HEBRON ENVIRONMENTAL ASSESSMENT

REVIEW OF COMPREHENSIVE STUDY REPORT

W. A. Montevecchi
University Research Professor
Memorial University of Newfoundland

ECOLOGICAL RESERVES OF NEWFOUNDLAND & LABRADOR

Globally Significant

SEABIRDS ON THE GRAND BANKS

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- > 40 million seabirds reside or migrate through the Grand Banks annually

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- > 40 million seabirds reside or migrate through the Grand Banks annually
- most important wintering ground in NW Atlantic

Globally Significant Seabird Populations

Northern Migrants

- Dovekies
- Thick – billed Murres
- Northern Fulmars
- Black-legged Kittiwakes

Southern Migrants

- Sooty Shearwaters
- Greater Shearwaters

ADDRESS 4 ISSUES

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1 - Study Design

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2 - Data Deficiencies, Access and Transparency

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3 - Planning for Episodic Events

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2 - Data Deficiencies, Access and Transparency

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4 - Independent Assessment and Input

1 - STUDY DESIGN

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STUDY SITES

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STUDY SITES - DEPENDS ON HOW ONE SLICES THE PIE

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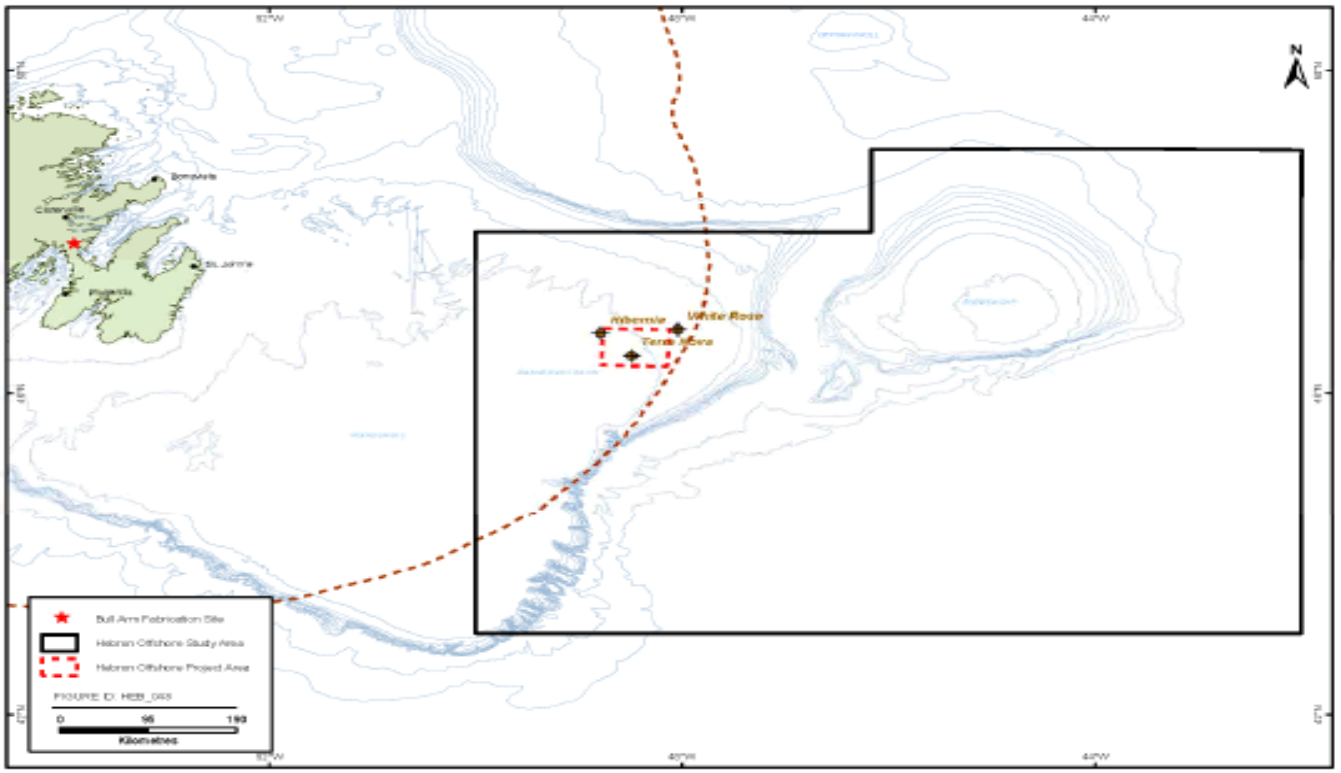

Figure 9-2 Offshore Study and Project Areas

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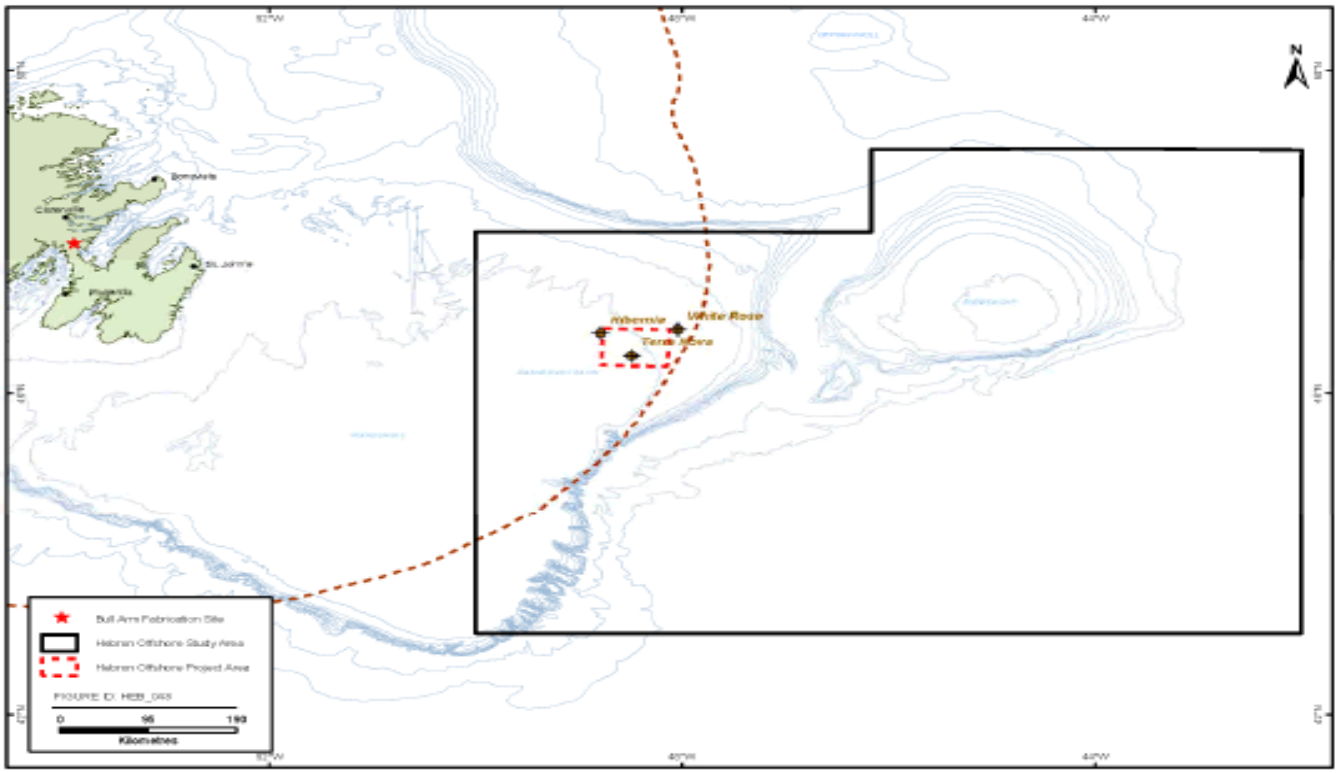

Figure 9-2 Offshore Study and Project Areas

- Tiny Inshore Study Area

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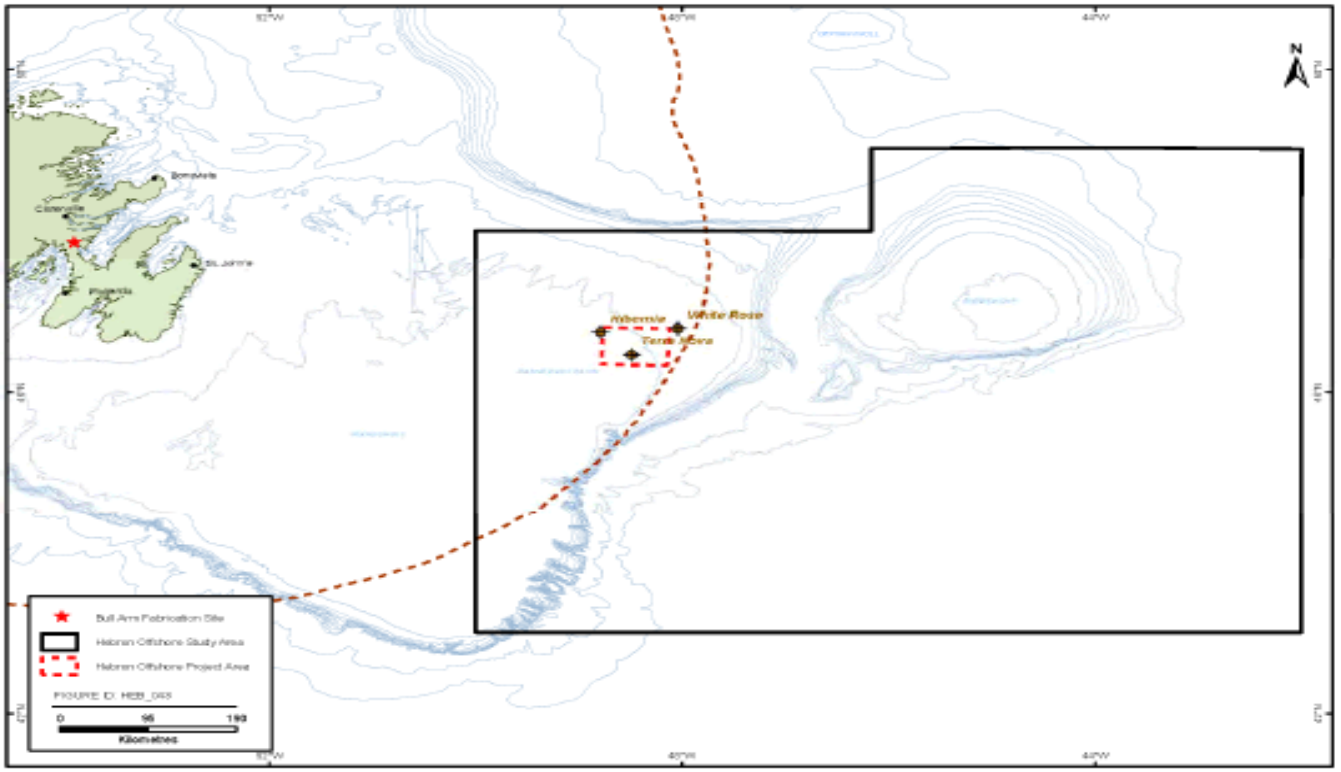

Figure 9-2 Offshore Study and Project Areas

- Tiny Inshore Study Area
- Large Offshore Study Area ~80% Outside of Canadian Jurisdiction

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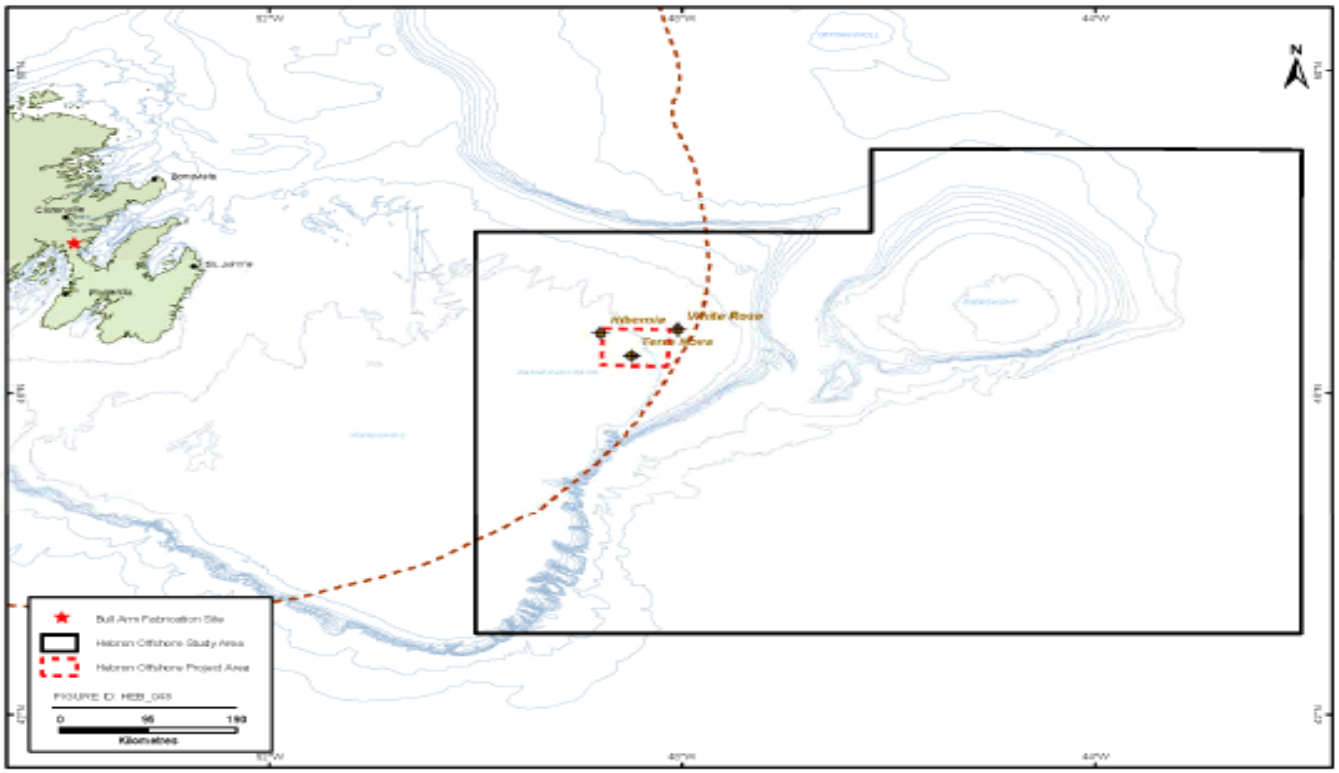

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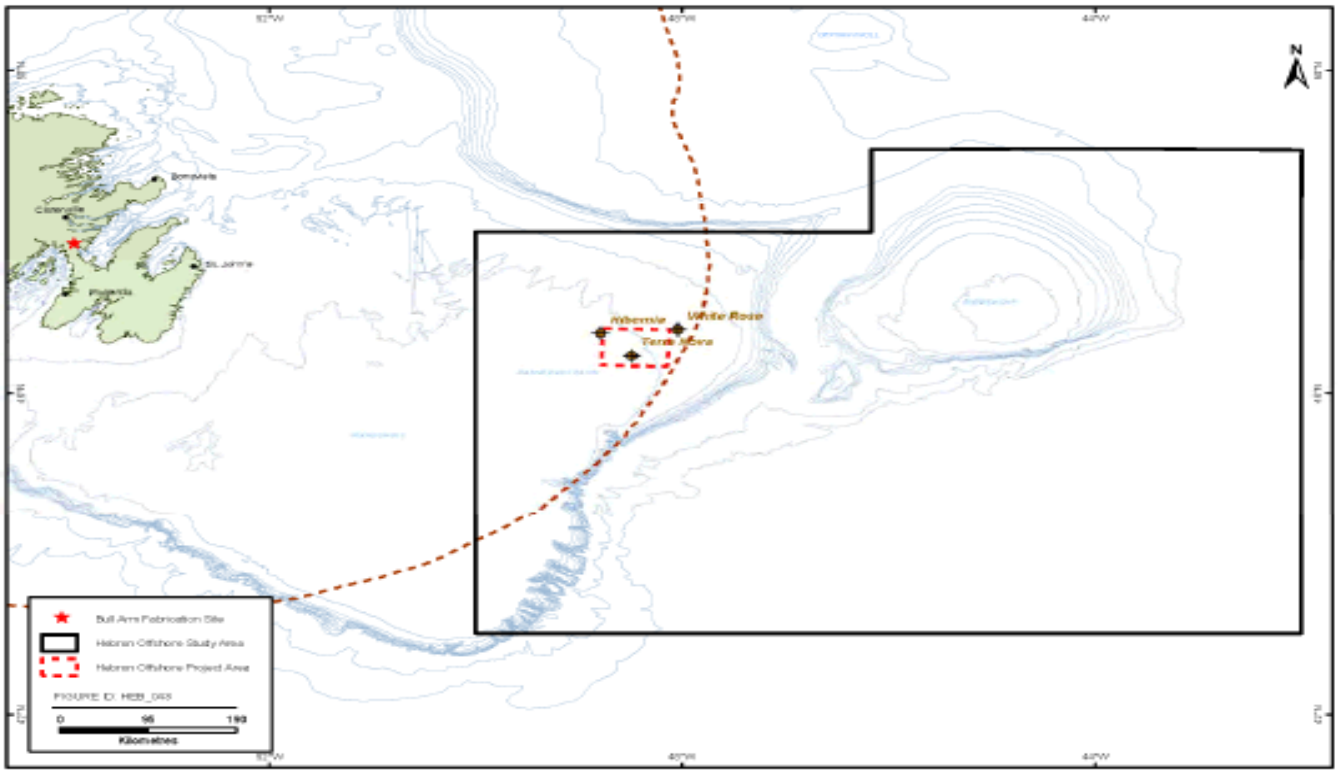

Figure 9-2 Offshore Study and Project Areas

- Tiny Inshore Study Area
- Large Offshore Study Area ~80% Outside of Canadian Jurisdiction
- Nothing In Between Where All Materials and Product Will Be Shipped
- And Where Globally Significant Seabird Ecological Reserves Located

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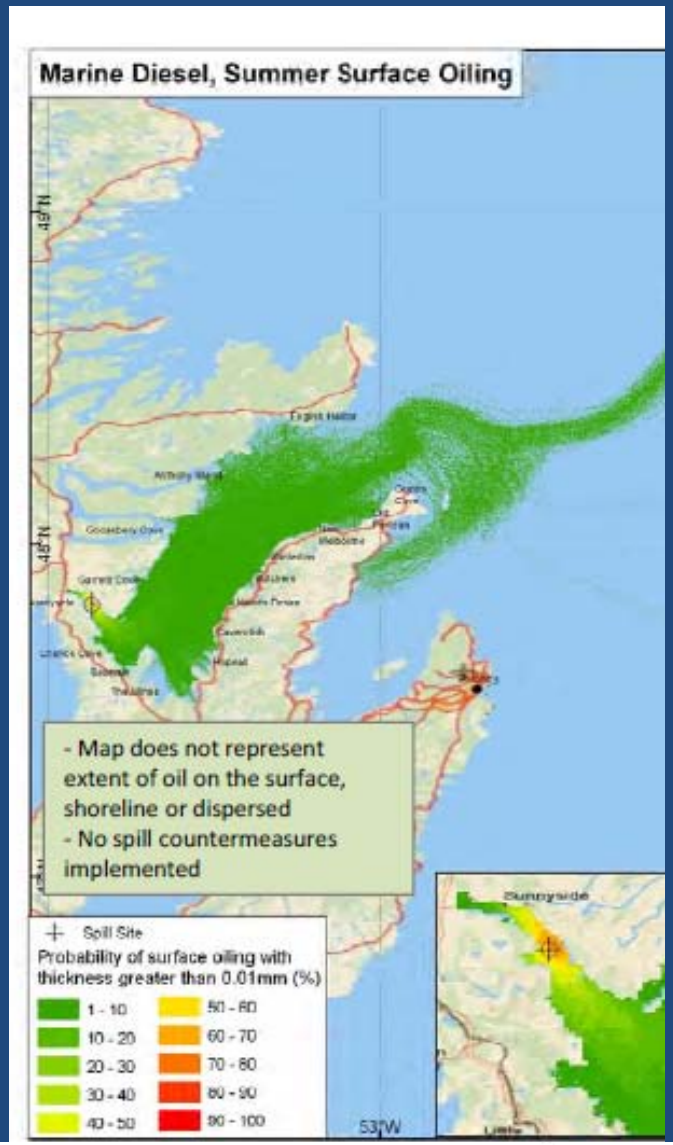

Figure 14-1 Probability of Surface Contact from a Release of 100 m^3 of Marine Diesel at the Bull Arm Site in Summer

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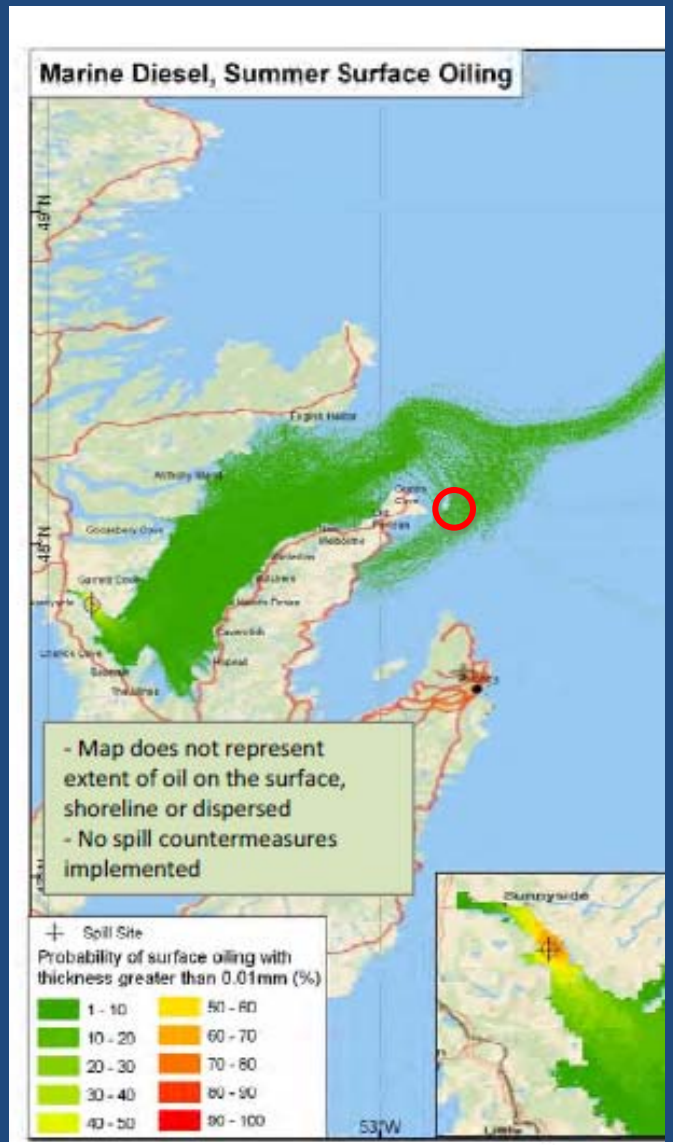

Baccalieu Island Ecological Reserve

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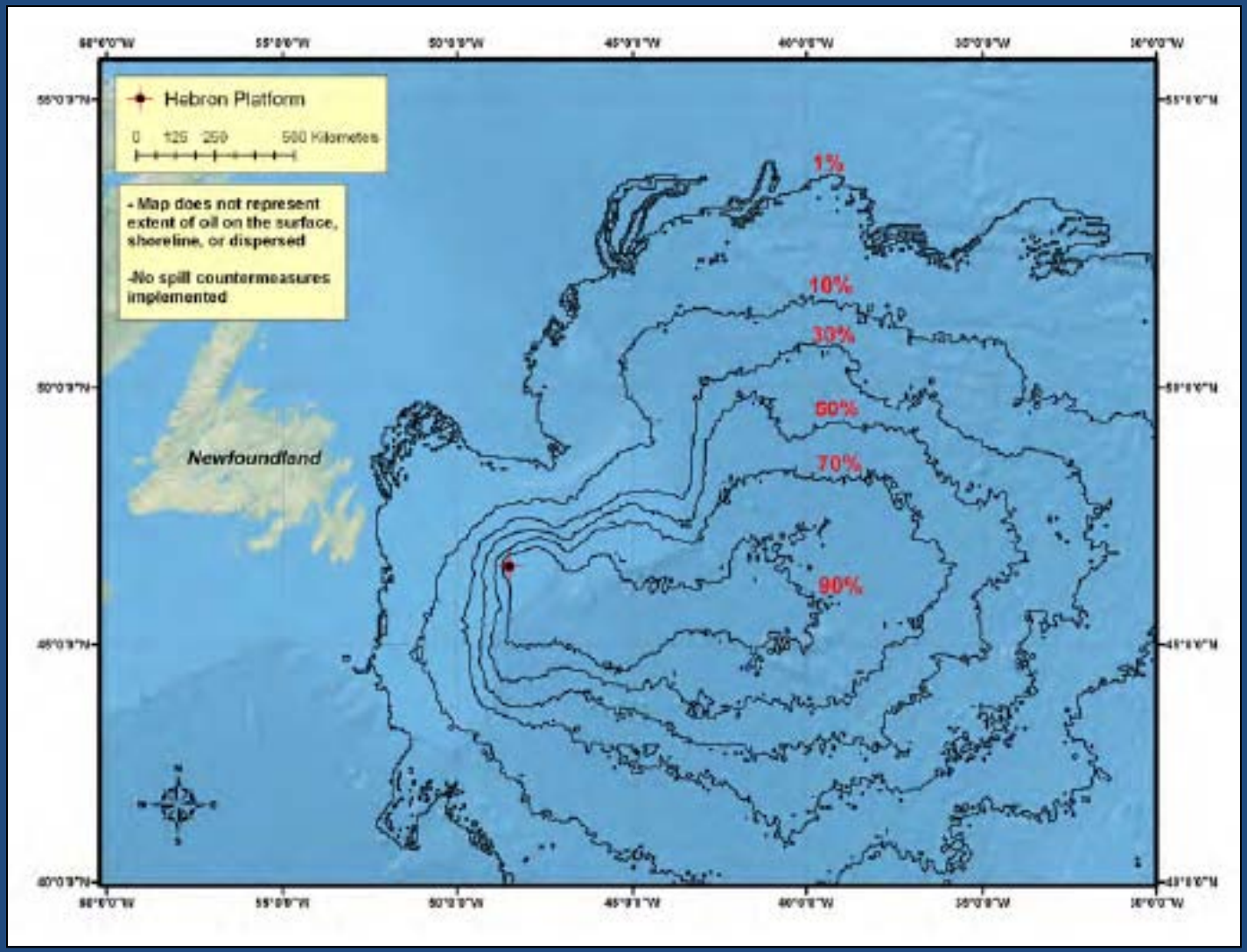

Fig 14-14 Surface Oiling Probabilities Greater than 0.01 mm from a Hebron Platform Blow-out of 5,600 m^3/day over a 30-day Period Simulated for 60 days during Summer

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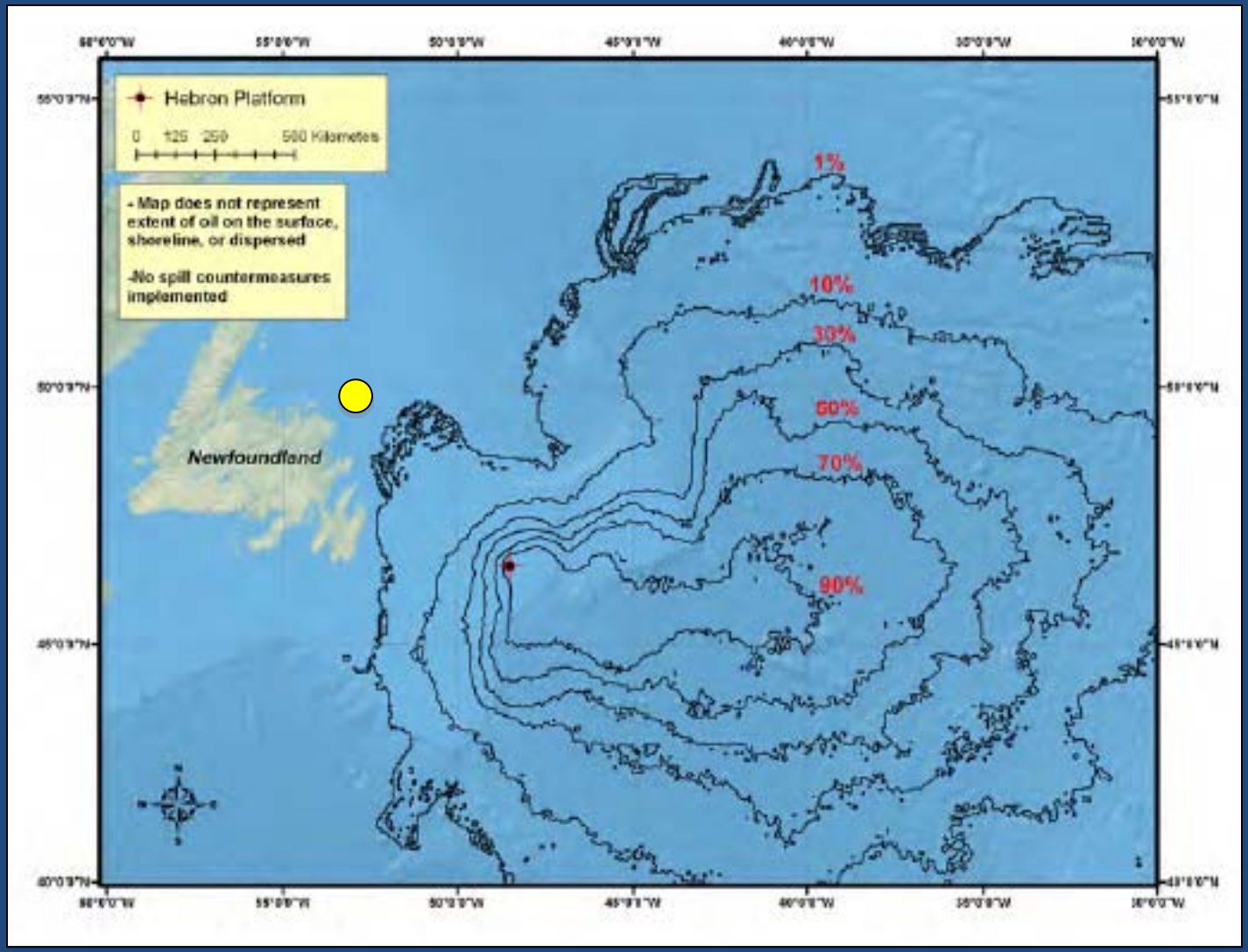

Seabird Ecological Reserves

Funk Island

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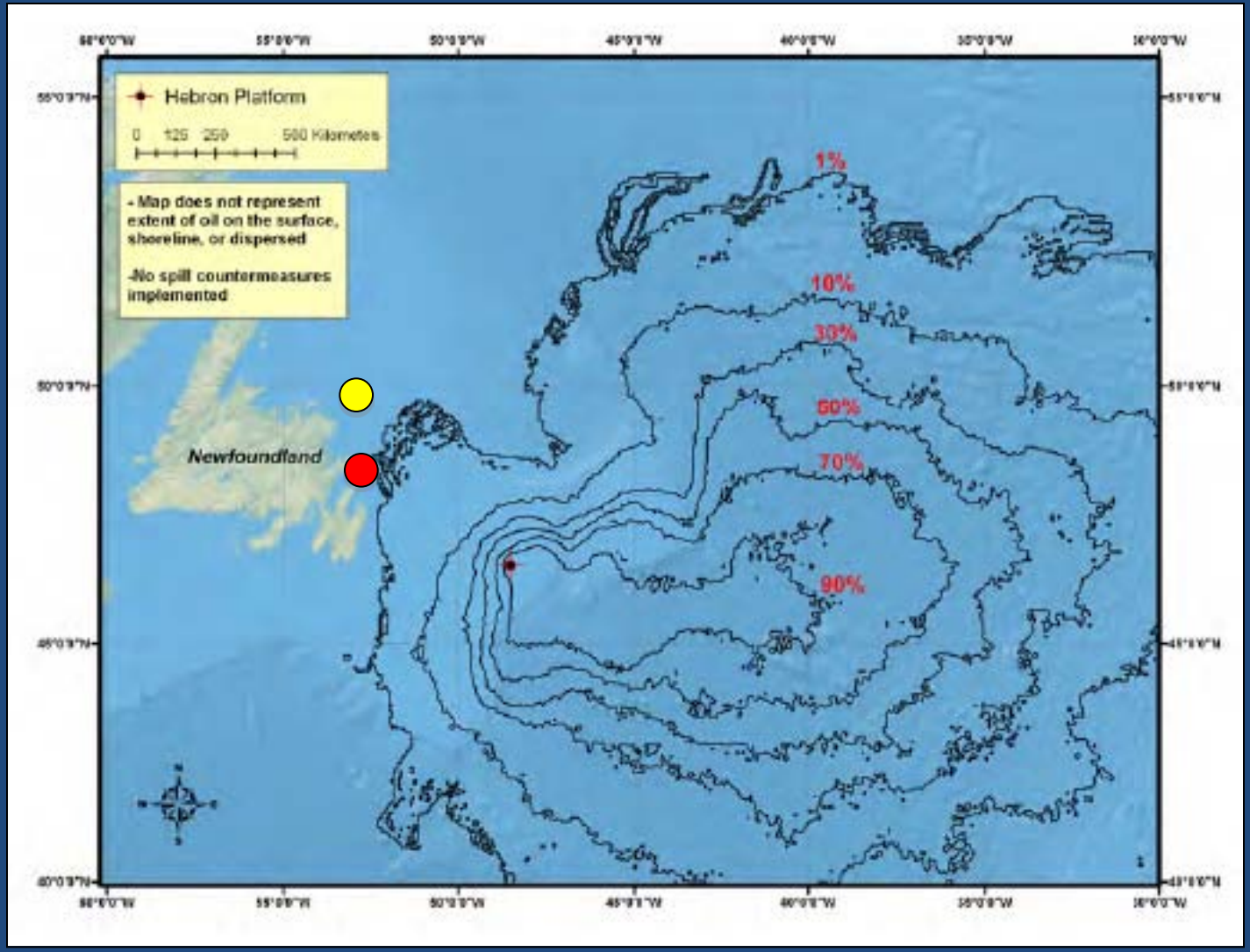

Seabird Ecological Reserves

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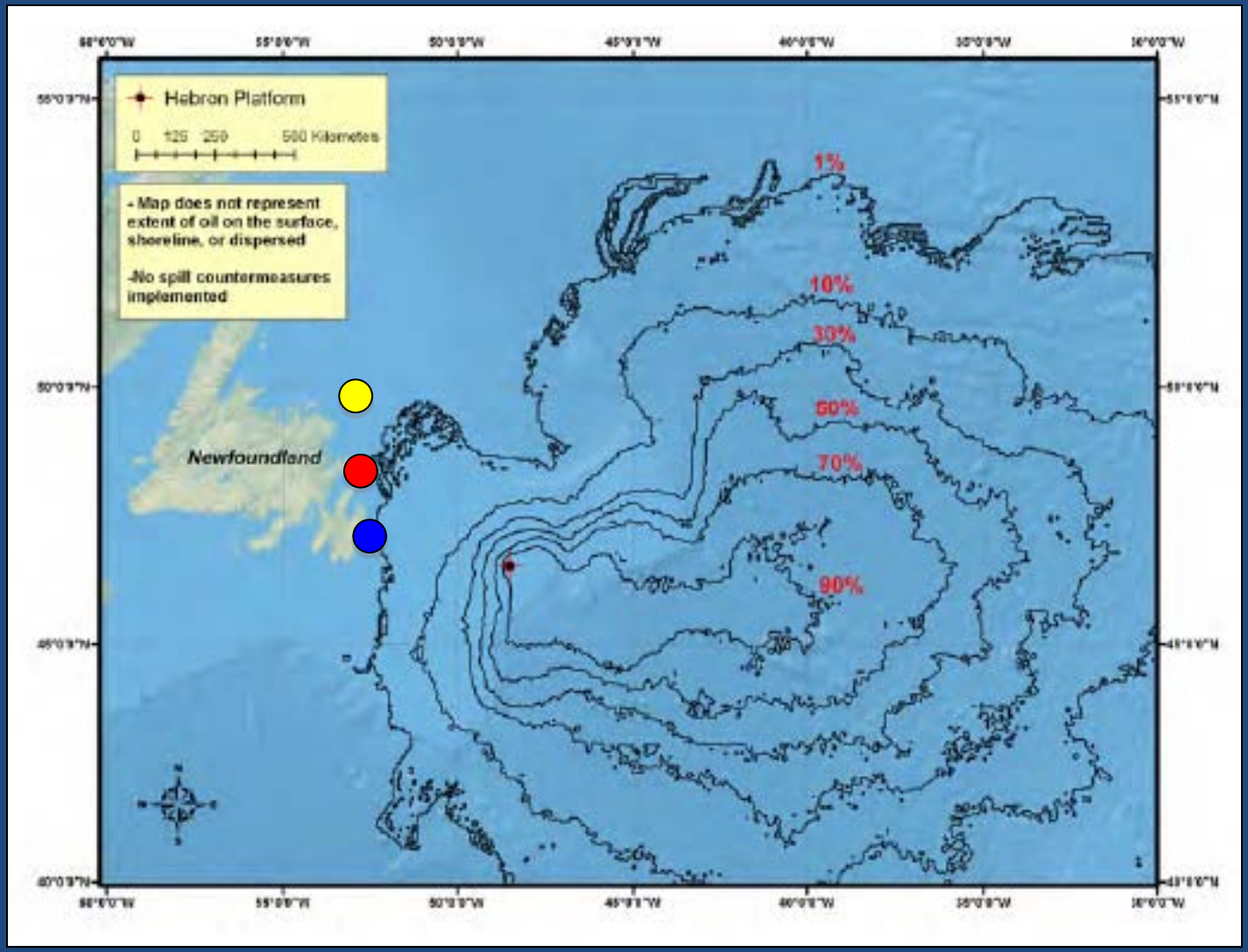

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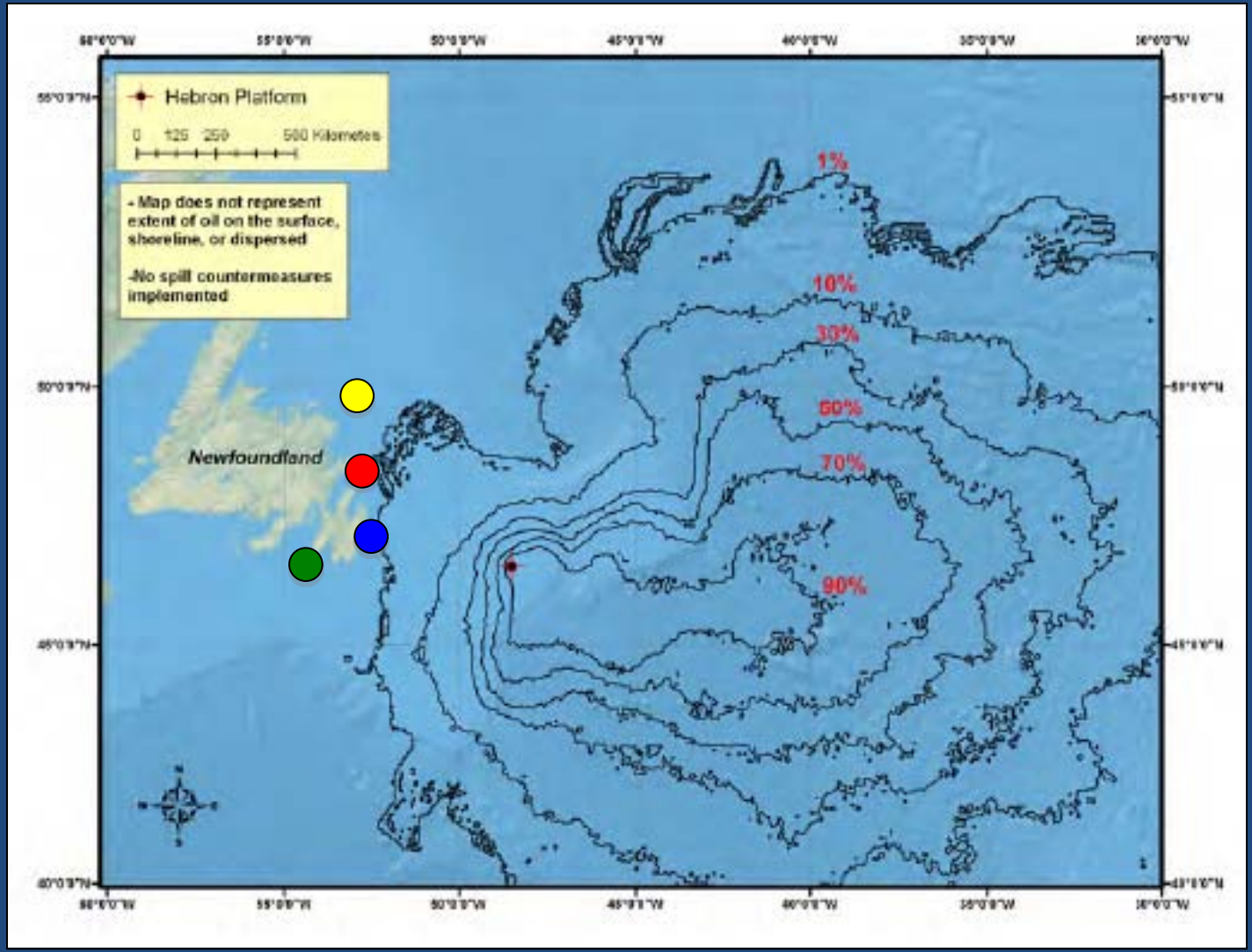

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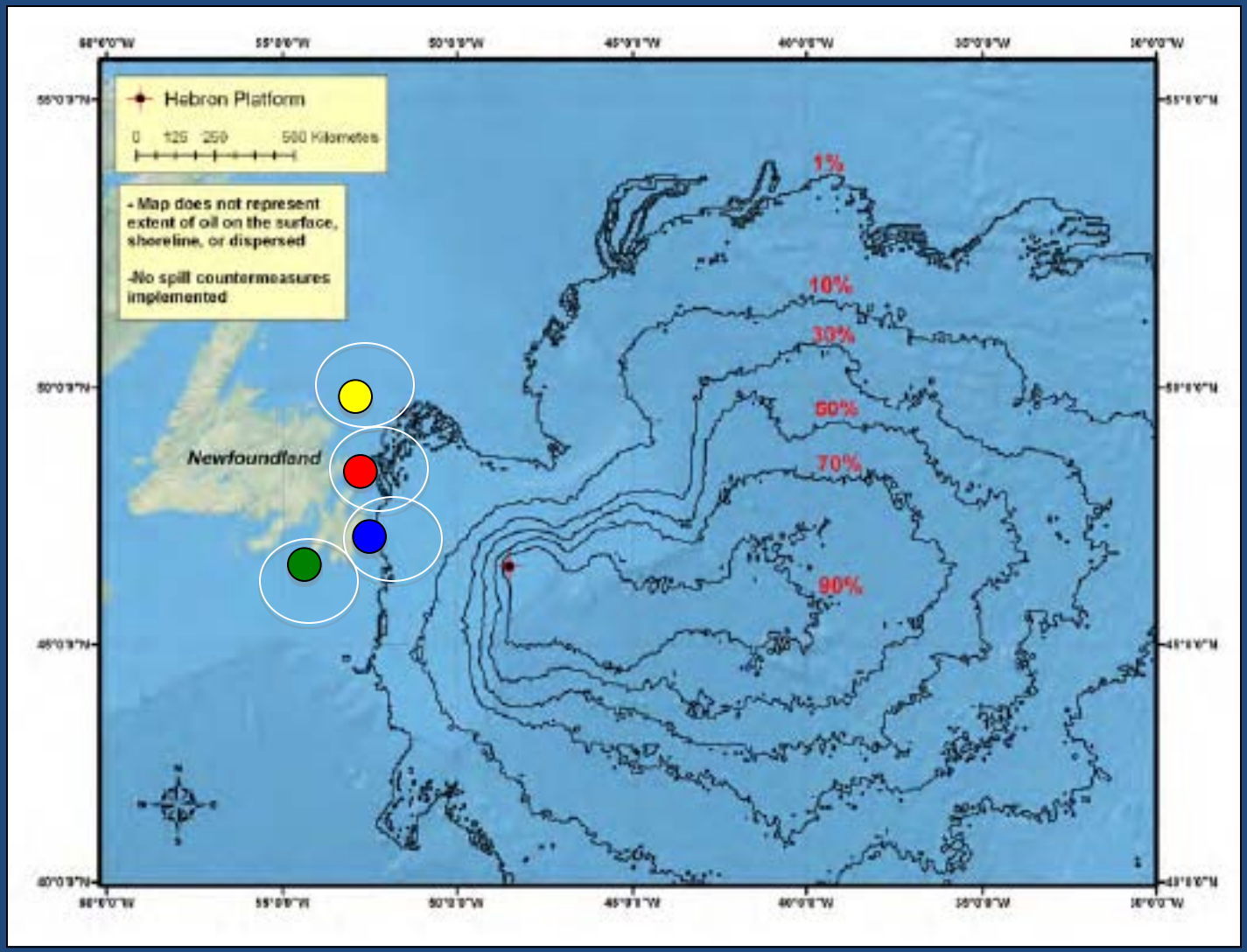

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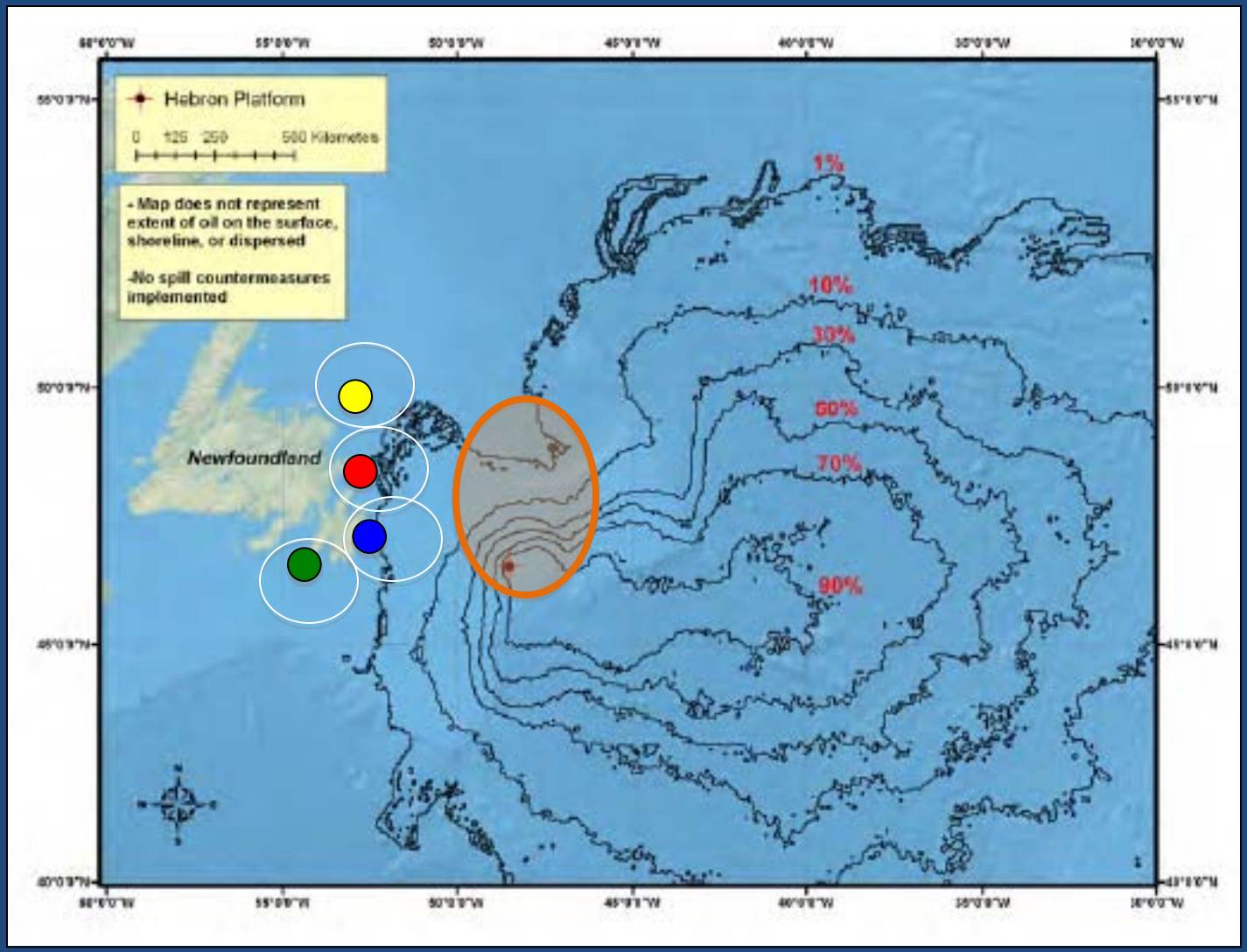

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Key Winter Habitat

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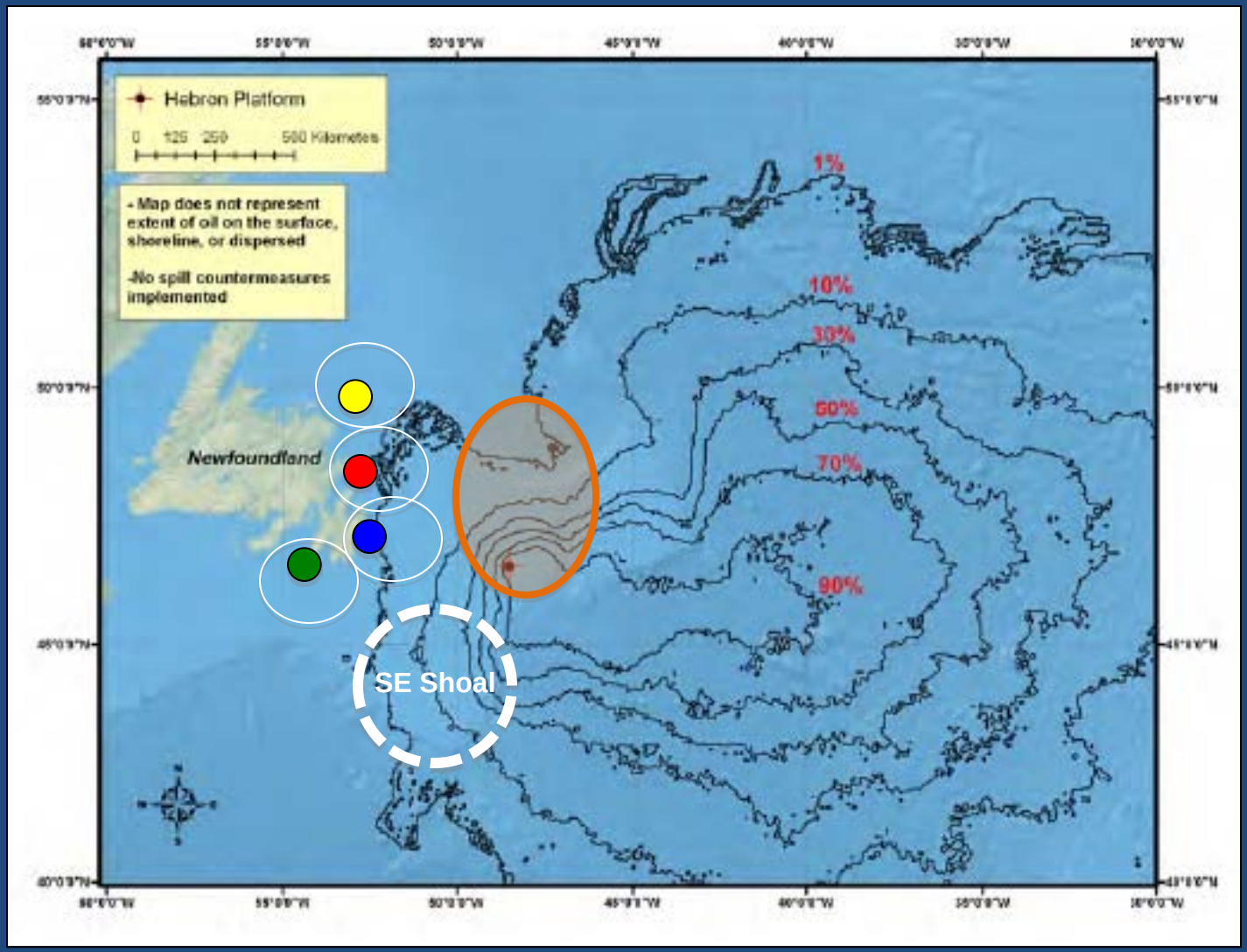

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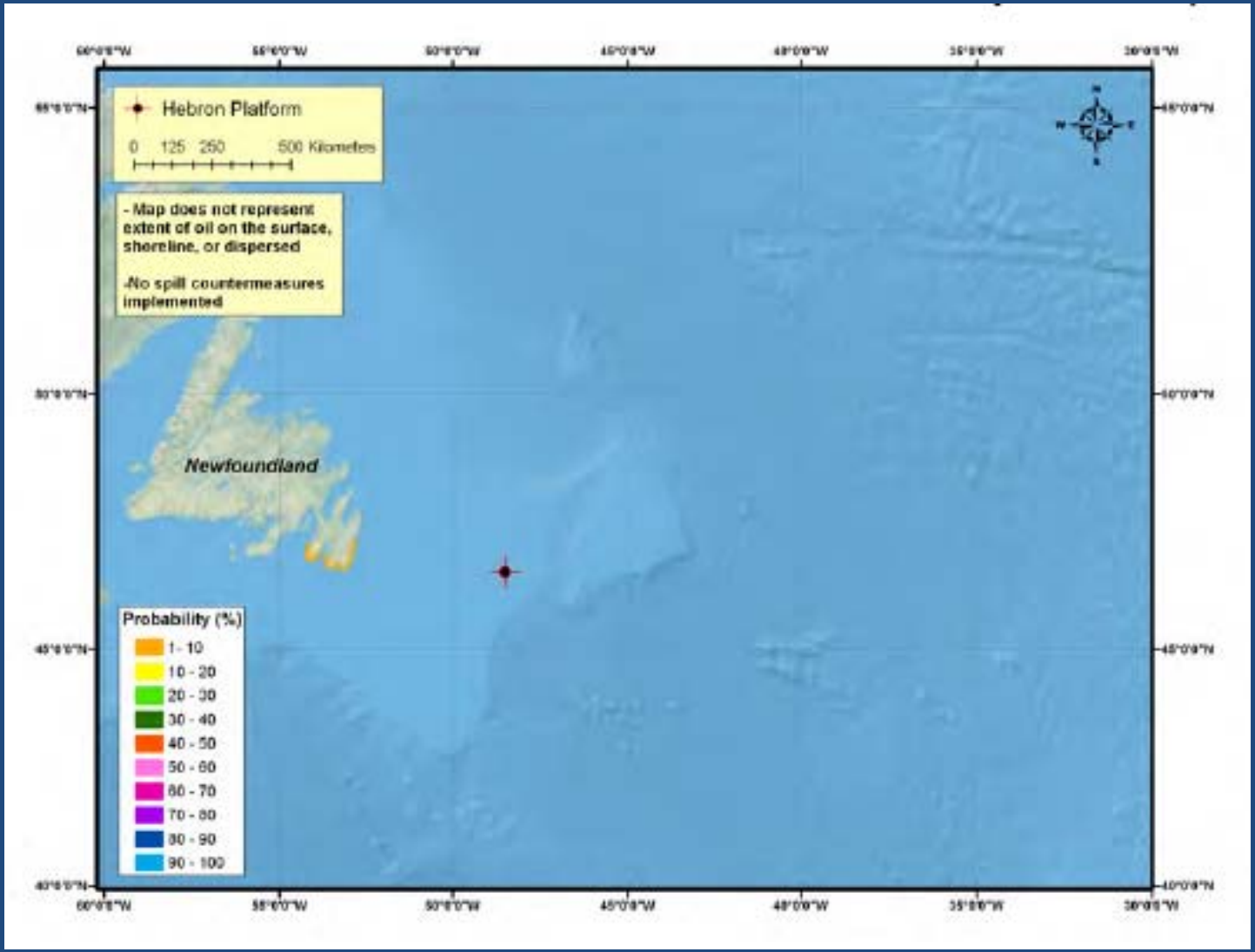

Fig 14-21 Probability of Shoreline Contact for Oil Thickness Greater than 0.01 mm; Surface Blow-out, 120 Days Winter

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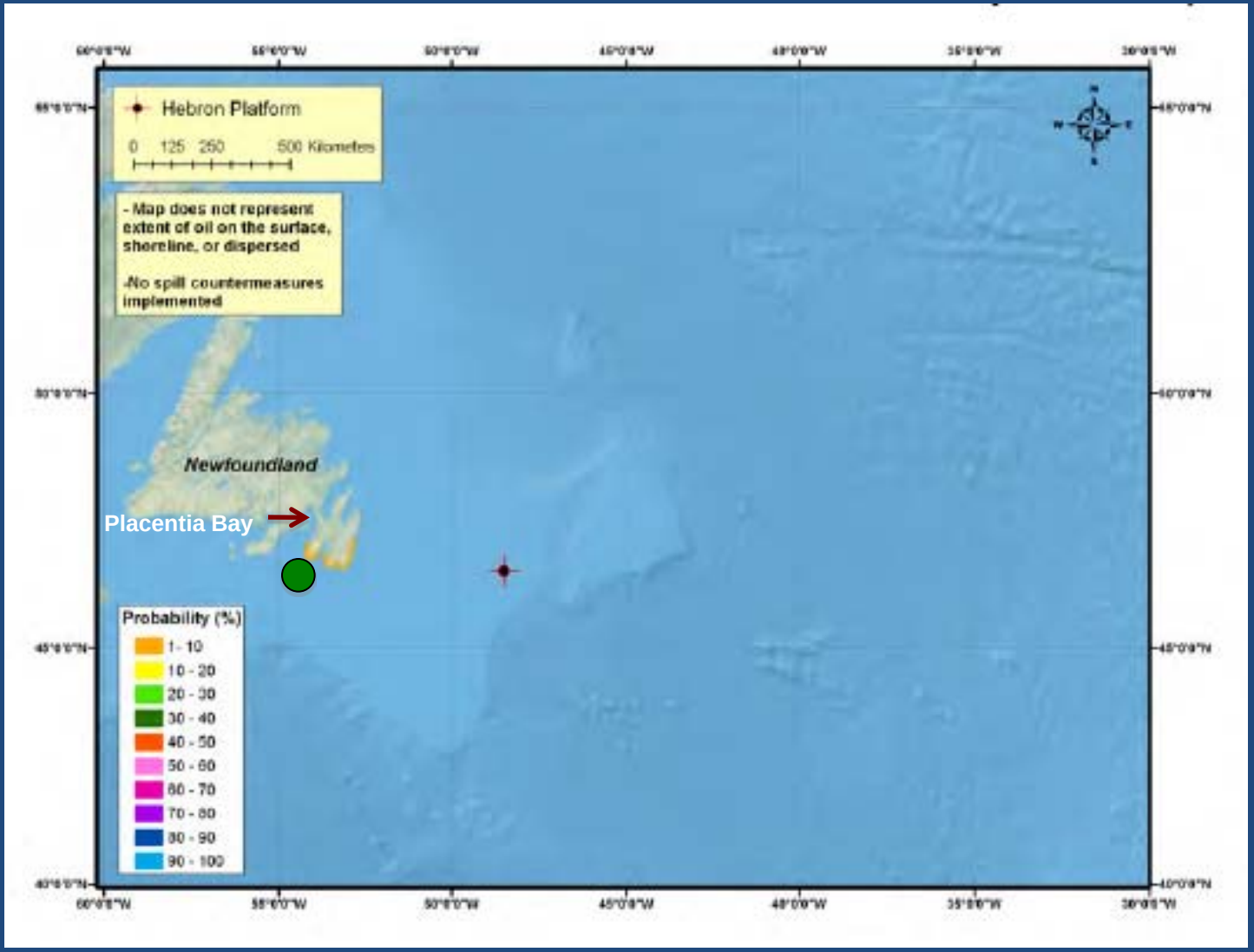

Cape St. Mary's

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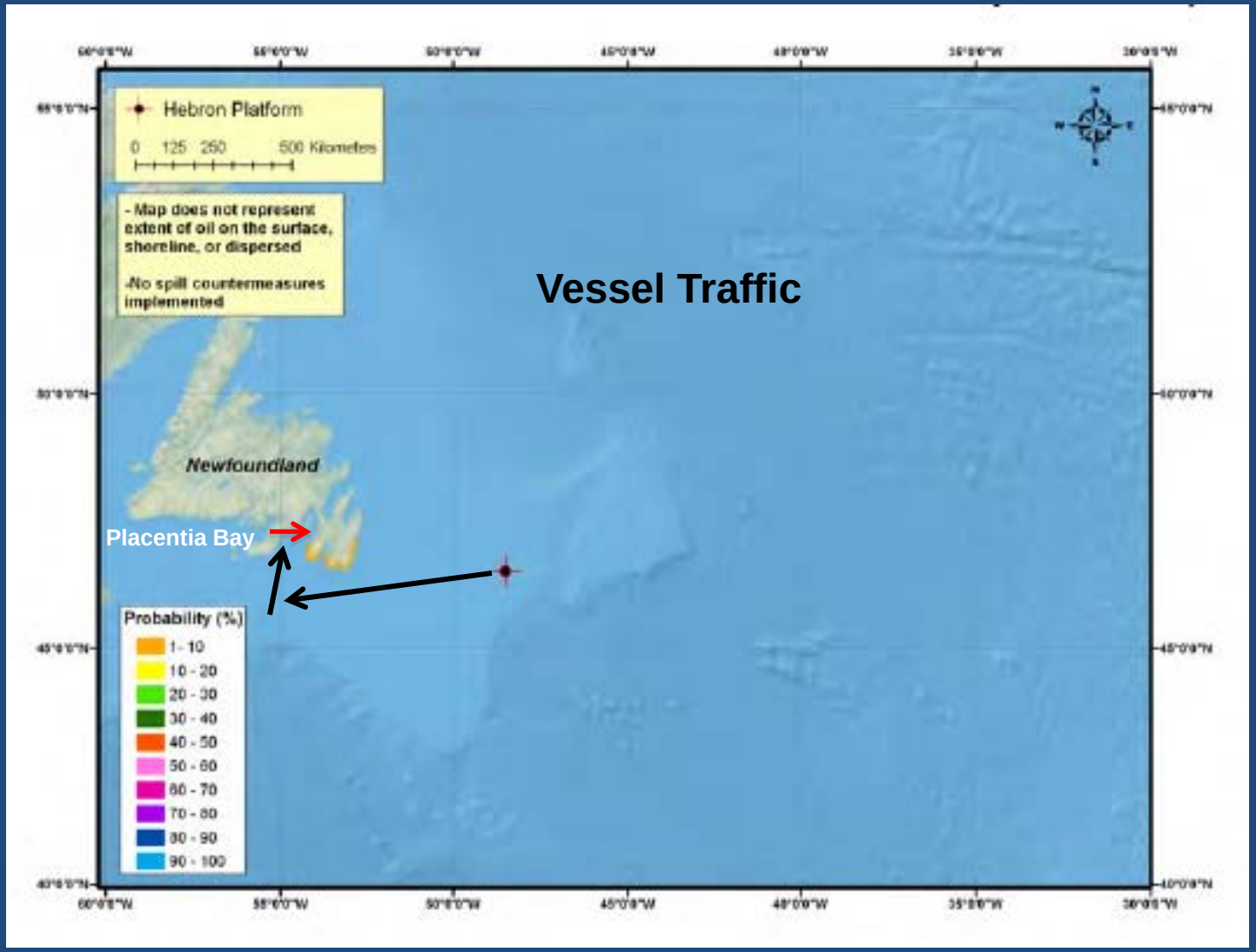

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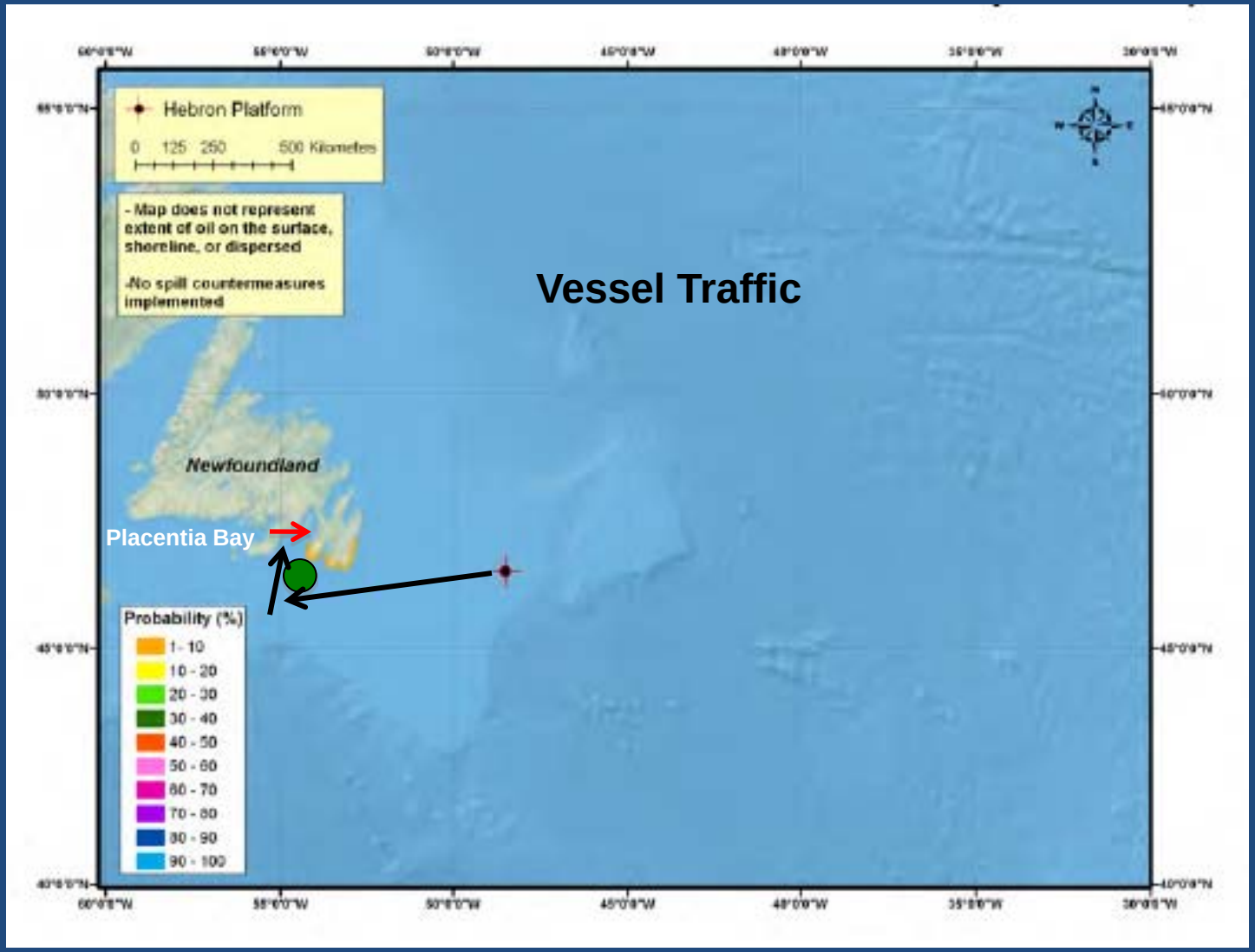

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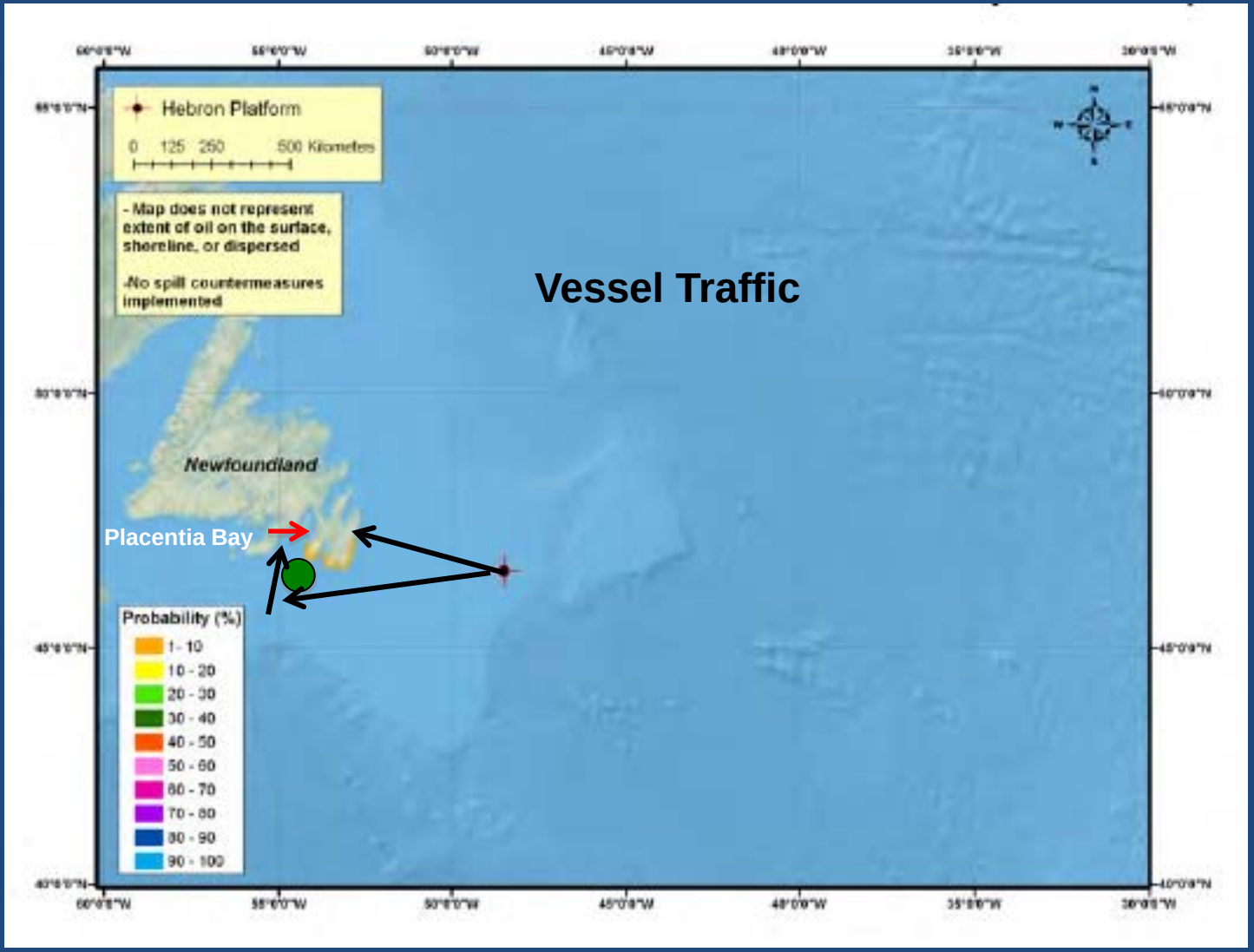

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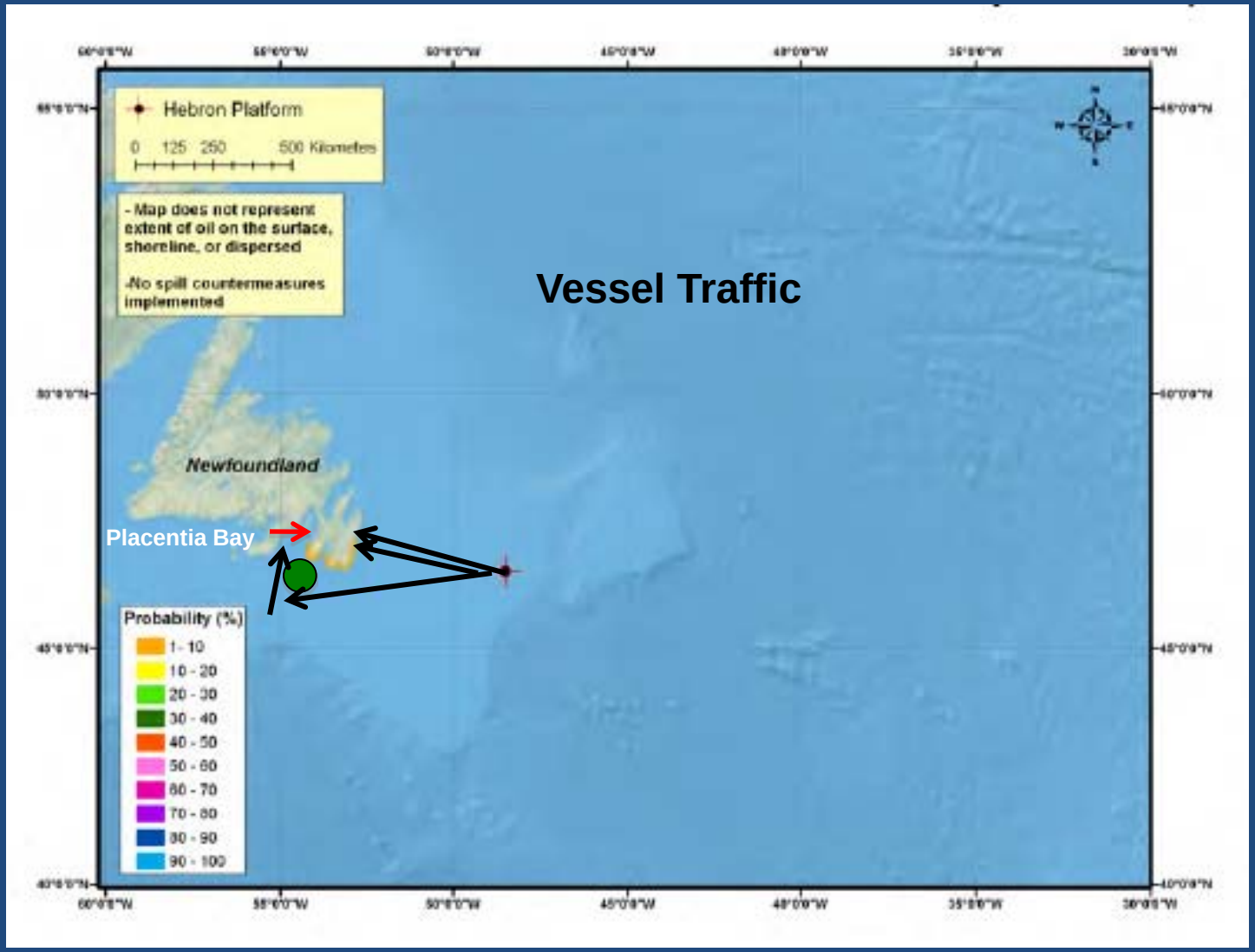

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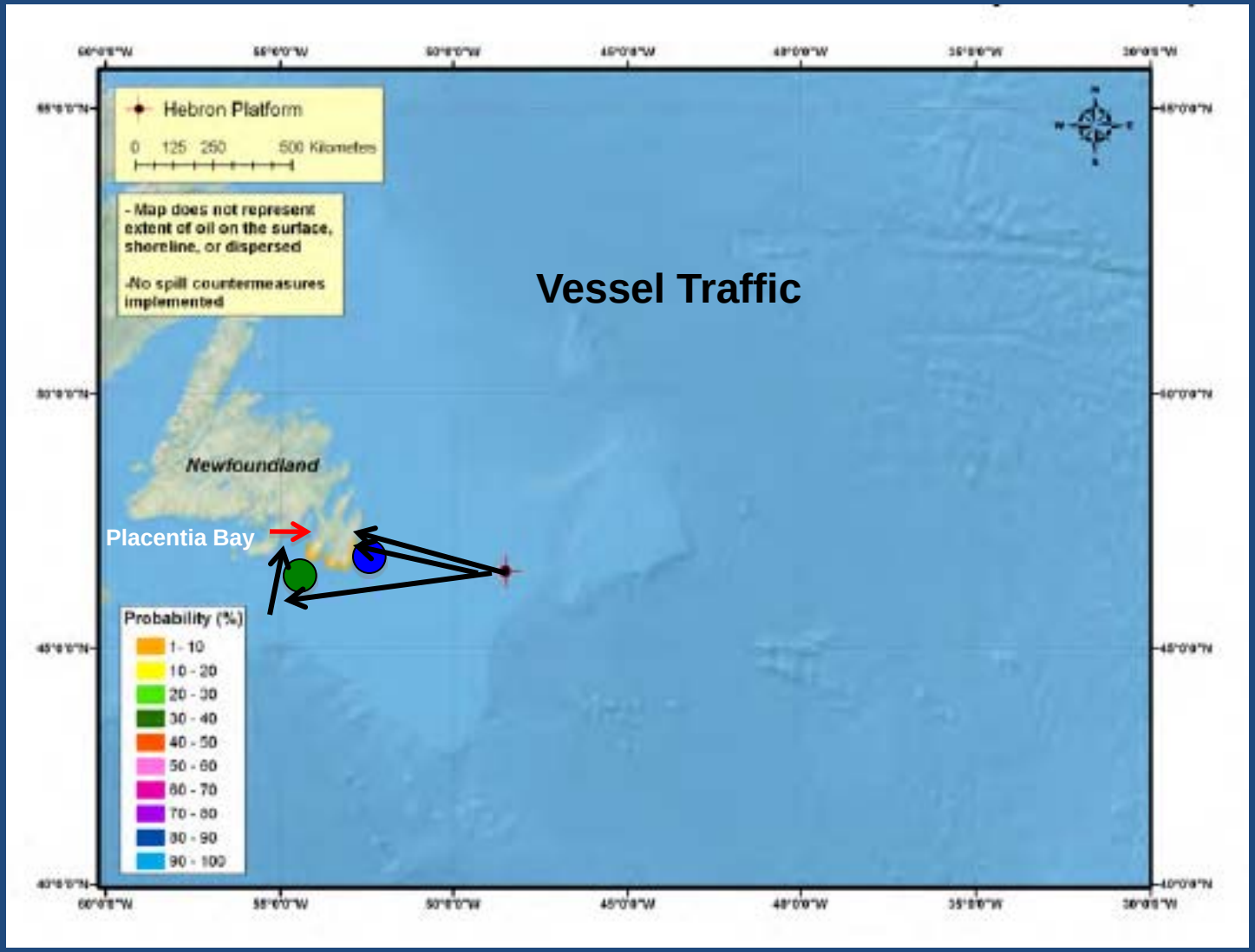

Witless Bay

Cape St. Mary's

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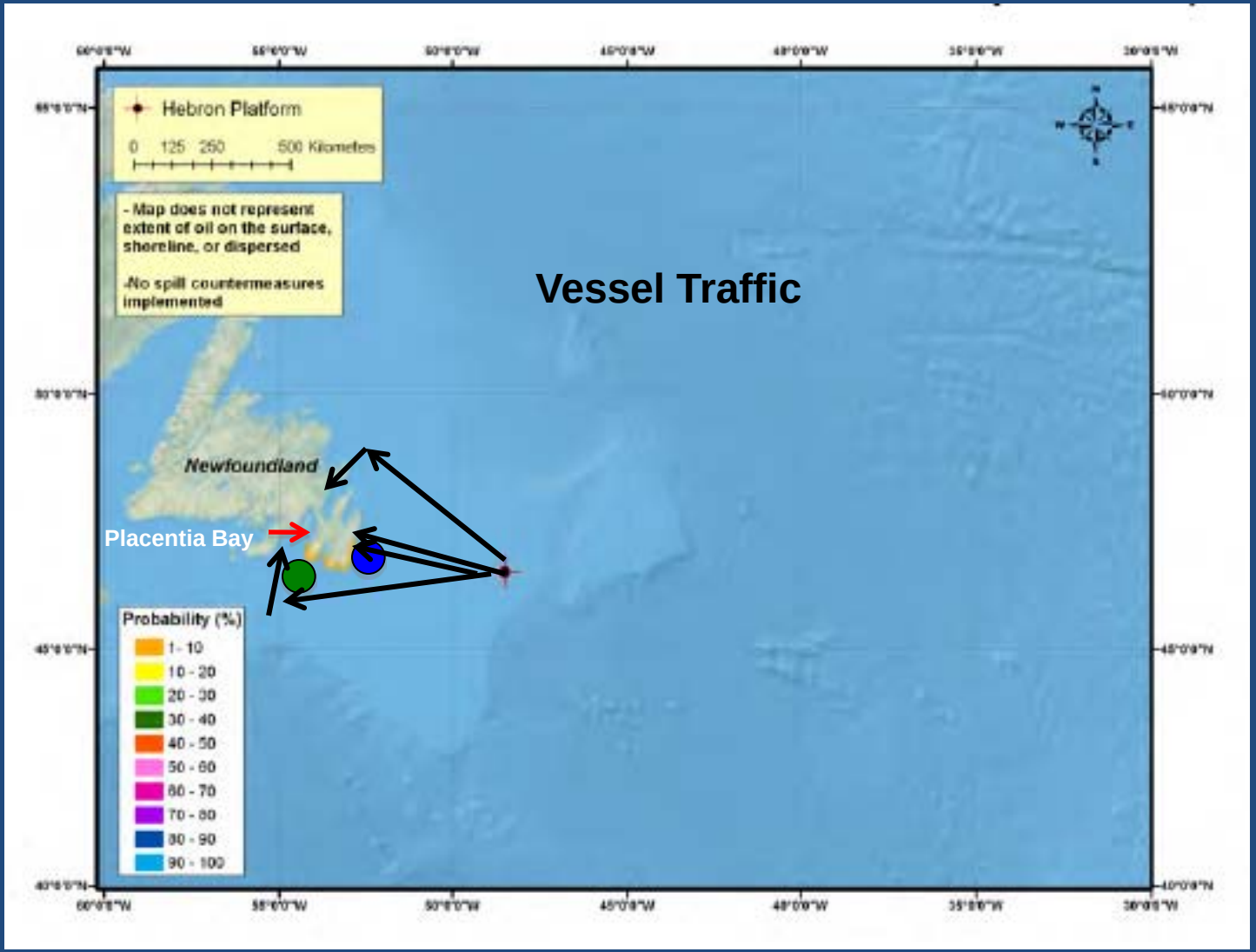

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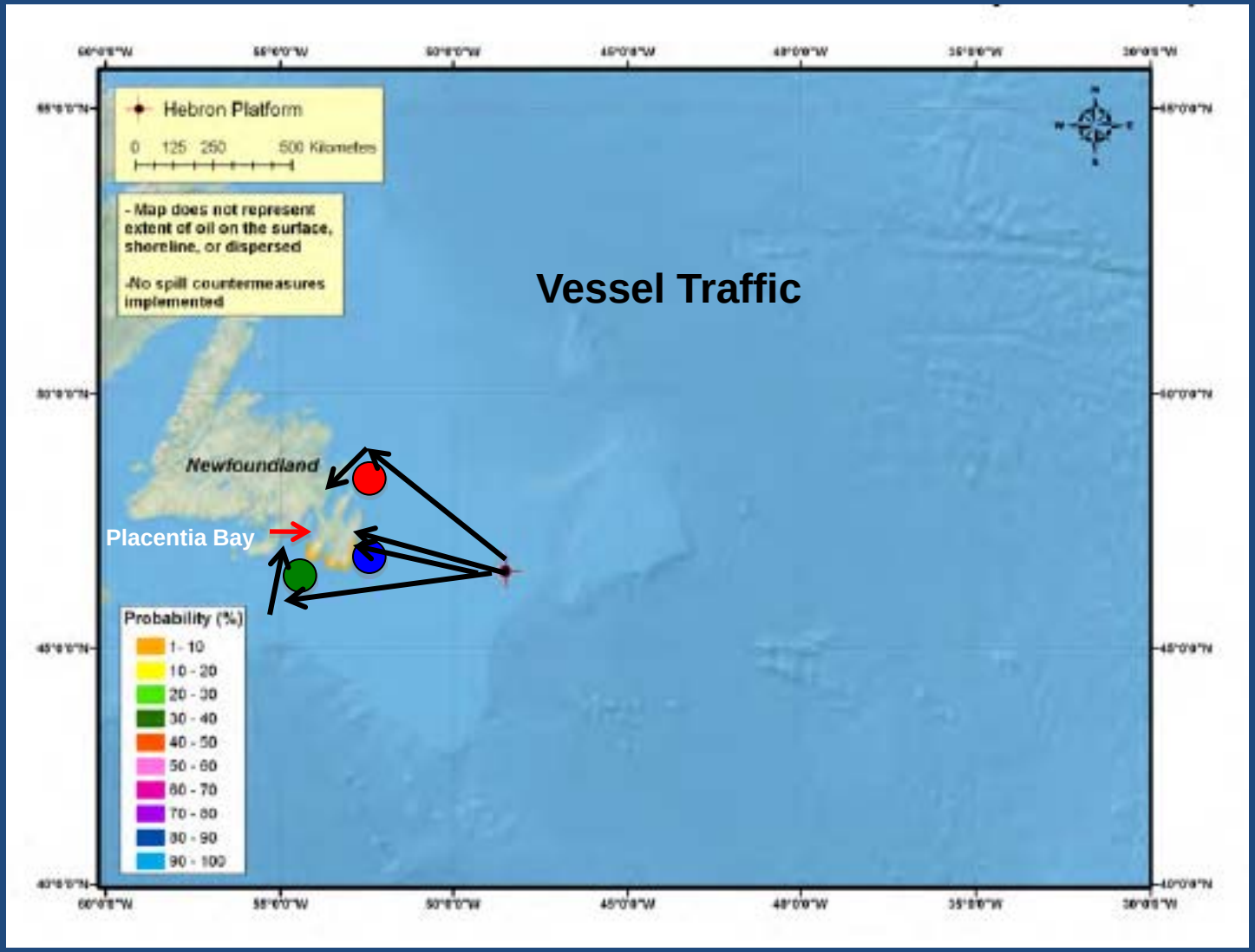

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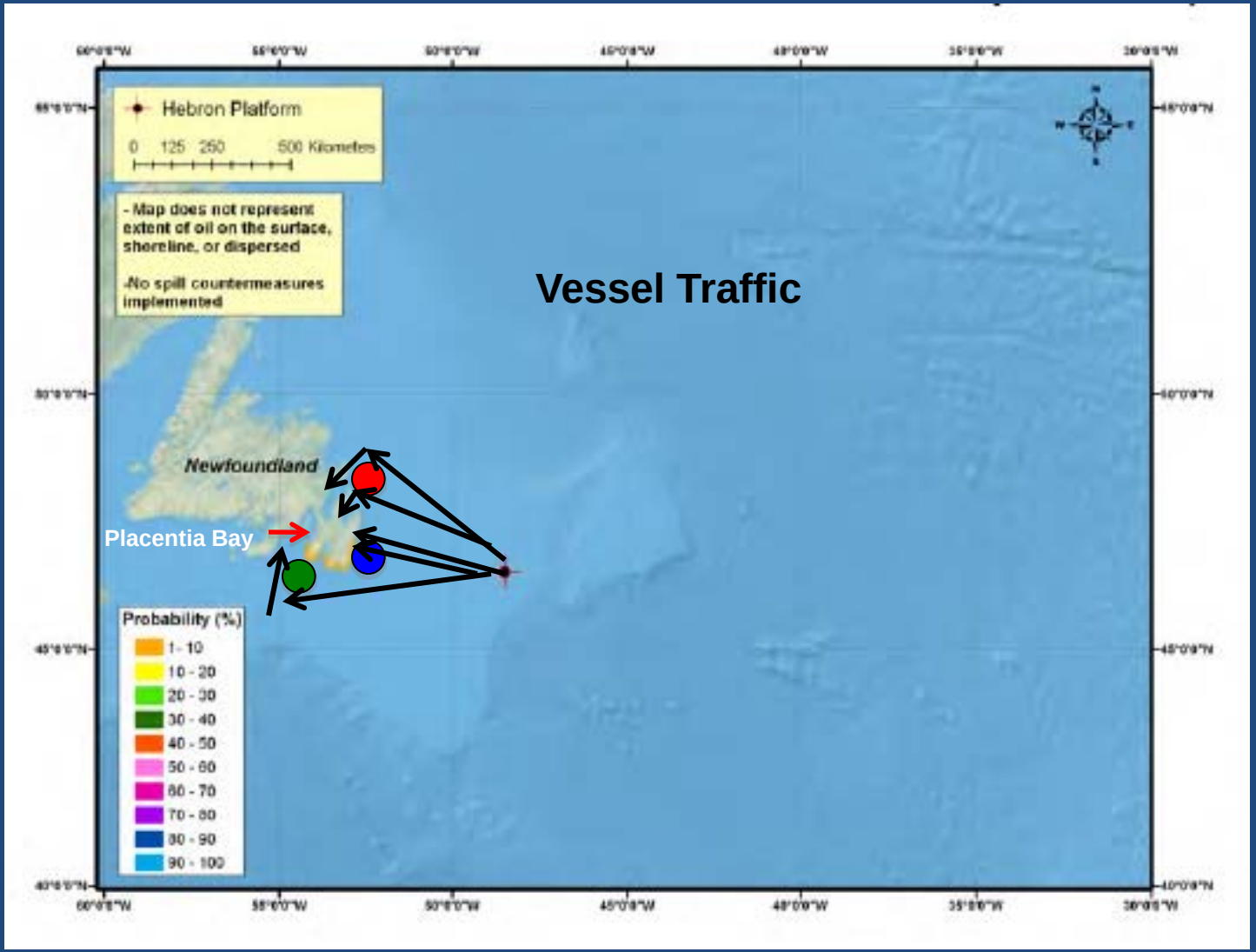

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CONCLUSION 1

Owing to the Exclusion of the Seabird Ecological Reserves Study Sites Are Inadequate for a Proper Environmental Assessment of the Proposed Hebron Development

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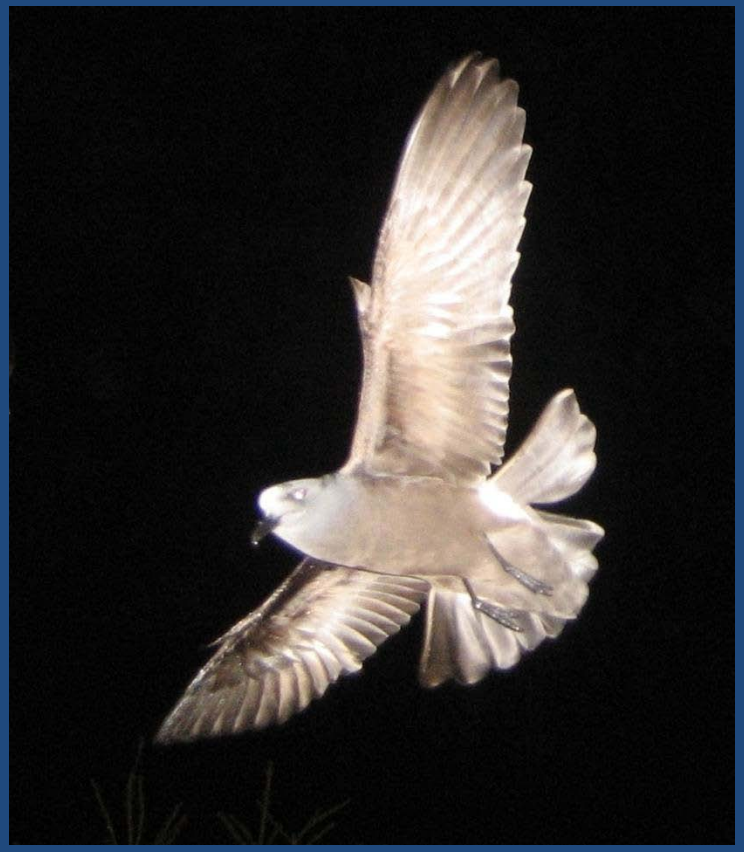

“ExxonMobil has a mature Operations Integrity Management (OIMS) that emphasizes relentless attention to Safety, Well Control and Environmental Protection.” (p. 14-16, 14-34)

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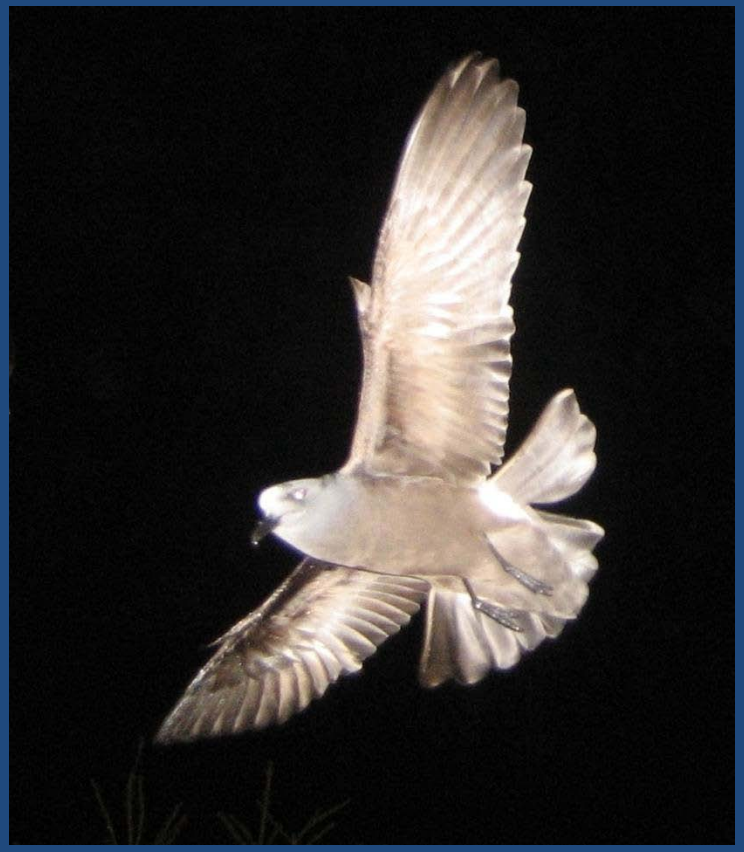

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Let’s Assess the Track Record

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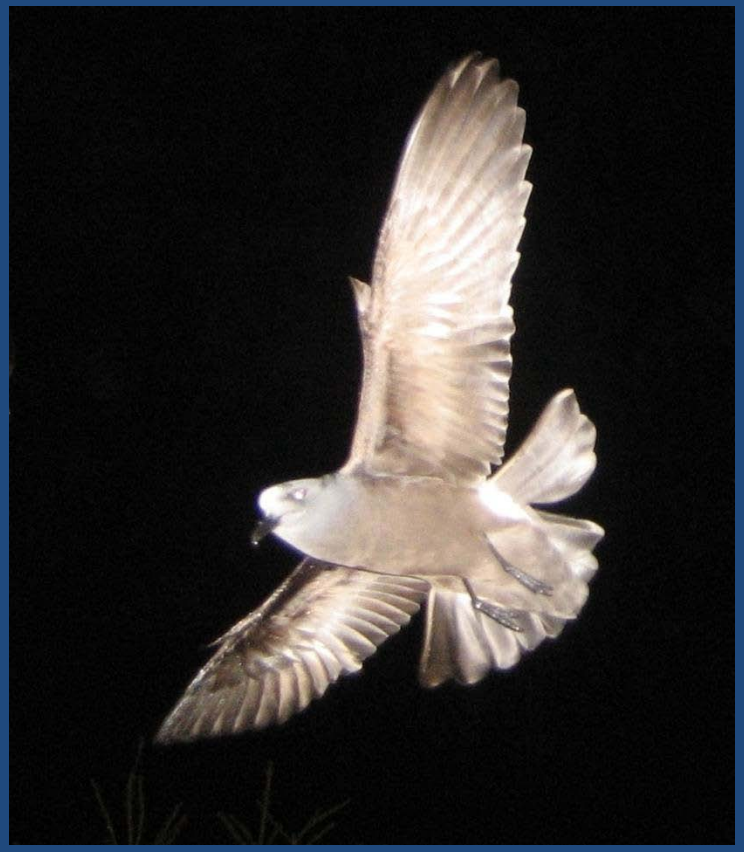

- Data Access and Transparency

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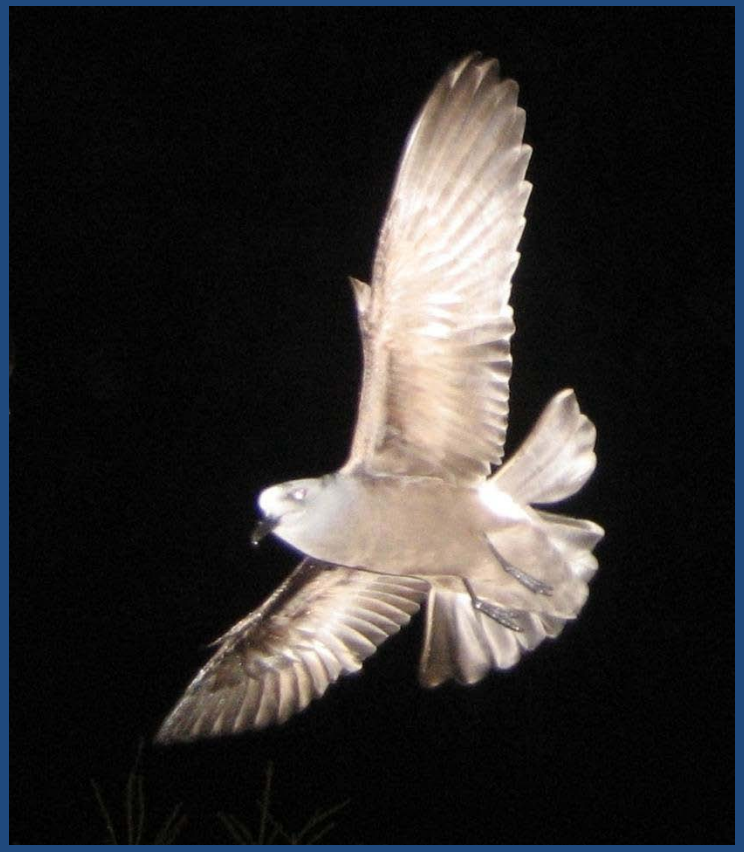

- Data Access and Transparency
- Protocols For Data Collection (Data Quality)

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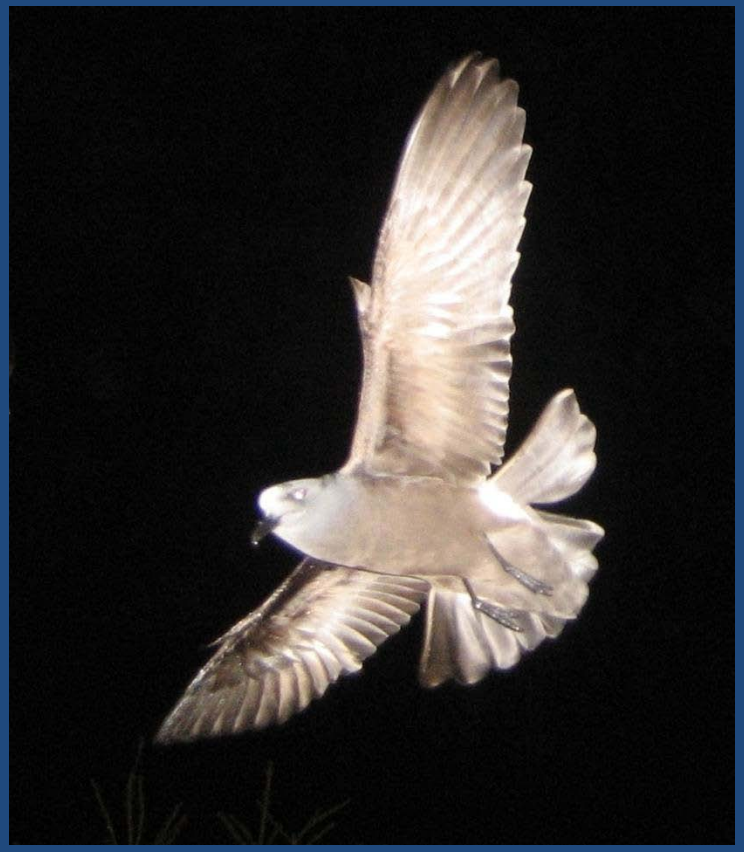

- Data Access and Transparency
- Protocols For Data Collection (Data Quality)
- Protocols and Data from Hibernia, Terra Nova and White Rose

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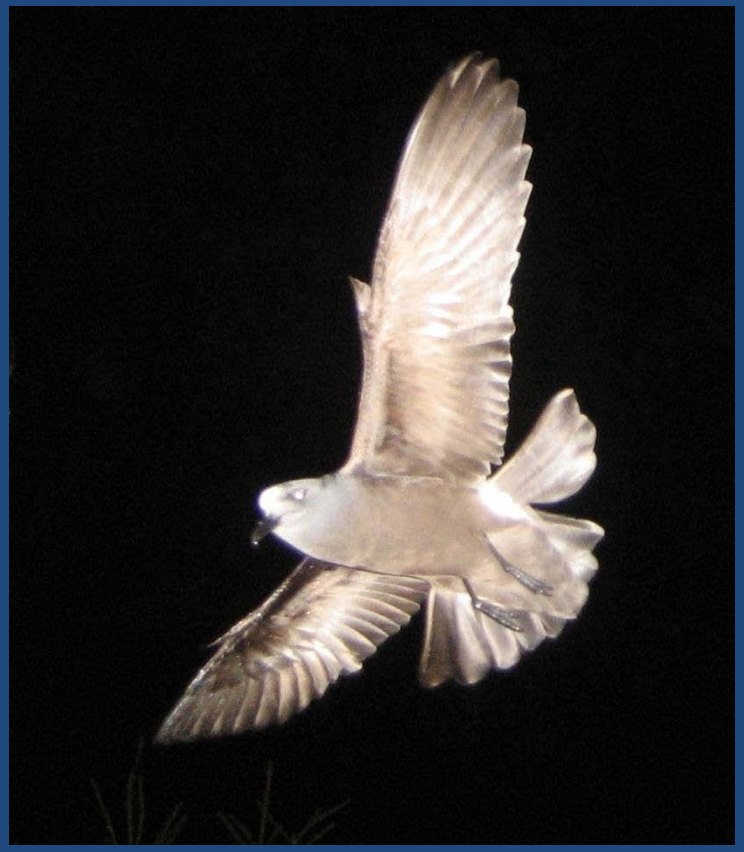

- "a mature Operations Integrity Management (OIMS)" Suggests That Relevant Protocols from the Hibernia Platform – the Longest Active Development in the Canadian Offshore - Would Be Presented

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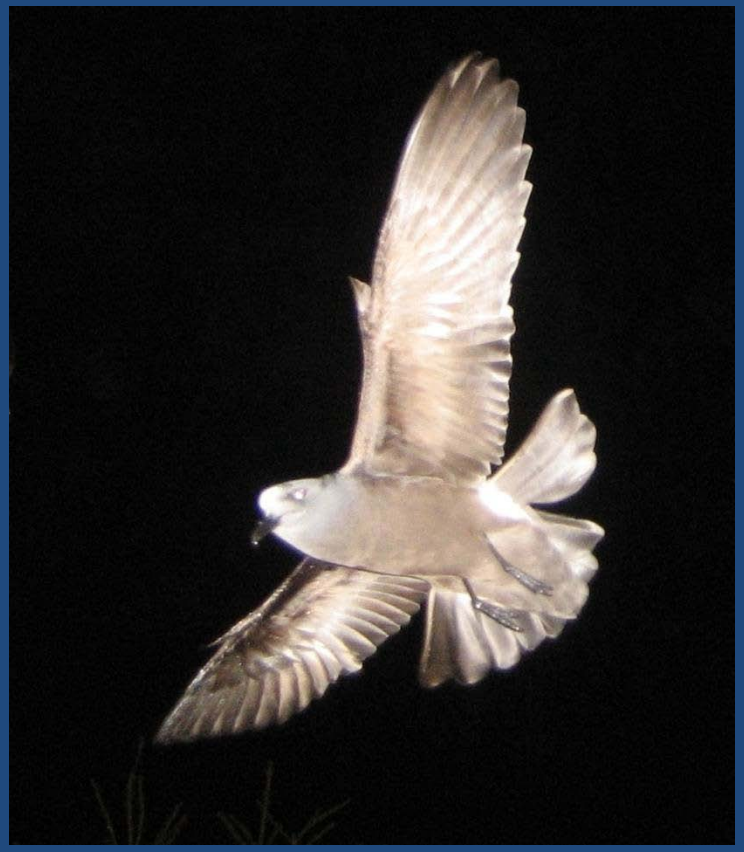

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- Where Are They?

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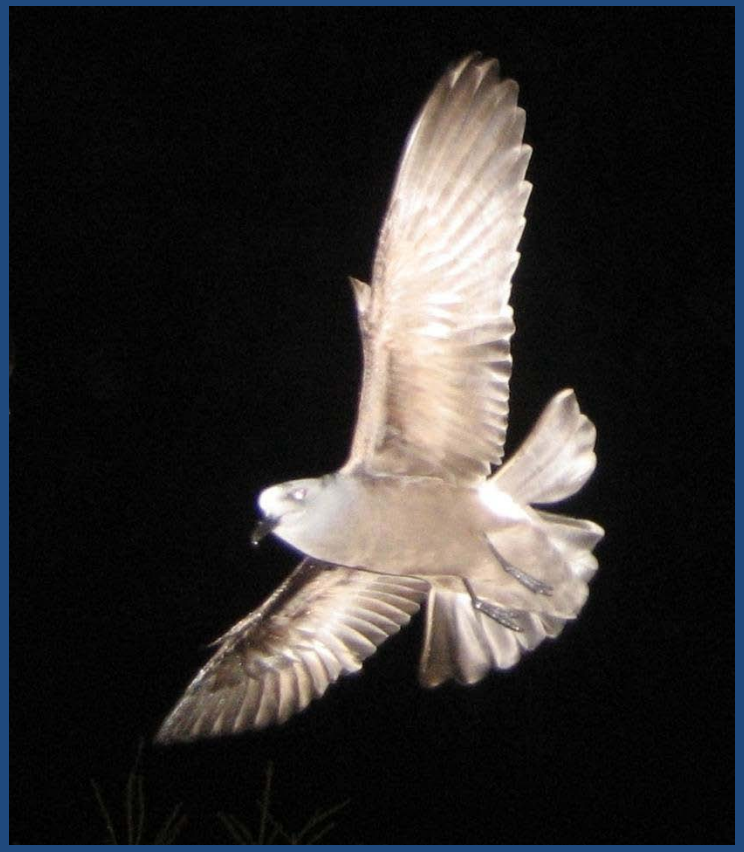

- "ExxonMobil Canada Properties (EMCP) will develop protocols for regular searches of birds that may become stranded on all vessels and facilities." (9.5.1.2)

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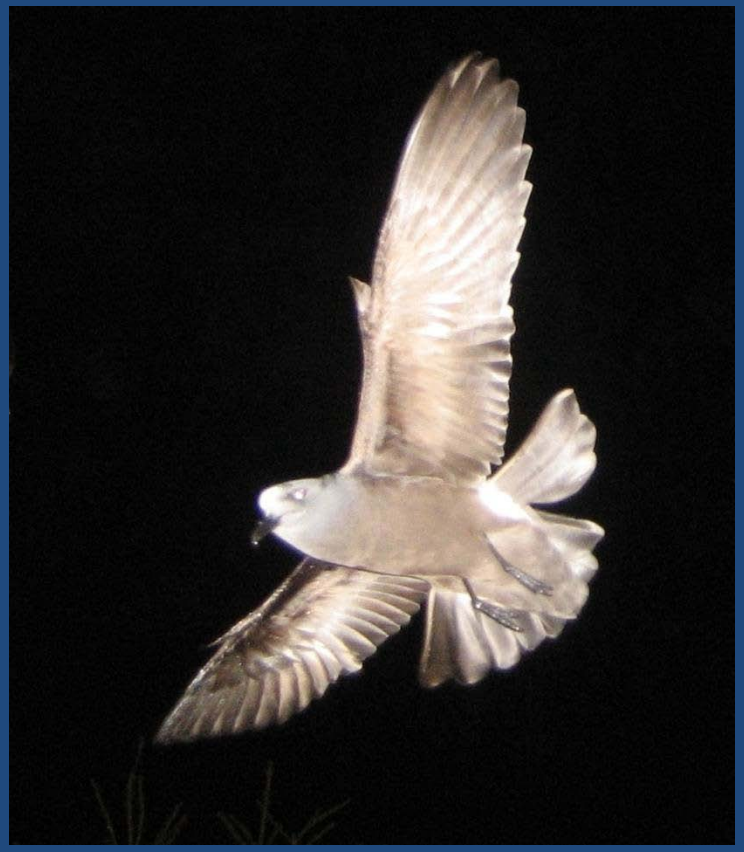

•"ExxonMobil Canada Properties (EMCP) **will** develop protocols for regular searches of birds that may become stranded on all vessels and facilities." (9.5.1.2)

Why **will**?

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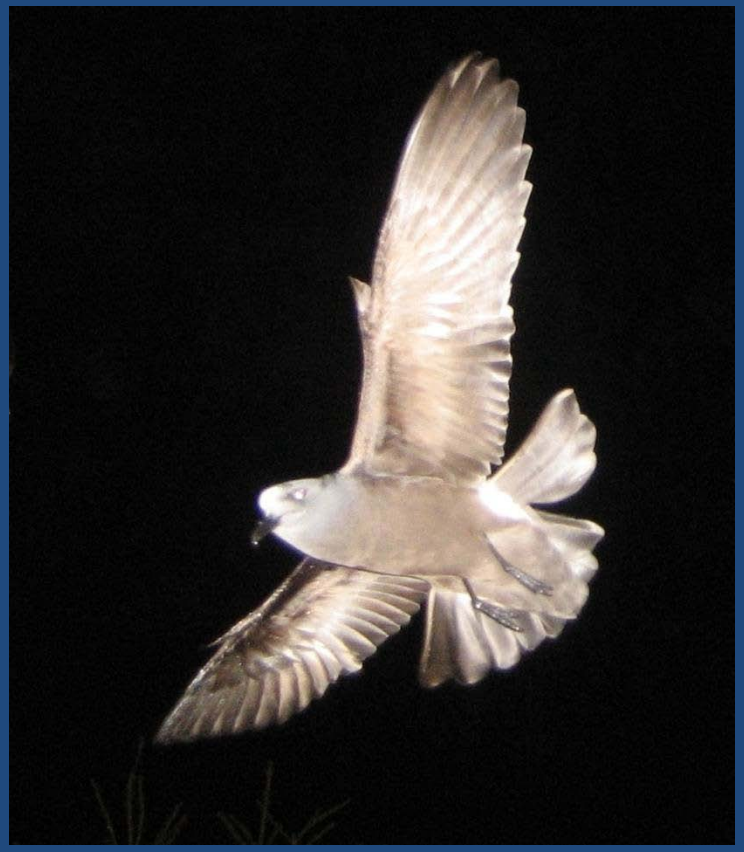

- "ExxonMobil Canada Properties (EMCP) **will** develop protocols for regular searches of birds that may become stranded on all vessels and facilities." (9.5.1.2)
- "Mitigation described in Section 9.5.1.2 will also be applied during the operation to limit potential environmental effects ..." (9.5.1.4)

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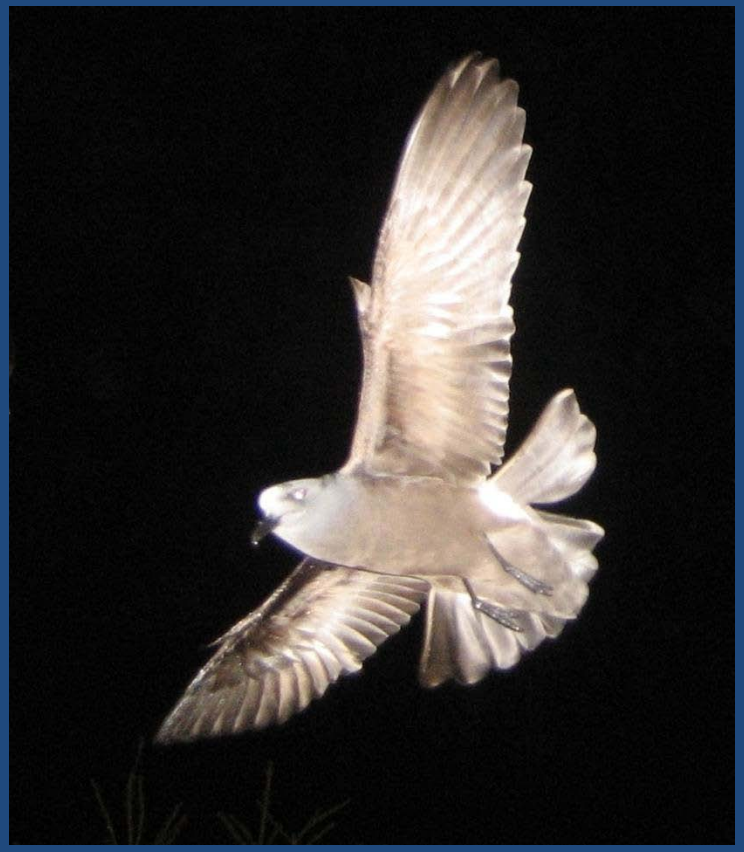

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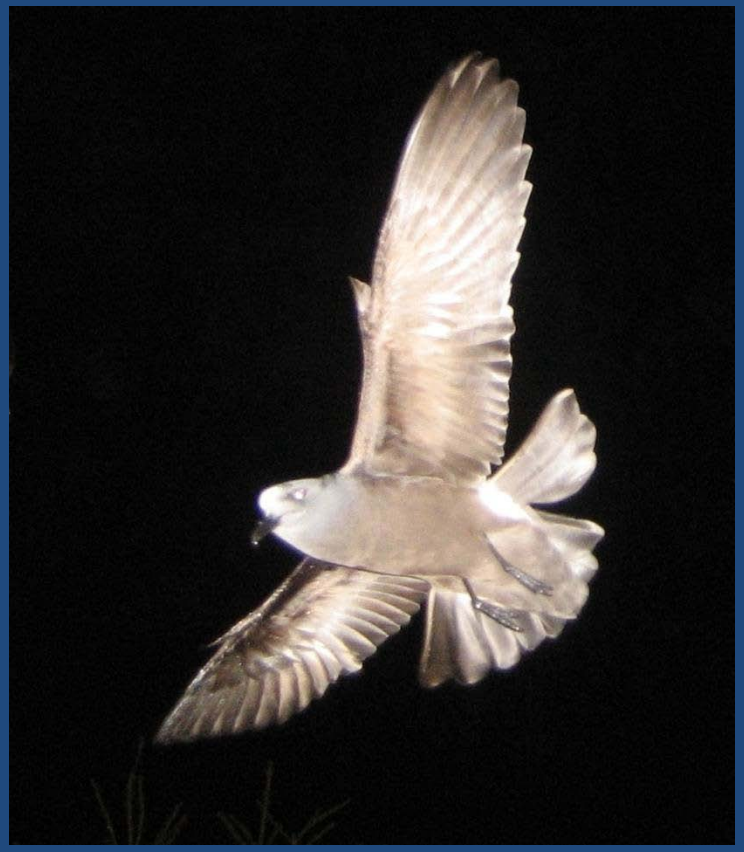

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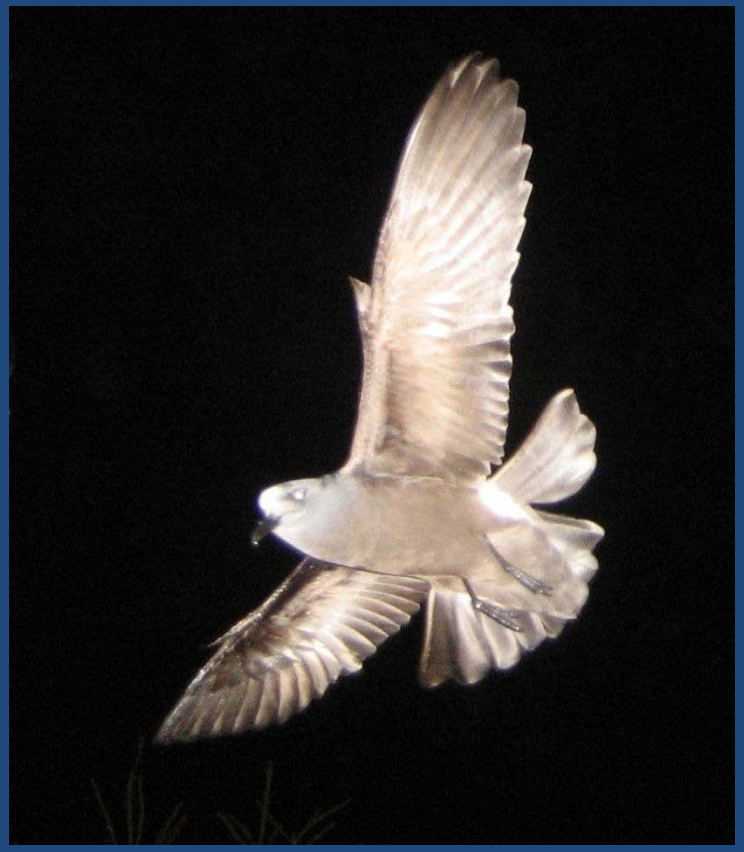
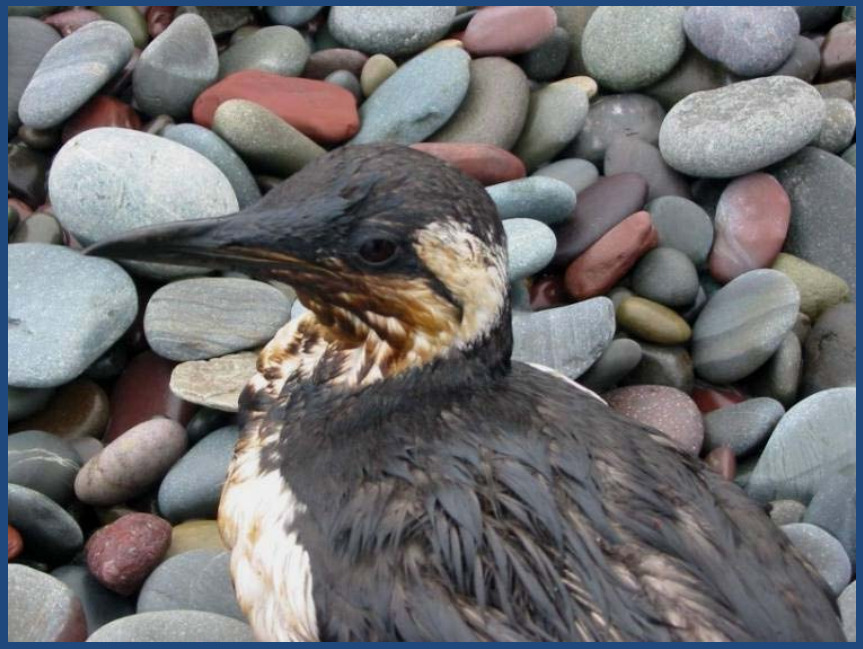
- Why Have They Not Been Implemented?

CONCLUSION 2



The Hebron Study Report Provides No Protocols To Assess Seabird Occurrences and Mortality

3 - PLANNING FOR EPISODIC EVENTS



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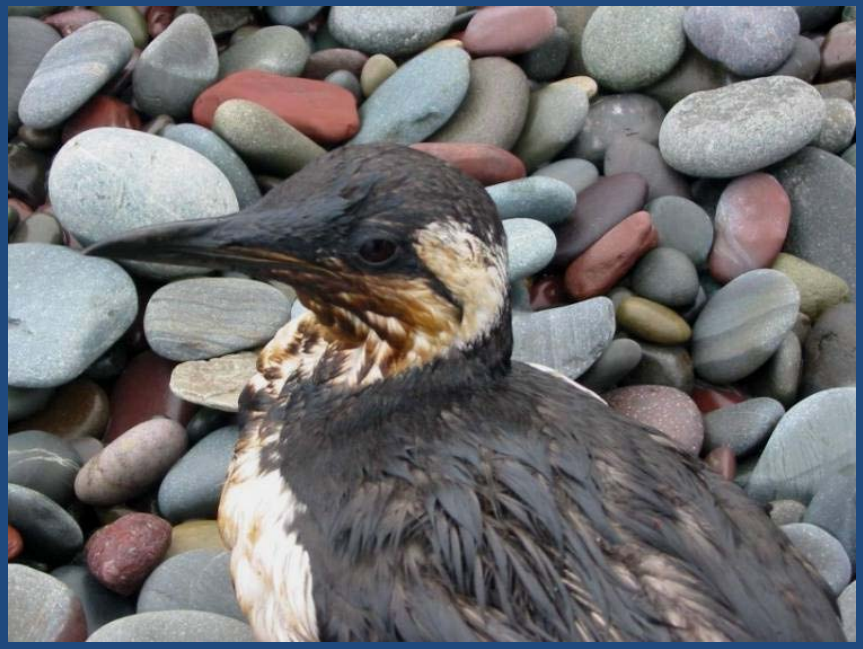

“An average of less than one Leach’s Storm-Petrel per day was recorded from the drill platform on the northeast Grand Banks 1999 to 2002 (Baillie et al. 2005).” 9-19

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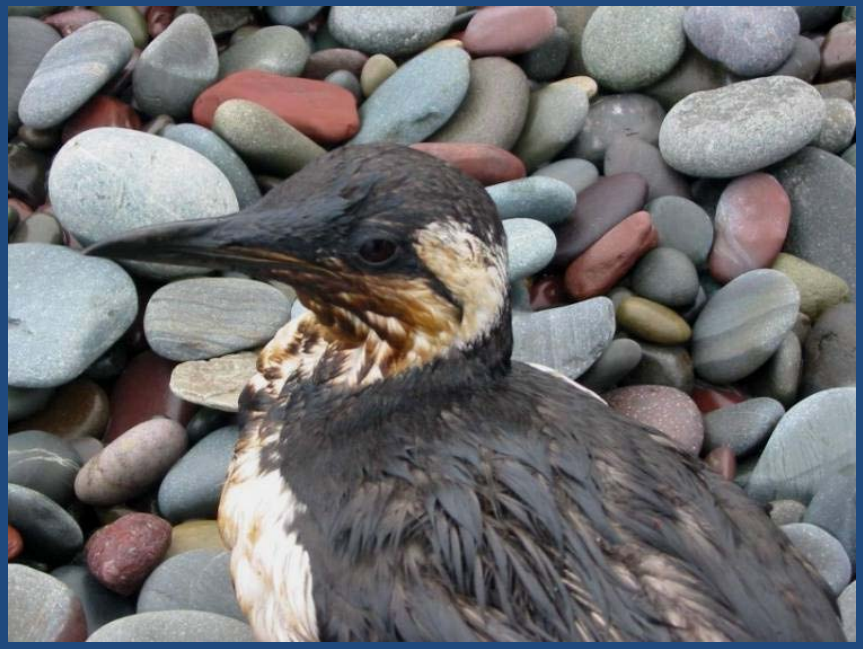

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Independent Researchers Have No Access to This Report
Many Others Cited in the Hebron Report

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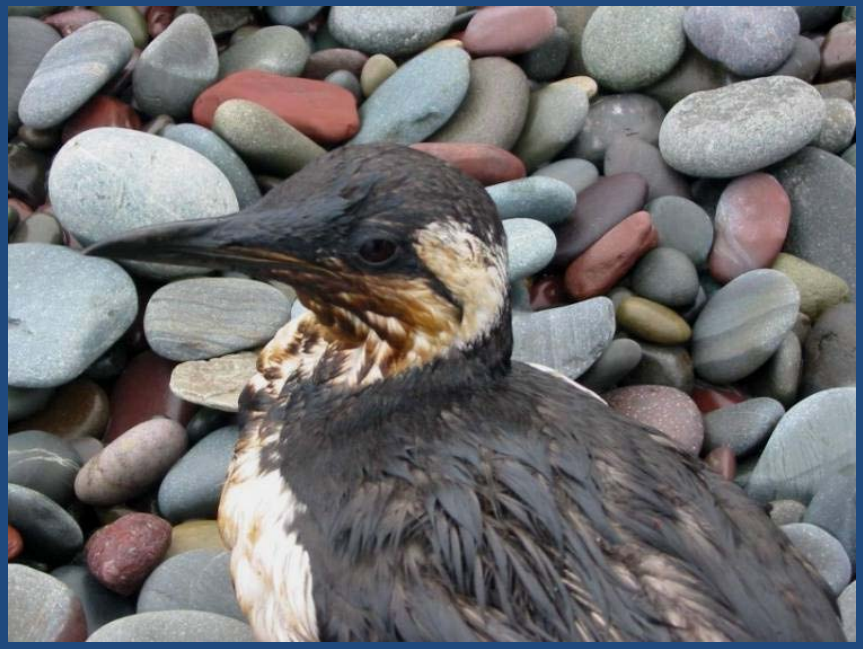

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Many Others Cited in the Hebron Report

Key Research from Memorial University on Marine Birds Is Not Used and Is Not Properly Referenced

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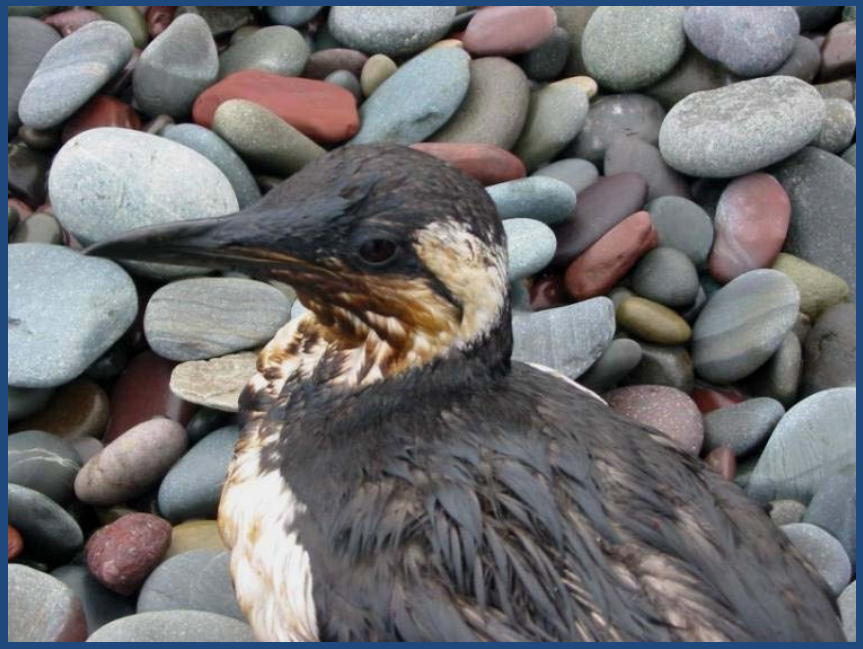

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Episodic Aperiodic Rare Events Are Not Well Described By Averages

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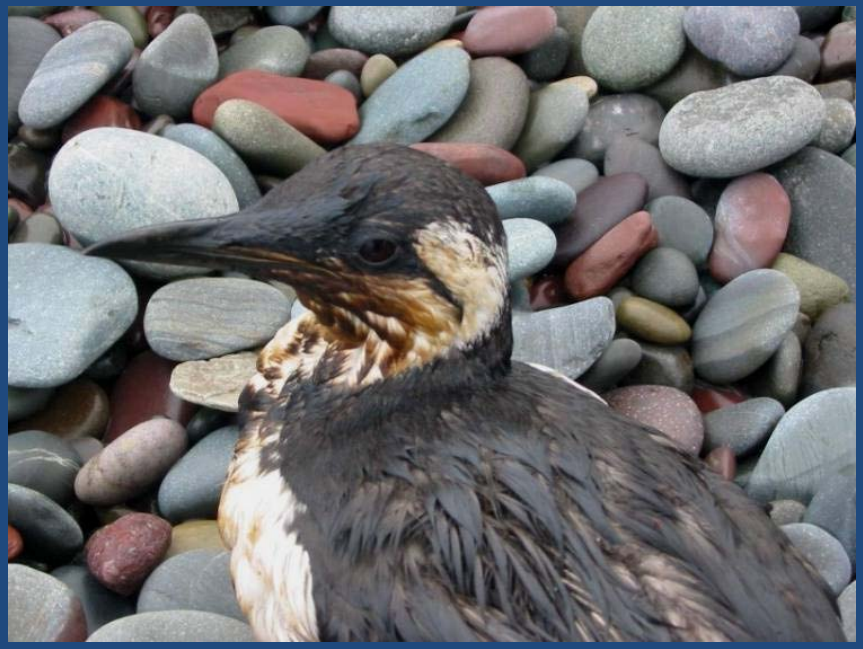

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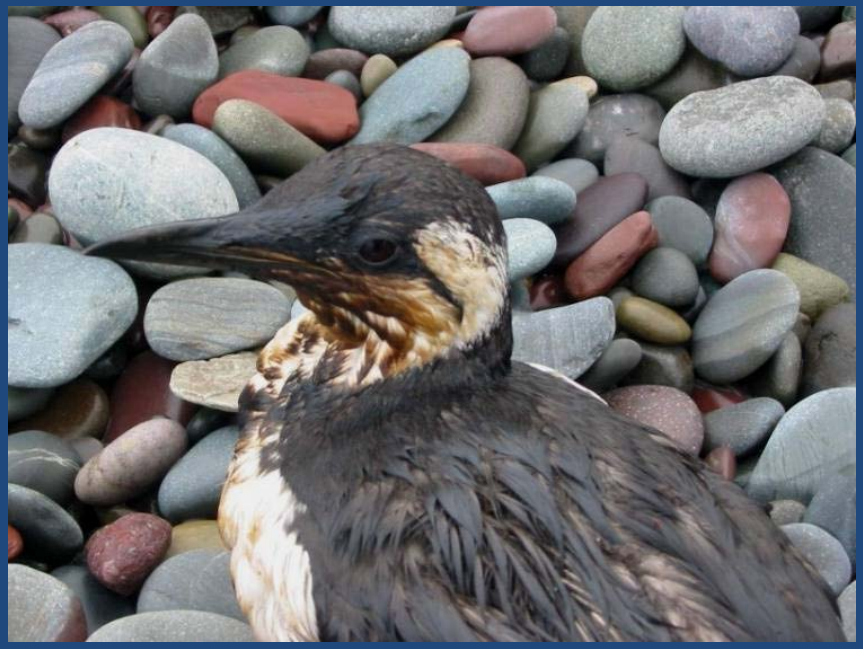
Episodic Aperiodic Rare Events Are Not Well Described By Averages

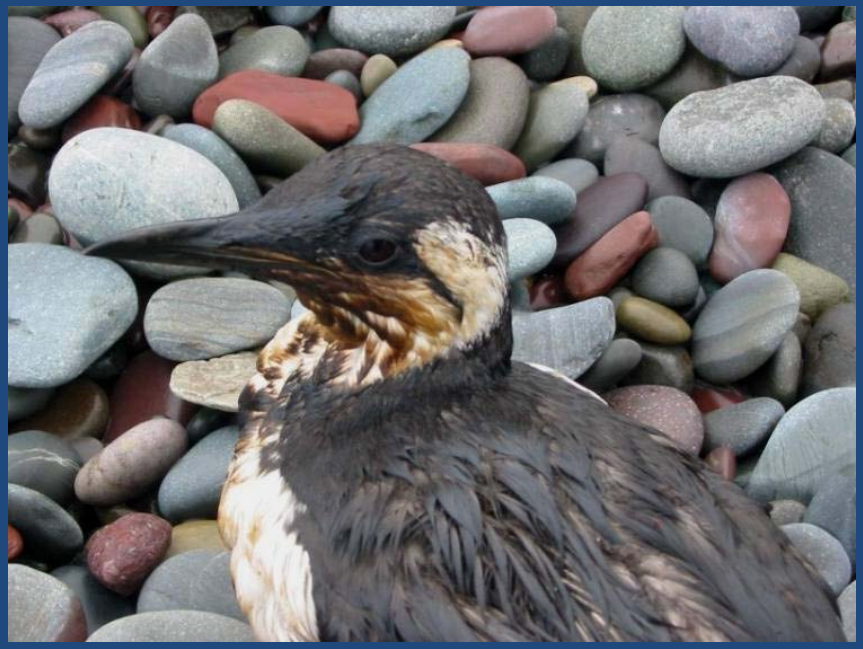
For example, it is likely that less than one bird per day was killed by oil tanker spills in Prince William Sounds 1985 to 1988, but after 24 March 1989 there were 300,000 oil-related deaths

3 - PLANNING FOR EPISODIC EVENTS



How Can We Attempt to Understand Episodic Seabird Occurrences at Offshore Platforms and on Support Vessels?

3 - PLANNING FOR EPISODIC EVENTS



How Can We Attempt to Understand Episodic Seabird Occurrences at Offshore Platforms and on Support Vessels?

Robust Scientific Seasonal Monitoring Protocols

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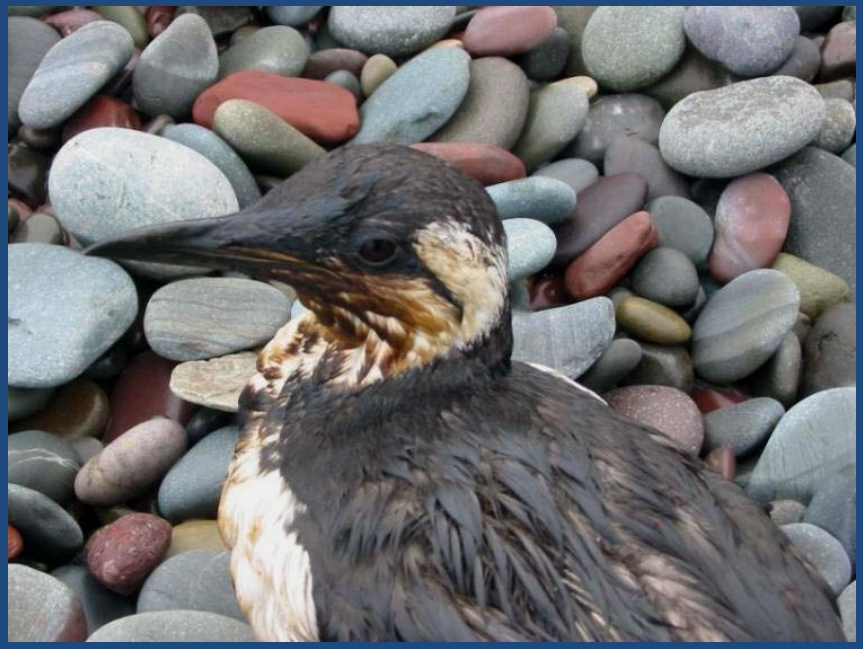

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These Are Not Available

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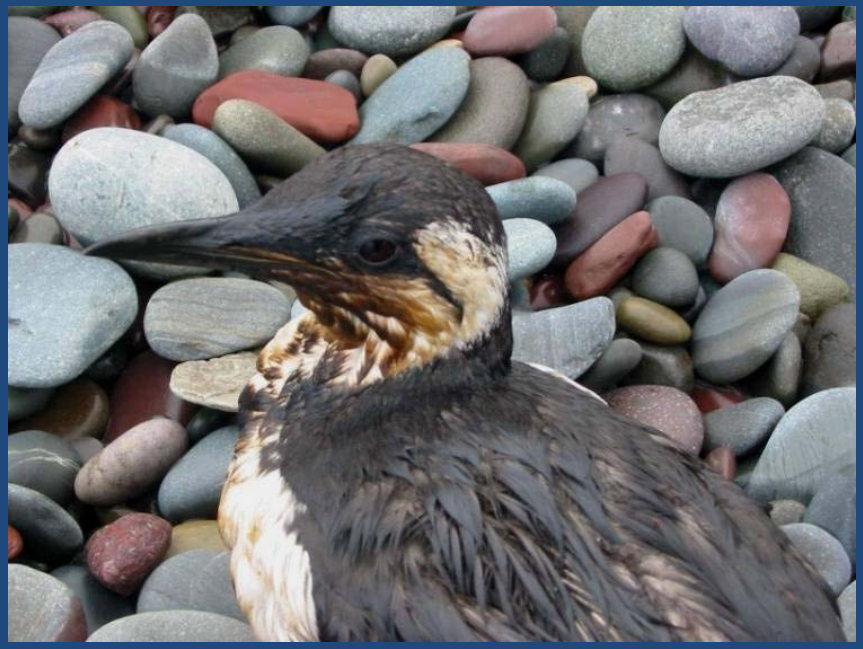

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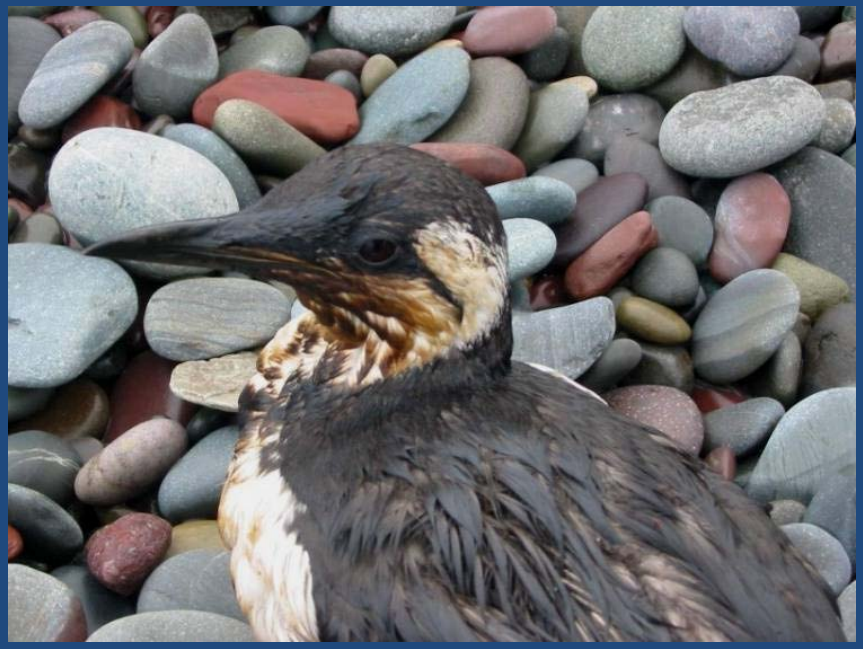
Why?

CONCLUSION 3



There is an Absence of Monitoring Protocols To Understand the Episodic Occurrences of Marine Birds at the Proposed Hebron Development

4 - INDEPENDENT ASSESSMENT AND INPUT

Brief Contrast of ~50 Days of Independent Research

by Memorial University Seabird Researchers in Platform Areas

Compared with 15 Years of Seabird Effort by the Proponent

4 - INDEPENDENT ASSESSMENT AND INPUT

EMCP – "Some marine birds, particularly gulls, may be attracted to sewage particles, but the small amount is unlikely to increase the abundance of marine birds in the offshore study area." 9-45

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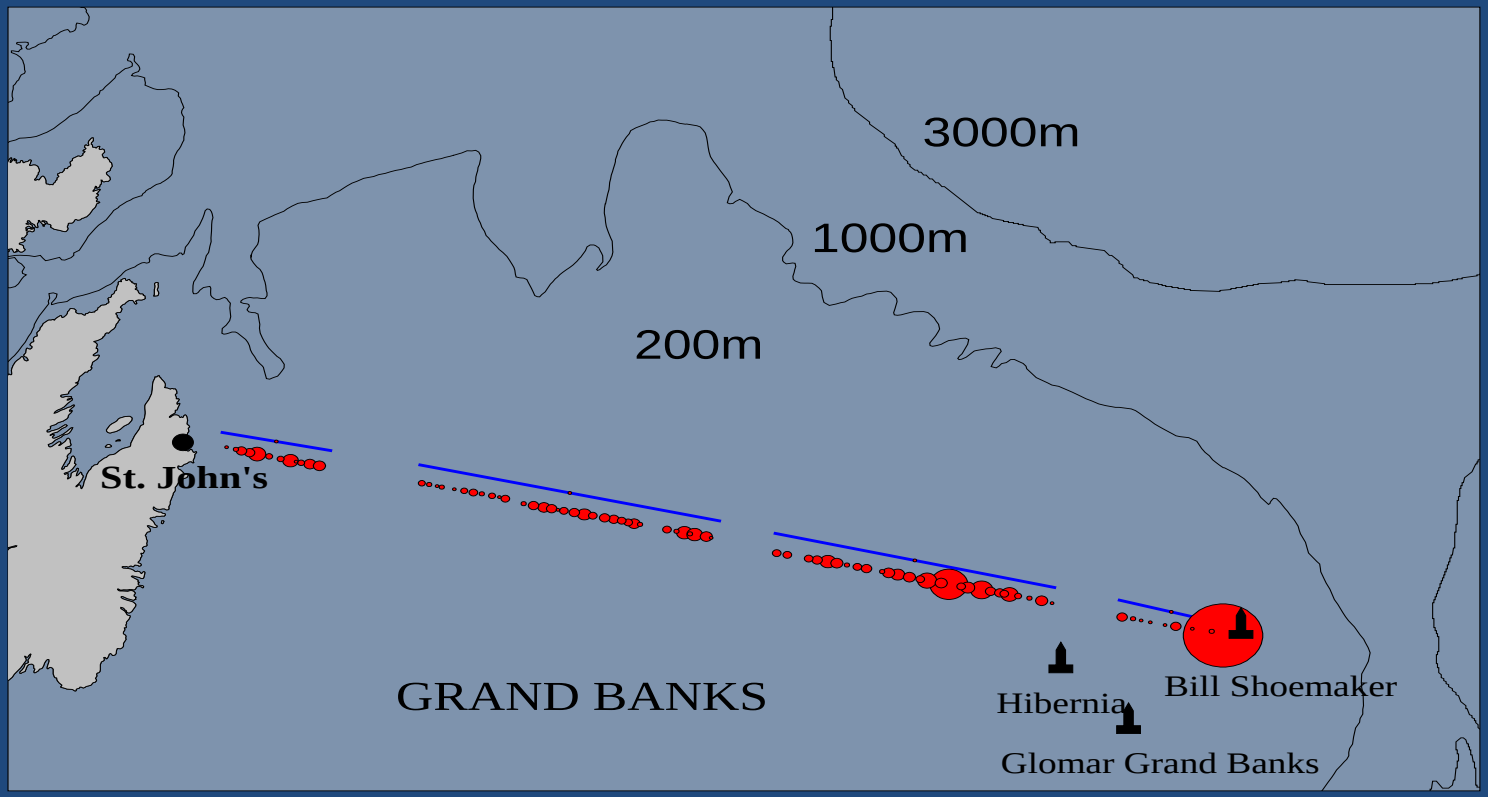

Weise et al. 2001

4 - INDEPENDENT ASSESSMENT AND INPUT

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Gulls Roosting on the Base of Hibernia

4 - INDEPENDENT ASSESSMENT AND INPUT

Slick Around the Base of Hibernia

4 - INDEPENDENT ASSESSMENT AND INPUT

Evidence Operational Spill Above Hibernia Base

4 - INDEPENDENT ASSESSMENT AND INPUT

Oiled Black-legged Kittiwakes On Support Vessel at Hibernia

4 - INDEPENDENT ASSESSMENT AND INPUT

Oiled Murre Picked Up by Support Vessel in transit - Hibernia

4 - INDEPENDENT ASSESSMENT AND INPUT

Oiled Murre at Base of Hibernia Platform

4 - INDEPENDENT ASSESSMENT AND INPUT

Independent Observers on Platforms

4 - INDEPENDENT ASSESSMENT AND INPUT

Independent Observers on Platforms and Support Vessels

vs.

Self-Reporting

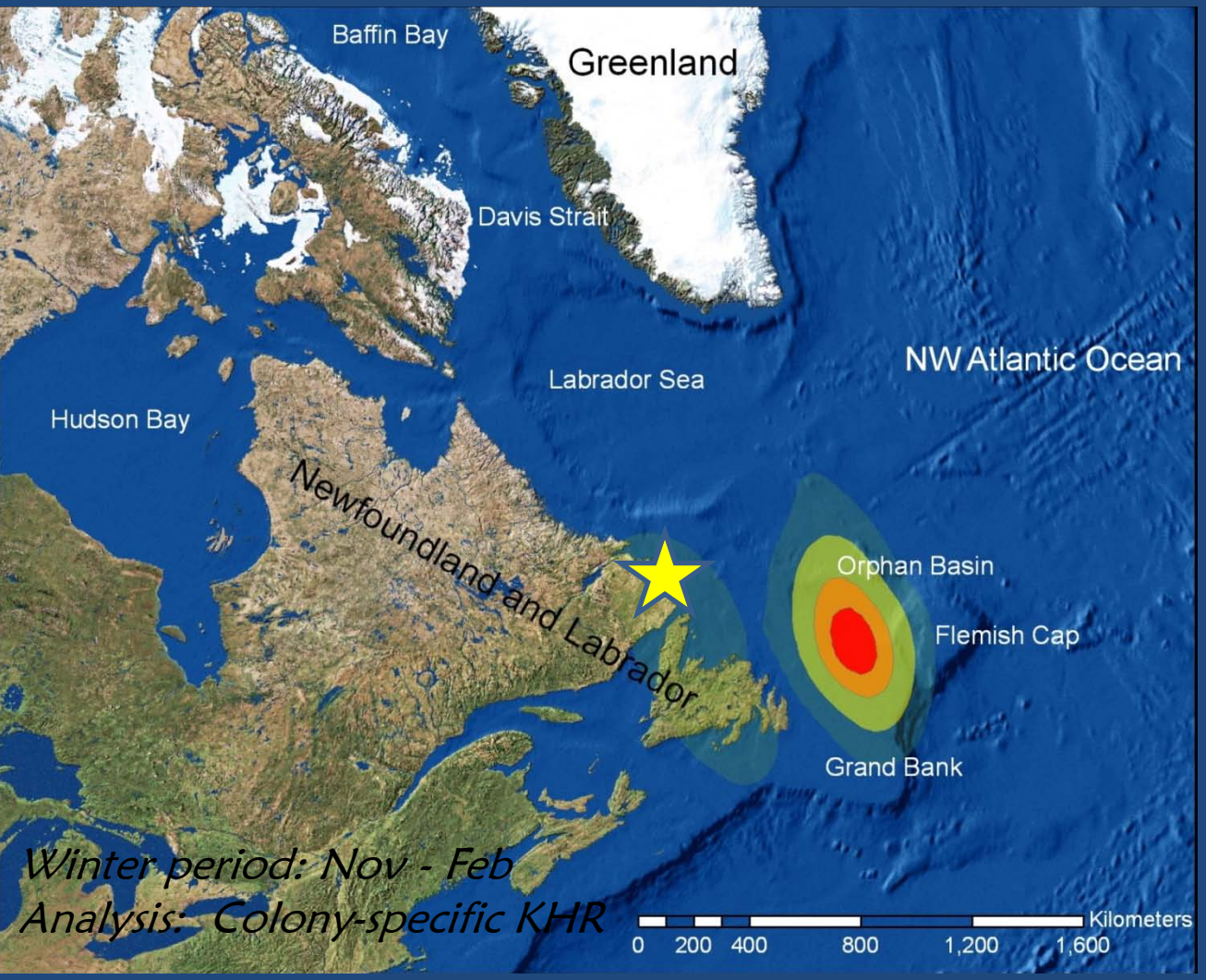
4 - INDEPENDENT ASSESSMENT AND INPUT

Independent Observers on Platforms and Support Vessels

Similar Recommendations from the Terra Nova Hearing (Les Harris, Jon Lien)

4 - INDEPENDENT ASSESSMENT AND INPUT

GEO-LOCATORS - COMMON MURRE WINTER HABITAT GANNET IS, LABRADOR



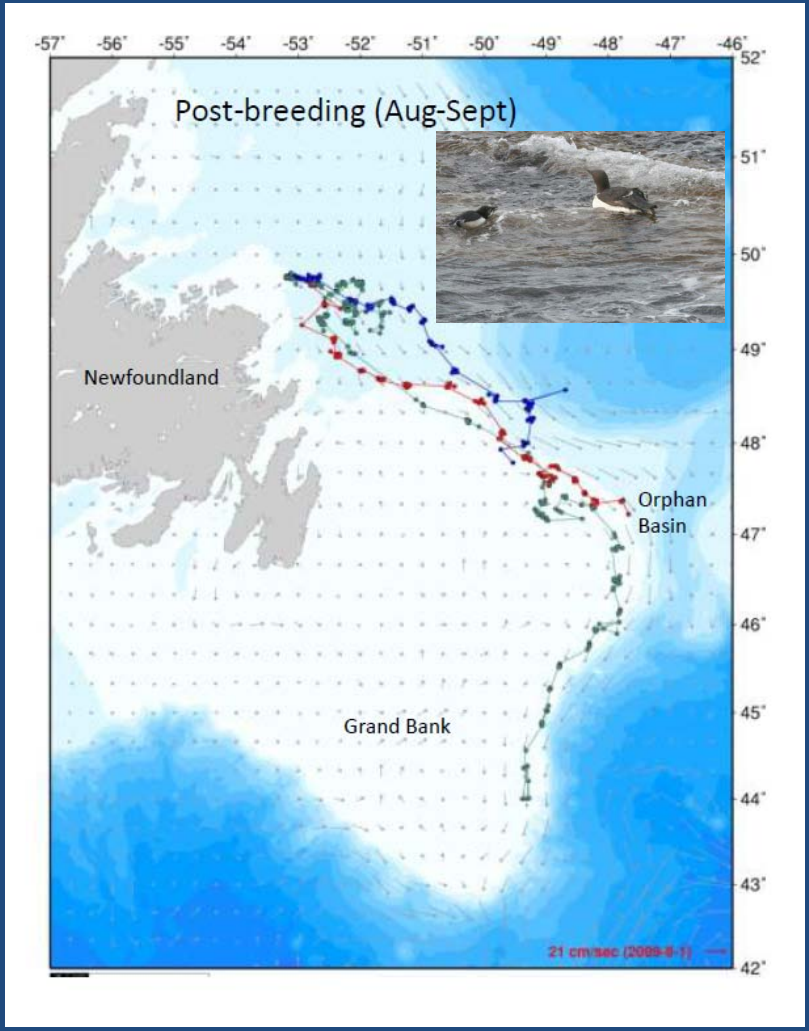
★ Colony

McFarlane-Tranquilla

4 - INDEPENDENT ASSESSMENT AND INPUT COMMON

MURRE MALES + CHICKS

PTT TRACKS FROM FUNK I – SPECIES' LARGEST COLONY



At and Downstream from Oil Platforms

Burke

4 - INDEPENDENT ASSESSMENT AND INPUT

NEEDED AT FRONT END DESIGN OF EA

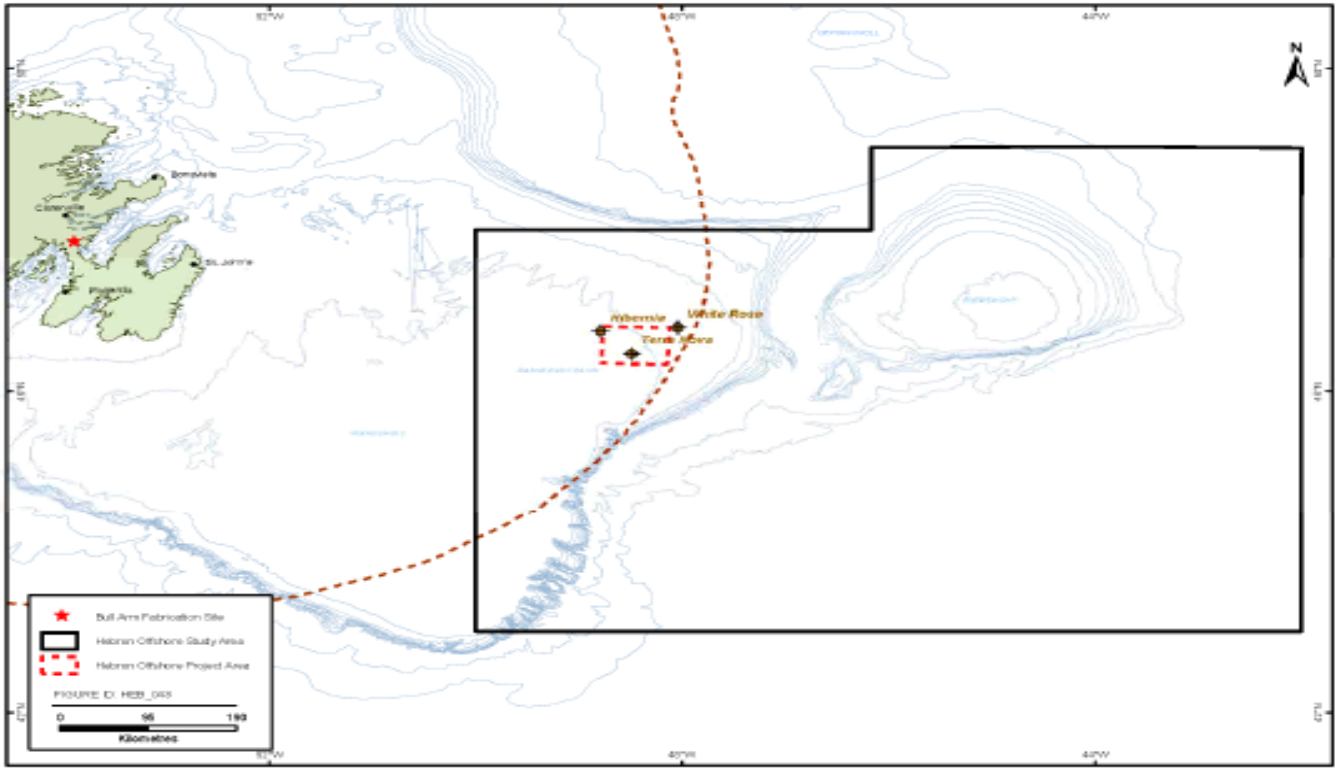
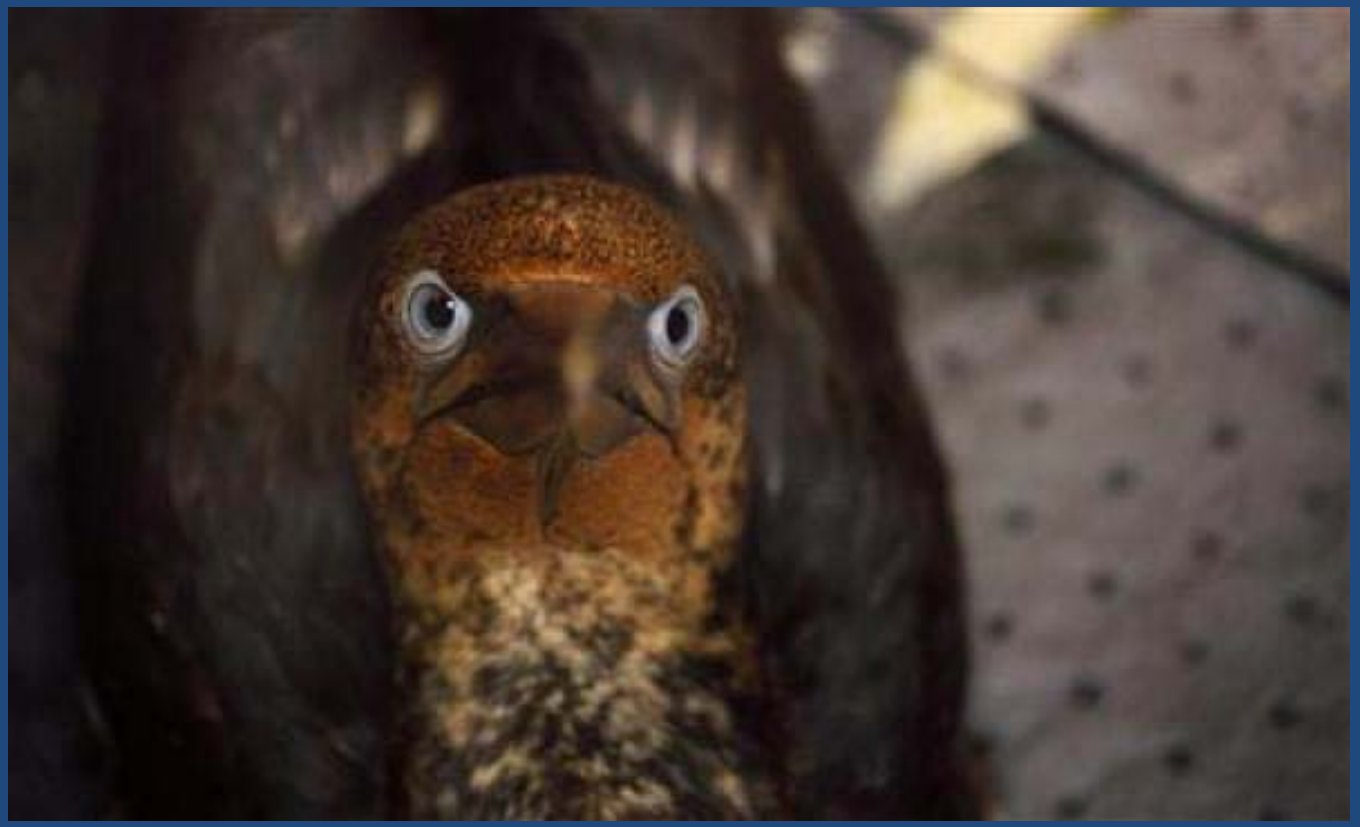


Figure 9-2 Offshore Study and Project Areas

These Study Areas Would Not Be Acceptable To Independent Biologists Concerned about the Potential Effects of the Proposed Hebron Development on Marine Birds

CONCLUSION 4



Self- Reporting Has Proven to Be an Inappropriate Means of Monitoring at Offshore Platforms

Independent Arm's Length Observers and Assessments are Required

WHY?

WHY ARE WE HERE TODAY?

The *Deep-Water Horizon*

22 April 2010

WHY ARE WE HERE TODAY?

LESSONS FROM THE DEEPWATER HORIZON?

The *DeepWater Horizon*

22 April 2010

WHY ARE WE HERE TODAY?

LESSONS FROM THE DEEPWATER HORIZON?

A Scandalously Close Relationship Between the Regulator and the Industry

Barack Obama, President
United States of America

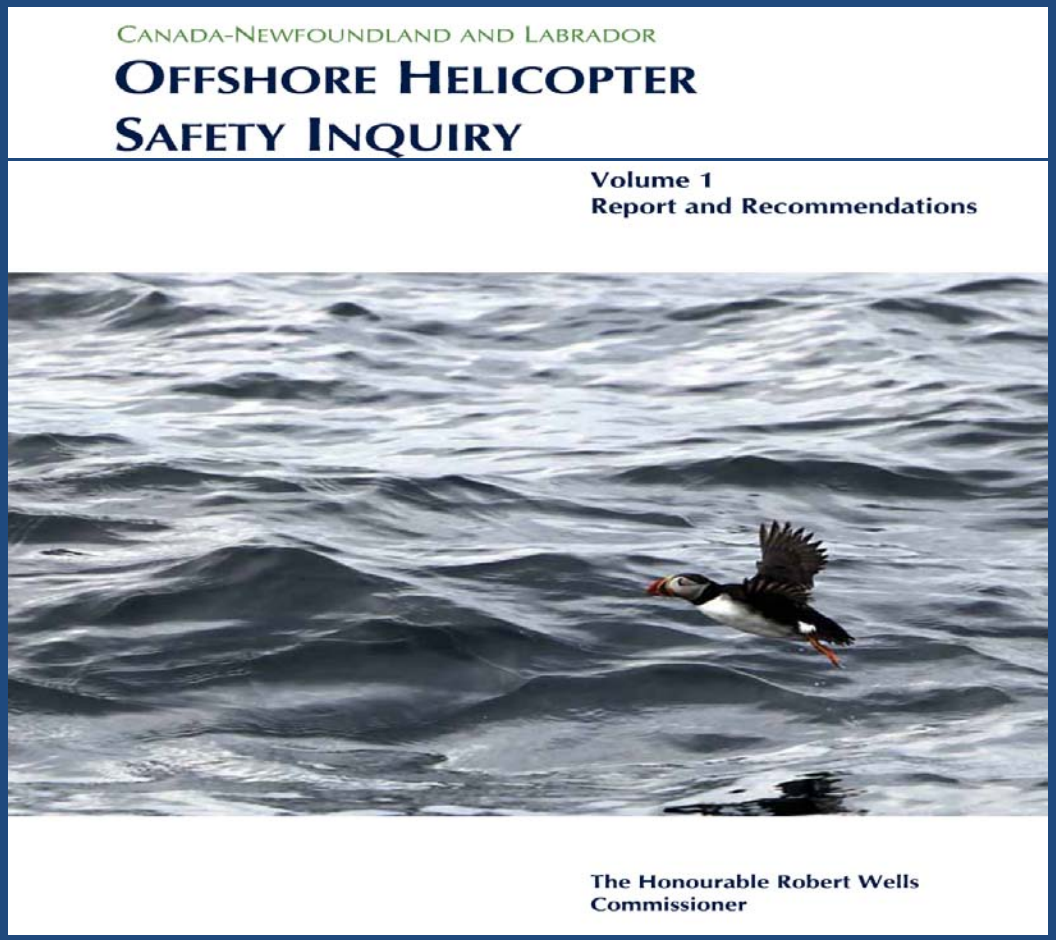
WHY ARE WE HERE TODAY?

LESSONS FROM THE DEEPWATER HORIZON?

Separation of Regulatory Responsibilities for Safety and Environment

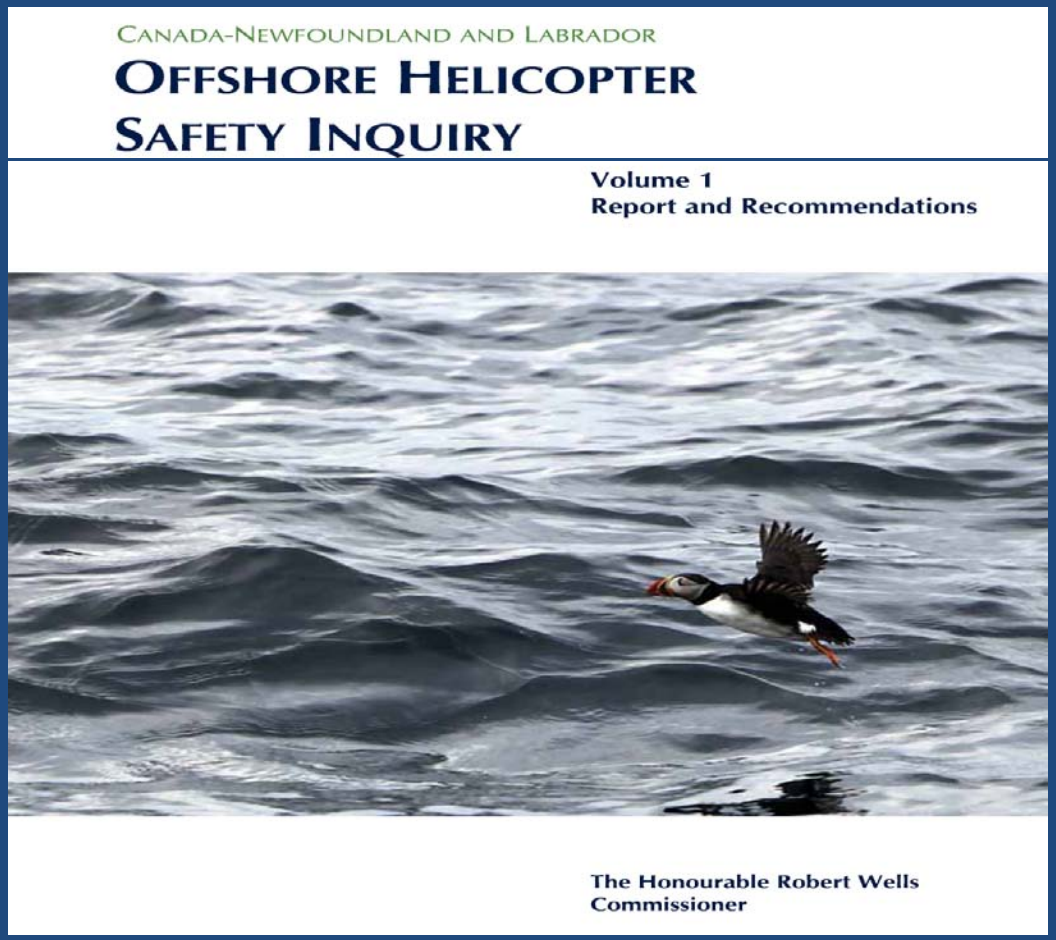
and for Development

WHY ARE WE HERE TODAY?



Similar Recommendations Were Made by Justice Wells

WHY ARE WE HERE TODAY?



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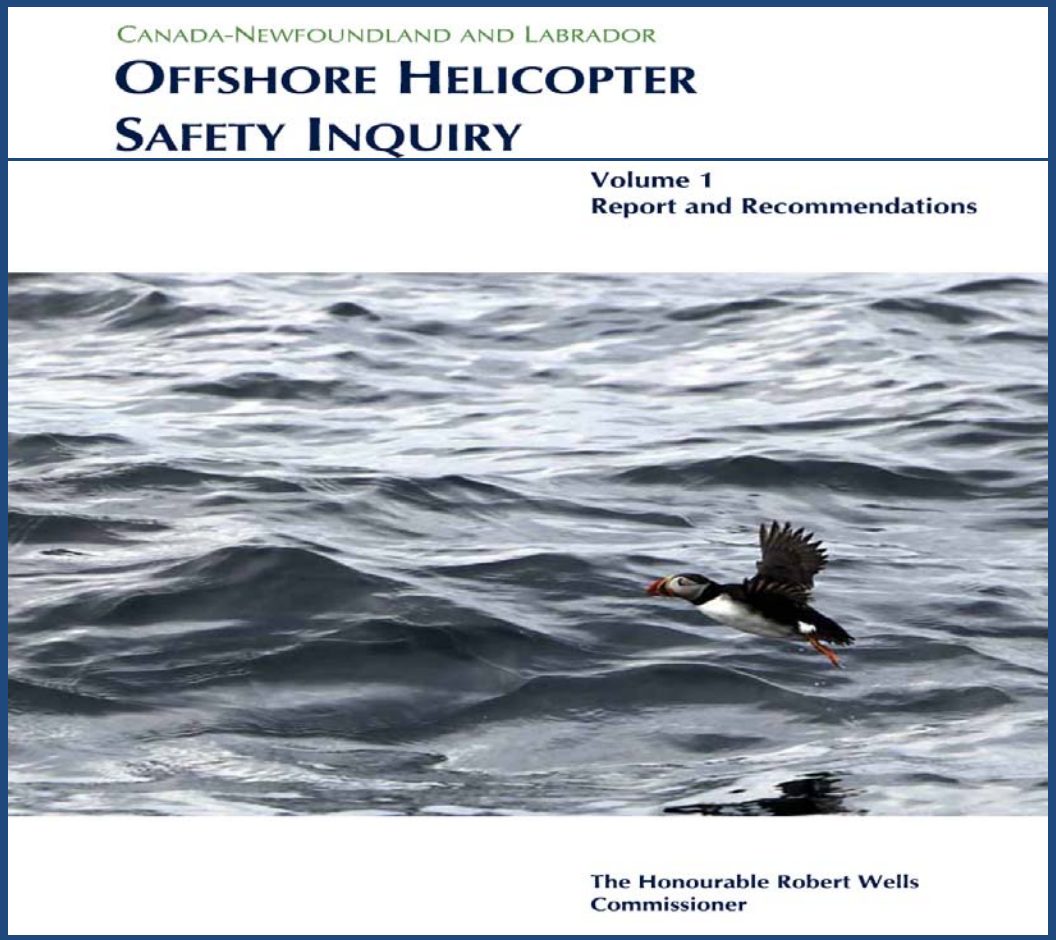

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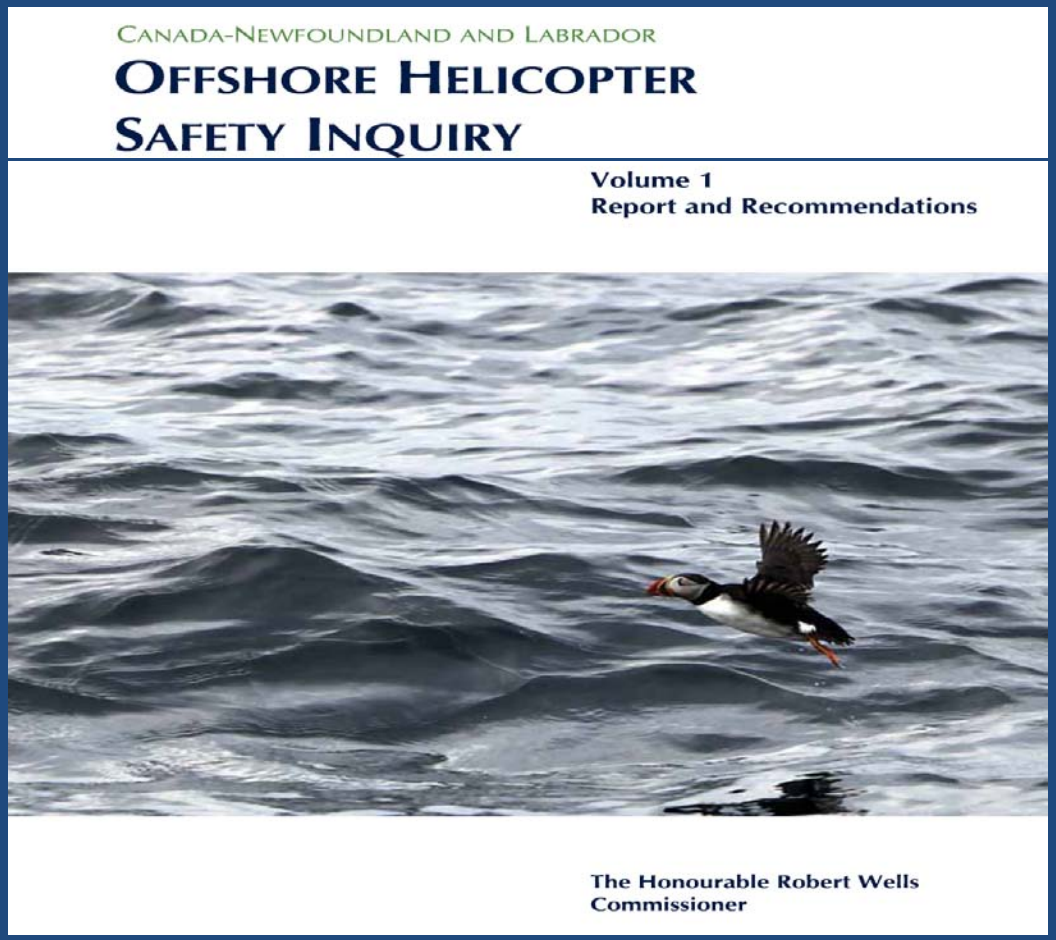
We Know What Needs to Be Done
We Just Have to Muster the Commitment and Courage to Do It

WHY ARE WE HERE TODAY?



The More Transparent the Process of Environmental Protection

The Safer It Will Be for Every Person on an Offshore Platform

RECOMMENDATIONS

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1 – Establish Appropriate Study Areas for the Hebron Assessment

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5– Act on the Wells' Report Recommendation Regarding Separate Regulatory Regimes for Environmental Protection and Safety

THANK YOU

FOR YOUR CONSIDERATION