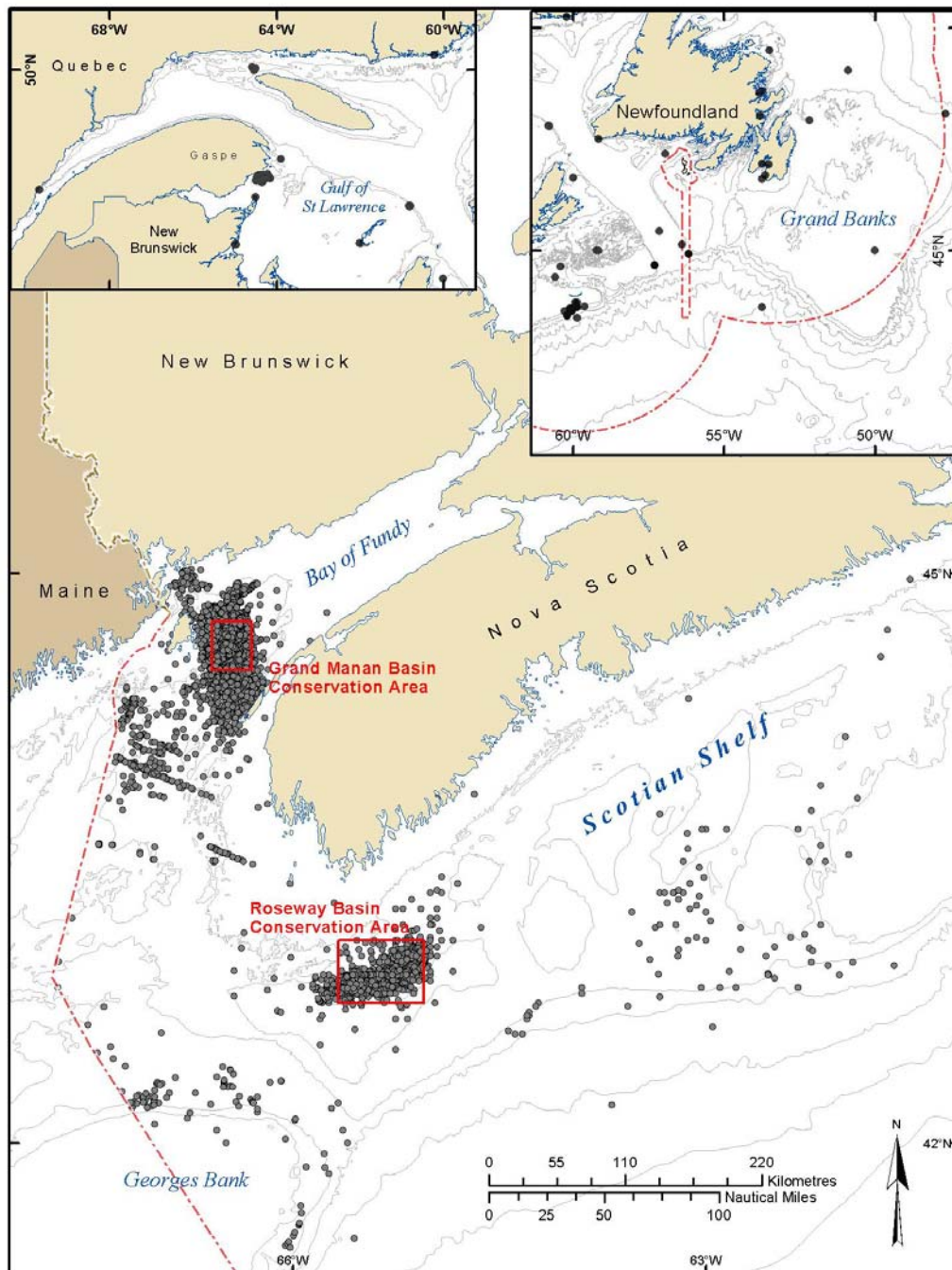


# Assessment of Large (mostly Right) Whale Entanglements in the Canadian Maritimes

Preliminary work in progress

Moir Brown  
New England Aquarium  
Canadian Whale Institute  
March 2009



## Right Whales in Canadian Waters – 1951- 2005

- > 80% of known pop.
- June through December
- (~ May and now January)
- Primary habitats
  - Grand Manan Basin
  - Roseway Basin and waters between and
  - Eastern Scotian Shelf
  - Gulf of St. Lawrence
  - Gaspe
- -Data poor outside of two conservation areas



# Current situation with entanglement mitigation

## By Fishermen and NGOs

- Disentanglement response (1999)
  - Volunteer fishermen
  - Basic training to DFO officers
- Voluntary gill net removal
  - ~1999/2000
- Voluntary code of conduct
- Fishermen/Right whale working group
- WWF Canada Share the Oceans campaign

## By DFO and Fishermen

- Some support for disentanglement effort (acquisition of equipment only)
- Strategy for LFA 36, 37 & 38 (western side lower Bay of Fundy)
  - Aerial surveys and GMFA hotline
  - Voluntarily not set trawls within 2 km of right whales
  - Voluntarily move gear away from approaching right whales

Mandate in Canada for Right Whale Recovery under Species at Risk Act – DFO  
(Recovery Strategy for the North Atlantic Right Whale in Atlantic Canadian Waters  
[Proposed: 2009])

**Objective 2:** *Reduce mortality and injury as a result of fishing gear interactions (entanglement and entrapment)*

*Rationale:* A serious threat to right whales is injury and mortality from fishing gear interactions in Canadian waters: this may affect the survival of the species. **To increase the chances for survival, the number and severity of entanglements or entrapments must be reduced.**

*Strategies:*

- a) Evaluate, promote, and/or implement where necessary, strategies (*e.g.* gear modifications, effort restrictions) that will reduce the potential for harmful interactions between fishing gear and right whales. Collaboration between researchers, fishers and resource managers on the development and field-testing of modified fishing practices will assist in the identification and application of mitigation measures.
- b) Evaluate and minimize the effects of all new and expanding fisheries on right whales.
- c) Collaborate with fishers about ways in which they can, through measurable voluntary action, reduce the number/frequency of interactions between right whales and fishing operations.
- d) Support emergency response and disentanglement programs in eastern Canada that are able to rapidly respond to reports of entangled or entrapped right whales.

Next step: unspecified Action Plans within two years, critical habitat for Roseway Basin

# Known right whale interactions

n=20

## Databases examined

- NEAq – photo id
- PCCS - ALWDN
- DFO – SABS
  - No gear archived
- GMWSRS
- Published accounts
  - Lien et al 1989
  - Knowlton & Kraus 2001
  - Johnson *et al* 2005
  - Canadian Recovery Plan 2000

## Results for right whales only

- 3 entrapments in herring weirs, all animals released without serious injury
- 4 (+ 1 poss) entanglements in gill nets, 3 observed (2 freed themselves, 3 partially disentangled) (< 2000)
- 6 entanglement in lobster trawl gear (1 fatal)
- 3 in crap pot gear + 1 in unspec. pot gear
- 1 entangled in a cod trap (Nfld)
- 1 entangled in a Danish Seine (fatal) (now id'd as crab pot gear)
- 1 in aquaculture gear later id'd as lobster trawl gear
- 1 unknown gear

Gear investigations – by NMFS

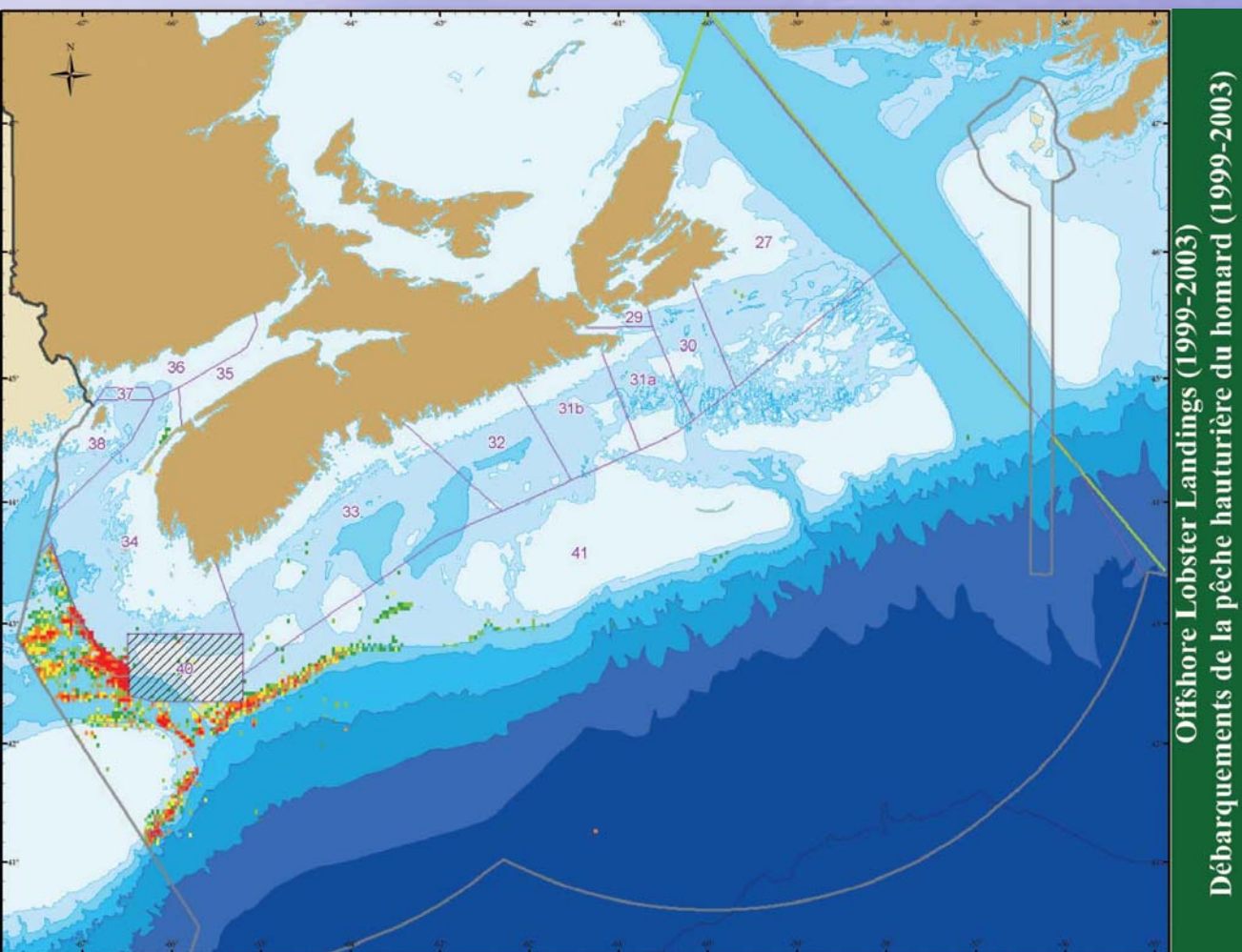
Fundy fishing practices



# Gear Research in Eastern Canada

- ECE/NMFS/NS fisherman – load cells on gill net hauling lines
- CWI/GMFA – test of sinking (EsterPro) and neutrally buoyant (HydroPro) ground line
- Dalhousie/DFO Tech Report – probability of entanglement by fishery based on summer and fall right whale distribution and distribution of gillnet, hook and line and crab pot fisheries
- DFO/GMFA fishermen
  - rope durability testing
- DFO
  - Profile ground line on experimental lobster trawl in shallow near shore waters
- DFO/WWF
  - logger study profiling sinking ground line in Bay of Fundy – distribution of elevation above the bottom, bunching of pots, effect of current on position of groundline (SG = 1.1, 14-20 pots)

# Eastern Canada Offshore Lobster Fishery – in assessment for MSC certification



- LFA 41
- 8 licenses
- 3-4 boats all owned by Clearwater
- No trap limit
- TAC 720 tonnes
- ~ 30 sets 100 pot trawls
- Year round, but mostly in spring and fall
- Already using sinking groundline (EsterPro)



