

Basin Head Marine Protected Area (MPA)

MPA Objective

To protect the unique strain of Irish moss (*Chondrus crispus*) and its associated habitat that exists solely within this coastal ecosystem

www.dfo-mpo.gc.ca/oceans/

Irish Moss



Basin Head Strain

Basin Head

Basin Head is located on the beautiful scenic Basin Head Road, at lot 47. The area was designated as a Marine Protected Area in October 2005. The Basin Head system is inhabited by a unique form of Irish moss, *Chondrus crispus*, which has a life cycle limited to this ecosystem.

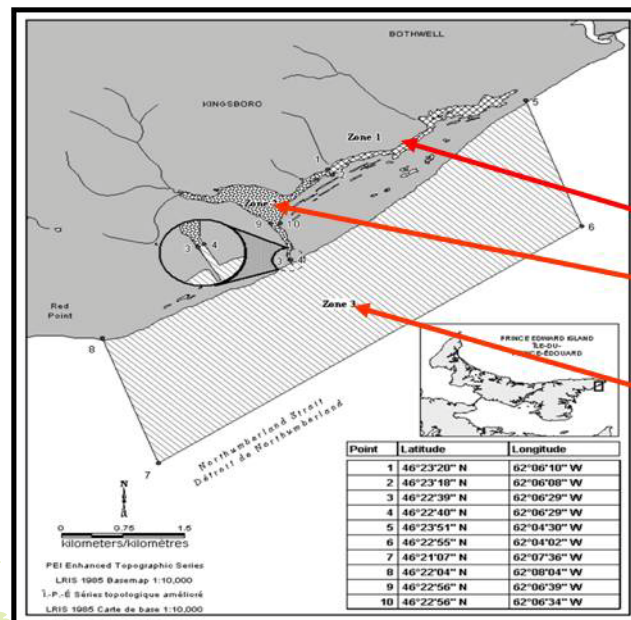
What makes this Irish moss unique?

- ◆ It is free floating and stays in the lagoon by attaching itself to the blue mussel.
- ◆ It yields 75% pure carrageen versus 45-50% pure found in the common form.
- ◆ It is larger (800 grams) than the common strain of Irish moss (50 grams).
- ◆ It maintains its red-brown color throughout the year while the common form exhibits color changes from red to yellow to green throughout the summer.

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Common Form



The Basin Head Marine Protected Area is divided into 3 management zones:

Zone 1: The Northeast Arm: Where the unique Irish Moss is found has the highest level of protection.

Zone 2: The Lagoon: This is the main basin or lagoon area and acts as a buffer zone for the more sensitive Zone 1 area.

Zone 3: The Outer Coast: This zone acts as a buffer to protect the integrity of the dune structure.

Research at Basin Head

Monitoring of the health (biomass and coverage) of the Basin Head *Chondrus crispus*

- Seasonal variations and yearly growth rates
- Levels of turbidity in the Basin
- Water quality trends
- Aerial photography and photo interpretation



The *Chondrus* bed is concentrated in a 500 to 600 m section of the Northeastern Arm, although small patches can be found in the Main Basin. The patches change in shape and distribution from year to year and perhaps even from season to season but this particular bed has been a stable component in this part of the arm over the past 25 years (Murchinson 1977; McCurdy 1980; Judson et al. 1987)

Results

The images have revealed changes in the coverage of the bed indicating significant changes in the distribution of biomass within the bed. The photo-interpretation has also shown a dramatic decline in the overall bed coverage and biomass in the last 2 years.

Basin Head Watershed Management Plan

Issues Integrity of the lagoon (erosion, stability of the entrance and the sand dunes)

- Nutrient enrichment (industrial, domestic and agricultural)
- Contaminants (pesticides, herbicides)
- Invasive species (green crab, tunicate, codium)
- Grazing by herbivores

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Goals and Objectives for the Basin Head Watershed

- Improve and protect ground and surface water quality
- Restore and protect ecosystem integrity
- Promote active living and increase recreational opportunities
- Enhance communication and educational opportunities
- Increase understanding of the concept and impact of climate change

