

1 Characterization of epibenthic community structure in the Beaufort Sea area

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12 The Canadian Arctic is facing new issues with increased marine traffic, exploration and
13 exploitation of resources. Knowledge of the environment is needed to address these issues.
14 Fisheries and Oceans Canada conducted a survey during summers 2012 to 2014 in the Canadian
15 Beaufort Sea and the Amundsen Gulf. The **“BREA-MFP” Beaufort Regional Environmental**
16 **Assessment-Marine Fish Project**” objective was to improve knowledge of the composition of
17 fish communities and their habitats in offshore waters of the Beaufort Sea and the Amundsen
18 Gulf. As an important part of the fish habitat and diet, the epibenthos was sampled to characterize
19 and improve the knowledge of epibenthic community structure (diversity and abundance) in these
20 areas.

21 The benthos is ideal as an ecological indicator index because organisms are sessile, highly
22 diverse, and long-lived. Moreover, environmental factors such as organic matter content, benthic
23 Chla, and sediment grain size are known to influence the benthic community composition.
24 Collected data are used to establish baselines for epibenthic diversity, abundances, and
25 community compositions, and for comparisons among regions (Beaufort Sea, Amundsen Gulf)
26 and gradients (nearshore-offshore depth, East-West). Furthermore, the study highlighted new
27 occurrences of species for the area indicating additional studies are needed to assess benthic
28 biodiversity in this area.

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