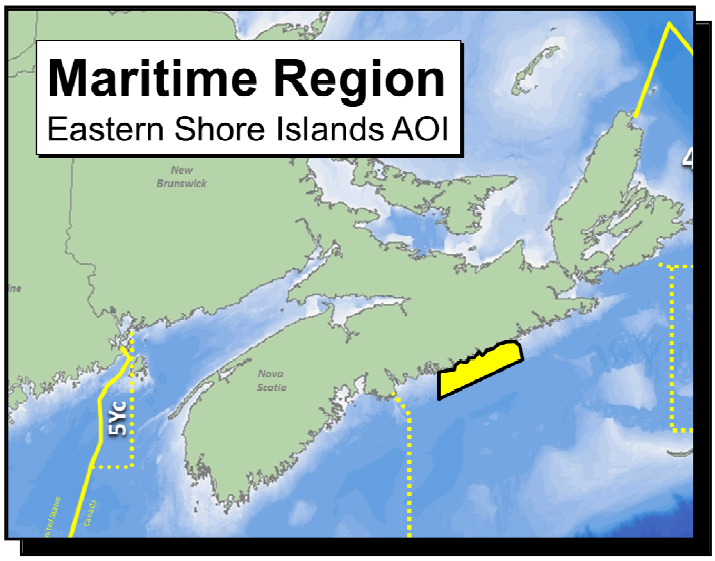
Socio-Economic Profile
(Marine Harvest Activities)

Eastern Shore Islands - Area of Interest



This report is a socio-economic profile of marine harvesting activities in the Eastern Shore Islands Area of Interest (AOI). The analysis in this report reflects current harvesting activity and is primarily based on landings data from 2013 to 2017. This five year period was used in order to smooth out annual variations in harvest activity and is the most recent five years of data in DFO's Maritimes Fisheries Information System (MARFIS). The landed values presented in this document represent only the value of harvesting activity when landed and does not include additional value-added activities such as processing or transportation. The analysis does not in any way represent the socio-economic impacts of a potential Marine Protected Area (MPA) designation. Any impacts of an MPA designation are dependent on the finalized set of boundaries used for the area and whatever conservation measures (eg: restrictions) are implemented.

Key Findings:

- On average, over $12 million worth of landings are harvested from the AOI each year.
- The vast majority of the area's landed value comes from the Lobster fishery.
- Approximately 145 harvesters fish within the AOI each year.
- The majority of harvesters in the area are heavily dependent on landings from the AOI.
- Over the past 30 years, the relative size and types of fisheries in the area has changed significantly.

What commercial fisheries operate within the Eastern Shore Islands AOI?

In recent years a number of fisheries have been active within the Eastern Shore Islands AOI. These primarily are Lobster[1], Groundfish (largely Halibut) and Herring. A number of other fisheries occasionally have a small amount of landings from the area.

What gear types are used within the Eastern Shore Islands AOI?

The most common gear types used by vessels fishing within the Eastern Shore Islands AOI include trap, longline, gill net, otter trawl, angling, and a few other occasionally used gear types.

What are the annual landed values and landed quantities of the commercial fisheries operating within the Eastern Shore Islands AOI?

The landed value of all species caught within the Eastern Shore Islands AOI increased significantly over the 2013 to 2017 period, rising from approximately $6 million in 2013 to approximately $18 million in 2017. Over the five year period, landed values averaged just over $12 million per year. Lobster landings represented over 95% of the total annual average landed value with less than $300,000 in landed value coming from all the other fisheries combined.

Table 1: Annual Landed Quantity and Landed Value, 2013-2017 Average

Landed Species	Landed Value ($)	Landed Weight (kg)
Lobster	$11,900,000	853,000
Halibut	$125,000	8,800
Herring	$96,000	197,000
Other *(Scallop, Tuna, Swordfish, Mackerel, Crab)*	$47,500	30,000
Total	**$12.2 million**	**1.1million kg**

How many licence holders actively fish in the Eastern Shore Islands AOI?

There were approximately 260 licence holders who had landings from the Eastern Shore Islands AOI at some point during the five year period examined. The number of active harvesters varied by year with an average of 145 licence holders landing catch from the area each year. Roughly 85% of all active licence holders fished for Lobster. The breakdown by species is summarized in Table 2. Note that some licence holders hold licences in more than one fishery.

[1] Due to the lack of geographic coordinate data associated with harvesting activity in the lobster fishery, lobster fishing grids 325 to 331 inclusive were used as a proxy for the AOI boundaries in this fishery.

Table 2: Annual Number of Licence Holders (FINs) by Licence Species, 2013-2017 Average

Licence Species	Average number of FINs per year
Lobster	119
Groundfish	25
Herring	14
Other	Less than five

Note: Some licence holders hold licences in more than one fishery.

How dependent are the active licence holders on catches from the Eastern Shore Islands AOI?

Many of the licence holders that are active within the Eastern Shore Islands AOI are heavily dependent on the area for landings. This is especially true when looking at the large group of harvesters who averaged more than $10,000 in annual landed value from the area (ie: harvesters who were consistently or very active in the area). For these harvesters, the majority received more than 75% of their total landed value from the AOI. Note: The $10,000 cut-off is ONLY used for the dependency analysis to better reflect the dependency of the primary users of the area. The data presented in other parts of this document includes all harvesters and harvesting activity within the AOI. The breakdown by dependency is summarized in Table 3.

Table 3: Licence Holder Dependency*, 2013-2017 Average

Dependency	Share of Licence Holders (FINs) (FINs with LV from AOI >$10k/yr)
Light (<25%)	24%
Moderate (25%-75%)	26%
Heavy (>75%)	51%

** Share of a licence holder's total landed value that comes from the AOI.*

In what counties do the vessels land?

During the 2013 to 2017 period, vessels reporting landings from the Eastern Shore Islands AOI landed in over 65 ports in the region; mainly located in Halifax and Guysborough Counties of Nova Scotia. The majority of these ports had relatively low amounts of landed value from the AOI, as approximately half of the total landed value from the AOI occurred in just five ports; Ecum Secum, East Jeddore, Marie Joseph, Mushaboom, and Owl's Head. Landed value by county are presented in Table 4.

Table 4: Annual Landed Value by County, 2013-2017 Average

County	Landed Value ($)
Halifax	$8.1 million
Guysborough	$3.8 million
Other six counties	$250,000

How important to the communities are landings from the Eastern Shore Islands AOI?

Landings from the Eastern Shore Islands AOI are very important to those communities closest to the area. On average, from 2013 to 2017, ports in communities directly adjacent to the AOI received nearly 80% of their landed value from catch harvested within the area of interest. At the individual port level, dependency levels can be even higher. From a county wide perspective, landings from the AOI represented approximately 8% of the total average landed value of Halifax and Guysborough Counties combined. Dependency was higher in Halifax County at 13% and lower in Guysborough County at less than 5%. Community dependency rates for landing from the Eastern Shore Islands AOI are summarized in Table 5.

Table 5: Community Dependency, 2013-2017 Average

Area	Landed Value from AOI Area per year	Total Landed Value from All Areas per year	% of Total Landed Value from AOI
Ports adjacent to AOI	$9.5 million	$12.1 million	78%
All Halifax County	$8.1 million	$63.5 million	13%
All Guysborough County	$3.8 million	$92.0 million	4%

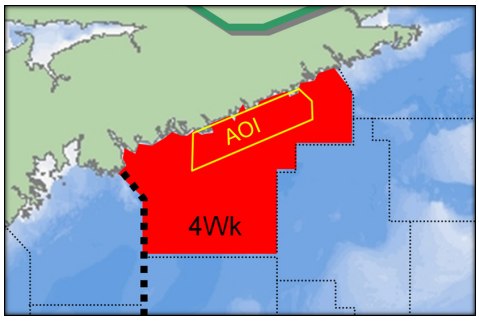
What aquaculture activities take place in the area[2]?

Four aquaculture companies have been issued a total of 15 leases to operate aquaculture facilities within or near the AOI. The leases are located in four general areas along the coast: Marie Joseph Harbour, Sheet Harbour, and two areas around Ship Harbour (inner harbour and outer harbour).

The leases within the AOI include shellfish (three sites – one site is dormant) and finfish (two sites which are currently dormant). Two shellfish leases also include marine plants.

Are there other marine-related harvesting activities in the area?

In addition to the activities noted above, there are a number of other marine-related harvests that potentially take place near the proposed AOI. These include a variety of marine plants (eg: Rockweed), shore based shellfish harvest (eg: Clams), and non-vessel based fish harvest (eg: Eels and Elvers). To give an indication of the relative size of these fisheries, Table 6 presents the average landed value of these activities in NAFO area 4Wk (which extends from Country Harbour to Sambro).



[2] Source: Nova Scotia Department of Fisheries and Aquaculture

Table 6: Annual Landed Value, 2013-2017 Average (NAFO Area 4Wk)

Licence Species	Landed Value ($)
Eel/Elver	$5 million
Clams	$500,000
Alewives/Gaspereau	$35,000
Marine Plants	*

** Note: Not available.*

Were marine harvest activities in the area different in the past?

Although historical harvesting information for the specific AOI is not available, landings from the surrounding NAFO area 4Wk (which extends from Country Harbour to Sambro and further offshore) shows fishing patterns have changed significantly in the area over the past 30 years.

In the late 1980s, groundfish (primarily Cod, Haddock, and Pollock) was the most valuable fishery followed by Lobster (at around $2.5 million per year or approximately $5 million in today's dollars). By the late 1990's, the groundfish moratorium significantly reduced the groundfish activity in the area, while Lobster and Snow Crab grew to be the most valuable fisheries. The value of the Lobster fishery in the area continued to rise significantly over the next 20 years to its current record level of around $30 million per year. Other fisheries that also emerged or grew in the area include Elvers, Halibut, and Swordfish.

Table 7: Annual Historical Landed Value by Species*, 1980s-Current (NAFO Area 4Wk)

Time period	Fisheries with the Highest Landed Values (in excess of $1 million / year – nominal $)
Late 1980's	Cod, Haddock, Pollock (CHP=$4m) Lobster $2.5m, White Hake
Late 1990's	Lobster $5m Snow Crab, Silver Hake
Late 2000's	Lobster $15m Silver Hake, Herring
Current	Lobster $30m Elvers, Halibut, Silver Hake, Swordfish

** Values are in nominal dollars. Historical data may not be fully inclusive of all landings due to data quality issues.*

Will additional socio-economic analysis be conducted on the AOI?

Socio-economic analysis is an important part of the entire AOI/MPA process. Additional socio-economic analysis will be conducted, as required, to help determine what boundaries should be proposed for a potential Eastern Shore Islands MPA. In addition, socio-economic analysis is also used when looking at possible management measures that could be proposed for the MPA (e.g. zones, prohibitions, allowable activities, etc).

If the Eastern Shore Islands AOI is officially put forward for an MPA designation, a formal socio-economic analysis will be conducted to determine the specific costs and benefits of such a designation. In addition, the analysis will also look at which stakeholders and communities could potentially be impacted. This information will be used during consultations and will form part of the formal documentation needed for the MPA designation.