

15.6.4.2 Lobster

5 The lobster fishery, which had been the highest value fishery in UA 4Ra in past years, has gone through a number of cycles over the last two decades, as shown in Figure 15.6.3-7. Catches in UA 4Ra have ranged from highs of more than 500 t in the late 1980s to a low of about 70 t in 2001 (DFO 1990-2009). The Study Area lies within Lobster Fishing Area (LFA) 14c, Big Brook to Cape Bauld. The fishery in LFA 14c is typically open between mid-May and early July, and occurs on the Newfoundland side of the Strait of Belle Isle, along the shoreline between Anchor Point and Yankee Point in water depths less than 30 m. Figure 15.6.4-3 shows the reported local harvesting locations for lobster (as well as lumpfish and herring). According to fishers (Canning & Pitt Associates Inc. 2010), there are no important lobster resources on the Labrador side of the Strait of Belle Isle. 10 Fishers with licences in LFA 14c are allowed up to 300 traps per licence.

15.6.4.3 Groundfish

15 Figure 15.6.4-4 shows the georeferenced portion of the groundfish harvest (mainly cod) for 2005-2009, aggregated, for all months (from DFO 1990-2009). There is relatively little recorded harvest in the submarine cable corridor. Reported local cod (and scallop), lumpfish and halibut fishing grounds are mapped in Figure 15.6.4-3, Figure 15.6.4-5, Figure 15.6.4-6 and Figure 15.6.4-7.

20 The majority of the groundfish harvest in and near the Study Area, and in UA 4Ra as a whole, is Atlantic cod. As noted earlier, Atlantic cod harvests dropped drastically after the closure of the fisheries in the 1990s. As Figure 15.6.3-1 shows, the harvest remains relatively low. A recent science assessment of the northern Gulf of St. Lawrence cod stock (DFO 2010c) states, "Based on current productivity, the exploitation rates that have been observed in the period 2000 to 2009 have been too high (except for 2003 which was under moratorium) to allow for any significant rebuilding of this stock. Such exploitation levels are not sustainable at present productivity, and are inconsistent with a rebuilding strategy." Despite this, it is still the second most important harvest in UA 4Ra in terms of average catch value (DFO 1990-2009). In recent years the other principal groundfish species have been lumpfish and halibut.

25 In the past, most of the cod catch was by mobile gear (otter trawl). However, given resource conditions, the current catch is taken using fixed gear: nets, and hook and line. Fishers also report that recreational cod fishing activities can be conducted anywhere throughout UA 4Ra, on the same grounds used by commercial fishers. However, because most of the vessels involved in this "food fishery" (typically only a few days a year) are less than 20 feet, many recreational participants prefer to stay relatively close to shore. In recent years cod have 30 been harvested primarily between July and September.

Lumpfish, which are harvested for their high-value roe, are caught using nets in waters along the shoreline between Forteau Point and Pinware on the Labrador side, and in the same area as the lobster fishery on the Newfoundland side (Figure 15.6.4-3 and Figure 15.6.4-6).

35 The halibut season is typically a very short one, usually lasting approximately three days. Fishers on the Labrador side travel to the Newfoundland side of the Strait to harvest their halibut. This species is fished with hook and line gear, in water depths of 12 m and deeper, on grounds located between Anchor Point and Green Island Cove (Figure 15.6.4-7).

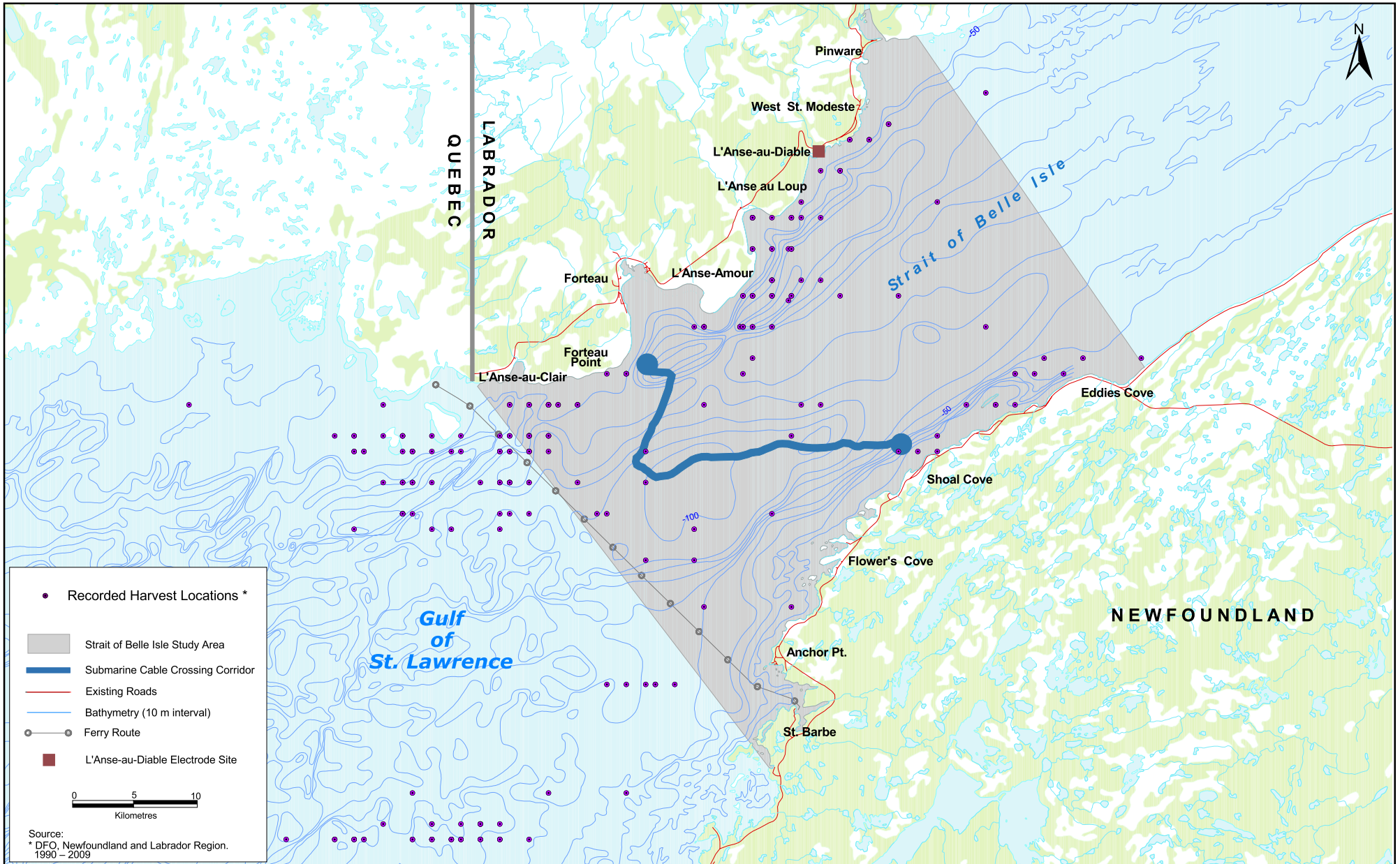


FIGURE 15.6.4-4



**Reported Groundfish Harvesting Locations, Strait of Belle Isle (Georeferenced Data),
2005-2009 Aggregated**

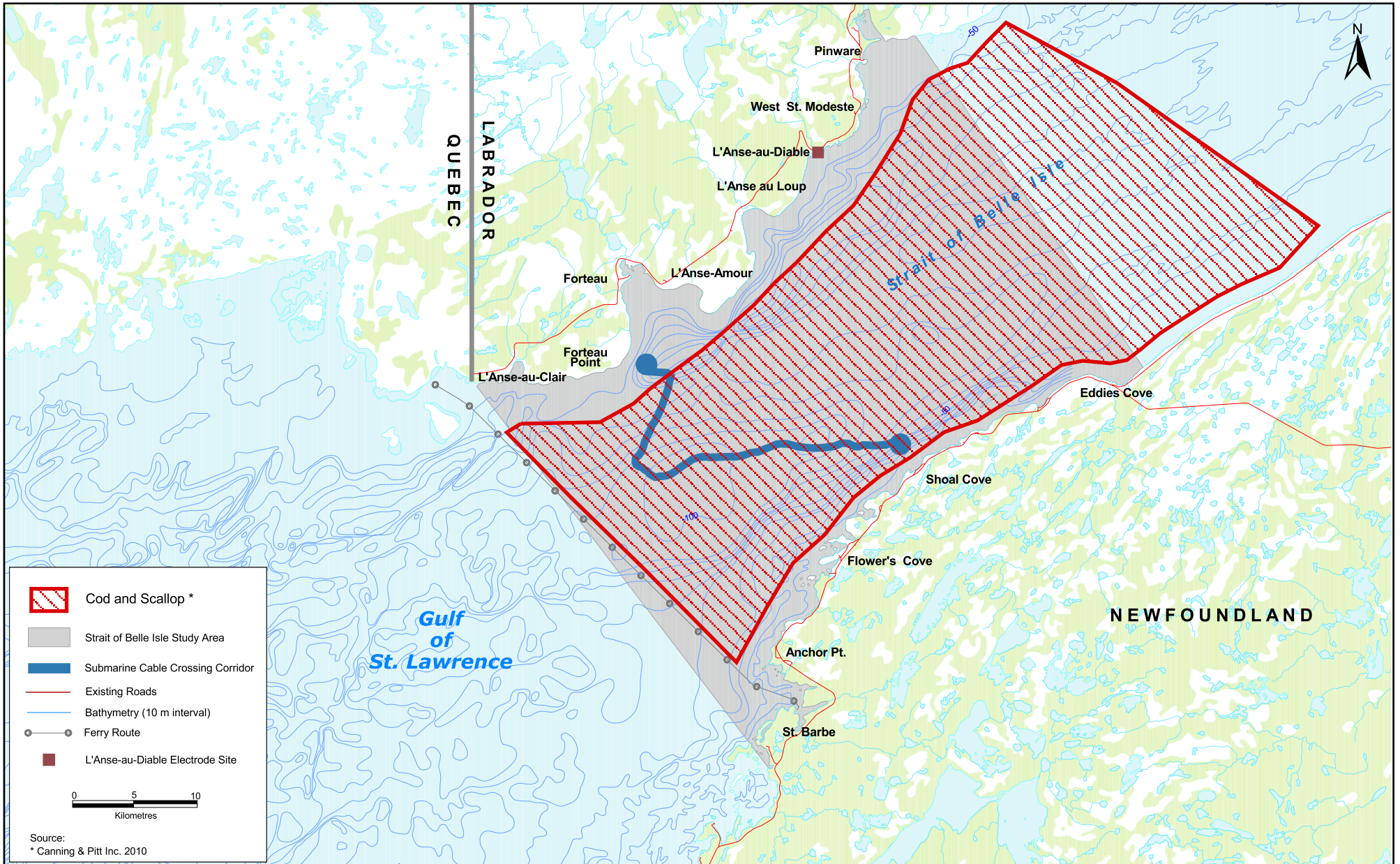


FIGURE 15.6.4-5



Reported Cod and Scallop Harvesting Area, Strait of Belle Isle Study Area

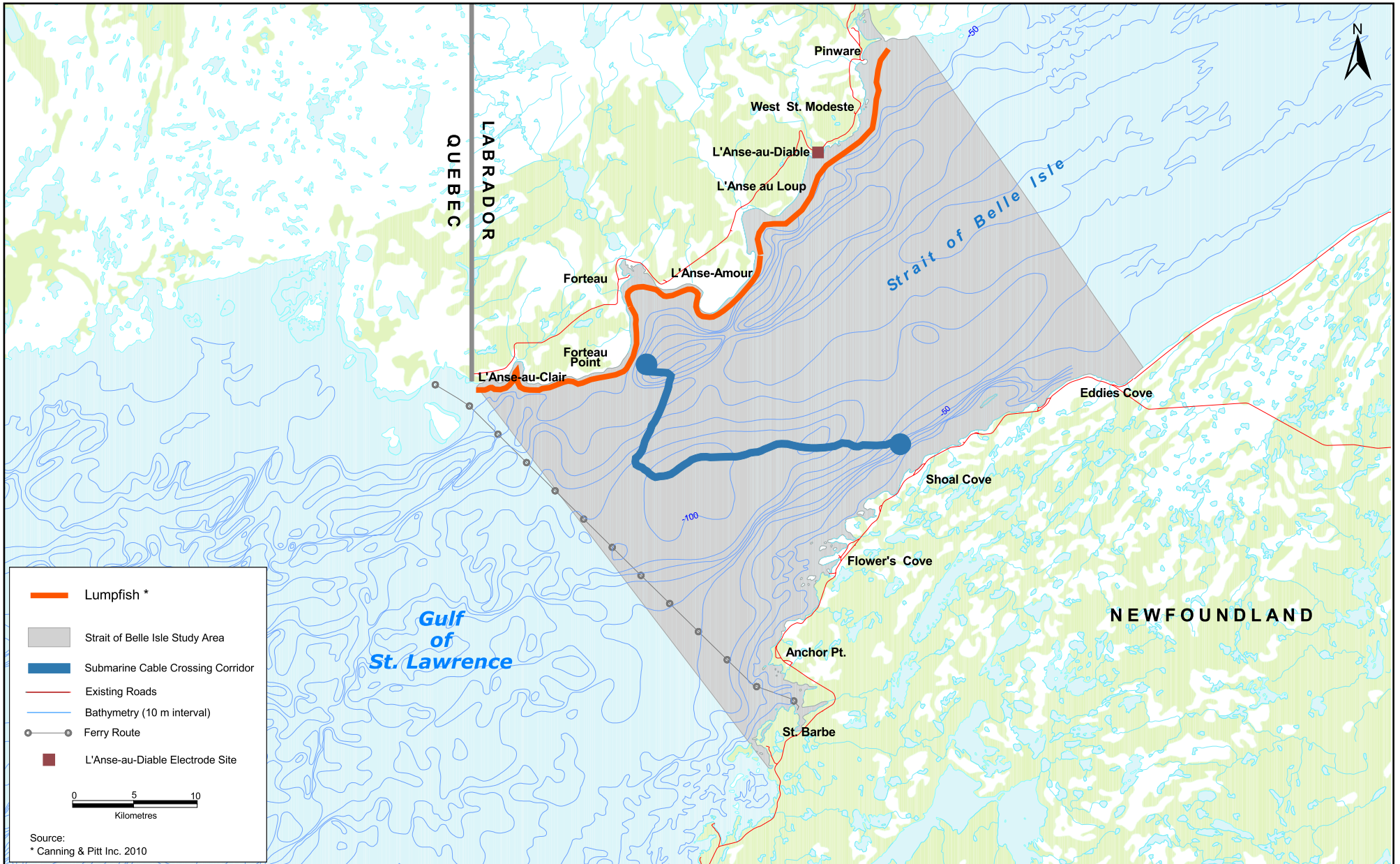


FIGURE 15.6.4-6



Reported Lumpfish Harvesting Locations, Strait of Belle Isle Study Area

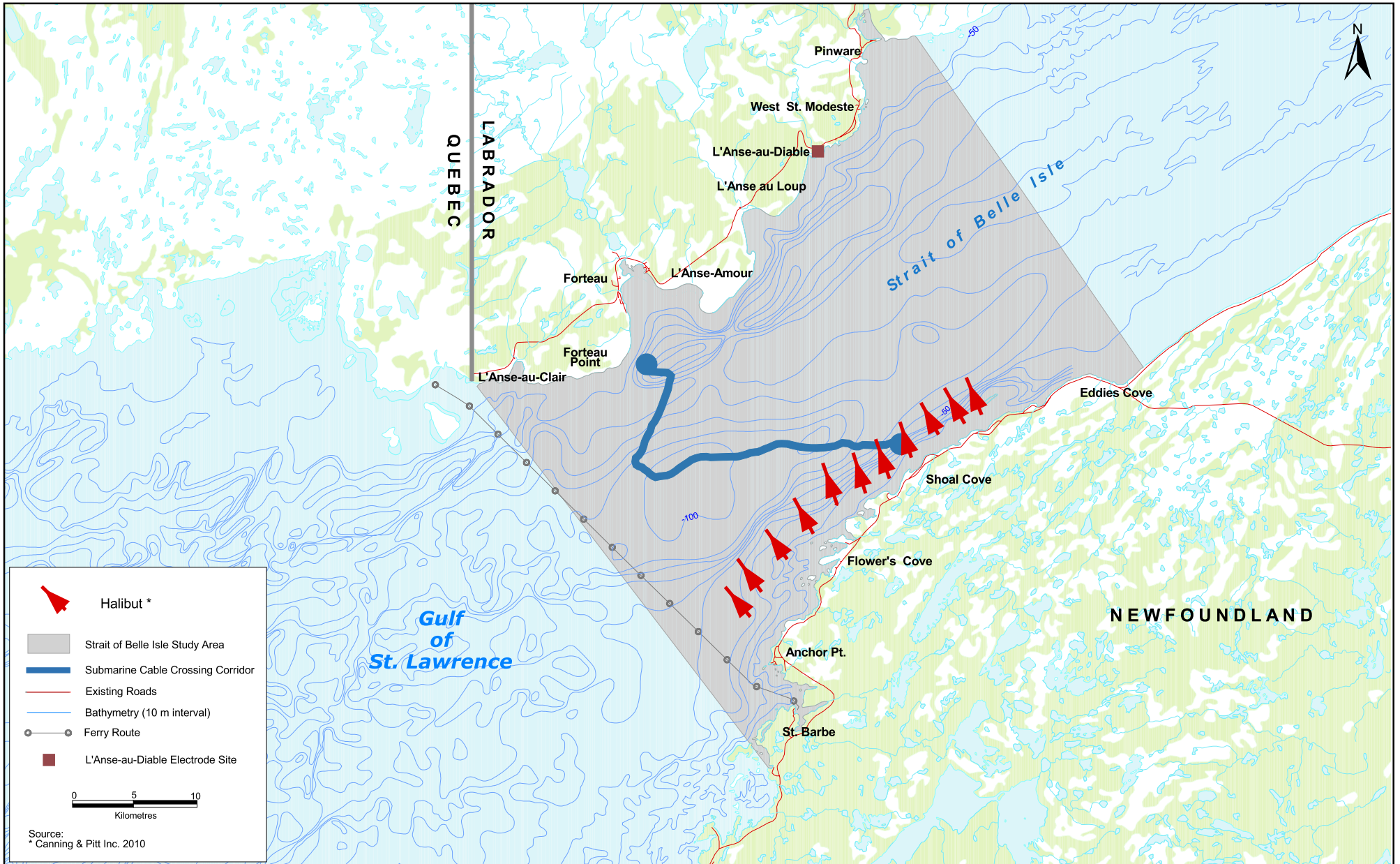


FIGURE 15.6.4-7



Reported Halibut Harvesting Locations, Strait of Belle Isle Study Area

15.6.4.4 Scallops

5 Within UA 4Ra generally, the Icelandic scallop fishery exhibited a rapid increase in landings during the early 1990s followed by a gradual decline, so that harvests in 2007 and 2008 were at levels similar to those in the period 1989 to 1991 (Figure 15.6.3-3). DFO records show that 56 enterprises that fish the Study Area hold scallop licences. However, fishers report that, in recent years, only 10-14 vessels (using drags, dredges or rakes) have been actively involved due to poor market conditions, regulatory restrictions and other factors (Canning & Pitt Associates Inc. 2010). The harvest typically occurs over six months from spring to fall, with the largest catches coming in July and August.

10 DFO (2009) notes that the Strait of Belle Isle fishery is “the longest existing scallop fishery in Newfoundland and Labrador, started in 1969 and has been prosecuted annually with the exception of four years (1975 to 1979). The number of active licenses has ranged from a high of 107 (1985) to the current low of 10. The fishery has been cyclical in nature, often driven by market considerations. The fishery has been regulated by an annual Total Allowable Catch (TAC) since 1996. Other management measures include weekly catch limits and spatial regulation of removals. The majority of vessels in this fishery are less than 45 feet LOA (length overall). They make daily excursions and land fresh product with nearly all scallops shucked at sea.”

15 Fishers using grounds within the Study Area harvest scallop and cod on the same grounds (see Figure 15.6.4-4). Scallops are found throughout much of the Strait of Belle Isle, and grounds for this species extend as far as Red Bay. According to harvesters, the most suitable scallop beds are generally found where water depths are greater than 60 m.

20 For most of the last decade, scallop fishing was excluded from a refugium established by DFO in 2000 to enhance stock recruitment (see Figure 15.6.4-8). The refugium was established to test the hypothesis that the reduced number of pre-recruits (less than 60 mm shell height) in this area was due to intensive fishing which resulted in higher levels of incidental mortality. However, based on 2007 survey data, no difference in density between inside and outside the refugium was observed as natural mortality was higher and the density of predatory starfish was greater inside the refugium (Naidu et al. 2001).

25 Figure 15.6.4-8 also shows the scallop harvesting locations for the five years 2005-2009, aggregated, for all months from the DFO catch and effort datasets (DFO 1990-2009). The harvesting activity showing within the refugium is from 2009, the year that area was re-opened to scallop dragging.

15.6.4.5 Whelk

30 The whelk fishery in the Strait of Belle Isle began in the early 1990s. Harvesting usually commences in June and fishing may continue into the fall months. Labrador-based fishers report whelk are generally found in the same areas and at the same water depths (e.g., 20 m and less) in which pelagic species such as herring are taken (Canning & Pitt Associates Inc. 2010). It was noted that whelk also inhabit deeper water, but most fishers prefer to fish this species closer to shore given the size of their vessels and the strong tides found farther out in the Strait of Belle Isle. Whelk fishers on the Newfoundland side of the Strait of Belle Isle say that they generally fish whelk in water depths of 30 m or deeper (Canning & Pitt Associates Inc. 2010).

15.6.4.6 Eels

40 Although of minor importance in UA 4Ra, this species is harvested on the Labrador side of the Strait of Belle Isle in various freshwater locations, such as Forteau Brook and L’Anse au Loup Brook. Eels are reportedly not fished on the Newfoundland side of the Strait of Belle Isle (Canning & Pitt Associates Inc. 2010). They are harvested using eel pots or fyke nets.

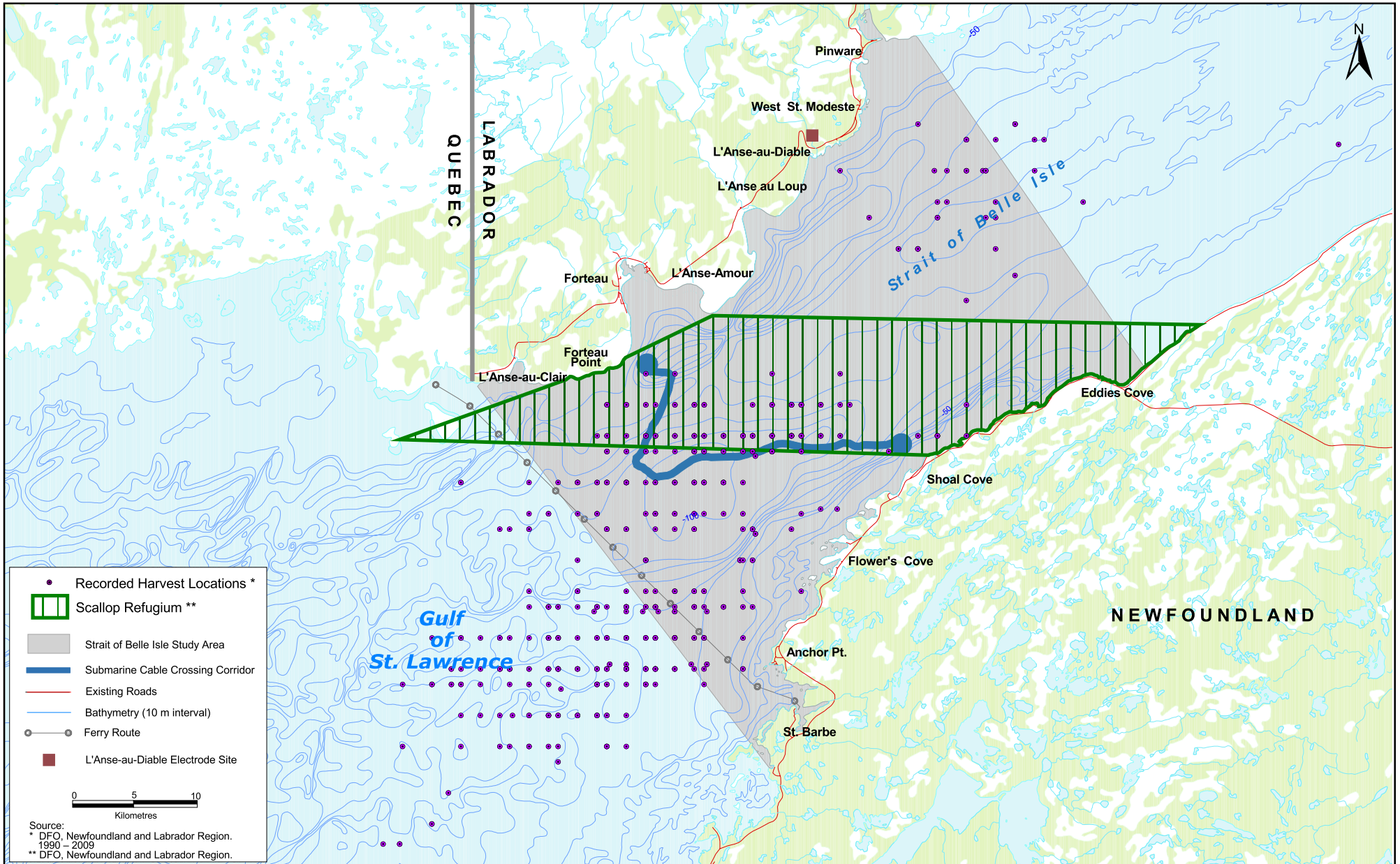


FIGURE 15.6.4-8



Reported Scallop Harvesting Locations, Strait of Belle Isle (Georeferenced Data), 2005-2009 Aggregated

15.6.4.7 Seals

5 Fishers based in ports on both sides of the Strait of Belle Isle are allowed to harvest seals throughout UA 4Ra as well as in other parts of the Gulf of St. Lawrence. If the seals are in the area in the spring, most fishers choose to harvest them on the ice closest to their homeports. In some years, fishers from other parts of the province, e.g., the north-east coast of Newfoundland, may also take part of their annual harvest in the same general area, especially if they have not been able to take their full quota elsewhere. However, these non-UA 4Ra enterprises are not permitted to harvest seals farther west than a line between Flower's Cove and L'Anse au Clair.

15.6.4.8 Toad and Rock Crab

10 Toad and rock crab are quite abundant on the Labrador side of the Strait of Belle Isle and are often caught together on the same grounds. However, fishers noted that catch quantities fluctuate from year to year depending on product market prices (Canning & Pitt Associates Inc. 2010). Toad crab are found along the same shoreline areas inhabited by lumpfish (see Figure 15.6.4-9) but are taken in deeper water, from 8 m - 10 m to about 100 m depth.

15 Fishers on the Newfoundland side of the Strait report that toad crab are relatively abundant on their side of the Strait of Belle Isle and are generally found in water depths between 12 m - 120 m, while rock crab tend to inhabit water depths less than 60 m (Canning & Pitt Associates Inc. 2010).

15.6.4.9 Snow Crab

20 Although snow crab emerged as an important economic species in the years following the groundfish closures (see Figure 15.6.3-6), snow crab catches in the north-eastern Gulf of St. Lawrence have been low since 2002. This species has accounted for less than 1% of the overall species catch value in the past several years. Even though the Division 4R quota (1,535 t) remained high after 2006, snow crab fishers were catching only about 35% of the available quota. In 2009, the Division 4R quota dropped to 902 t, but the catch that year was just 288 t for the entire Division and 217 t in 2010. The most recent DFO assessment of Newfoundland and Labrador snow crab (DFO 2010d) notes that both landings and effort in Division 4R have steadily declined since 25 2004, to historical lows in 2009, that the TAC has not been achieved since 2002, and that recent DFO Science Branch surveys indicate that the fishable biomass remains low. The decline in UA 4Ra crab catch since 2002 has been greater than the decline in the regional (Division 4R) crab fishery as whole.

30 The snow crab harvest usually begins in late May or early June. It peaks in June but may continue until the early fall in some years. Both the georeferenced snow crab data and consultations with local fishing groups indicate that most of the snow crab harvesting occurs well away from the cable crossing corridor, in other parts of the Gulf of St. Lawrence and off the Labrador coast (Canning & Pitt Associates Inc. 2010).

15.6.4.10 Shrimp

35 The shrimp harvested in UA 4Ra is almost all northern shrimp, which accounted for nearly 11% - 12% of the average UA 4Ra harvest (by quantity and value) for the 2005-2009 period (DFO 1990-2009). As Figure 15.6.3-4 shows, landings have been much higher in the last decade, though there has been variability over the full 20-year period. Although there may be some shrimp harvesting during most months, April to May is the key period, accounting for more than 80% of the catch in 2005-2009. Although some shrimp harvesting may occur in the general vicinity of the submarine cable corridor, the main activities in the Regional Area are 40 concentrated 65 km or more distant, well to the south-west of the Study Area (see Canning & Pitt Associates Inc. 2010).

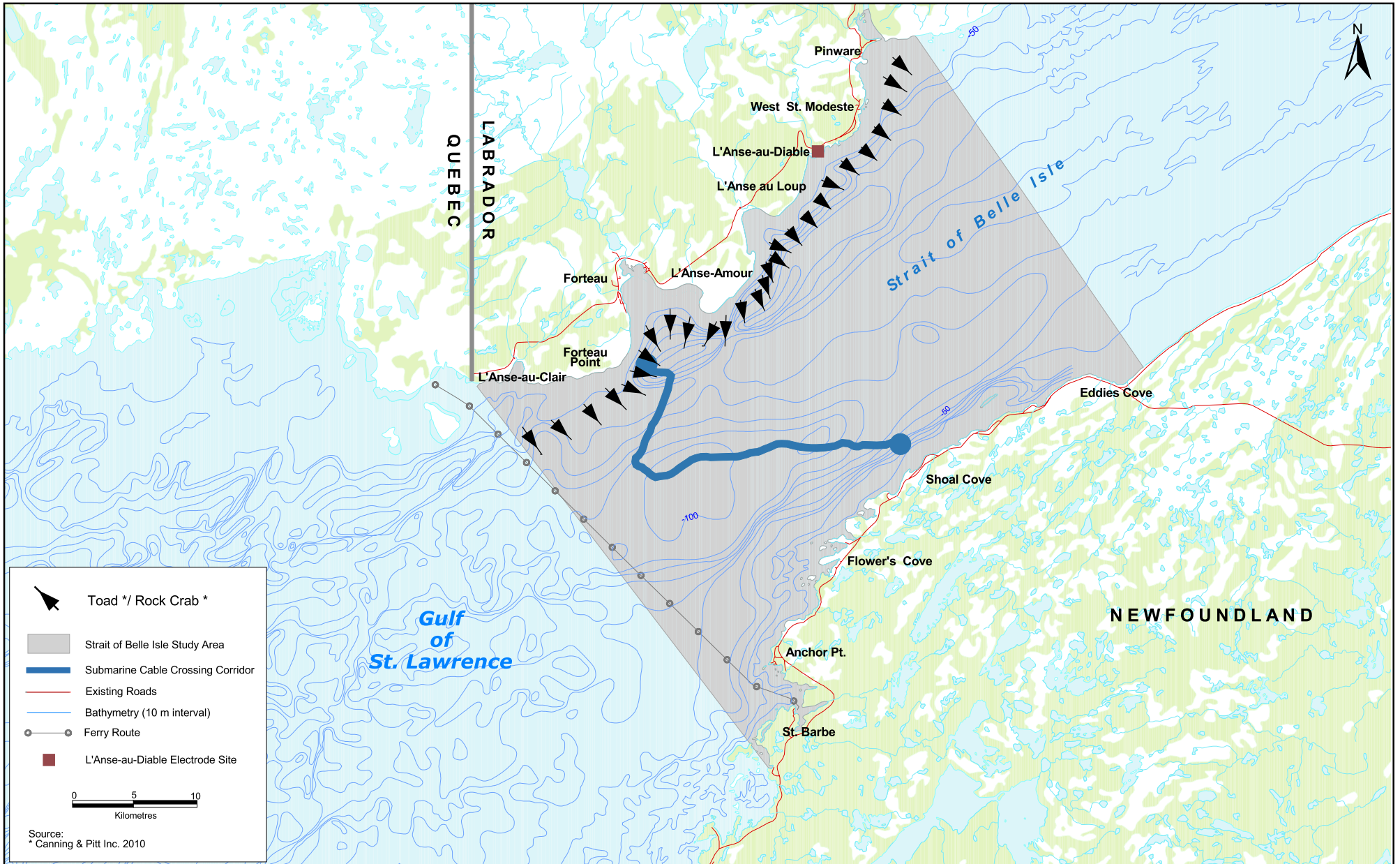


FIGURE 15.6.4-9



Reported Toad / Rock Crab Harvesting Locations, Strait of Belle Isle Study Area

15.6.4.11 Summary of Study Area Fisheries

The following table (Table 15.6.4-1) provides summary information about fisheries activities in the general vicinity of the Strait of Belle Isle Study Area, including the fishing season for various species, use of fishing gears and additional comments about fishing grounds, based on information from DFO sources and fisher meetings (Canning & Pitt Associates Inc. 2010).

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Table 15.6.4-1 Summary of Fisheries in and near the Study Area: Species, Seasons, Gear and Locations

Species	Typical Season	Fishing Gear	Fishing Grounds
Scallop	May to October	Dredges / rakes	Scallops are harvested throughout the Study Area usually in water depths greater than 60 m. Most of the scallop grounds are found on gravelly – rocky bottom beds.
Cod	Early July through to September, depending on how long it takes to fill the quota.	Gillnets, and hook and line gear.	Cod are harvested throughout the Study Area.
Capelin / Herring / Mackerel	The herring season opens in mid-June, but most of the harvest takes place in late July and early August. Mackerel and capelin are harvested in the same period.	Traps and nets (vessels from outside the Study Area may occasionally fish pelagic species in the area using purse seines).	Traps (and nets) are generally set close to shore (within 300 m - 400 m) in water depths of 12 m - 14 m.
Toad / Rock Crab	June to August, and in some years into September.	Pots	Pots are set in water depths of between 8 m - 10 m and deeper.
Whelk	From early spring (i.e., June) into the fall months	Pots	Whelk are harvested in the same areas where pelagic species are fished; in areas close to shore in water depths of 12 m - 14 m.
Eels	Early fall (mainly September)	Fyke nets or eel pots	On the Labrador side of the Strait of Belle Isle in freshwater locations (brooks).
Lumpfish	May, June and July	Gillnets	Nets are set along most parts of the shoreline in water depths of about 30 m - 60 m outside (i.e., in deeper water) of the locations where herring nets are set.
Halibut	June (usually a short season, i.e., three days)	Hook and line gear	This species is harvested mainly on the Newfoundland side of the Study Area in water depths 12 m and deeper.
Lobster	Early May to end of June	Pots	Lobster are only harvested on the Newfoundland side of the Study Area.

Source: Canning & Pitt Associates Inc. 2010.

15.6.4.12 Aboriginal Fisheries

A number of Aboriginal groups reside in Labrador and Québec and some undertake land use and resource harvesting activities in the general vicinity of the Project. Several of these groups assert Aboriginal rights and / or title to portions of these areas. These claims are at varying stages of review, acceptance and / or negotiation with the Government of Newfoundland and Labrador and the Government of Canada.

The Study Area does not overlap with past or current Labrador Innu land claim areas, and Labrador Innu are not known to undertake fishing activities in this area. The Project does not extend into the marine waters or land areas covered by the Labrador Inuit Land Claims Agreement of 2005. Québec Aboriginal groups include Innu communities along the Lower North Shore (Nutashkuan, Mingan, La Romaine, Saint-Augustin, Sept-Iles) and Schefferville, and the land claims of several of these Aboriginal groups extend into Labrador. However, these have not been accepted for negotiation by the GNL. Based on the information currently available, these claims are not known to overlap with the Study Area, and Québec Aboriginal groups are not known to undertake fishing in the Study Area.

The NCC has asserted a land claim which covers much of Labrador and its coastal areas, including the Strait of Belle Isle, but this has not been accepted for negotiation by either the federal or provincial government. NCC members reside in Labrador Straits communities and are involved in the general commercial fishing activity described above. Any "NCC-specific" fishing activities and associated fishing and management arrangements with DFO are, however, reportedly in the area north of Cape Charles and do not extend into the Strait of Belle Isle. NCC members have identified during 2011 interview areas in the Strait of Belle Isle where they harvest cod (see Section 15.5.7 for further information).

DFO reports that food / social / ceremonial fishing licences have been issued to members of the Innu Nation and the NCC. These are licences to harvest trout, salmon and char within the Upper Lake Melville area and in the coastal area between Fish Cove Point (near Black Tickle) and Cape St. Charles. There are no commercial fish harvesting activities by any members of these Aboriginal communities southwest of Cape St. Charles.

15.6.4.13 Aquaculture

There are currently no licenced aquaculture sites in or near the transmission corridor area in the Strait of Belle Isle. The closest existing aquaculture operations are more than 75 km away from the submarine cable crossing, at the northeastern tip of the Northern Peninsula in the Pistolet Bay - St Lunaire-Griquet area (Department of Fisheries and Aquaculture (DFA) 2010, internet site).

15.6.4.14 Recreational Fisheries

Responsibility for managing recreational fisheries activities in the Strait of Belle Isle lies with DFO's Corner Brook Area 3 office. The Area Chief of Resource Management (Ball 2010, pers. comm.) reports that the primary recreational fishing activity in the Strait of Belle Isle is for cod. In 2009, recreational cod fisheries took place between July 25 and August 16, and between September 26 and October 4; in 2011 recreational fisheries took place between July 23 and August 14, and from September 24 to October 2 (DFO 2011b). Future recreational cod fishing activities may have different opening and closing dates, as determined by DFO.

Other recreational / food fisheries include those for capelin (harvested by hand or with cast nets) and mackerel (taken with rod and reel gear). In addition, DFO has issued 20 recreational scallop licences for all of Division 4R. DFO managers (Ball 2010, pers. comm.) report that most of these recreational scallop harvesting activities are concentrated in the Bay of Islands - Bay St. George area.

15.6.4.15 Potential Future Fisheries

Evaluating any potential, future fisheries requires consideration of a range of biological (species presence, abundance, status) and socioeconomic (market demand and price, skills and equipment needs) factors, as well as decisions by government regulatory and resource management agencies. Apart from increases in market

demand for some of the existing non-traditional species fisheries, such as toad and rock crab, the most likely future fishery in both UA 4Ra and the Study Area could be a re-instatement of the mobile gear (i.e., otter trawl) cod fishery, but this would require a substantial improvement in the Northern Gulf cod stock and much more scientific study and assessment by DFO.

5 **15.6.5 Dowden's Point**

10 Geo-referenced catch data for the past five years indicate that nearshore fishing grounds within the Study Area are used primarily for the harvest of pelagic species such as capelin, herring and mackerel. Most of the catch is capelin, nearly all of which is harvested in July and August by larger 35-64 foot vessels using mobile gear such as purse seines and tuck seines. Most of these mobile gear pelagic fishing activities occur south of the Holyrood Generating Station (DFO 1990-2009).

15 Lobster, herring and lumpfish are harvested on suitable grounds closer to shore in the area between Lance Cove and Dowden's Point. Three lobster fishers set a total of about 20 pots in 2 m water within 30 feet from shore off Dowden's Point. Herring and lumpfish are harvested with nets 250-500 m out from this location in water depths of about 10 m. Recreational fishing activities in the immediate vicinity of the proposed electrode site include the harvest of brown trout by trolling gear close to shore, and cod using handlines, usually in water depths between 32 and 36 m (Lear 2011, pers. comm.)

15.7 Tourism

20 Tourism is the temporary movement of people to destinations outside their normal places of work and residence, the activities undertaken during their stay in those destinations and the facilities created to cater to their needs (Mathieson and Wall 1982). Therefore, the tourism industry is made up of three interrelated components - the destination and its attractions and activities (i.e., supply); transportation - the mode of travel people use to reach their destination; and the markets or locations where visitors come from (i.e., demand). Statistics Canada's Canadian Tourism Satellite Account (CTSA) defines the relevant distance for tourism as a trip of more than 80 km (50 miles) in one direction. This is used to help separate regular commuting or activities within one's usual environment (Katherine Kemp and Shaila Nijhowne Consultants (KKS) 2004).

This section discusses tourism in Newfoundland and Labrador. Focus is placed on major destinations, particularly those in areas through which the transmission corridor will cross or come close to. As tourists must travel through the province to reach those destinations, focus is also placed on transportation systems by which tourists enter into and travel throughout the province.

30 The reader is also referred to Section 15.3 Community Infrastructure and services, which describes the highways, roads, parks, airports and railway within the province by region. Section 15.4 Economy, Employment and Business also describes the contribution of Tourism to the economy. Section 15.5 Land and Resource Use also describes tourist attractions such as parks and protected areas, campgrounds and recreational areas, hunting and angling and motorized recreational vehicles.

35 **15.7.1 Study Area**

40 The discussion of Tourism focuses initially and primarily on the four sub-regions: Central and Southeastern Labrador, Northern Peninsula, Central and Eastern Newfoundland and the Avalon Peninsula (Figure 15.7.1-1) through which the proposed Project would extend. These are discussed in relation to the various RED Board zones crossed by the transmission corridor, as well as other project related components and activities. Depending on the availability and type of data, it is presented from the perspective of the provincial tourism regions which are used for tourism marketing, evaluation and data management: Western, Central, Eastern and Avalon. Given the larger provincial dimensions of the tourism sector, the industry in Newfoundland and Labrador as a whole is also generally described in this section.