Requested data layer/geospatial information
Coral and Sponge Species Distribution Modelling in the Maritime and Gulf Regions
Glass sponge presence (*Vazella pourtalesii*)
Distribution of the glass sponge *Vazella pourtalesii*
Chlorophyll-a seasonal climatology
Regional density of fish species (if available)
Atlantic salmon rivers and migration routes (if available)
Candidate Areas of Interest for future marine protected areas

Marine mammal sightings
Sea turtle sightings
NARW sightings
NBW sightings
Blue whale sightings
All DFO EBSAs
DFO's marine mammal acoustic datasets
NOAA's Passive Acoustic Cetacean Map (PACM)
The North Atlantic Right Whale Consortium sightings database (request required)

Supporting Data Layers used to generate SBAs in the Maritime Region
Unique Species -– Paragorgia arborea
Unique Species – Lophelia pertusa
Species Distribution Modeling and Kernel Density Analysis of EBSAs
Distribution of the bubblegum coral *Paragorgia arborea*
Identification of Significant Benthic Areas
Corals and sponges in Eastern Canyons Conservation Area
Significant Benthic Areas in the Maritime and Gulf Regions
Benthic imagery
Benthic imagery

Source	Type of information
Species Distribution Modelling of Corals and Sponges in the Maritimes Region for Use in the Identification of Significant Benthic Areas - Mendeley Data	Dataset
Distribution Modelling of Sea Pens, Sponges, Stalked Tunicates and Soft Corals from Research Vessel Survey Data in the Gulf of St. Lawrence for Use in the Identification of Significant Benthic Areas - Mendeley Data	Dataset
Predicted distribution of the glass sponge Vazella pourtalesi on the Scotian Shelf and its persistence in the face of climatic variability - Mendeley Data (2018)	Dataset
Climate change winner in the deep sea? Predicting the impacts of climate change on the distribution of the glass sponge Vazella pourtalesii - Mendeley Data (2021	Dataset
Beazley, L., Z. Wang, E. Kenchington, I. Yashayaev, H.T. Rapp, J.R. Xavier, F.J. Murillo, D. Fenton & S. Fuller, 2018. Predicted distribution of the glass sponge Vazella pourtalesi on the Scotian Shelf and its persistence in the face of climatic variability. PLoS ONE 13(10): e0205505. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0205505	Research paper
Beazley, L., E. Kenchington, F.J. Murillo, D. Brickman, Z. Wang, A.J. Davies, E.M. Roberts, and H.T. Rapp, 2021. Climate change winner in the deep sea: Predicting the impacts of climate change on the distribution of the glass sponge Vazella pourtalesii. Marine Ecology Progress Series 657: 1-23. http://www.int-res.com/articles/feature/m657p001.pdf	Research paper
Pending from Science	
Offshore Ecological and Human Use Information considered in Marine Protected Area Network Design in the Scotian Shelf Bioregion	Dataset
Bundy, A., Will, E., Serdynska, A., Cook, A., and Ward-Paige, C.A. 2017. Defining and mapping functional groups for fishes and invertebrates in the Scotian Shelf Bioregion. Can. Tech. Rep. Fish. Aquat. Sci. 3186: iv + 49 p..	DFO Technical Report
Atlantic Salmon Federation	Dataset (requires request)
Provided in attachment	Dataset

DFO Maritimes Whale Sightings Database	
Canadian Sea Turtle Network; DFO Maritimes Whale Sightings Database	
DFO Maritimes Whale Sightings Database	
DFO Maritimes Whale Sightings Database	
DFO Maritimes Whale Sightings Database	Dataset

<table>
<tr><td colspan="2" align="center">Other data that may be of interest but that were not spe</td></tr>
<tr><td>Ecologically and Biologically Significant Areas - Ecologically and Biologically Significant Areas (.SHP) Open Government Portal (canada.ca)</td><td>Dataset</td></tr>
<tr><td>DFO Maritimes passive acoustic monitoring (PAM) datasets and analyses.</td><td>Dataset (requires request), published research papers, tech reports</td></tr>
<tr><td>Passive Acoustic Cetacean Map | NOAA NEFSC</td><td>Dataset (requires request)</td></tr>
<tr><td>https://www.narwc.org/sightings-database.html</td><td>Dataset (requires request)</td></tr>
</table>

[Kernel Density Analyses of Coral and Sponge Catches from Research Vessel Survey Data for Use in Identification of Significant Benthic Areas - Mendeley Data](#)	Dataset
[Climate-Change Refugia for the Bubblegum Coral Paragorgia arborea in the Northwest Atlantic - Mendeley Data](#)	Dataset
[Photo Archive of In Situ Benthic Imagery from the Lophelia Coral Conservation Area - Mendeley Data](#)	Dataset
[Species Distribution Modelling and Kernel Density Analysis of Benthic Ecologically and Biologically Significant Areas (EBSAs) and Other Benthic Fauna in the Maritimes Region - Mendeley Data](#)	Dataset
[Wang, S., F.J. Murillo, and E. Kenchington, 2022. Climate-change refugia for the bubblegum coral Paragorgia arborea in the northwest Atlantic. Frontiers in Marine Science 9: 863693 https://doi/10.3389/fmars.2022.863693](#)	Research paper
[Kenchington, E., C. Lirette, F.J. Murillo, L. Beazley, J. Guijarro, V. Wareham, K. Gilkinson, M. Koen Alonso, H. Benoit, H. Bourdages, B. Sainte-Marie, M. Treble, and T.Siferd, 2016. Kernel Density Analyses of Coral and Sponge Catches from Research Vessel Survey Data for Use in Identification of Significant Benthic Areas. Canadian Technical Report of Fisheries and Aquatic Sciences 3167: viii+207p.](#)	DFO Technical Report
[Characterization of the Corals and Sponges of the Eastern Scotian Slope from a Benthic Imagery Survey - Mendeley Data](#)	Dataset
[Delineation of Coral and Sponge Significant Benthic Areas in Eastern Canada Using Kernel Density Analyses and Species Distribution Models - Mendeley Data](#)	Dataset
[Kenchington, Ellen; Lirette, Camille (2023), "Photo/Video Archive of In Situ Benthic Imagery from the St. Anns Bank Marine Protected Area", Mendeley Data, V2, doi: 10.17632/vhj7cg9y68.2](#)	Dataset
[Beazley, Lindsay; Lirette, Camille; Guijarro, Javier (2019), "Characterization of the Corals and Sponges of the Eastern Scotian Slope from a Benthic Imagery Survey", Mendeley Data, V1, doi: 10.17632/z87pcc5vfz.1](#)	Dataset

Notes/description
Coral and Sponge Species Distribution Modelling in the Maritime and Gulf Regions (includes rasters [presence probability and extrapolated areas] and presence/absence point data)
Species Distribution Modelling (Includes rasters [presence probability and extrapolated areas]). Also see related links in Mendeley Data where you will find presence/absence data.
Includes model outputs of present day and future distribution of *Vazella pourtalesii* and occurrence dataset.
Emerald Basin on the Scotian Shelf off Nova Scotia, Canada, is home to a globally unique aggregation of this glass sponge, first documented in the region in 1889. In 2009, DFO implemented two Sponge Conservation Areas to protect these sponge grounds from bottom fishing activities. In order to ascertain the degree to which the sponge grounds remain unprotected, we modelled the presence probability and predicted range distribution of *this species* on the Scotian Shelf using random forest modelling on presence-absence records.
Random forest and generalized additive models were used to project the distribution of V. pourtalesii in the northwest Atlantic (Scotian Shelf and US continental margins) using environmental conditions simulated under moderate and worst-case CO_2 emission scenarios under future (2046–2065) climate change
This data record may help with species richness and functional groups
This report provides maps of the density 14 functional groups across the Scotian Shelf for 5 time periods. For access to specific data layers in this document, contact Maritimes Region MPC
This would require a request to the Atlantic Salmon Federation for their Atlantic salmon rivers layer The ASF salmon rivers layer is not published on Open Data. Two main requirements that were not fulfilled for Open Data were that these were not DFO or GC data, and had restricted use. External parties should contact ASF directly.
See geotabase file attachment titled "Original_Draft_Design" shared over email.

See attachment entitled "2023Oct10_WHALESITINGS_IAAC_RA Data Request" (Annex I). Please carefully read the caveats associated with these data in section 2.7 of the DFO Maritimes written submission.
See Figures 13 and 14 in Appendix B of the DFO Maritimes written submission. CSTN data requires request. To obtain sea turtle sightings from DFO, please contact DFO directly.
See attachment entitled "2023Oct10_WHALESITINGS_IAAC_RA Data Request" (Annex I). Please carefully read the caveats associated with these data in section 2.7 of the DFO Maritimes written submission.
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ecifically requested
DFO Maritimes has a long-running PAM project and extensive resulting dataset of acoustic recordings of cetacean calls throughout the Scotian Shelf. While these data are not public, some data are posted to PACM (see below). These data could be requested in future for future assessments. Additionally, results from the analysis of these data are published in numerous reports (see marine mammal section 2.1.2 of written submission).
Acoustic detections of whale species in the Northwest Atlantic. The full detections dataset was compiled by the NOAA NEFSC Passive Acoustic Research Program using acoustic data collected by many collaborators. The entire dataset is not publicly available. If you are interested in the data for a single deployment, you may reach out to the point of contact (POC), which is listed in the deployment details (click on a stationary platform or track to bring up the details for a deployment).
The Sightings database contains records of thousands of sightings of right whales in the North Atlantic Ocean, as well as sightings of many other species of whales, dolphins, sea turtles, seals, and large fishes. It also contains survey data associated with many of these sightings that allow quantification of associated survey effort (note that the database does not include interpreted effort data as such). Though most sightings in the Sightings database are from surveys conducted from the late 1970's to the present, some right whale historical records go back as far as the 18th Century. The sightings contained in the database come from a wide variety of contributors both Consortium members and others. Each record in the Sightings database represents a group of whales (i.e., a group of 3 whales has a single record just as a group of 1 does) and there may or may not be photographic proof of a given right whale sighting.

Coral and Sponge Kernel Density Estimation Areas and trawl catches in the Maritime and Gulf Regions (Includes KDE polygons and point [significant, non-significant and null coral group and sponge locations])
Includes model outputs as well as present/absence dataset.
Includes a spreadsheet of the abundance of different taxa (between them, the coral *Lophelia pertusa*) per analyzed photo.
Complete model results (KDE polygons and SDM presence probability rasters) and model inputs (trawl biomass locations for KDE and presence/absence data for SDM) for five EBSA groups.
A regional reassessment of the predicted distribution of this species in the Maritimes bioregion, using both machine learning (random forest) and generalized additive model (GAM) frameworks, including projection to 2046–2065, was undertaken. Climate refugia were identified and used in conservation planning for the MPA network design.
Identification of significant concentrations of corals and sponges was evaluated throughout all zones using a kernel density estimation approach applied to research vessel catch biomass records. This was presented to CSAS and used to delineate significant benthic areas. Open Data records: KDE of coral and sponde catches;
Characterization of the Corals and Sponges of the Eastern Scotian Slope from a Benthic Imagery Survey
Benthic imagery (566 photos, 2 video transects) collected from two research cruises conducted by Fisheries and Oceans Canada in 2009 and 2015, prior to the establishment of the [St. Anns Bank] MPA
Linear video and photographic transects from ~200 to 1000 m depth were collected at 10 stations between the Gully Marine Protected Area and the Lophelia Coral Conservation Area using the video and photographic camera system Campod and the '4K Camera' drop camera system.

Additional associated information (if applicable)
Beazley, L., E. Kenchington, F.J. Murillo, C. Lirette, J. Guijarro, A. McMillan, and A. Knudby, 2016. Species Distribution Modelling of Corals and Sponges in the Maritimes Region for use in the Identification of Significant Benthic Areas. Canadian Technical Report of Fisheries and Aquatic Sciences 3172: vi+189p.

Beazley, L., E. Kenchington, and C. Lirette, 2017. Species Distribution Modelling and Kernel Density Analysis of Benthic Ecologically and Biologically Significant Areas (EBSAs) and Other Benthic Fauna in the Maritimes Region. Canadian Technical Report of Fisheries and Aquatic Sciences 3204: vi + 159.

Sabaniel, Javier; Wareham, Vonda; Gilkinson, Kent; Koen-Alonso, Mariano; Benoit, Hugues; Bourdages, Hugo; Sainte-Marie, Bernard; Treble, Margaret; Siferd, Tim (2018), "Kernel Density Analyses of Coral and Sponge Catches from Research Vessel Survey Data for Use in Identification of Significant Benthic Areas", Mendeley Data, V2, doi: 10.17632/dtk86rjm86.2 **2)** Kenchington, Ellen; Beazley, Lindsay; Lirette, Camille; Murillo-Perez, Javier; Guijarro-Sabaniel, Javier; Wareham, Vonda; Gilkinson, Kent; Koen-Alonso, Mariano; Benoit, Hugues; Bourdages, Hugo; Sainte-Marie, Bernard; Treble, Margaret; Siferd, Tim (2018), "Delineation of Coral and Sponge Significant Benthic Areas in Eastern Canada Using Kernel Density Analyses and Species Distribution Models", Mendeley Data, V1, doi: 10.17632/hnp4xr2sy3.1