

Mapping Nearshore Coastal Habitats and Associated Organisms in the Qikiqtarjuaq area

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The nearshore (<50 m) area of Qikiqtarjuaq will be mapped using time lapse photography in areas previously identified of interest to community members. High resolution images of the seafloor using a drop camera frame with lighting will be used to characterize and map benthic habitats and associated organisms. The main objectives of the project are to 1) classify benthic habitats, characterize associated flora and fauna and create distribution maps of benthic habitat types and organisms. 2) define habitat specific biological communities and functional attributes of those communities based on relationships between benthic habitat types and organism characteristics.

Establishing this baseline will provide a benchmark to track future change to the habitats and organisms found in this area. The resulting distribution maps will help inform future Integrated Coastal Zone Management activities (e.g. port construction and areas that are important for local harvesting interests) in the region of Qikiqtarjuaq.

Methods used to conduct this research include creating a georeferenced grid (200 x 200 m/cell) to indicate where sampling will take place. A drop camera frame with lighting will be lowered to the seafloor to capture time lapse images at each site. Complementary water quality profiles will be collected at each site by deploying a CTD attached to the camera frame. Images will then be downloaded and analysed for bottom type, the occurrence, type and percent cover of algae and identity and abundance (counts) of organisms.

Results will be communicated through creation of annual plain-language reports/newsletter on results from habitat mapping surveys, summaries of biodiversity patterns based on sample identifications, oral presentations and discussion of results with the local HTA and community members (open house), and through other avenues such as local radio.