

The Marine Side: By Katrina Boerder

Marine biologist Kristina Boerder explains that Eastern Shore marine ecosystems and salt marshes are providing “important ecosystem services” that benefit humans and nature.

- Protection from coastal erosion
- Providing important habitat for a multitude of species
- Benefiting local fisheries
- Acting as important carbon sinks (absorbing & storing carbon dioxide)
- Providing breeding and nursery habitat for terrestrial, near-shore, and migratory birds
- Providing “shelter, foraging, and breeding habitat for marine invertebrates, such as shrimp and crabs, and small fish”

I’m a marine biologist working with Dalhousie University and have been doing a little research on the coastal and marine habitats and ecosystems around Owls Head, which might potentially be impacted by any large-scale development on the land. The best data comes from DFO [Department of Fisheries and Oceans] for the proposal for the Eastern Shore marine protected area as well as from some research going on at Dal.

While I don’t have detailed site-specific data (yet), coastal habitats in the wider area include highly vulnerable salt marshes and marine habitats such as eelgrass beds, kelp forests, and rockweed habitats. All of these habitats are very important – salt marshes are essential breeding and nursery habitats for terrestrial, near-shore, and migratory birds. Salt marshes and marine habitats both “provide shelter, foraging and breeding habitat for marine invertebrates, such as shrimp and crabs, and small fish” (DFO Biophysical and Ecological Overview of the Eastern Shore Islands Area of Interest (CSAS SAR – 2019/016)). Rockweed, kelp, and eelgrass are important as feeding, hiding, and breeding grounds for many different species such as commercially valuable lobster and many fish species such as herring.

In contrast to other areas around Nova Scotia, these ecosystems are still doing pretty well along most parts of the Eastern Shore (one of the reasons why the marine protected area proposal is so important). They’re providing what is called “important ecosystem services” (services ultimately benefitting humans) such as protection from coastal erosion, providing habitat for a multitude of species (including benefits for local fisheries), and being important carbon sinks (salt marshes are essential breeding and nursery habitat for terrestrial, near-shore and migratory birds and, same as the marine habitats, “provide shelter, foraging and breeding habitat for marine invertebrates, such as shrimp and crabs, and small fish).

However, they are all globally threatened, mainly by coastal developments. For a large development such as golf courses, the construction and subsequent run-off from the

land as well as increased nutrient loads all have the potential to negatively impact these ecosystems.

“Thus, as increasing human pressures on coastal ecosystems threaten the continued supply of essential functions and services, the protection of marine vegetated habitats should be a management priority.” (Schmidt et al 2011)

Kristina Boerder

Sources:

BIOPHYSICAL AND ECOLOGICAL OVERVIEW OF THE EASTERN SHORE ISLANDS AREA OF INTEREST (AOI) “Both international and domestic targets (Aichi Target 11 and Canada’s Target 1) call for the conservation of 10% of coastal and marine areas by 2020.”

http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2019/2019_016-eng.pdf

Ecosystem structure and services in eelgrass and rockweed habitats <https://www.int-res.com/articles/meps2011/437/m437p051.pdf>