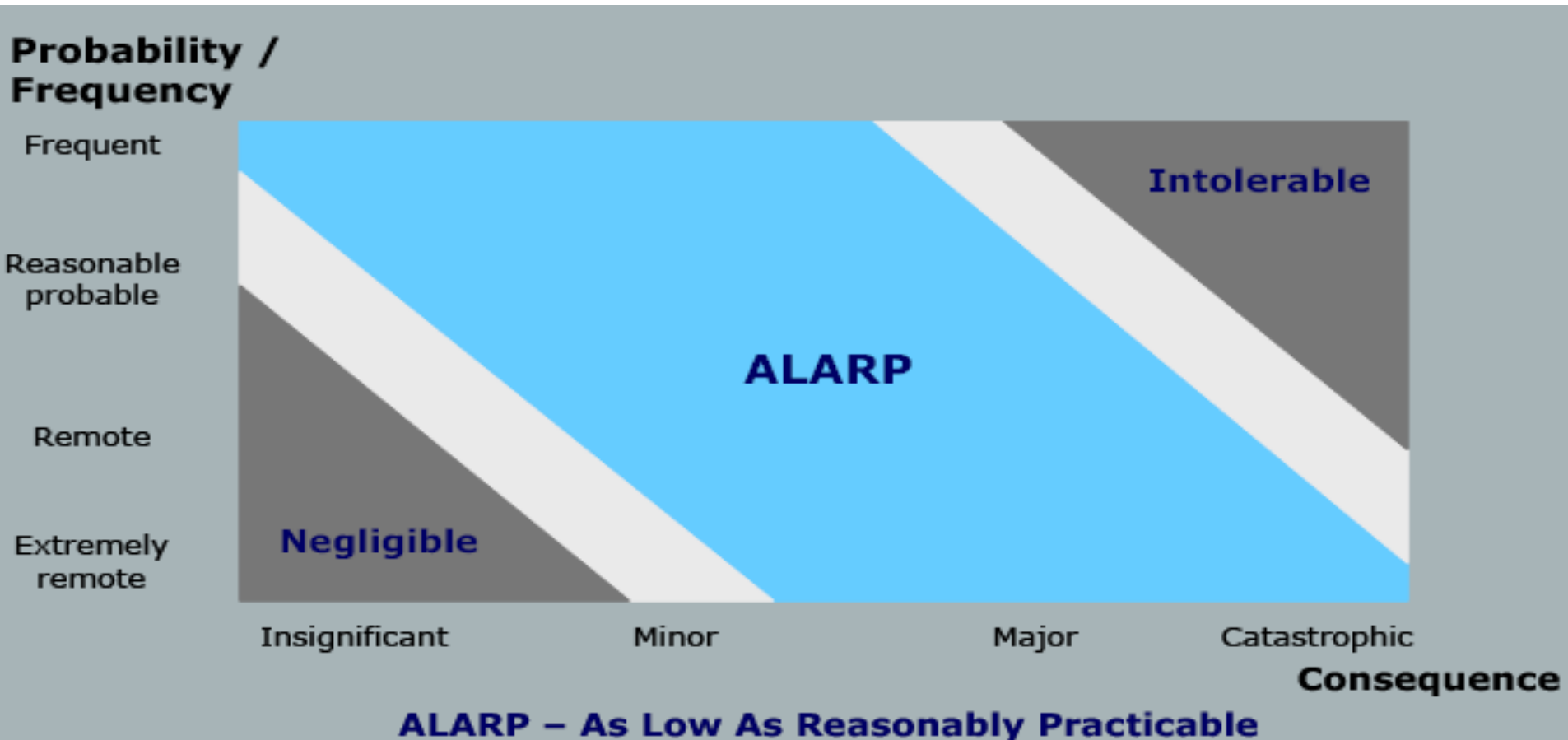
# Policy Framework

- **Initial Focus on Atlantic Canada**
- **Harmonizing Jurisdictional Responsibilities**
- **Unified Command and Control**
- **Prioritization of Response Initiatives**
- **Stakeholder Involvement**
- **Bilateral Agreements**
- **Based on Historical Lessons, Other Nation's Policies and Canada's Unique Coastline**
- **Preparatory Measures and Incident Specific Measures**
- **Humanitarian Rescue followed by Assistance to Ship**
- **Involvement of Canadian Coast Guard and Transport Canada**
- **Risk Assessment**

# The Risk Assessment Process



# Risks 'As Low As Reasonably Practicable'



# Risk Categorization of Ports Surveyed

| Serial Number | Port                  | Province               | Risk Category of the Port | Investments for upgrading to the 'Low Risk' Class (\$ US Millions) |
|---------------|-----------------------|------------------------|---------------------------|--|
| <b>1</b>      | <b>Belledune</b>      | <b>New Brunswick</b>   | <b>Very High</b>          | <b>20</b>  |
| <b>2</b>      | <b>Dalhousie</b>      | <b>New Brunswick</b>   | <b>Very High</b>          | <b>35</b>  |
| <b>3</b>      | <b>Miramichi</b>      | <b>New Brunswick</b>   | <b>Very High</b>          | <b>70</b>  |
| <b>4</b>      | <b>Yarmouth</b>       | <b>Nova Scotia</b>     | <b>Very High</b>          | <b>30</b>  |
| <b>5</b>      | <b>Shelburne</b>      | <b>Nova Scotia</b>     | <b>Very High</b>          | <b>75</b>  |
| <b>6</b>      | <b>Lewisporte</b>     | <b>Newfoundland</b>    | <b>Very High</b>          | <b>60</b>  |
| <b>7</b>      | <b>Gaspé</b>          | <b>Quebec</b>          | <b>High</b>               | <b>30</b>  |
| <b>8</b>      | <b>Whiffen Head</b>   | <b>Newfoundland</b>    | <b>High</b>               | <b>20</b>  |
| <b>9</b>      | <b>Come-By-Chance</b> | <b>Newfoundland</b>    | <b>High</b>               | <b>20</b>  |
| <b>10</b>     | <b>Eastport</b>       | <b>Maine, U. S. A.</b> | <b>Medium</b>             | <b>10</b>  |
| <b>11</b>     | <b>Bayside</b>        | <b>New Brunswick</b>   | <b>Medium</b>             | <b>35</b>  |
| <b>12</b>     | <b>Rimouski</b>       | <b>Quebec</b>          | <b>Medium</b>             | <b>25</b>  |
| <b>13</b>     | <b>Sept Iles</b>      | <b>Quebec</b>          | <b>Medium</b>             | <b>10</b>  |
| <b>14</b>     | <b>Point Tupper</b>   | <b>Nova Scotia</b>     | <b>Medium</b>             | <b>10</b>  |
| <b>15</b>     | <b>Sydney</b>         | <b>Nova Scotia</b>     | <b>Medium</b>             | <b>35</b>  |
| <b>16</b>     | <b>Cornerbrook</b>    | <b>Newfoundland</b>    | <b>Medium</b>             | <b>25</b>  |
| <b>17</b>     | <b>Montreal</b>       | <b>Quebec</b>          | <b>Low</b>                | <b>0</b>   |
| <b>18</b>     | <b>Quebec</b>         | <b>Quebec</b>          | <b>Low</b>                | <b>0</b>   |
| <b>19</b>     | <b>Saint John</b>     | <b>New Brunswick</b>   | <b>Low</b>                | <b>0</b>   |
| <b>20</b>     | <b>Halifax</b>        | <b>Nova Scotia</b>     | <b>Low</b>                | <b>0</b>   |
| <b>21</b>     | <b>St. John's</b>     | <b>Newfoundland</b>    | <b>Low</b>                | <b>0</b>   |



# **Risk Categorization Results**

| <b>Risk Category of the Port</b> | <b>Number of Ports in Each Category</b> | <b>Percentage of Ports in Each Category</b> |
|----------------------------------|---|---|
| <b>Very High Risk</b>            | <b>6</b>                                | <b>29</b>                                   |
| <b>High Risk</b>                 | <b>3</b>                                | <b>14</b>                                   |
| <b>Medium Risk</b>               | <b>7</b>                                | <b>33</b>                                   |
| <b>Low Risk</b>                  | <b>5</b>                                | <b>24</b>                                   |
| <b>TOTAL</b>                     | <b>21</b>                               | <b>100</b>                                  |

# Canadian Oil Tanker Traffic

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- 1) Annual Oil Tanker Movements in Canada:  
20,000 (17,000 on the East Coast)
- 2) Annual Crude Petroleum Tanker Imports:  
30 million tonnes
- 3) Annual Fuel Oil Imports on Tankers:  
2 million tonnes
- 4) Crude Petroleum carried in Domestic  
Maritime Trade: 10 million tonnes
- 5) Fuel Oil carried in Domestic Maritime Trade:  
9.5 million tonnes

DISTORTION OF INBOARD  
AREA OF MAIN DECK  
PLATING AT FRAME 76

# Conclusions

- ▶ **Globalization, Economic Integration and World Trade**
- ▶ **Technical Complexity of Ships and Human Error**
- ▶ **Reliance on Fossil Fuel Energy**
- ▶ **Humanitarian and Environmental Obligations**
- ▶ **Standardizing Processes and Procedures for Value Added Service**
- ▶ **Urgent Need for Policy Development due to Canada's Location and Trade Network**
- ▶ **Contingency Planning with Preparatory Measures and Incident-Specific Measures**
- ▶ **Harmonizing Jurisdictional Responsibilities**
- ▶ **Categorizing Ports based on Risk Levels**
- ▶ **National Applicability**
- ▶ **Future Challenges (e.g. Deepwater Horizon)**



# **Basis for Policy**

**International Incidents – Erika, Castor,  
Prestige, Christos Bitas, Iron Baron,  
Argo Merchant**

**Canadian Incidents – Trave Ore, Eastern  
Power, Kitano, Doddsland, Kurdistan, Flare**

**Lessons Learned from the Policies Adopted by  
Other Major Maritime Nations –  
United States, United Kingdom, Spain,  
Australia, Norway, Denmark**



# Recommendations

- **Publicity**
- **Research and Development - Oil Transfer, Ship Technology, Arctic Challenges**
- **Ports Compensation**
- **Ship Certification of Financial Responsibility**
- **Incorporating Response Mechanisms**
- **Access to Sheltered Waters as a minimum**
- **Coordinated Action – Holistic Approach**
- **Gathering Comprehensive Coastal Zone Data**
- **Command and Control Structure**
- **Exemption from Liability**
- **Risk Assessments for all Canadian Ports**
- **Port Risk Level Classification**
- **Focus of Response Efforts on Low Risk Ports**



## Research Contribution

- 1) Sustainable Economic Development
- 2) Improved and Holistic Oceans Management
- 3) Methodical and Systematic Approach – Cohesive and Robust Model
- 4) Contingency Planning for Effective Response
- 5) Investment Forecasting for Port Infrastructure Development to Reduce Risks
- 6) Worldwide Applicability, Unique and Novel Approach

**THANK YOU FOR  
YOUR ATTENTION**



Questions?