

Atlantic Canada Microplastics Research Project

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The Atlantic Canada Microplastic Research Project, led by Bluenose Coastal Action Foundation, is a partnership aimed at addressing the environmental problem of marine plastic pollution, specifically microplastic (<5 mm in diameter). The project is an ecosystem-based research initiative that will quantify microplastic distribution and concentration across three locations in Atlantic Canada; the Bay of Fundy, the Bay of Islands (i.e., Gulf of St. Lawrence), and the LaHave River Estuary (i.e., Atlantic Coast). As research shows, plastic particles allow chemicals to adhere to their surface as they travel throughout the marine environment, contributing to reduced water quality over time. Although research has been conducted on these impacts, further understanding of water quality impacts from microplastic pollution, and its subsequent impact on habitat and biodiversity, is needed across Atlantic Canada's ecosystems.

The proposed project involves one year of project development and training and two years of microplastic sampling and analyses within the three study areas. Sampling methodologies will replicate those used by researchers in the Great Lakes and the St. Lawrence River (Eriksen et al., 2013, Casteñeda et al., 2014, and Corcoran et al., 2015), to compare the results of those studies to data collected in Atlantic Canada. Samples will be collected from surface water trawls and benthic sediment grabs to quantify microplastic particles and determine concentrations. The culmination of the proposed project will be an international workshop event to share and discuss results of microplastic data with researchers, scientists, non-government organizations and students.

This project is in partnership with the Huntsman Marine Science Centre (St. Andrew's, NB) and ACAP-Humber Arm (Corner Brook, Newfoundland). We will also be working with Dr. Max Liboiron from Memorial University in St. John's, Newfoundland to assist with sampling protocol and procedures as well as conduct lab analysis of the collected microplastic.