Description of the Gulf Region lobster fishery in 1993, 2005, 2011, and 2016 from standardized phone surveys of Southern Gulf of St. Lawrence lobster fishers

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2022

Canadian Manuscript Report of
Fisheries and Aquatic Sciences 3247

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Cat. No. Fs97-4/3247E-PDF ISBN 978-0-660-44427-7 ISSN 1488-5387

Correct citation for this publication:

Boudreau, S.A., Giard, D. 2022. Description of the Gulf Region lobster fishery in 1993, 2005, 2011, and 2016 from standardized phone surveys of Southern Gulf of St. Lawrence lobster fishers. Can. Manuscr. Rep. Fish. Aquat. Sci. 3247: iv + 99 p.

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ABSTRACT

Boudreau, S.A., Giard, D. 2022. Description of the Gulf Region Lobster Fishery in 1993, 2005, 2011, and 2016 from Standardized Phone Surveys of Southern Gulf of St. Lawrence Lobster Fishers. Can. Manuscr. Rep. Fish. Aquat. Sci. 3247: iv + 99 p.

American lobster (*Homarus americanus*) supports the most valuable commercial fishery in Atlantic Canada. Over the past decades, lobster landings and abundance indicators in the southern Gulf of St. Lawrence (SGSL) have been increasing; landings are above the long-term median and commercial landings are expected to continue in an upward trend. Management of the SGSL lobster fishery is based entirely on fishing effort. The four most important measures in controlling lobster fishing effort are; (1) a fixed number of lobster fishing licenses, (2) individual trap allocations, (3) limited fishing seasons, and (4) trap specifications. Information on how this fishing effort is deployed, and the impact regulatory changes have on effort, is not well understood or documented.

To learn more about the spatial, temporal, and socio-economic changes in the SGSL lobster fishery, telephone surveys of lobster fishers were conducted in 1993-94, 2006, 2012 and 2017. Questions were constructed around five general topics; (1) vessels, (2) traps, (3) fishing patterns, (4) general opinions and, (5) captain and crew.

This manuscript combines four surveys that represented the 1993, 2005, 2011, and 2016 fishing seasons. A Canadian Industry Report for the 1993-94 survey has been already published. The 2005, 2011, and 2016 survey results are presented for the first time in this document. Results demonstrate that there have been some notable changes in addition to evidence of regional variabilities in some fishing practices while others are stable across the multiple surveys, years, and areas.

RÉSUMÉ

Boudreau, S.A., Giard, D. 2022. Description of the Gulf Region Lobster Fishery in 1993, 2005, 2011, and 2016 from Standardized Phone Surveys of Southern Gulf of St. Lawrence Lobster Fishers. Can. Manuscr. Rep. Fish. Aquat. Sci. 3247: iv + 99 p.

Le homard américain (*Homarus americanus*) soutient la pêche commerciale la plus importante au niveau économique du Canada atlantique. Au cours des dernières décennies, les débarquements de homard et les indicateurs d'abondance dans le Sud du Golfe du Saint-Laurent (SGSL) ont augmenté; les débarquements sont supérieurs à la médiane à long terme et les débarquements commerciaux devraient se poursuivre selon une tendance à la hausse. La gestion de la pêche au homard du SGSL est entièrement basée sur l'effort de pêche. Les quatre mesures les plus importantes pour contrôler l'effort de pêche au homard sont: (1) un nombre fixe de permis de pêche au homard, (2) des attributions de casiers individuels, (3) des saisons de pêche limitées et (4) des spécifications de casiers. Les informations sur la manière dont cet effort de pêche est déployé et sur l'impact des modifications réglementaires sur l'effort, associées aux modifications réglementaires, sont nuancées et mal comprises ou documentées.

Pour en savoir plus sur les changements spatiaux, temporels et socio-économiques de la pêche au homard du SGSL, des sondages téléphoniques auprès des pêcheurs de homards ont été menés en 1993-94, 2006, 2012 et 2017. Les questions ont été construites autour de cinq thèmes généraux; (1) navires, (2) casiers, (3) habitudes de pêche, (4) opinions générales et (5) capitaine et équipage.
Ce manuscrit combine quatre relevés qui représentaient les saisons de pêche 1993, 2005, 2011 et 2016.

Un rapport sur l'industrie canadienne pour l'enquête de 1993-94 a déjà été publié. Les résultats de l'enquête 2005, 2011 et 2016 sont présentés pour la première fois dans ce document. Les résultats démontrent qu'il y a eu des changements notables en plus des preuves de variabilités régionales dans certaines pratiques de pêche tandis que d'autres sont stables à travers les multiples relevés, années et zones.

BACKGROUND

The American lobster (*Homarus americanus*) supports one of the most important commercial fisheries in the Southern Gulf of St. Lawrence in both landings and economic value (SGSL; DFO 2016 a-c). Management of the lobster fishery is based entirely on fishing effort (i.e. input controls; Rondeau et al. 2015). The four most important measures controlling effort in the lobster fishery are; (1) a fixed number of lobster fishing licenses, (2) individual trap allocations, (3) limited fishing seasons, and (4) trap specifications. Information on how this effort is deployed across the Gulf Region is not well documented or understood. Information on fishing habits, strategies, gear and vessel specifications, would contribute to the characterization of the lobster fleet's effective fishing effort. Information on bait use and interactions with species listed under the *Species at Risk Act* (SARA) during the fishery are needed to support both Fisheries and Oceans Canada (DFO) and industry's interests, including their eco-certification (Marine Stewardship Council, MSC; Criquet et al. 2015). The Gulf lobster fishery is currently managed as five major Lobster Fishing Areas (LFAs; Figure 1), 23, 24, 25, 26A and 26B and three provinces have coastline bordering the SGSL (Nova Scotia, NS; New Brunswick, NB; and Prince Edward Island, PEI). The Lobster Fishing Areas are often further divided for management purposes, named either a sub-LFA or Management Zone (MZ). Lobster Fishing Area 23 is broken down into four sub-LFAs (23A, 23B, 23C and 23D), LFA 26A has one sub-LFA (26A2) and two MZs (Figure 1; 26A1 and 26A3), LFA 26B has two MZs (26B North and South), while LFAs 24 and 25 are not subdivided. Lobster landings have been increasing for decades (Figure 2 and 3, Rondeau et al. 2015, DFO 2019). The fishery landings were 27,076 mt in 2016 (DFO 2016a), valued at $131,462,000 (DFO 2016b) and fished by 2916 license holders (DFO 2016c). The season, number of traps, minimum legal size, and additional size protection measure for females vary by fishing area. There are two fishing seasons, LFA 23, 24, and 26A and B take place in the spring (typically late April to late June or early July) while LFA 25 is in the summer (early August to early October). The 2016 lobster fishery key management measures are presented in Table 1.

To identify and describe spatial and temporal changes in lobster fishing practices, and to address critical knowledge gaps and support conservation decision-making, telephone surveys of SGSL lobster fishers were conducted in 1993 (Lanteigne 1999), 2005, 2011 and 2016. In this report we present the results from the phone surveys, and while all survey years have been summarized in this document, the focus and interpretation will be relative to the most recent series of interviews representing the 2016 fishing season.

METHODS

Questionnaire:

The phone survey questionnaire was designed by DFO Gulf Region's Lobster Section to gather information regarding; (1) the fishers, (2) their vessels, (3) fishing gear, and (4) fishing patterns and strategies. The general sections and specific questions have evolved over time, and an accounting of the questions included during each survey year is in Appendix 1. The first survey took place from Fall 1993–Winter 1994 and sought to identify changes which may have resulted in an increase in fishing effort since 1984 (Lanteigne 1999). In addition to capturing a snapshot of the 1993 fishing activity, the fishers were asked questions with respect to their previous vessel (Lanteigne 1999). The subsequent surveys (2005, 2011, and 2016), with occasional questions interested in longer-term trends, are intended to represent the survey fishing year. A complete version of the 2016 questionnaire is presented in Appendix 2 and results for questions removed The first survey took place in Fall 1993–Winter 1994 and sought to identify

changes which may have resulted in an increase in fishing effort since 1984 (Lanteigne 1999).prior to 2016 are found in Appendix 3.

Sampling design:

The phone interviews were conducted by randomly selecting a representative subsample of lobster fishers holding commercial licenses in all LFAs and MZs (Figure 1). The sampling protocol followed a weight-stratified design according to the statistical district fished (Figure 1) reflecting the heterogeneous distribution of lobster fishermen along the coastline (Lanteigne 1999). The list of fishers in each LFA was randomly sorted and a sample representing 20% of the license holders for each statistical district was generated. In 1993 the goal was 15% per statistical district (Lanteigne 1999). A second list was also generated and made available to the interviewers in the event of a refusal to participate or the inability to reach or otherwise make an appointment with the respondent. In 2016, 592 participants of the 2916 license holders were selected according to the sampling design (Table 2). The survey was scheduled to take place during the two months prior to the spring lobster fishing season. For the 2016, 2011, and 2005 surveys interviews were conducted from February 15 to April 6, 2017, February 3 to March 2, 2012, and March 2 until April 20, 2006, respectively. The 1993 survey was conducted in the fall of 1993 and winter of 1994 (Lanteigne 1999). Interviewers were knowledgeable about the lobster fishery and how to administer the phone survey.

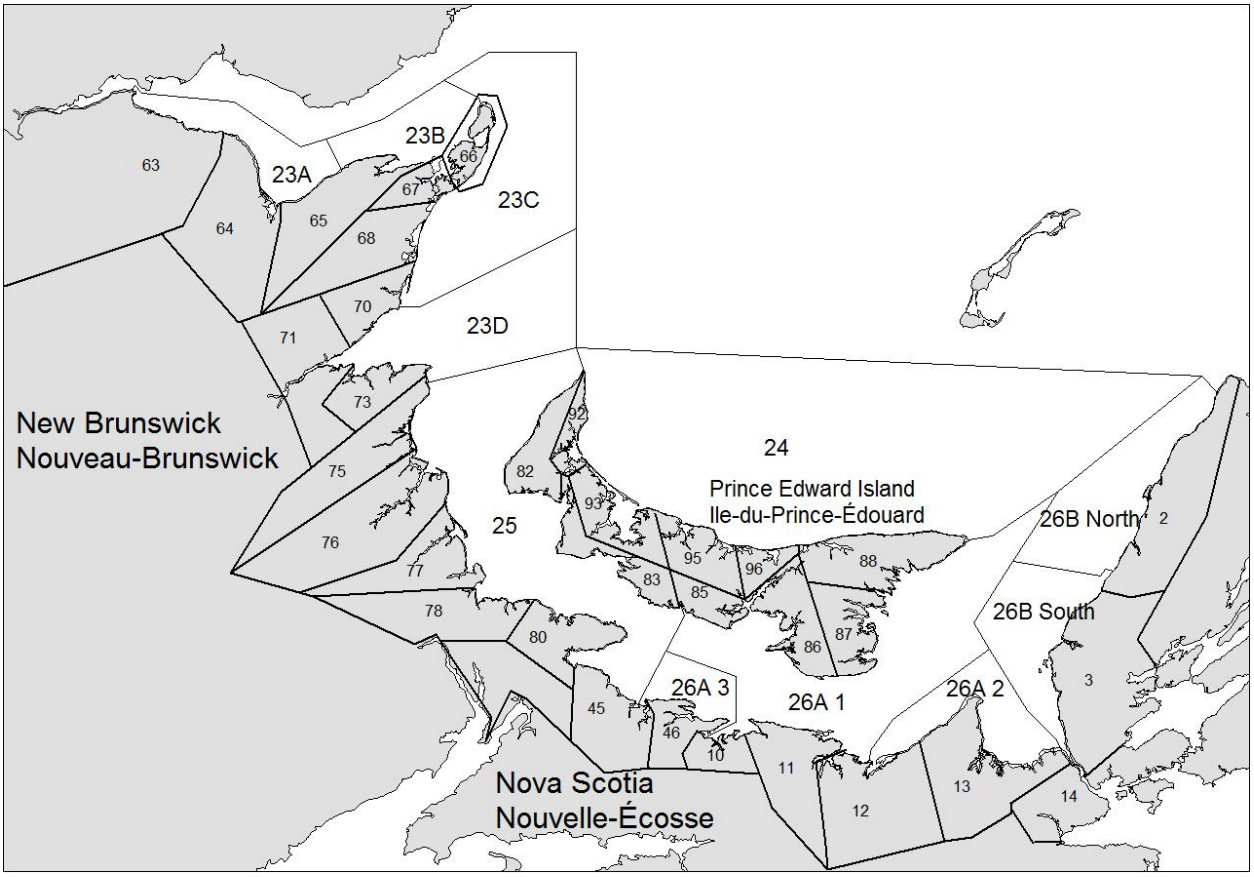

Figure 1: Map of the Southern Gulf of St. Lawrence with the Lobster fishing areas and sub-areas (printed on the water), and statistical districts (numbers are printed on the land).

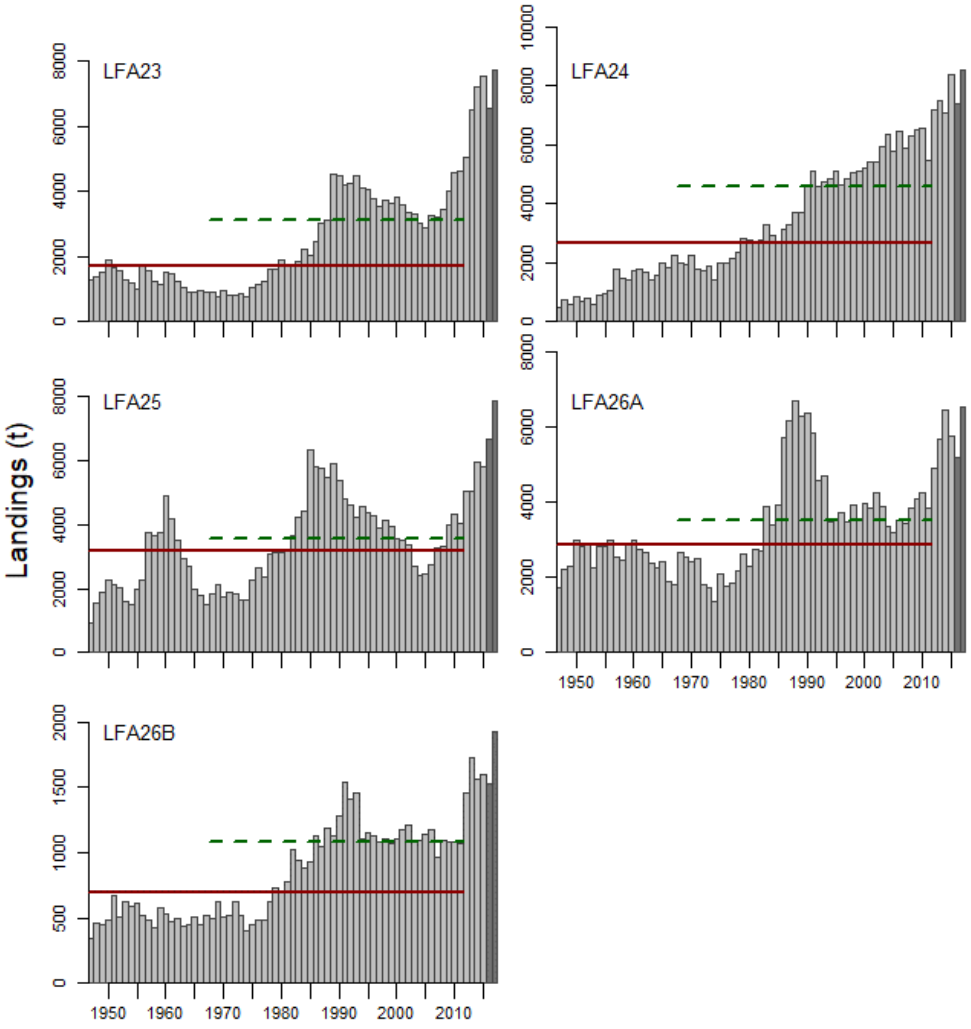

Figure 2: Lobster landings (t) by sub LFAs 1947 to 2017. The solid horizontal line is the median value for 1947 to 2011 (long-term) and the dashed horizontal line is the median value for 1968 to 2011 (mid-term). Data for 2016 and 2017 are preliminary (DFO 2019).

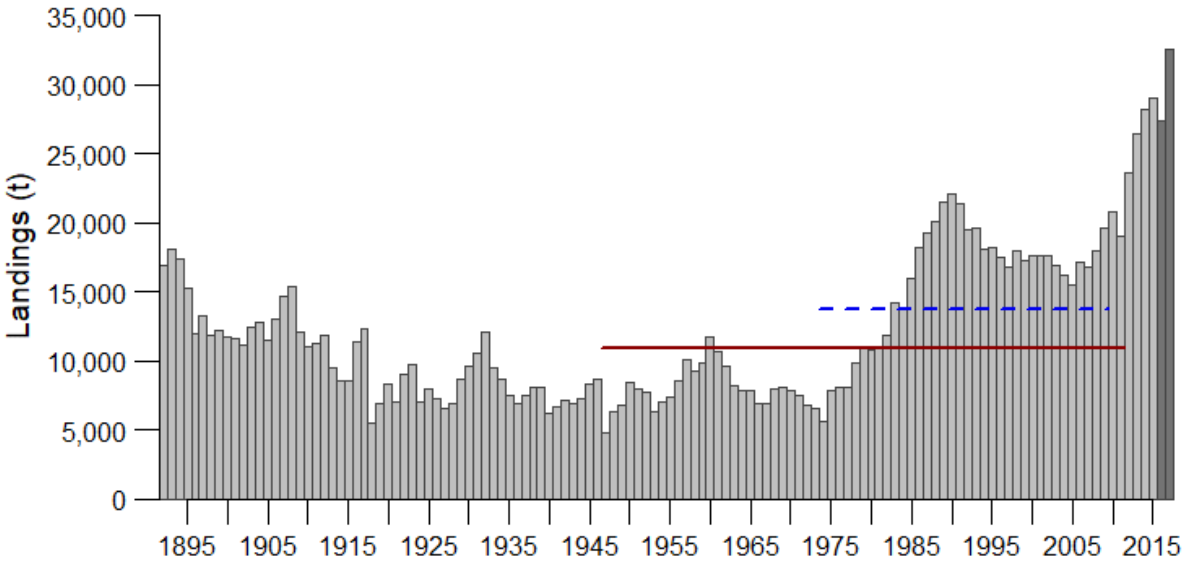

Figure 3: Total southern Gulf of St. Lawrence lobster landings (t) from 1892 to 2017. The horizontal solid line is the median landing of the time series for 1947 to 2011 (10,933 t). The dashed line represents the Upper Stock Reference point (13,798 t) (DFO 2014). Data for 2016 and 2017 are preliminary (DFO 2019).

Analyses:

Following Lanteigne (1999), the survey responses were averaged and weighted by statistical district, *s* (Figure 1). For a particular district, the number of fishers interviewed, n_s, out of the total number of fishers, N_s, was expected to be ~20%. The mean of the response variable in a statistical district for fisherman, *f*, was estimated (eqn 1; $\overline{Y}_s$) before scaling up to the LFA (subLFA, or MZ) using a stratified estimator (eqn 2; $\hat{\overline{Y}}_{LFA}$), where N_{LFA} is the total number of fishermen in the LFA.

$$(1)\ \bar{Y}_s = \frac{\sum_{Fishers\ in\ s} Y_{sf}}{n_s}$$

$$(2)\ \hat{\bar{Y}}_{LFA} = \frac{\sum_{s\ in\ LFA} N_s \bar{Y}_s}{N_{LFA}}$$

The mean area of lobster traps (m^2), as calculated from dimensions of the bottom of the respondent's traps, were weighted by LFA (eqn 3; $\widehat{\overline{MTA}}_{LFA}$). For mean area, N_x is the estimated number of traps of type X, $\widehat{\overline{LG}}_x$ is the estimated mean trap length (m), and $\widehat{\overline{WD}}_x$ represents the estimated mean trap width (m).

$$(3)\ \widehat{\overline{MTA}}_{LFA} = \frac{\sum_{\text{trap type x in LFA}} (N_x \widehat{\overline{LG}}_x \widehat{\overline{WD}}_x)}{\sum_{\text{trap type x in LFA}} N_x}$$

RESULTS AND DISCUSSION

The results are presented by LFA, sub LFA, MZ, and province. The results from LFA 25 NS are not presented in order to maintain the confidentiality of the responses due to the small number of fishers, i.e. less than five, and respondents in the area (Table 2). LFA 25 NS is however included within the results for the entire SGSL.

Participation:

In the 1993 survey, the initial goal to achieve 15% coverage for the entire SGSL was reached (Lanteigne 1999) (Table 2). Subsequent surveys had a sampling coverage objective of 20% for each statistical district. In the recent years, if the LFA had less than the desired 20% response rate (Table 2), this was typically due to difficulty getting in contact with respondents. In 2016 the responses were high, reaching the targeted 20% in all LFAs but one (Table 2) where, even after employing the second list of participants and having allowed more time, the callers were unable to reach 20%. However, the overall participation level was deemed excellent for all surveys in all years.

Respondents:

The captains were, on average, in their late 40's and 50s, in all survey years (1993, 2005, 2011, 2016; Table 3). On the whole results are similar across the years and the average age of the captains has generally been increasing with each surveyed year (Table 3). As captains, in 2016 the respondents had 24.2 years of experience (Table 4) and 32.9 years in the fishery (Table 5), both results are similar to the previous survey years (Table 4 & 5). The average number of deckhands on board during the beginning of the 2016 fishing season was, on average, 1.7, marginally higher in 2016 than the other years (Table 6), on average an additional crew member was hired LFA 23A and 23B during the 2016 season. At the end of 2016 season there were 1.6 deckhands (Table 6). Nearly all of the respondents landed their catch at their home port (96.3% in 2016; Table 7). In 2016, on average, more respondents were participating solely in the lobster fishery during the year (44.6%; Table 8). Of those who did fish other species, the top three fisheries fished by lobster fishers as reported in 2016, in order of high to low percentage, were tuna (e.g. Atlantic bluefin tuna, *Thunnus thynnus*), Atlantic herring (*Clupea harengus*) and Atlantic halibut (*Hippoglossus hippoglossus*), which was subtly different than the herring, Atlantic mackerel (*Scomber scombrus*) and tuna of 2005 and 2011 (Table 8). The majority of respondents, 78.8% in 2016, did not have another profession or employment after the lobster season, which is similar to previous survey years (Table 9). This is likely because most lobster harvesters are considered to be "bonafide" fishermen, namely fishermen fishing from vessels 50' length overall or less located in the SGSL where the majority of their income (≥75%) comes from the fishery (DFO 1986). With respect to transitioning out of the fishery, on average, the respondents will be fishing for another 13.1 years, as of 2016, before retiring (Table 10), and 47.1% of the respondents had a child who was interested in taking over the license and equipment (Table 11).

Boat information:

The vessels in the SGSL lobster fleet are described by their age, length, construction material, engine type, horsepower (HP), equipment, accessories used for lobster fishing, and how lobster are stored. In 2016, the average age for a vessel of the SGSL was 18.3 years (Table 12). Management Zone 26A1 NS had the oldest vessels on average, 21.6 years, while LFA 25 PEI has the newest, 14.8 years (Table 12).

Maximum length of lobster vessels in the Gulf Region is 45 feet (13.7m; DFO 2010), as per licencing conditions. Average length of lobster vessels in the SGSL in 2016 (Table 13) were from 11.5 m in MZ 26B South to 13.4 m in LFA 24 and LFA 25 PEI. The most common material used in the construction of vessels is fiberglass due to its durability and low maintenance (Table 14). In the decade between the 1993 and 2005 surveys, the fleet transitioned from wood to fiberglass, in 2016, 69.5% of all boats in the SGSL were made of fiberglass while 6.7% were wooden (Table 14). Only two areas, sub LFAs 23B and MZ 26A3 have less than 50% of their fleet using fiberglass. Inboard diesel engines are found throughout the lobster fleet of the SGSL (Table 15) and have been the dominant engine type since at least 1993. Horsepower, used here as an indicator of the overall fishing capacity of the lobster fleet, has been increasing with every survey year (Table 16). In 2016 the average HP was 357.8 and LFA 25 PEI had the highest on average, 461 HP, while MZ 26B South had the lowest, 279.2 HP (Table 16).

Navigation aids for fishing vessels have improved significantly over the decades. The use of radar by respondents has been consistently around 40% since 2005 (Table 17). Electronic technology such as global positioning systems (GPS; Table 17), colour sounders (Table 17), very high frequency (VHF) radios, cellular phones (Table 18), and plotters (Table 19) are currently found on board nearly all vessels in the fleet. Bottom mapping systems (BMS) and cameras (Table 19) are also being installed in the wheel house. All of these technologies contribute to the vessel's lobster fishing efficiency.

Disc haulers are utilized on nearly all lobster vessels in the SGSL (Table 20). They are placed on the stern or the bow according to the fishing practices of the captain and the crew. Bow haulers are more prevalent, used by over 90% of respondents in LFA 25 PEI, MZ 26A3, MZ 26B North (Table 20). Stern haulers are used by more than 87% in Sub LFA 23A, 23B, 23C (Table 20). Hydraulic booms are becoming more common on board (Table 21), while the use of a propeller guard has not changed much from 2011 and the use of a trap lift has been dispersed through the years (Table 22).

The storing of lobsters onboard fishing vessels differs by region and commercial season. As it is warmer during the summer fishery than the spring, keeping the catch in good condition is an important consideration. Answers from the survey were grouped into four categories, storage using ice, no ice, seawater (fill and drain or recirculating), or another method (Table 23). Since storage for canners and markets were the same, only results for the market lobsters are shown. In 2016, the lobster fishers were mostly using ice (42.7%), particularly in the summer-fall (LFA 25 NB, 91.4%; LFA 25 PEI, 79.5%), or seawater (49.4%) to store lobster (Table 23). Banding market size lobster is done consistently in all fishing areas but had become less prevalent in 2016 (Table 24), particularly in Sub LFA 23A (28.8%) and LFA 25 NB (36.6%). Some harvesters, notably those from Nova Scotia, also band canner-sized lobster, overall the percentages did not change much in 2016 (18.8%) from 2011 (21.7%; Table 24). The banding of canners is typically for those destined for the live market to prevent the lobster injuring one another.

Trap information:

The survey was also interested in capturing information about the different types of lobster traps being used in the SGSL including; construction materials, trap dimensions, hoop size, escape mechanism dimensions, the number of parlours, and the number of bait pins. There are regulations in place regarding the number of traps to be fished, the trap size, hoop diameter (entrance) and escape mechanisms (Rondeau et al. 2015), while the overall shape, interior design and construction materials are not regulated. The number of traps are allocated according to the license type and area (Table 1). The majority of respondents reported fishing their trap allowance (Table 25).

Per the *Atlantic Fishery Regulations* (1985; 60(4)), no person shall fish with or have on board a vessel a lobster trap that exceeds 1.125 m^2. Traps have been steadily increasing in surface area and the overall 2016 average within the SGSL was 0.682 m^2 (Table 26). Traps are made of wood, wire mesh or are a hybrid of those materials. In 2016, as in 2005 and 2011, wire traps were used most often at 43.9% (Table 27). In 2016, wood traps were used by 35.1% of the respondents and hybrid traps by 21.0% (Table 27). There were some regional trends, for example, all fishing areas from NB show an overall preference for wire mesh traps. In PEI, wood is the material of choice with wood and hybrid traps being the most popular. Respondents from Nova Scotia however, were divided. Along the Cape Breton coast, wood and hybrid traps were preferred while along the Northumberland Strait results demonstrate wire mesh as the most common material (Table 27). The preferred colour of wire used in traps in 2016 was green (55.7%), followed by yellow (22%) (Table 28).

There are many different trap designs and configurations. Contemporary lobster pots are rectangular (Figure 4), however hybrid and wood traps may be dome-shaped. LFA 24 fishers, for example, slightly preferred domed-shaped (or round, Figure 5) traps (59.7%) indicating that some of hybrids are also domed (Table 29). Overall, rectangular (or square, Figure 6) traps were predominant at 72.5% (Table 29). Single and double parlour traps were overall evenly distributed throughout the SGSL (Table 29). However for some fishing areas the preference is quite clear, for example, respondents from MZ 26B North used one parlour (100%) while sub LFA 23C preferred two (94.1%; Table 29). Other trap specifications within the SGSL indicated that respondents preferred a trap with one kitchen (Table 30), and two bait pins (Table 31), slightly preferred entrances facing each other rather than offset (Table 32), and hoop size around 5.8 inches and not angled (Table 32). The regulation size for hoop is the entrance diameter (Table 1 and Notice to Harvesters 2016).

In this survey, a hybrid lobster trap is defined as one with a wood frame using wire mesh on one, or more, parts of the trap. Adding wire mesh on a wooden frame makes it stronger and last longer and reduces the maintenance. The door to open the trap is constructed most often of wire mesh (56.5%; Table 33). Respondents were asked if they were building their own traps. Over 90% of harvesters from PEI (LFA 24 and LFA 25 PEI; Table 34) completely built their traps, while the average for SGSL is 63.1%. On the other hand, more than 70% of sub LFA 23A, B and C do not build any part of their traps, which is well above the SGSL average of 29.1% (Table 34).

In 2016, as in 2011, most of the respondents were using legal-sized escapement mechanisms (Table 35). Some harvesters, however, are using oversized escape mechanisms to avoid catching smaller lobster and minimize onboard sorting and handling. In 2005 more fishers were using escape mechanisms larger than required (Table 35).

Figure 4: Rectangular wire lobster traps in Lamèque, NB (LFA 23, 2022, Y. Laroques).

Figure 5: Wooden dome shaped lobster traps in French River, PEI (LFA 24, 2021, S. Boudreau).

Figure 6: Wooden rectangular lobster traps in Nine Mile Creek, PEI (LFA 26, 2019, S.Boudreau).

The average number or traps per line within the SGSL has been around five per line over the past three surveys (2005, 2011, and 2016; Table 36). While there are no regulations in the *Fisheries Act* for the number of traps per line, some areas, through fishing agreements between harvesters and licensing conditions, have imposed a maximum number of traps per line (Table 1). Respondents were asked what number of traps per line they would choose to set if they had the opportunity. Results over the different survey years indicate that most harvesters would opt for the status quo (Table 37). The exception in 2016 were sub LFA 23D, LFA 25 NB, and MZ 26A1 NS, MZ 26A3, MZ 26B North and South which would prefer something different, with 5 traps per line being the preference (14.6%; Table 37).

Though navigation aids make it possible for the captain to locate their gear, some traps are still lost every season, typically due to bad weather conditions. If a trap is lost during the fishing season a replacement tag can be issued upon request. In 2016, on average within the SGSL harvesters lost 4 traps (Table 38). Some harvesters mentioned losing up to 300 traps for a season, while others did not lose a single one (Table 38). Regarding traps lost over a 5 year period, the 2016 average for the SGSL was 17.4 traps (Table 39).

In the SGSL on average, fishers replace their traps on a time frame (not specified; Table 40). A third of the respondents replace their traps as needed (Table 40). On average in 2016, respondents replaced 42.3 traps, and has varied between 37.0 in 2011, 30.8 in 2005 and 43.8 traps in 1993 (Table 41). Participants were asked about the life span of their traps (Table 42). In 2016, on average wire has a longer lifespan, lasting 8.9 years while wood was 6.1 years (Table 42), both slightly sooner than reported in 2011 (10.3 years; Table 42) indicating that harvesters do not necessarily wait for their traps to be unfishable to replace them.

Fishing pattern and strategies:

Fishers reported typically leave the wharf early in the morning, in 2016, on average respondents left just before 0500 hrs (Table 43). The average time of departure has been consistent over the four surveys (Table 43). On average the respondents were back to the wharf at 1400 hrs in 2016 (Table 44). On average the time to steam to and from the fishing grounds in 2016 was just over an hour (Table 45). It took the respondents an average of 8 hours in 2016 to haul all of their gear, which is consistent across all survey years (Table 46). The respondents were asked about the strategy they use when hauling their gear. On average, more than 80% from the past three surveys, and 93.8% in 2016, haul all of their traps every day (Table 47). On average the lobster fishers in the SGSL do not haul their gear more than once per day (Table 48). Whether or not a respondent fishes on Sundays varies by fishing area but generally, gear is not hauled on Sunday (Table 49). In 2016, 75.4% of SGSL lobster fishers who responded to the survey do not fish on Sundays (Table 49) as per a “gentlemen’s agreement”, and the percentages of those who do haven’t changed much in the past decade.

The traps are set generally in mid and deep water during the first four weeks of the fishery (Table 50 & 51) and then the effort moves to the mid to shallower depths for the last four (Table 52 & 53). In 2016, the average depths fished in the shallowest zone was 4.6 (low) to 9.5 m (high; Table 54). The average depth of vessels fishing in mid-water in 2016 was 12.2 (low) to 19 m (high; Table 55), while those fishing in the deepest waters of the lobster grounds averaged setting their gear from 22.8 to 29.3 m (Table 56) and the overall average deepest water where gear was reported to be set in 2016 was 27.0 m (Table 56). Over 75% of respondents in both 2011 and 2016 set their traps in the same location as the season before (Table 57).

Fishers were asked to describe their overall patterns fishing effort in the 2011 and 2016 fishing seasons relative to an average year and, in both years, respondents replied that their fishing effort was generally the same (Table 58). The number of fishing days were comparable between 2011 and 2016, with respondents in 2011 fishing an average of 50.8 days while in 2016 it was 47.5 days (Table 59). On average fishing activities were completed one day before the season officially closed (Table 60). In 2016 respondents lost 4 days of fishing, mostly due to weather (Table 61) while in 2011, 6 days were lost, again mostly due to weather (Table 62).

Bait usage and other species:

Lobster traps are baited to attract lobsters, though the bait will also attract other species. Rock crab (*Cancer irroratus*), for example, are one of the species caught as bycatch in the lobster fishery. Prior to 2021 when a minimum legal size was implemented, Lobster license holders were entitled to keep any sized male rock crab (*Atlantic Fishery Regulations, 1985* (55)). Most of the respondents did not retain rock crab to land at the wharf (85.3% in 2011 and 96.5% in 2016; Table 63) and of those who did land rock crab, the average weight landed per harvester in 2011 was 211.8 pounds and 56.4 pounds in 2016 (Table 63). The bait used by a lobster license holder is either purchased or fished. In 2011 and 2016, the majority of respondents did not fish for their own bait (Table 64). Of those who did fish bait in 2016, fewer fished the bait during the lobster season (52.9%) than in 2011 (66.3%; Table 64).

Respondents were asked to rank their three most used baits that season. For baits in 2016, the baits employed most often (Table 65) were frozen mackerel (*Scomber scombrus*), frozen herring (*Clupea harengus*), and fresh mackerel, in addition to frozen flatfish (Pleuronectiformes), and redfish (*Sebastes* spp.; unspecified if frozen or fresh; Table 65). In 2011, the baits used were similar to 2016 (Table 66), and while in 2005 mackerel and herring were still the most used, it was fresh baits as opposed to frozen were the most popular (Table 67). Regardless of availability, the respondents were asked in 2011 (Table 68) and 2016 (Table 69) which bait that would prefer to use, and the responses again were similar to actual usage with the additions of Gaspereau (*Alosa pseudoharengus*) and fresh flatfish. On average, lobster fishers in the SGSL used 188.8 kg of rock crab as bait in the 2016 season (Table 70), the usage within each sub-LFA varies, for example, some respondents don't bait their traps with rock crab at all. Rock crab usage was higher in 2016 than in 2011 (Table 70). The overall average amount of bait used by respondents in 2016 was 5658 kg (Table 71) which is similar to the average amounts reported from previous surveys.

The respondents were asked to report how many interactions they have had with species of conservation concern, namely, wolffish (*Anarchichas minor* or *A. denticulatus*; spotted or Northern), Leatherback turtles (*Dermochelys coriacea*), or whales (Cetacea), over the past five years (2012-2016; Table 72). Overall, the fishers reported interacting with wolffish, particularly in LFA 24, more often than Leatherback turtles or whales (Table 72).

General questions:

The respondents were asked whether they agreed with some general statements, many were included to capture the concerns and observed trends being discussed by the fishers at the time. In the 2016 season, 56% of respondents agreed that there were more sub-legal lobsters in their traps, roughly the same percentage as in 2011 (53.5%; Table 73). Over half of the respondents agreed that there were more berried lobsters (58.7%; Table 74) in their traps in 2016 and fewer rock crab (51.5%; Table 74). When asked whether timely and accurate landings are required to manage the fishery, 69.8% agreed (Table 75), and 69.8% also agreed that lobster habitat and fishing grounds are expanding (Table 75). Similarly 68.1% thought that after increasing the size of the escape mechanisms, the sorting time of small lobsters by respondents was reduced (Table 75). With respect to artificial baits being an option to replace expensive and less available baits, the responses were mixed, but the majority in both 2011 (45.4%) and 2016 (47.2%) disagreed with this statement (Table 76). With respect to the lobster stock doing well in the fishing area of respondents, most (72.1% in 2016; 62.7% in 2011) were in agreement with the statement (Table 77). Over 60% disagreed that poaching was an issue in their area (61.3% in 2005, 65.9% in 2011, and 64.5% in 2016; Table 78). The respondents in 2016 agreed that seals are an issue for the lobster fishery in their area (strongly agree, 19.4%; agree, 40.5%; Table 79). The percentage of respondents who disagreed that seals were a problem increased by 21.2% in 2016 to 38.9% (Table 79) from 2011 (17.7%; Table 79). In 2016, 18.7% more respondents agreed that obtaining an eco-certification, such as from the Marine Stewardship Council (MSC), was important for the lobster fishery than in 2011 (52.9% in 2011 and 71.6% in 2016; Table 80). Overall the respondents disagreed that an earlier start to the fishing season would be beneficial (50.2% in 2011 and 61.6% in 2016; Table 81).

CONCLUSIONS

A phone survey of lobster fishers was conducted to identify and describe spatial and temporal changes in lobster fishing practices in the southern Gulf of St. Lawrence, and to address knowledge gaps and support conservation decision-making. The survey was successfully administered for the 1993, 2005, 2011, and 2016, fishing seasons with between 565 and 592 fishers (out of approximately 3000, Table 2) interviewed each year. The survey responses provide a valuable snapshot of the fishing season, offers insights into fishing trends and experiences, and is one of the best characterizations of the fishery. The lobster fishery is very important to the livelihoods of the respondents (Table 9) and overall the fishers agreed that the lobster stock is doing well (Table 77). In the survey respondents' experience, there have been more berried lobsters and fewer rock crabs in their traps (Table 74), escape mechanisms have successfully reduced sorting time (Table 75), and lobster habitat and grounds have been expanding (Table 75).

Following an increase in lobster landings during the early 1990's (Figures 2 and 3), a shift is evident in the responses following the 1993 phone survey. In particular, fishing vessels (e.g. Table 14 and 16) and technology (Table 17 and 18) began to evolve in to the operations of the contemporary fishery. Responses to questions about demographics, vessels, and trends in gear setting, have generally been consistent during the 2005, 2011, and 2016 surveys. There has been a recent shift is the number of respondents who participate in additional fisheries, however, LFA 23 has the largest changes overall (Table 8) with more respondents fishing only lobster in 2016 than in 2011 and 2005.

The phone survey has been successful in meeting the research goals in part. The survey has informed meetings with the Marine Stewardship Council and results have been requested from Statistics and Economics Branch, Fisheries Management, and Science. However, the goals of some of the questions of the phone survey were not always clear, and there is evidence that some objectives shifted through time, and not all replies were requested in a way that would allow for interpretation of spatial or temporal trends. For example, questions about fishing depth (Tables 50-56) were recent additions to the survey, some were first introduced in 2011 (Tables 50-53) with specific depths requested in 2016 (Tables 54-56). Changes in effective fishing effort has been a knowledge gap since the late 1990's following the increasing trend in lobster landings (Rondeau et al. 2015). To detect a shift in depths fished throughout the seasons, a question introduced in earlier surveys would have aided in interpreting changes. The earlier survey years were more focused on characterizing gear construction etc... in response to increasing catches (e.g. Table 26-33) providing important information but has not changed overall across the survey years.

There is a good potential however in and for this work, and the surveys have been a successful collaboration between Science and Industry. It is recommended that a future iteration be revised by revisiting social science survey techniques to construct the questions, and with data management and analysis in mind. A revision with better alignment with current initiatives in logbooks (e.g. SARA, bycatch), regulations and licensing conditions, is also recommended. Ultimately, a re-design with the goal of informing and being integrated into the stock assessment and advisory processes would be valuable for all involved in the fishery, science, and management.

ACKNOWLEDGEMENTS

We would like to thank the lobster fishers who have participated in the surveys, and to M. Comeau, A. Rondeau, D. Gagnon, M. Ouellet, P. Hanley, B. Comeau, and S. Chiasson for the development of the survey in addition to making the calls and asking the questions. Thank you to R. Allain and E. Coughlan for their constructive reviews, and to Y. Laroques for taking photos of wire traps.

REFERENCES

Atlantic Fishery Regulations, 1985. SOR/86-21. https://laws-lois.justice.gc.ca/eng/regulations/sor-86-21/FullText.html

Criquet, G., Brethes, J-C, Allain, RJ. 2015. Marine Stewardship Council Assessment, Public Certification Report, for the; Nova Scotia and New Brunswick Lobster Eco-Certification Society. Bay of Fundy, Scotian Shelf and Southern Gulf of St Lawrence lobster (Homarus americanus) Trap Fisheries. Sai Global Assurance Service, Ireland. Version 1.3, January 15, 2013. 533p.

DFO. 1986. Commercial Fisheries Licensing Policy for Eastern Canada. Discussion Paper. DFO/2809. iii + 59. https://waves-vagues.dfo-mpo.gc.ca/Library/40622927.pdf

DFO. 2010. Commercial Fisheries Licensing Policy for the Gulf Region. EKME 2201439. 101 p. Created: August 10, 2010. Last updated: January 18, 2018. http://www.inter.dfo-mpo.gc.ca/folios/00164/docs/licensing_policy_gulf-eng.pdf

DFO. 2014. Reference point options for the southern Gulf of St. Lawrence lobster stock (Lobster Fishing Areas 23, 24, 25, 26A, 26B). DFO Can. Sci. Advis. Sec. Sci. Resp. 2014/027

DFO. 2016a. 2016 Atlantic Coast Commercial Landings, by Region (metric tonnes, live weight). http://www.dfo-mpo.gc.ca/stats/commercial/land-debarq/sea-maritimes/s2016aq-eng.htm (Date modified: 2018-03-06)

DFO 2016b. 2016 Value of Atlantic Coast Commercial Landings, by Region (thousand dollars) (thousand dollars). http://www.dfo-mpo.gc.ca/stats/commercial/land-debarq/sea-maritimes/s2016av-eng.htm (Date modified: 2018-03-06)

DFO. 2016c. Update of the stock status indicators for the American lobster (Homarus americanus) stocks in the Southern Gulf of St. Lawrence. DFO Can. Sci. Advis. Sec. Sci. Resp. 2016/051 (Erratum: March 2017).

DFO. 2019. Update of the stock status indicators of the American lobster (Homarus americanus) stock of the southern Gulf of St. Lawrence to 2018. DFO Can. Sci. Advis. Sec. Sci. Resp. 2019/008

Lanteigne, M. 1999. Description of the 1993 lobster fishery and fishing fleet of the Southern Gulf of St. Lawrence and a retrospective look of the changes that took place from 1984-1993. Canadian Industry Report of Fisheries and Aquatic Sciences 250. vii+34p https://waves-vagues.dfo-mpo.gc.ca/Library/236170.pdf

Rondeau, A., Comeau, M., and Surette, T. 2015. Assessment of the American Lobster (Homarus americanus) Stock Status in the Southern Gulf of St. Lawrence (LFA 23, 24, 25,26A and 26B). DFO Can. Sci. Advis. Sec. Res. Doc. 2014/036. xii + 92 p.

TABLES

Table 1: Key management measures in the 2016 lobster fishery in the SGSL (DFO 2016c); Nova Scotia (NS), Prince Edward Island (PE), and New Brunswick (NB), NA indicates that the measure is not applicable in that area.

Management measures	Description										
Lobster Fishing Areas (LFA)	23A	23B	23C	23D	24	25	26A1	26A2	26A3	26B North	26B South
Fishing season	April 30 to June 30				April 30 to June 30	Aug. 9 to Oct. 10	April 30 to June 30[1]			May 6 to July 6	April 30 to June 30
No. of licences- Category A Category B	639 30				635 0	706 4	682 4			223 3	
Number of traps/licence	300				300	250 (NB) 240 (NS) 225 (PE)	280 (NS) 272[2](PE)	255[3]	250	250	
Number of traps per line	NA		3 (portion)		NA	NA	6 (part PE) 5 (Gulf NS)	6	2	5	NA
Maximum size of entrance (mm)	152				NA	152	NA[4]	152	NA	152	NA
Minimum legal carapace size (mm)	76			75	72	73	72	76		82.5	81
Female size restriction (mm)	115-129				115-129	≥114	115-129			NA	

[1] Fishing season for the portion of LFA 26A1 from Point Prim to Victoria was May 7 to July 7, 2016

[2] Commercial licence holders can take part in a combining initiative and have a trap allocation of 374 or 476

[3] Commercial licence holders are fishing 255 traps, some Communal Commercial licence holders remain at 275

[4] Female size restriction refers to size of females which must be released, in addition to the minimum legal size and the restriction on egg-bearing females

Table 2: The number of survey participants (N), total licence holders (Lic), and percentage (%) interviewed in each sub Lobster Fishing Area (LFA), LFA, and Management Zone (MZ) for all survey years (1993, 2005, 2011, 2016).

	1993			2005			2011			2016		
	N	Lic	%	N	Lic	%	N	Lic	%	N	Lic	%
SubLFA 23A	30	146	20.5	18	79	22.8	22	124	17.7	23	107	21.5
SubLFA 23B	40	203	19.7	24	94	25.5	20	95	21.1	19	92	20.7
SubLFA 23C	42	219	19.2	60	338	17.8	60	336	17.9	60	298	20.1
SubLFA 23D	42	197	21.3	35	156	22.4	32	190	16.8	35	172	20.3
LFA 24	125	639	19.6	97	612	15.8	137	637	21.5	129	635	20.3
LFA 25 NB	107	597	17.9	93	503	18.5	87	561	15.5	94	469	20
LFA 25 NS	4	20	20	2	16	12.5	3	18	16.7	3	15	20
LFA 25 PEI	44	259	17	44	268	16.4	40	225	17.8	44	217	20.3
MZ 26A1 NS	28	137	20.4	25	131	19.1	30	134	22.4	27	134	20.1
MZ 26A1 PEI	39	407	9.6	75	409	18.3	70	378	18.5	73	359	20.3
SubLFA 26A2	38	182	20.9	33	160	20.6	33	166	19.9	30	157	19.1
MZ 26A3	10	52	19.2	10	47	21.3	8	36	22.2	8	36	22.2
MZ 26B North	10	115	8.7	22	114	19.3	24	109	22	22	108	20.4
MZ 26B South	11	139	7.9	27	129	20.9	24	118	20.3	25	117	21.4
SGSL	**570**	**3312**	**17.2**	**565**	**3056**	**18.5**	**590**	**3127**	**18.9**	**592**	**2916**	**20.3**

Personal information:

Table 3: The average (Ave), and standard error (SE), age (years) of the vessel captain (the respondent) by sub Lobster Fishing Area (LFA), LFA, and Management Zone (MZ) for all survey years (1993, 2005, 2011, 2016).

Captain age	1993		2005		2011		2016	
	Ave	SE	Ave	SE	Ave	SE	Ave	SE
SubLFA 23A	45.1	1.9	46.9	2.2	53.9	2.5	52.6	1.6
SubLFA 23B	45.2	1.4	51.4	1.7	56.4	1.5	57.1	2.0
SubLFA 23C	44.8	1.4	49.7	1.2	50.4	1.2	54.3	1.2
SubLFA 23D	45.8	1.6	49.1	1.4	50.9	1.7	55.7	1.6
LFA 24	45.4	0.9	50.9	1.0	51.4	0.8	51.3	1.1
LFA 25 NB	47.3	0.9	49.0	0.8	50.4	1.1	52.5	1.3
LFA 25 PEI	43.4	1.3	45.3	1.5	46.5	1.7	48.2	1.5
MZ 26A1 NS	47.0	2.1	50.9	1.4	49.9	1.5	53.0	2.2
MZ 26A1 PEI	47.2	2.5	47.6	1.1	50.7	1.0	49.9	1.0
SubLFA 26A2	44.0	1.3	52.0	1.3	49.3	1.4	56.3	1.9
MZ 26A3	49.2	3.3	48.3	2.6	50.8	2.2	55.1	3.9
MZ 26B North	44.7	4.8	45.7	1.8	45.6	2.0	49.8	2.3
MZ 26B South	38.4	2.4	50.8	2.2	54.2	2.0	56.9	2.0
SGSL	**45.6**	**0.5**	**49.2**	**0.4**	**50.7**	**0.4**	**52.5**	**0.4**

Table 4: The average (Ave) and standard error (SE), years of experience of the respondents as a captain by sub Lobster Fishing Area (LFA), LFA, and Management Zone (MZ) for all survey years (1993, 2005, 2011, 2016).

Years of experience as a captain	**1993**		**2005**		**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	19.9	2.1	24.8	2.0	28.2	3.7	21.3	2.0
SubLFA 23B	15.7	1.5	28.2	1.9	28.2	2.4	26.7	3.3
SubLFA 23C	17.6	1.5	28.1	1.4	21.9	1.5	23.9	1.6
SubLFA 23D	17.1	2.0	29.2	1.5	21.2	2.0	26.7	2.1
LFA 24	18.7	0.9	24.5	1.2	24.5	0.9	24.0	1.1
LFA 25 NB	20.1	1.1	28.4	0.9	24.4	1.3	23.7	1.2
LFA 25 PEI	19.7	1.4	19.1	1.7	19.1	2.1	21.3	1.7
MZ 26A1 NS	20.5	2.4	21.7	2.0	19.1	1.8	24.0	2.0
MZ 26A1 PEI	21.1	2.5	22.2	1.3	24.7	1.2	23.8	1.3
SubLFA 26A2	18.1	1.4	23.2	1.6	25.3	1.7	26.9	2.5
MZ 26A3	20.0	3.6	19.1	2.0	17.0	2.5	28.0	4.3
MZ 26B North	19.8	5.3	18.3	1.7	18.1	2.3	20.8	2.4
MZ 26B South	13.2	2.7	23.9	1.9	28.3	2.1	29.6	2.7
SGSL	**18.9**	**0.5**	**24.6**	**0.4**	**23.6**	**0.5**	**24.2**	**0.5**

Table 5: The average (Ave), and standard error (SE), years of lobster fishing experience of the respondents by sub Lobster Fishing Area (LFA), LFA, and Management Zone (MZ) in 2011 and 2016.

Years of experience in the lobster fishery	**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**
SubLFA 23A	33.9	2.9	31.7	1.8
SubLFA 23B	33.5	2.4	37.0	2.3
SubLFA 23C	28.6	1.4	33.4	1.4
SubLFA 23D	32.1	1.8	35.7	1.4
LFA 24	31.5	0.8	32.5	1.0
LFA 25 NB	31.9	1.2	31.8	1.1
LFA 25 NS	51.7	5.8	40.3	3.4
LFA 25 PEI	29.0	1.7	28.7	1.5
MZ 26A1 NS	32.8	1.5	34.1	1.9
MZ 26A1 PEI	31.2	1.0	31.3	1.2
SubLFA 26A2	33.6	1.6	36.2	2.1
MZ 26A3	31.3	2.5	41.3	4.3
MZ 26B North	25.1	2.0	30.8	2.3
MZ 26B South	34.8	2.0	38.2	2.3
SGSL	**31.4**	**0.4**	**32.9**	**0.4**

Table 6: The average (Ave), and standard error (SE), number of deckhands at the beginning and end of the fishing season in by sub Lobster Fishing Area (LFA), LFA, and Management Zone (MZ) for survey years 2005, 2011, and 2016.

	Number of deck hands at beginning of season						**Number of deck hands at end of season**					
	2005		**2011**		**2016**		**2005**		**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	1.3	0.1	1.3	0.1	2.2	0.1	1.3	0.1	1.1	0.1	2.1	0.1
SubLFA 23B	1.2	0.1	1.3	0.1	2.3	0.1	1.2	0.1	1.4	0.1	2.3	0.1
SubLFA 23C	1.7	0.1	1.5	0.1	1.9	0.1	1.7	0.1	1.4	0.0	1.9	0.1
SubLFA 23D	1.6	0.1	1.4	0.1	1.9	0.1	1.6	0.1	1.4	0.1	1.8	0.1
LFA 24	1.9	0.1	1.6	0.0	1.6	0.0	1.8	0.1	1.6	0.0	1.6	0.0
LFA 25 NB	1.2	0.0	1.4	0.0	1.8	0.1	1.1	0.0	1.2	0.0	1.6	0.1
LFA 25 PEI	1.5	0.1	1.5	0.1	1.7	0.1	1.4	0.1	1.4	0.1	1.6	0.1
MZ 26A1 NS	1.2	0.1	1.3	0.1	1.3	0.1	1.2	0.1	1.3	0.1	1.3	0.1
MZ 26A1 PEI	1.4	0.1	1.2	0.0	1.4	0.1	1.4	0.1	1.2	0.0	1.4	0.1
SubLFA 26A2	1.6	0.1	1.6	0.1	1.6	0.1	1.6	0.1	1.6	0.1	1.6	0.1
MZ 26A3	0.9	0.1	0.8	0.1	1.1	0.2	0.9	0.1	0.8	0.1	0.9	0.1
MZ 26B North	1.7	0.1	1.3	0.1	1.7	0.1	1.7	0.1	1.3	0.1	1.7	0.1
MZ 26B South	1.6	0.1	1.5	0.1	1.5	0.1	1.6	0.1	1.4	0.1	1.4	0.1
SGSL	**1.5**	**0.0**	**1.4**	**0.0**	**1.7**	**0.0**	**1.5**	**0.0**	**1.4**	**0.0**	**1.6**	**0.0**

Table 7: The percentage (%) of respondents whose home port is the same as the one where they land their catch by sub Lobster Fishing Area (LFA), LFA, and Management Zone (MZ) for survey years 2005, 2011, and 2016.

Same homeport and landing port	**2005**		**2011**		**2016**	
	Same port	**Different port**	**Same port**	**Different port**	**Same port**	**Different port**
SubLFA 23A	87.5	12.5	90.7	9.3	100.0	0.0
SubLFA 23B	62.8	37.2	85.0	15.0	89.5	10.5
SubLFA 23C	86.4	13.6	96.6	3.4	98.3	1.7
SubLFA 23D	93.9	6.1	97.1	2.9	97.2	2.8
LFA 24	99.1	0.9	97.7	2.3	98.5	1.5
LFA 25 NB	99.0	1.0	97.9	2.1	99.0	1.0
LFA 25 PEI	100.0	0.0	100.0	0.0	88.6	11.4
MZ 26A1 NS	96.0	4.0	100.0	0.0	100.0	0.0
MZ 26A1 PEI	90.1	9.9	93.3	6.7	86.3	13.7
SubLFA 26A2	96.8	3.2	97.1	2.9	100.0	0.0
MZ 26A3	100.0	0.0	87.5	12.5	100.0	0.0
MZ 26B North	95.5	4.5	100.0	0.0	100.0	0.0
MZ 26B South	88.9	11.1	95.7	4.3	100.0	0.0
SGSL	**94.1**	**5.9**	**96.5**	**3.5**	**96.3**	**3.7**

Table 8: The percentage (%) of respondents who do not fish species other than lobster (No) and the top three species fished (Atlantic herring, Atlantic mackerel, Tuna, Atlantic Halibut) by overall percentage (SGSL) of those who answered yes by sub Lobster Fishing Area (LFA), LFA, and Management Zone (MZ) for survey years 2005, 2011, and 2016.

Other species fished	**2005**				**2011**				**2016**			
	No	**Herring**	**Mackerel**	**Tuna**	**No**	**Herring**	**Mackerel**	**Tuna**	**No**	**Tuna**	**Herring**	**Halibut**
SubLFA 23A	4.7	84.3	45.1	0.0	61.2	17.6	23.5	0.0	73.6	0.0	13.4	8.5
SubLFA 23B	32.1	44.9	25.0	5.1	41.9	14.1	39.3	4.7	84.1	0.0	0.0	10.5
SubLFA 23C	31.7	54.2	23.3	3.3	33.1	29.8	32.5	0.0	44.9	1.7	28.3	38.5
SubLFA 23D	18.3	68.3	20.1	9.1	29.8	40.7	10.4	17.5	44.3	16.1	26.7	6.2
LFA 24	30.6	20.3	42.5	25.1	34.0	27.4	29.7	38.1	40.3	30.2	9.4	17.0
LFA 25 NB	51.8	30.7	25.9	1.3	49.4	11.8	18.2	0.0	52.1	3.1	6.3	4.2
LFA 25 PEI	26.4	23.6	45.9	4.7	23.7	28.0	38.4	11.8	34.1	18.2	6.8	6.8
MZ 26A1 NS	32.0	52.0	40.0	8.0	19.2	77.6	7.2	34.4	22.6	14.5	58.5	0.0
MZ 26A1 PEI	28.4	33.1	32.5	22.8	42.5	30.9	8.6	30.7	46.9	24.7	12.3	9.8
SubLFA 26A2	21.0	36.3	54.8	24.8	51.4	31.3	5.8	23.9	50.7	32.4	18.2	0.0
MZ 26A3	20.0	40.0	50.0	0.0	37.5	37.5	0.0	0.0	25.0	0.0	50.0	0.0
MZ 26B North	0.0	18.2	22.7	9.1	0.0	12.5	25.0	16.7	9.1	9.1	4.5	13.6
MZ 26B South	29.6	33.3	44.4	22.2	41.7	25.0	20.8	33.3	44.0	24.0	8.0	4.0
SGSL	**30.6**	**35.5**	**35.0**	**12.6**	**37.8**	**27.1**	**21.6**	**18.1**	**44.6**	**16.3**	**14.8**	**11.7**

Table 9: The percentage (%) of respondents who do not have another profession or line of employment after the lobster season by sub Lobster Fishing Area (LFA), LFA. and Management Zone (MZ) for survey years 2005, 2011, and 2016.

Other professions	**2005**	**2011**	**2016**
	No other employment after lobster season (%)		
SubLFA 23A	74.7	65.7	74.0
SubLFA 23B	81.4	85.9	89.0
SubLFA 23C	90.2	78.8	90.2
SubLFA 23D	88.4	74.5	91.2
LFA 24	92.6	82.6	81.2
LFA 25 NB	69.5	75.6	85.0
LFA 25 PEI	92.6	87.7	86.4
MZ 26A1 NS	96.0	80.0	73.8
MZ 26A1 PEI	84.9	82.2	78.0
SubLFA 26A2	68.3	37.9	38.6
MZ 26A3	50.0	0.0	87.5
MZ 26B North	86.4	66.7	63.6
MZ 26B South	92.6	75.0	52.0
SGSL	**84.5**	**75.6**	**78.8**

Table 10: The average (Ave), and standard error (SE), number of years to retirement for the respondents by sub Lobster Fishing Area (LFA), LFA. and Management Zone (MZ) for survey years 2011 and 2016.

Years to retirement	**2011**		**2016**	
	Average	**SE**	**Average**	**SE**
SubLFA 23A	8.9	1.159	10.8	2.4
SubLFA 23B	13.2	1.791	10.8	3.0
SubLFA 23C	13.7	1.185	11.6	1.5
SubLFA 23D	17.1	1.352	9.1	2.5
LFA 24	15.1	1.551	14.6	1.3
LFA 25 NB	12.5	1.538	14.7	2.0
LFA 25 PEI	19.7	2.917	16.1	2.8
MZ 26A1 NS	10.5	2.093	13.2	1.6
MZ 26A1 PEI	13.8	1.531	14.6	1.4
SubLFA 26A2	13.6	1.723	10.7	1.8
MZ 26A3	6.5	1.563	7.5	2.4
MZ 26B North	23.6	1.806	11.6	5.9
MZ 26B South	10.5	1.849	9.8	3.1
SGSL	**14.1**	**0.559**	**13.1**	**0.6**

Table 11: The percentage (%) of respondents who do not (No) have someone interested in taking over their licence and equipment, and those who do (children, relative, acquaintance, unsure, or other), by sub Lobster Fishing Area (LFA), LFA. and Management Zone (MZ) for survey years 2011 and 2016.

Taking over the business	2011						2016					
	No	**Child**	**Relative**	**Acquaintance**	**Unsure**	**Other**	**No**	**Child**	**Relative**	**Acquaintance**	**Unsure**	**Other**
SubLFA 23A	63.7	15.2	0.0	0.0	17.6	3.4	13.4	54.9	9.2	18.0	4.5	0.0
SubLFA 23B	15.0	50.4	0.0	15.0	19.7	0.0	5.0	56.0	11.0	6.0	22.0	0.0
SubLFA 23C	22.0	37.0	7.5	3.2	28.9	1.5	10.1	58.2	6.6	8.3	15.1	1.7
SubLFA 23D	47.1	19.7	8.8	8.8	15.7	0.0	23.6	49.4	9.0	6.7	2.8	8.5
LFA 24	39.3	34.5	6.6	6.3	10.9	2.4	7.0	47.2	1.6	0.0	43.4	0.8
LFA 25 NB	46.2	27.6	2.8	2.7	20.7	0.0	22.5	39.7	5.4	21.6	9.8	1.0
LFA 25 PEI	36.7	37.4	0.0	2.1	23.7	0.0	6.8	51.4	4.8	0.0	37.0	0.0
MZ 26A1 NS	10.4	40.8	3.2	3.2	35.1	7.2	7.7	33.5	10.9	29.4	14.9	3.6
MZ 26A1 PEI	54.8	23.0	2.6	10.3	9.3	0.0	19.2	37.1	5.5	0.0	36.8	1.4
SubLFA 26A2	27.6	29.6	9.5	9.5	23.9	0.0	15.5	58.6	10.7	4.5	4.5	6.2
MZ 26A3	37.5	25.0	0.0	12.5	25.0	0.0	12.5	50.0	0.0	12.5	25.0	0.0
MZ 26B North	33.3	29.2	12.5	8.3	12.5	4.2	0.0	54.5	4.5	18.2	22.7	0.0
MZ 26B South	33.3	41.7	8.3	0.0	16.7	0.0	28.0	52.0	8.0	8.0	0.0	4.0
SGSL	**39.1**	**31.0**	**4.9**	**5.6**	**18.2**	**1.2**	**13.6**	**47.1**	**5.7**	**8.5**	**23.3**	**1.8**

Boat information:

Table 12: The average (Ave) age of boats, and standard error (SE), as reported in each lobster fishing management area in the SGSL for the survey years 1993, 2005, 2011, and 2016.

Survey year	**1993**		**2005**		**2011**		**2016**	
Area	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	9.7	0.8	10.7	1.4	16.7	1.2	18.7	1.7
SubLFA 23B	9.5	0.8	16.2	1.3	20.3	2.0	20.9	1.5
SubLFA 23C	9.3	0.7	11.7	0.7	16.1	1.0	17.6	0.9
SubLFA 23D	10.2	0.7	12.3	0.9	14.2	1.1	17.6	1.4
LFA 24	6.4	0.4	10.1	0.6	12.8	0.5	16.4	0.7
LFA 25 NB	9.8	0.5	14.4	0.6	18.8	0.7	20.6	0.8
LFA 25 PEI	6.8	1.0	13.0	0.8	17.1	0.8	14.8	1.2
MZ 26A1 NS	5.7	0.8	11.9	1.5	16.0	0.9	21.6	1.4
MZ 26A1 PEI	7.7	1.2	11.5	0.7	15.7	0.8	19.4	0.7
SubLFA 26A2	6.9	0.6	9.40	1.0	14.7	1.3	17.3	1.2
MZ 26A3	7.4	0.8	10.4	1.5	16.4	2.0	18.5	2.7
MZ 26B North	12.6	1.9	12.0	1.6	13.8	1.3	19.4	1.7
MZ 26B South	10.6	1.8	10.0	1.3	13.2	1.0	19.4	1.5
SGSL	**8.4**	**0.3**	**11.9**	**0.3**	**15.7**	**1.4**	**18.3**	**0.3**

Table 13: The average (Ave) length of boats in meters, and standard error (SE), as reported in each lobster fishing management area in the SGSL in 1993, 2005, 2011, 2016 and their vessel before 1993.

	<1993		**1993**		**2005**		**2011**		**2016**	
Area	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	8.0	0.4	9.2	0.4	10.9	0.5	10.2	0.5	11.7	0.3
SubLFA 23B	10.8	0.5	11.9	0.2	12.5	0.2	13.0	0.1	13.0	0.2
SubLFA 23C	10.5	0.6	12.1	0.3	12.7	0.1	12.7	0.1	13.0	0.1
SubLFA 23D	11.7	0.4	12.2	0.2	12.9	0.1	13.1	0.1	13.1	0.1
LFA 24	12.3	0.1	12.6	0.1	13.2	0.0	13.4	0.0	13.4	0.0
LFA 25 NB	12.1	0.2	12.5	0.1	12.8	0.0	13.0	0.1	13.0	0.1
LFA 25 PEI	12.4	0.1	12.8	0.1	13.0	0.1	13.2	0.1	13.4	0.1
MZ 26A1 NS	11.9	0.3	11.8	0.3	12.5	0.1	12.6	0.1	12.7	0.1
MZ 26A1 PEI	12.5	0.2	12.2	0.3	12.8	0.1	12.9	0.1	13.0	0.1
SubLFA 26A2	11.0	0.3	11.1	0.2	12.1	0.2	12.1	0.2	12.4	0.2
MZ 26A3	11.5	0.4	11.9	0.3	12.6	0.2	12.3	0.3	12.7	0.2
MZ 26B North	9.1	0.0	9.9	0.3	11.4	0.3	12.0	0.2	12.2	0.3
MZ 26B South	8.9	0.2	10.3	0.5	11.3	0.3	12.1	0.3	11.5	0.3
SGSL	**11.5**	**0.1**	**12.0**	**0.1**	**12.7**	**0.0**	**12.8**	**0.0**	**13.0**	**0.0**

Table 14: The percentage (%) of fishers fishing vessels made of wood, fiberglass, epoxy/fiberglass on wood, or aluminum as reported in each lobster fishing management area in the SGSL in 1993, 2005, 2011,and 2016.

Hull type	**Wood**				**Fiberglass**				**Epoxy/Fiberglass on wood**				**Aluminum**			
Survey year	**1993**	**2005**	**2011**	**2016**	**1993**	**2005**	**2011**	**2016**	**1993**	**2005**	**2011**	**2016**	**1993**	**2005**	**2011**	**2016**
SubLFA 23A	51.2	28.2	15.3	8.7	45.8	59.5	63.7	65.0	3.0	12.3	21.1	26.4	0.0	0.0	0.0	0.0
SubLFA 23B	74.9	14.7	14.1	5.4	12.4	28.2	40.2	42.7	12.8	57.1	45.7	51.9	0.0	0.0	0.0	0.0
SubLFA 23C	75.8	20.6	9.4	8.4	7.1	25.7	49.9	50.0	17.1	51.9	40.7	41.7	0.0	1.7	0.0	0.0
SubLFA 23D	73.2	20.1	12.2	8.9	22.1	45.1	68.1	67.5	4.7	34.8	19.7	23.6	0.0	0.0	0.0	0.0
LFA 24	64.3	26.1	7.2	7.7	34.2	69.8	82.6	79.8	0.8	4.1	9.4	12.5	0.7	0.0	0.7	0.0
LFA 25 NB	79.6	36.8	21.7	11.7	14.9	35.2	41.4	57.2	5.5	27.9	36.8	31.1	0.0	0.0	0.0	0.0
LFA 25 PEI	52.9	25.3	15.4	7.3	45.1	74.7	72.0	88.6	2.0	0.0	12.6	4.7	0.0	0.0	0.0	0.0
MZ 26A1 NS	53.6	32.0	10.4	26.0	46.4	60.0	56.8	66.9	0.0	8.0	32.8	25.8	0.0	0.0	0.0	0.0
MZ 26A1 PEI	48.8	41.5	31.0	4.5	37.2	56.1	55.9	64.3	13.9	2.5	13.1	9.7	0.0	0.0	0.0	0.0
SubLFA 26A2	44.8	14.1	15.2	37.5	55.2	79.6	81.9	89.3	0.0	6.4	2.9	6.2	0.0	0.0	0.0	0.0
MZ 26A3	70.0	70.0	50.0	4.5	30.0	20.0	50.0	37.5	0.0	10.0	0.0	25.0	0.0	0.0	0.0	0.0
MZ 26B North	40.0	13.6	12.5	4.0	20.0	77.3	79.2	90.9	40.0	9.1	8.3	4.5	0.0	0.0	0.0	0.0
MZ 26B South	50.0	22.2	4.2	10.5	33.3	74.1	87.5	92.0	16.7	3.7	8.3	4.0	0.0	0.0	0.0	0.0
SGSL	**63.0**	**28.4**	**15.8**	**6.7**	**29.5**	**54.7**	**63.1**	**69.5**	**7.4**	**16.7**	**21.0**	**20.0**	**0.1**	**0.2**	**0.1**	**0.0**

Table 15: The percentage (%) of fishers fishing vessels with inboard diesel, inboard gas, and outboard gas engines as reported in each lobster fishing management area in the SGSL for all survey years.

Engine type	**Inboard diesel**					**Inboard gas**					**Outboard gas**				
Survey year	**< 1993**	**1993**	**2005**	**2011**	**2016**	**< 1993**	**1993**	**2005**	**2011**	**2016**	**< 1993**	**1993**	**2005**	**2011**	**2016**
SubLFA 23A	13.0	40.4	72.0	65.2	86.9	40.8	16.8	12.3	0.0	8.8	46.2	42.8	15.7	34.8	4.3
SubLFA 23B	44.8	82.2	91.7	100.0	100.0	28.7	12.8	8.3	0.0	0.0	26.5	5.0	0.0	0.0	0.0
SubLFA 23C	7.9	75.8	98.5	100.0	96.7	72.7	16.2	1.5	0.0	1.7	19.4	7.9	0.0	0.0	0.0
SubLFA 23D	29.5	44.8	100.0	100.0	100.0	59.0	50.5	0.0	0.0	0.0	11.6	4.7	0.0	0.0	0.0
LFA 24	34.0	82.8	100.0	99.3	100.0	65.0	16.5	0.0	0.7	0.0	1.0	0.7	0.0	0.0	0.0
LFA 25 NB	31.7	73.2	98.9	99.1	100.0	66.2	26.0	1.1	0.9	0.0	2.0	0.8	0.0	0.0	0.0
LFA 25 PEI	40.0	95.4	100.0	100.0	100.0	60.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26A1 NS	50.0	71.4	96.0	100.0	100.0	50.0	25.0	4.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0
MZ 26A1 PEI	16.6	71.7	98.6	100.0	100.0	83.4	28.3	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SubLFA 26A2	42.4	86.9	100.0	100.0	96.9	57.6	13.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0
MZ 26A3	55.6	90.0	100.0	100.0	100.0	44.4	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26B North	100.0	40.0	100.0	100.0	100.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26B South	0.0	63.6	96.3	100.0	100.0	100.0	36.4	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SGSL	**32.0**	**73.4**	**98.2**	**98.3**	**99.0**	**61.8**	**23.1**	**1.4**	**0.3**	**0.7**	**6.2**	**3.4**	**0.4**	**1.4**	**0.2**

Table 16: The average (Ave) horse power (HP) of engines, and standard error (SE), as reported in each lobster fishing management area in the SGSL for all survey years.

	<1993		**1993**		**2005**		**2011**		**2016**	
Area	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	101.1	21.8	113.1	13.0	234.4	20.0	186.5	19.0	286.0	23.9
SubLFA 23B	136.1	10.6	141.9	8.0	217.8	12.5	240.0	13.5	344.9	18.9
SubLFA 23C	135.5	9.3	145.4	5.9	250.4	8.2	269.5	8.4	357.2	13.2
SubLFA 23D	250.0	0.0	190.8	6.4	297.0	15.1	325.5	16.3	363.3	15.7
LFA 24	174.7	6.0	196.0	5.6	356.3	10.4	384.0	8.2	401.1	10.1
LFA 25 NB	135.7	5.4	189.7	4.9	232.7	6.4	279.1	7.3	324.1	8.8
LFA 25 PEI	243.1	9.3	226.1	11.0	344.1	18.4	361.9	23.6	461.0	17.7
MZ 26A1 NS	171.1	24.5	186.2	15.1	263.3	12.1	303.9	13.3	305.5	18.2
MZ 26A1 PEI	188.1	13.2	191.4	12.0	293.4	13.9	285.9	11.7	331.8	11.1
SubLFA 26A2	134.0	3.8	187.7	8.2	293.7	19.2	280.4	17.6	379.5	25.2
MZ 26A3	150.0	10.4	201.1	23.1	256.4	24.7	255.6	24.0	298.6	30.6
MZ 26B North	35.0	0.0	156.0	10.7	271.9	17.3	348.5	24.4	364.5	24.3
MZ 26B South	0.0	0.0	188.5	10.7	253.7	18.6	308.5	22.1	279.2	20.3
SGSL	**148.9**	**2.9**	**183.3**	**18.3**	**287.0**	**4.0**	**308.3**	**3.8**	**357.8**	**4.3**

Table 17: The percentage (%) of respondents' fishing vessels reporting use of radar, a global positioning system (GPS), and/or a coloured monitor depth sounder on board in each lobster fishing management area in the SGSL for all survey years, <1993 indicates the respondent's previous vessel.

	Radar					**GPS**					**Coloured monitor depth sounder**				
	<1993	**1993**	**2005**	**2011**	**2016**	**<1993**	**1993**	**2005**	**2011**	**2016**	**<1993**	**1993**	**2005**	**2011**	**2016**
SubLFA 23A	0.0	10.5	4.7	11.8	21.9	0.0	3.7	89.1	93.1	95.7	10.1	35.4	90.5	72.1	100.0
SubLFA 23B	33.8	40.2	50.7	48.7	52.3	3.7	17.2	84.6	95.3	100.0	30.1	72.7	86.5	95.3	100.0
SubLFA 23C	0.0	23.3	51.7	54.8	58.4	0.0	7.6	86.0	95.3	100.0	28.2	56.2	96.7	98.3	98.3
SubLFA 23D	6.3	7.4	37.2	53.5	37.5	4.2	16.8	93.9	100.0	100.0	29.5	66.7	97.6	100.0	100.0
LFA 24	4.8	15.0	39.3	46.7	34.1	2.8	16.1	97.0	100.0	95.4	31.2	85.8	100.0	99.2	98.5
LFA 25 NB	3.1	6.8	13.5	32.0	37.3	0.0	10.4	90.7	98.9	97.9	19.5	63.0	97.8	90.5	96.8
LFA 25 PEI	11.8	14.9	22.3	43.1	45.6	9.5	27.4	97.9	97.9	97.7	0.0	50.0	100.0	100.0	100.0
MZ 26A1 NS	21.7	53.6	48.0	52.8	44.8	13.0	17.9	88.0	100.0	96.4	26.3	86.9	97.9	95.5	97.7
MZ 26A1 PEI	3.8	12.3	36.7	34.1	31.1	0.0	17.2	95.1	97.3	97.2	34.8	85.7	100.0	100.0	100.0
SubLFA 26A2	3.0	23.8	46.4	34.5	53.8	6.0	18.7	91.1	97.1	96.9	28.8	82.0	100.0	100.0	98.6
MZ 26A3	22.2	20.0	50.0	37.5	25.0	11.1	22.2	100.0	100.0	100.0	51.4	97.3	100.0	100.0	100.0
MZ 26B North	0.0	50.0	59.1	75.0	72.7	0.0	20.0	100.0	95.8	100.0	44.4	100.0	100.0	100.0	100.0
MZ 26B South	0.0	27.3	40.7	54.2	44.0	0.0	18.2	96.3	91.7	100.0	0.0	70.0	100.0	100.0	100.0
SGSL	**6.7**	**18.4**	**35.4**	**43.0**	**41.0**	**2.8**	**15.5**	**93.3**	**97.8**	**97.7**	**60.0**	**81.8**	**96.3**	**100.0**	**100.0**

Table 18: The percentage (%) of respondents' fishing vessels with a very high frequency (VHF) radio, a citizens band (CB) radio, and/or a cellular phone on board as reported in each lobster fishing management area in the SGSL for all survey years, <1993 indicates the respondent's previous vessel.

	VHF					**CB**					**Cellular phone**				
	<1993	**1993**	**2005**	**2011**	**2016**	**<1993**	**1993**	**2005**	**2011**	**2016**	**<1993**	**1993**	**2005**	**2011**	**2016**
SubLFA 23A	13.0	46.0	82.9	61.8	82.8	66.8	71.0	66.9	55.9	48.4	0.0	6.4	87.5	90.7	100.0
SubLFA 23B	47.0	79.9	89.7	95.3	100.0	63.9	77.3	66.7	50.4	51.9	0.0	2.6	80.1	94.4	100.0
SubLFA 23C	37.4	86.5	96.5	100.0	100.0	85.5	85.6	82.9	74.9	75.3	0.0	0.0	88.7	88.3	100.0
SubLFA 23D	38.9	83.7	100.0	100.0	100.0	88.4	85.4	39.0	29.6	8.5	0.0	2.5	97.0	79.6	89.3
LFA 24	58.1	95.2	100.0	99.3	100.0	90.4	86.1	33.1	32.4	5.4	0.0	0.7	92.4	99.3	96.9
LFA 25 NB	35.6	65.1	98.0	100.0	100.0	92.0	85.7	42.3	19.9	8.4	1.9	3.3	93.5	89.8	94.8
LFA 25 PEI	56.3	91.5	100.0	100.0	100.0	86.4	88.2	30.8	28.9	4.6	0.0	0.0	87.9	94.1	93.2
MZ 26A1 NS	65.2	85.7	100.0	96.8	100.0	82.6	71.4	40.0	56.8	51.2	0.0	0.0	76.0	96.8	96.4
MZ 26A1 PEI	62.3	94.5	100.0	98.1	98.6	63.8	81.2	69.3	52.0	31.3	0.0	8.1	90.8	86.8	94.5
SubLFA 26A2	57.7	86.8	100.0	97.1	100.0	81.8	92.0	48.4	35.4	44.9	0.0	2.7	96.8	91.4	87.6
MZ 26A3	55.6	80.0	90.0	100.0	100.0	55.6	40.0	50.0	37.5	25.0	0.0	10.0	90.0	100.0	100.0
MZ 26B North	0.0	60.0	100.0	95.8	100.0	100.0	100.0	45.5	37.5	9.1	0.0	0.0	81.8	91.7	86.4
MZ 26B South	20.0	81.8	96.3	100.0	96.0	80.0	72.7	44.4	37.5	44.0	0.0	0.0	74.1	87.5	96.0
SGSL	**45.5**	**81.7**	**98.0**	**97.5**	**99.0**	**82.4**	**83.2**	**49.6**	**39.8**	**25.7**	**0.3**	**2.6**	**89.7**	**91.6**	**95.2**

Table 19: The percentage (%) of respondents' fishing vessels with an underwater camera, bottom mapping system and plotter on board as reported in each lobster fishing management area in the SGSL as available for survey years 2005, 2011, and 2016.

Equipment	**Underwater camera**			**Bottom mapping**			**Plotter**		
Survey year	**2005**	**2011**	**2016**	**2005**	**2011**	**2016**	**2005**	**2011**	**2016**
SubLFA 23A	0.0	0.0	4.5	0.0	3.4	8.8	48.4	70.1	83.0
SubLFA 23B	0.0	0.0	5.4	3.2	0.0	21.3	69.9	69.2	100.0
SubLFA 23C	0.0	1.7	1.7	1.4	0.0	10.0	64.8	80.0	98.3
SubLFA 23D	0.0	0.0	2.7	0.0	2.9	2.7	85.4	90.7	94.6
LFA 24	0.0	0.0	0.0	0.0	11.8	30.4	87.0	94.8	97.6
LFA 25 NB	0.0	0.9	2.1	0.0	0.0	9.5	57.3	88.9	96.9
LFA 25 PEI	0.0	0.0	0.0	0.0	10.4	50.1	91.2	97.9	97.8
MZ 26A1 NS	0.0	3.2	0.0	4.0	6.4	18.5	56.0	96.8	89.1
MZ 26A1 PEI	0.0	0.0	2.7	1.6	6.7	12.4	72.8	81.6	93.2
SubLFA 26A2	0.0	5.8	8.9	0.0	8.6	32.4	84.1	82.7	84.5
MZ 26A3	10.0	0.0	0.0	0.0	0.0	25.0	70.0	100.0	100.0
MZ 26B North	0.0	4.2	9.1	4.5	20.8	50.0	86.4	91.7	95.5
MZ 26B South	0.0	4.2	8.0	0.0	20.8	28.0	55.6	79.2	76.0
SGSL	**0.2**	**1.1**	**2.5**	**0.8**	**6.5**	**21.6**	**73.2**	**87.6**	**94.4**

Table 20: The percentage (%) of respondents' fishing vessels with disc hauler, and its location on board (stern or bow), as reported in each lobster fishing management area in the SGSL for all survey years, <1993 indicates the respondent's previous vessel.

						Disc hauler location									
	Disc hauler					**<1993**		**1993**		**2005**		**2011**		**2016**	
	<1993	**1993**	**2005**	**2011**	**2016**	**Stern**	**Bow**	**Stern**	**Bow**	**Stern**	**Bow**	**Stern**	**Bow**	**Stern**	**Bow**
SubLFA 23A	53.6	89.9	100.0	100.0	100.0	69.5	30.5	47.6	52.4	76.6	23.4	82.3	17.7	87.2	12.8
SubLFA 23B	89.0	100.0	100.0	100.0	100.0	78.1	21.9	77.0	23.0	90.4	9.6	90.6	9.4	100.0	0.0
SubLFA 23C	94.3	96.8	100.0	100.0	100.0	72.3	27.7	79.1	20.9	74.2	25.8	94.0	6.0	95.1	4.9
SubLFA 23D	75.8	100.0	100.0	100.0	100.0	62.6	37.4	56.5	43.5	67.0	33.0	53.1	46.9	48.3	51.7
LFA 24	87.6	98.5	100.0	95.6	100.0	28.6	71.4	20.2	79.8	14.1	85.9	18.5	81.5	23.1	76.9
LFA 25 NB	76.4	99.2	100.0	100.0	100.0	59.5	40.5	52.0	48.0	54.8	45.2	50.5	49.5	47.2	52.8
LFA 25 PEI	100.0	100.0	100.0	100.0	97.7	0.0	100.0	0.0	100.0	0.0	100.0	2.1	97.9	0.0	100.0
MZ 26A1 NS	73.9	96.4	100.0	100.0	100.0	90.9	9.1	92.6	7.4	76.0	24.0	52.8	47.2	55.6	44.4
MZ 26A1 PEI	96.2	100.0	100.0	100.0	100.0	16.3	83.7	29.8	70.2	58.7	41.3	51.2	48.8	46.8	53.2
SubLFA 26A2	90.8	100.0	100.0	100.0	100.0	88.0	12.0	76.4	23.6	70.6	29.4	65.0	35.0	69.3	30.7
MZ 26A3	66.7	100.0	100.0	100.0	100.0	44.4	55.6	10.0	90.0	0.0	100.0	50.0	50.0	0.0	100.0
MZ 26B North	100.0	100.0	100.0	100.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	4.2	95.8	9.1	90.9
MZ 26B South	100.0	100.0	100.0	100.0	100.0	0.0	100.0	0.0	100.0	14.8	85.2	0.0	100.0	29.2	70.8
SGSL	**86.0**	**98.8**	**100.0**	**99.1**	**99.8**	**44.1**	**55.9**	**40.7**	**59.3**	**43.7**	**56.3**	**45.0**	**55.0**	**45.3**	**54.7**

Table 21: The percentage (%) of respondents' fishing vessels with a hydraulic boom (survey years, 2005, 2011, and 2016), trap roller, compass and temperature thermometer/probe (in 2011 and 2016) as reported in each lobster fishing management area in the SGSL.

Equipment	Hydraulic boom			Trap roller		Compass		Thermometer/ Temperature probe	
Survey year	**2005**	**2011**	**2016**	**2011**	**2016**	**2011**	**2016**	**2011**	**2016**
SubLFA 23A	59.3	16.2	48.2	0.0	0.0	5.9	0.0	0.0	0.0
SubLFA 23B	44.1	35.5	30.2	0.0	0.0	0.0	0.0	0.0	0.0
SubLFA 23C	68.5	27.4	40.1	0.0	3.2	0.0	0.0	0.0	0.0
SubLFA 23D	50.0	41.4	41.6	0.0	5.4	0.0	0.0	0.0	0.0
LFA 24	10.2	39.3	66.8	16.9	6.9	0.0	0.0	0.0	0.0
LFA 25 NB	20.0	19.4	25.4	0.0	1.1	0.0	0.0	0.0	0.0
LFA 25 PEI	8.4	41.7	84.1	2.1	0.0	0.0	0.0	0.0	0.0
MZ 26A1 NS	4.0	22.4	33.9	0.0	11.3	0.0	7.3	0.0	0.0
MZ 26A1 PEI	34.4	47.8	64.5	1.9	12.4	0.0	1.4	0.0	0.0
SubLFA 26A2	18.5	42.0	24.9	11.5	9.3	0.0	0.0	0.0	0.0
MZ 26A3	40.0	12.5	25.0	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26B North	27.3	37.5	31.8	0.0	4.5	4.2	0.0	4.2	0.0
MZ 26B South	18.5	29.2	44.0	0.0	20.0	16.7	0.0	0.0	0.0
SGSL	**27.2**	**33.4**	**48.4**	**4.4**	**5.9**	**1.2**	**0.5**	**0.1**	**0.0**

Table 22: The percentage (%) of respondents' fishing vessels with a propeller guard and/or a trap lift on board, as reported in each lobster fishing management area in the SGSL for all survey years,<1993 indicates the respondent's previous vessel.

Equipment	Propeller guard					Trap lift				
Survey year	**<1993**	**1993**	**2005**	**2011**	**2016**	**<1993**	**1993**	**2005**	**2011**	**2016**
SubLFA 23A	10.1	14.2	0.0	49.0	78.7	0.0	15.7	17.2	3.4	8.8
SubLFA 23B	13.2	14.8	0.0	9.4	10.9	3.7	10.1	15.4	19.7	10.9
SubLFA 23C	5.7	18.6	0.0	3.2	1.7	0.0	7.1	3.2	13.0	16.8
SubLFA 23D	36.9	27.9	0.0	6.9	2.7	19.0	23.0	17.1	16.2	17.0
LFA 24	10.7	10.4	8.7	14.9	10.7	0.0	3.5	7.5	10.1	1.5
LFA 25 NB	11.9	14.0	0.0	16.2	14.7	23.9	29.6	12.1	13.8	13.8
LFA 25 PEI	0.0	4.3	2.1	4.5	11.4	44.7	38.3	8.0	12.8	2.3
MZ 26A1 NS	17.4	18.5	32.0	19.2	21.8	0.0	0.0	0.0	6.4	11.3
MZ 26A1 PEI	9.9	7.9	11.7	9.8	8.3	23.8	41.6	1.6	19.6	4.1
SubLFA 26A2	0.0	5.3	12.1	2.9	9.3	3.0	2.7	8.9	8.6	15.5
MZ 26A3	33.3	20.0	70.0	62.5	50.0	11.1	0.0	0.0	0.0	25.0
MZ 26B North	0.0	70.0	95.5	100.0	95.5	0.0	0.0	4.5	0.0	9.1
MZ 26B South	80.0	90.9	77.8	95.8	88.0	0.0	0.0	0.0	12.5	20.0
SGSL	**13.9**	**17.9**	**13.4**	**19.4**	**19.8**	**12.4**	**17.4**	**7.2**	**12.1**	**9.4**

Table 23: The percentage (%) of fishers reporting they store market lobsters onboard using ice, seawater, dry, or another method in each lobster fishing management area in the SGSL for all survey years, 1993, 2005, 2011, and 2016.

Storage method	**Ice**				**No Ice (Dry)**				**Seawater**				**Other**		
Survey year	**1993**	**2005**	**2011**	**2016**	**1993**	**2005**	**2011**	**2016**	**1993**	**2005**	**2011**	**2016**	**1993**	**2011**	**2016**
SubLFA 23A	6.4	6.3	6.9	22.0	87.1	54.6	59.3	34.4	3.4	39.1	33.9	43.6	0.0	0.0	0.0
SubLFA 23B	2.6	0.0	5.6	10.5	40.5	8.3	0.0	16.3	54.3	91.7	94.4	73.2	0.0	0.0	0.0
SubLFA 23C	10.2	0.0	1.7	18.3	64.0	4.9	9.0	25.2	25.9	95.1	89.3	56.6	0.0	0.0	0.0
SubLFA 23D	79.1	37.2	40.1	57.3	4.6	0.0	0.0	2.7	16.3	62.8	56.9	40.1	0.0	2.9	0.0
LFA 24	11.7	29.8	33.3	58.3	15.4	0.9	11.7	5.4	68.6	69.3	49.0	36.3	4.2	6.0	0.0
LFA 25 NB	69.5	43.8	54.6	91.4	8.5	0.0	2.0	1.0	21.1	56.2	40.5	6.5	0.8	2.9	1.0
LFA 25 PEI	78.6	85.7	94.1	79.5	0.0	2.1	0.0	6.8	2.0	12.3	2.1	13.6	19.4	3.8	0.0
MZ 26A1 NS	0.0	0.0	4.0	3.6	10.7	4.0	0.0	7.7	85.7	96.0	96.0	88.7	3.6	0.0	0.0
MZ 26A1 PEI	1.0	4.6	6.0	17.9	12.1	0.0	14.6	4.0	87.0	95.4	75.5	78.0	0.0	4.0	0.0
SubLFA 26A2	0.0	3.2	5.8	3.1	5.3	3.2	2.9	0.0	94.7	93.7	91.4	96.9	0.0	0.0	0.0
MZ 26A3	0.0	0.0	0.0	12.5	10.0	0.0	0.0	0.0	90.0	100.0	100.0	87.5	0.0	0.0	0.0
MZ 26B North	0.0	0.0	0.0	0.0	0.0	13.6	4.2	0.0	100.0	86.4	95.8	100.0	0.0	0.0	0.0
MZ 26B South	0.0	0.0	0.0	4.0	18.2	0.0	0.0	8.0	81.8	100.0	91.7	88.0	0.0	8.3	0.0
SGSL	**27.3**	**23.8**	**26.6**	**42.7**	**18.5**	**3.4**	**8.3**	**7.7**	**51.3**	**72.8**	**62.0**	**49.4**	**2.6**	**3.1**	**0.2**

Table 24: The percentage of who put rubber bands on the claws of market sized (markets) and/or canner sized lobsters (canners), as reported in each lobster fishing management area in the SGSL in 2011 and 2016. MZ 26B North fishes only market size lobster.

	Bands on markets		**Bands on canners**	
Survey year	**2011**	**2016**	**2011**	**2016**
Sub LFA 23A	75.5	28.8	3.4	0.0
Sub LFA 23B	100.0	89.1	9.4	0.0
Sub LFA 23C	73.4	51.4	3.4	1.7
Sub LFA 23D	75.7	59.5	0.0	0.0
LFA 24	93.5	90.0	0.7	2.6
LFA 25 NB	60.4	36.6	12.9	4.5
LFA 25 PEI	93.6	82.3	2.4	6.9
MZ 26A1 NS	100.0	100.0	96.8	96.0
MZ 26A1 PEI	100.0	91.1	4.6	10.1
Sub LFA 26A2	100.0	100.0	97.1	100.0
MZ 26A3	100.0	100.0	100.0	100.0
MZ 26B North	100.0	100.0	NA	NA
MZ 26B South	100.0	100.0	91.7	100.0
SGSL	**85.8**	**74.9**	**21.7**	**18.8**

Trap information:

Table 25: The 2011 and 2016 trap allowance in each LFA, sub LFA and MZ in the SGSL for each license category; commercial A (A), commercial B (B), communal commercial (CC), combined (Comb), partnership (Part), and temporary (Temp). The minimum (Min) and maximum (Max) traps reported to be fished by the survey respondents is also presented, in 2011 it was assumed that the Max would be the trap allowance.

	2011					2016							
	A	**B**	**CC**	**Part**	**Min**	**A**	**B**	**CC**	**Comb**	**Part**	**Temp**	**Min**	**Max**
Sub LFA 23A	300	90	300		90	300	90	300				300	300
Sub LFA 23B	300	90			300	300	90					300	300
Sub LFA 23C	300		300		300	300		300				300	300
Sub LFA 23D	300	90	275	450	300	300	90	275		450	25	90	300
LFA 24	300	90	300		300	300	90	300		450		249	300
LFA 25 NB	250	75	250	375	180	250	75	250		375		220	375
LFA 25 PEI	240/250		250		240	240/249		250				248	252
MZ 26A1 NS	280	90	280		260	280	90	280				280	280
MZ 26A1 PEI	280	90	300	420	270	272	90	300	374/476	374		270	476
Sub LFA 26A2	275	90	275	413	252	255	90	275		383		90	255
MZ 26A3	250		250		220	250		250				250	250
MZ 26B North	250	90	300	375	250	250	90	300		375		250	375
MZ 26B South	250	90			250	250	90			375		90	250

Table 26: The average (Ave) surface area (m^2) and standard error (SE) of the lobster traps in the management areas of the SGSL for all survey years, 1993, 2005, 2011, and 2016.

m^2	**1993**		**2005**		**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
Sub LFA 23A	0.495	0.010	0.602	0.011	0.632	0.017	0.650	0.012
Sub LFA 23B	0.483	0.008	0.597	0.008	0.611	0.011	0.626	0.009
Sub LFA 23C	0.541	0.012	0.598	0.007	0.610	0.011	0.612	0.007
Sub LFA 23D	0.589	0.012	0.647	0.006	0.656	0.010	0.691	0.022
LFA 24	0.593	0.007	0.673	0.005	0.679	0.006	0.712	0.005
LFA 25 NB	0.687	0.006	0.687	0.005	0.684	0.006	0.619	0.011
LFA 25 PEI	0.767	0.015	0.826	0.020	0.789	0.016	0.795	0.014
MZ 26A1 NS	0.622	0.025	0.745	0.017	0.734	0.026	0.714	0.015
MZ 26A1 PEI	0.654	0.017	0.694	0.006	0.711	0.009	0.724	0.009
Sub LFA 26A2	0.573	0.019	0.605	0.013	0.639	0.014	0.634	0.012
MZ 26A3	0.660	0.013	0.679	0.020	0.776	0.070	0.713	0.012
MZ 26B North	0.494	0.010	0.598	0.009	0.608	0.012	0.680	0.010
MZ 26B South	0.547	0.012	0.633	0.013	0.613	0.017	0.659	0.009
SGSL	**0.613**	**0.004**	**0.673**	**0.003**	**0.675**	**0.003**	**0.682**	**0.003**

Table 27: The percentage (%) of traps constructed with wood, wire, or both (hybrid) in the lobster management areas of the SGSL for all survey years, 1993, 2005, 2011, and 2016.

Trap construction materials	**1993**			**2005**			**2011**			**2016**		
	Wood	**Wire**	**Hybrid**	**Wood**	**Wire**	**Hybrid**	**Wood**	**Wire**	**Hybrid**	**Wood**	**Wire**	**Hybrid**
Sub LFA 23A	67.7	19.0	13.3	22.8	57.6	19.6	24.3	65.5	10.2	14.1	81.6	4.3
Sub LFA 23B	45.3	17.4	37.3	6.8	83.5	9.8	0.0	89.8	10.2	11.8	85.5	2.7
Sub LFA 23C	12.1	42.3	43.9	11.6	77.9	10.5	4.5	90.0	5.5	5.2	88.1	6.7
Sub LFA 23D	20.7	64.7	14.6	0.0	96.5	3.5	0.0	100.0	0.0	7.3	92.7	0.0
LFA 24	78.2	4.6	17.2	64.9	0.0	35.1	62.1	0.0	37.9	65.0	0.0	35.0
LFA 25 NB	20.1	64.1	15.0	13.0	83.8	3.2	7.4	92.6	0.0	1.0	99.0	0.0
LFA 25 PEI	80.2	1.6	18.2	83.8	4.5	11.7	79.4	8.0	12.6	100.0	0.0	0.0
MZ 26A1 NS	43.4	44.6	12.0	19.9	75.7	4.5	28.5	70.2	1.3	26.5	69.5	4.0
MZ 26A1 PEI	46.2	25.2	28.6	24.1	2.4	73.6	33.4	3.6	63.0	25.0	0.0	75.0
Sub LFA 26A2	74.7	16.3	9.1	43.1	36.6	20.3	47.3	43.2	9.5	60.8	36.0	3.2
MZ 26A3	10.2	89.8	0.0	11.7	88.3	0.0	9.2	90.8	0.0	21.5	72.3	6.3
MZ 26B North	83.9	16.1	0.0	47.7	4.5	47.7	34.8	0.0	65.2	34.2	0.0	65.8
MZ 26B South	58.6	41.4	0.0	57.3	34.1	8.6	21.8	39.8	38.4	60.2	30.8	9.0
SGSL	**49.9**	**31.3**	**18.6**	**32.5**	**43.0**	**24.5**	**31.0**	**47.1**	**21.8**	**35.1**	**43.9**	**21.0**

Table 28: The percentage (%) of coloured wire and hybrid traps used by survey respondents in 2016 in the lobster management areas of the SGSL.

Color of wiremesh used for wire and hybrid traps 2016	**Green**	**Yellow**	**White**	**Blue**	**Black**	**Red**	**Lime green**	**Orange**	**Purple**
SubLFA 23A	46.4	21.9	0.0	6.7	25.0	0.0	0.0	0.0	0.0
SubLFA 23B	22.3	13.1	0.0	9.3	55.3	0.0	0.0	0.0	0.0
SubLFA 23C	22.9	25.7	0.0	12.2	39.2	0.0	0.0	0.0	0.0
SubLFA 23D	12.9	33.3	0.0	30.3	22.8	0.0	0.0	0.6	0.0
LFA 24	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LFA 25 NB	32.2	45.3	0.0	15.7	6.5	0.0	0.0	0.1	0.2
LFA 25 PEI*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26A1 NS	34.1	44.3	9.9	11.6	0.0	0.0	0.0	0.0	0.1
MZ 26A1 PEI**									
SubLFA 26A2	79.1	19.0	0.0	0.6	1.3	0.0	0.0	0.0	0.0
MZ 26A3	31.1	54.0	4.8	10.0	0.0	0.0	0.0	0.0	0.0
MZ 26B North	86.3	2.1	11.6	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26B South	60.4	17.2	0.0	22.4	0.0	0.0	0.0	0.0	0.0
SGSL	**55.7**	**22.0**	**1.2**	**9.6**	**11.4**	**0.0**	**0.0**	**0.1**	**0.0**

* LFA 25 PEI was 100% wood traps (see Table 27)

** It is unclear why there is no data for MZ 26A1 PEI (reporting 75% hybrid traps; Table 27)

Table 29: Percentage (%) of traps configured with a single or double parlour for all survey years and percentage (%) of those which are round or square shaped (2011 and 2019) in the lobster management areas of the SGSL.

Trap configuration/shape	**1993**		**2005**		**2011**				**2016**			
	Single	**Double**	**Single**	**Double**	**Single**	**Double**	**Square**	**Round**	**Single**	**Double**	**Square**	**Round**
Sub LFA 23A	83.5	16.5	57.6	42.4	66.4	33.6	66.4	33.6	28.4	71.6	82.9	17.1
Sub LFA 23B	82.4	17.6	25.8	74.2	74.7	25.3	89.8	10.2	11.8	88.2	88.2	11.8
Sub LFA 23C	68.1	31.9	20.3	79.7	12.4	87.6	90.6	9.4	5.9	94.1	89.8	10.2
Sub LFA 23D	45.6	54.4	18.0	82.0	58.3	41.7	100.0	0.0	26.4	73.6	96.1	3.9
LFA 24	73.0	27.0	78.9	21.1	26.8	73.2	26.8	73.2	78.2	21.8	40.3	59.7
LFA 25 NB	17.2	82.8	23.8	76.2	77.3	22.7	98.9	1.1	15.6	84.4	99.0	1.0
LFA 25 PEI	100.0	0.0	98.1	1.9	58.5	41.5	63.4	36.6	92.7	7.3	44.2	55.8
MZ 26A1 NS	46.1	53.9	31.5	68.5	76.5	23.5	79.7	20.3	68.9	31.1	86.4	13.6
MZ 26A1 PEI	46.7	53.3	27.5	72.5	26.1	73.9	61.7	38.3	32.4	67.6	73.4	26.6
Sub LFA 26A2	84.2	15.8	82.0	18.0	65.3	34.7	67.9	32.1	96.6	3.4	49.9	50.1
MZ 26A3	36.8	63.2	74.3	25.7	83.9	16.1	93.2	6.8	75.6	24.4	91.0	9.0
MZ 26B North	90.0	10.0	86.4	13.6	89.7	10.3	92.1	7.9	100.0	0.0	92.9	7.1
MZ 26B South	100.0	0.0	92.5	7.5	68.3	31.7	76.7	23.3	88.4	11.6	75.6	24.4
SGSL	**61.6**	**38.4**	**51.9**	**48.1**	**50.5**	**49.5**	**71.2**	**28.8**	**50.8**	**49.2**	**72.5**	**27.5**

Table 30: The percentage (%) of traps configured with one (1) or two (2) kitchens in the lobster management areas of the SGSL for all survey years.

Number of kitchens	**1993**		**2005**		**2011**		**2016**	
	1	**2**	**1**	**2**	**1**	**2**	**1**	**2**
Sub LFA 23A	85.3	14.7	82.9	17.1	100.0	0.0	96.9	3.1
Sub LFA 23B	96.3	3.7	100.0	0.0	88.2	11.8	100.0	0.0
Sub LFA 23C	91.7	8.3	100.0	0.0	97.0	3.0	94.2	5.8
Sub LFA 23D	100.0	0.0	100.0	0.0	100.0	0.0	69.2	30.8
LFA 24	99.8	0.2	100.0	0.0	99.8	0.2	99.2	0.8
LFA 25 NB	91.9	8.1	100.0	0.0	97.3	2.7	91.7	8.3
LFA 25 PEI	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0
MZ 26A1 NS	100.0	0.0	100.0	0.0	100.0	0.0	92.0	8.0
MZ 26A1 PEI	97.9	2.1	100.0	0.0	91.0	9.0	100.0	0.0
Sub LFA 26A2	100.0	0.0	100.0	0.0	100.0	0.0	98.0	2.0
MZ 26A3	66.7	33.3	100.0	0.0	100.0	0.0	87.5	12.5
MZ 26B North	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0
MZ 26B South	100.0	0.0	100.0	0.0	100.0	0.0	95.5	4.5
SGSL	**96.3**	**3.7**	**99.6**	**0.4**	**97.7**	**2.3**	**95.2**	**4.8**

Table 31: The percentage (%) of traps with one, two, or three bait pins or bags in the kitchen of the lobster trap in the lobster management areas of the SGSL for all survey years.

	2005		2011		2016		
Number of bait pins/bags	**1 bait pin/bags**	**2 bait pins/bags**	**1 bait pin/bags**	**2 bait pins/bags**	**1 bait pin/bags**	**2 bait pins/bags**	**3 bait pins/bags**
Sub LFA 23A	46.6	53.4	21.8	78.2	26.3	73.7	0.0
Sub LFA 23B	4.2	95.8	12.7	87.3	0.0	100.0	0.0
Sub LFA 23C	22.0	78.0	7.6	92.4	4.8	95.2	0.0
Sub LFA 23D	28.5	71.5	45.0	55.0	19.7	80.3	0.0
LFA 24	78.4	21.6	18.4	81.6	75.2	24.8	0.0
LFA 25 NB	18.3	81.7	48.1	51.9	3.1	94.5	2.4
LFA 25 PEI	95.3	4.7	63.4	36.6	86.3	13.7	0.0
MZ 26A1 NS	17.3	82.7	57.4	42.6	51.1	48.9	0.0
MZ 26A1 PEI	29.2	70.8	14.9	85.1	28.6	70.1	1.3
Sub LFA 26A2	26.1	73.9	67.9	32.1	65.9	34.1	0.0
MZ 26A3	38.0	62.0	83.9	16.1	50.0	50.0	0.0
MZ 26B North	18.2	81.8	81.9	18.1	93.8	6.3	0.0
MZ 26B South	25.2	74.8	67.4	32.6	56.5	43.5	0.0
SGSL	**40.9**	**59.1**	**36.6**	**63.4**	**42.0**	**57.4**	**0.6**

Table 32: The average hoop size (Hoop; inches) and standard error (SE) for all survey years, the percentage (%) of traps with an offset entrance for survey years 2005, 2011, and 2016, and percentage with angled hoops in survey years 2011 and 2016, in the lobster management areas of the SGSL.

	1993		**2005**			**2011**				**2016**			
	Hoop	**SE**	**Hoop**	**SE**	**Offset entrance**	**Hoop**	**SE**	**Offset entrance**	**Hoops angled**	**Hoop**	**SE**	**Offset entrance**	**Hoops angled**
Sub LFA 23A	5.8	0.199	5.4	0.065	18.2	5.6	0.048	29.7	36.3	5.8	0.053	38.9	36.1
Sub LFA 23B	5.5	0.137	5.3	0.046	5.2	5.6	0.042	30.7	28.7	5.8	0.058	22.7	60.3
Sub LFA 23C	6.0	0.148	5.2	0.035	6.2	5.4	0.040	12.0	13.9	5.8	0.032	11.3	69.9
Sub LFA 23D	6.0	0.165	5.5	0.053	2.9	5.8	0.045	43.8	10.5	5.9	0.026	20.0	39.9
LFA 24	6.0	0.089	5.5	0.026	75.0	5.6	0.021	17.9	26.7	5.7	0.019	84.4	16.5
LFA 25 NB	5.8	0.122	5.5	0.024	9.5	5.6	0.029	56.2	15.8	5.9	0.041	17.8	9.6
LFA 25 PEI	6.8	0.196	5.7	0.055	91.2	5.7	0.031	54.1	9.5	5.8	0.028	98.9	4.5
MZ 26A1 NS	6.8	0.280	5.8	0.082	11.5	5.8	0.042	54.2	22.8	5.9	0.067	29.4	44.9
MZ 26A1 PEI	6.0	0.139	5.4	0.038	19.9	5.5	0.035	28.2	38.8	5.7	0.030	29.8	59.2
Sub LFA 26A2	5.5	0.135	5.4	0.043	23.7	5.5	0.045	65.3	16.3	5.6	0.063	54.7	10.9
MZ 26A3	6.4	0.444	5.7	0.064	10.7	5.8	0.124	71.5	6.8	5.8	0.093	63.0	15.6
MZ 26B North	4.9	0.097	5.3	0.060	0.0	5.6	0.053	63.6	11.5	5.8	0.047	81.3	61.1
MZ 26B South	5.0	0.115	5.2	0.061	8.6	5.5	0.053	40.4	23.8	5.7	0.055	64.3	39.2
SGSL	**6.0**	**0.044**	**5.5**	**0.012**	**31.0**	**5.6**	**0.011**	**37.9**	**21.4**	**5.8**	**0.011**	**47.6**	**32.3**

Table 33: The percentage (%) of which panel of hybrid lobster traps were made of wire mesh as reported by survey respondents; Bottom (B), Side (S), Door (D) only, or combinations, in survey years 2011 in the lobster management areas of the SGSL.

	2011							**2016**					
	Bottom	**Side**	**Door**	**B/S**	**B/D**	**B/S/D**	**S/D**	**Bottom**	**Door**	**B/S**	**B/D**	**B/S/D**	**S/D**
SubLFA 23A	0.0	50.0	0.0	0.0	0.0	25.0	25.0	0.0	0.0	100.0	0.0	0.0	0.0
SubLFA 23B	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
SubLFA 23C	0.0	14.3	57.1	0.0	0.0	0.0	28.6	55.0	0.0	22.5	0.0	0.0	22.5
SubLFA 23D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LFA 24	2.5	1.1	73.9	0.0	15.4	0.0	7.0	2.5	92.5	0.0	5.0	0.0	0.0
LFA 25 NB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LFA 25 PEI	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26A1 NS	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
MZ 26A1 PEI	8.4	0.0	32.7	0.0	55.5	3.4	0.0	20.0	35.8	0.0	42.5	1.8	0.0
SubLFA 26A2	30.6	19.4	0.0	30.6	0.0	0.0	19.4	0.0	100.0	0.0	0.0	0.0	0.0
MZ 26A3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
MZ 26B North	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	93.3	0.0	6.7	0.0	0.0
MZ 26B South	0.0	16.7	75.0	0.0	0.0	0.0	8.3	0.0	66.7	0.0	0.0	0.0	33.3
SGSL	**4.3**	**16.2**	**53.0**	**2.2**	**13.3**	**1.9**	**9.2**	**13.0**	**56.5**	**9.4**	**15.5**	**0.3**	**5.4**

Table 34: The percentages (%) of respondents who build their own traps in survey years 2011 and 2016 in the lobster management areas of the SGSL. Responses were that they do not build any part of their trap (No), they build the entire trap (Completely), or in part (Partial).

Build own traps	**2011**			**2016**		
	No	**Completely**	**Partial**	**No**	**Completely**	**Partial**
SubLFA 23A	66.7	26.5	6.9	82.3	4.3	13.4
SubLFA 23B	74.8	19.7	5.6	72.8	16.3	10.9
SubLFA 23C	70.3	28.0	1.7	76.7	18.3	5.0
SubLFA 23D	16.8	57.7	25.5	31.7	59.0	9.3
LFA 24	3.7	96.3	0.0	7.7	92.3	0.0
LFA 25 NB	19.2	50.9	29.8	33.3	36.8	29.9
LFA 25 PEI	0.0	97.6	2.4	2.3	97.7	0.0
MZ 26A1 NS	21.7	71.1	7.2	15.3	80.7	4.0
MZ 26A1 PEI	5.9	92.8	1.3	12.4	87.6	0.0
SubLFA 26A2	21.0	58.0	21.0	41.8	49.3	8.9
MZ 26A3	25.0	62.5	12.5	25.0	75.0	0.0
MZ 26B North	12.5	83.3	4.2	22.7	68.2	9.1
MZ 26B South	41.7	54.2	4.2	28.0	72.0	0.0
SGSL	**22.7**	**67.3**	**9.9**	**29.1**	**63.1**	**7.7**

Table 35: The percentage (%) of respondents using legal sized or larger escape mechanisms in their traps during the 2005, 2011, and 2016 survey years in the lobster management areas of the SGSL.

Escape mechanism	**2005**		**2011**		**2016**	
	Legal size	**Oversized**	**Legal size**	**Oversized**	**Legal size**	**Oversized**
Sub LFA 23A	0.0	100.0	95.8	4.2	13.1	86.9
Sub LFA 23B	0.0	100.0	100.0	0.0	20.9	79.1
Sub LFA 23C	0.0	100.0	100.0	0.0	36.2	63.8
Sub LFA 23D	1.5	98.5	69.2	30.8	76.8	23.2
LFA 24	53.8	46.2	97.0	3.0	97.7	2.3
LFA 25 NB	0.0	100.0	56.8	43.2	54.0	46.0
LFA 25 PEI	13.3	86.7	95.7	4.3	95.4	4.6
MZ 26A1 NS	72.0	28.0	46.4	53.6	55.6	44.4
MZ 26A1 PEI	81.1	18.9	92.5	7.5	100.0	0.0
Sub LFA 26A2	68.3	31.8	46.6	53.4	42.0	58.0
MZ 26A3	70.0	30.0	100.0	0.0	12.5	87.5
MZ 26B North	81.8	18.2	92.0	8.0	37.5	62.5
MZ 26B South	96.3	3.7	91.3	8.7	53.4	46.6
SGSL	**37.7**	**62.3**	**82.5**	**17.5**	**67.4**	**32.6**

Table 36: Average number (Ave), and the standard error (SE), of traps set in one line by in the lobster management areas of the SGSL for all survey years.

Traps/line	**1993**		**2005**		**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	4.3	0.2	3.1	0.1	2.9	0.2	3.2	0.1
SubLFA 23B	7.8	0.2	5.6	0.2	5.6	0.1	6.0	0.1
SubLFA 23C	7.4	0.2	5.5	0.1	5.5	0.1	5.4	0.1
SubLFA 23D	5.0	0.1	4.4	0.1	3.9	0.1	3.7	0.1
LFA 24	8.3	0.1	6.7	0.2	6.5	0.1	6.0	0.1
LFA 25 NB	4.6	0.1	3.5	0.1	3.6	0.2	3.2	0.1
LFA 25 PEI	4.3	0.3	3.9	0.2	3.7	0.2	4.1	0.2
MZ 26A1 NS*	4.8	0.3	4.8	0.3	5.1	0.0	5.0	0.0
MZ 26A1 PEI*	5.4	0.2	5.4	0.1	5.8	0.1	5.7	0.0
SubLFA 26A2*	7.5	0.4	7.2	0.3	7.2	0.2	6.6	0.1
MZ 26A3*	1.2	0.1	1.6	0.3	1.3	0.1	2.0	0.0
MZ 26B North*	6.9	0.5	5.5	0.2	5.1	0.0	5.0	0.0
MZ 26B South*	1.9	0.3	2.4	0.2	1.6	0.1	1.9	0.1
SGSL	**5.8**	**0.3**	**5.0**	**0.3**	**4.9**	**0.3**	**4.8**	**0.2**

* License conditions regulate a maximum number of traps as per the annual Notice to Harvesters.

Table 37: The percentage (%) of respondents indicating their preference, if different than the status quo (Status quo; approximately 5 traps per line, see Table 36), of the number of traps to be set on one line during survey years 2011 and 2016 in the lobster management areas of the SGSL.

Preferred traps/line	**2011**	**2016**										
	Status quo	**Status quo**	**10**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**
SubLFA 23A	84.8	87.3	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0	4.3	0.0
SubLFA 23B	78.6	89.5	0.0	0.0	0.0	0.0	10.5	0.0	0.0	0.0	0.0	0.0
SubLFA 23C	72.9	76.7	6.5	0.0	0.0	0.0	5.0	6.7	1.7	3.4	0.0	0.0
SubLFA 23D	81.9	37.4	0.0	0.0	0.0	0.0	18.8	32.2	2.7	6.2	0.0	2.7
LFA 24	87.4	96.8	0.0	0.0	0.0	0.8	0.8	1.6	0.0	0.0	0.0	0.0
LFA 25 NB	77.0	48.3	0.0	0.0	0.0	0.0	1.1	32.4	5.3	5.3	3.2	4.4
LFA 25 PEI	97.6	95.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	0.0
MZ 26A1 NS	89.6	8.1	0.0	0.0	0.0	0.0	11.7	65.3	7.3	3.6	4.0	0.0
MZ 26A1 PEI	84.8	97.1	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.4
SubLFA 26A2	68.7	76.9	4.5	0.0	3.1	3.1	6.2	6.2	0.0	0.0	0.0	0.0
MZ 26A3	62.5	37.5	0.0	0.0	0.0	0.0	0.0	0.0	37.5	25.0	0.0	0.0
MZ 26B North	62.5	0.0	4.5	0.0	0.0	0.0	9.1	72.7	4.5	4.5	0.0	4.5
MZ 26B South	79.2	0.0	24.0	0.0	0.0	0.0	0.0	4.0	8.0	24.0	36.0	4.0
SGSL	**81.0**	**69.5**	**2.0**	**0.0**	**0.2**	**0.3**	**3.5**	**14.6**	**2.6**	**3.3**	**2.5**	**1.4**

Table 38: The average number (Ave), and standard error (SE) of traps lost in a fishing season (1993, 2005, 2011, and 2016) in the lobster management areas of the SGSL.

Lost traps	**1993**		**2005**		**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	19.9	2.3	5.9	1.4	4.1	1.2	4.2	0.9
SubLFA 23B	25.4	2.4	3.0	0.7	2.0	0.6	4.2	1.1
SubLFA 23C	34.5	2.6	5.7	0.8	3.1	0.6	5.2	0.8
SubLFA 23D	31.8	2.6	4.8	0.6	4.2	0.7	2.9	0.5
LFA 24	21.0	1.7	4.2	0.5	3.6	0.4	3.9	0.4
LFA 25 NB	6.0	0.9	6.3	0.4	5.6	1.1	5.5	0.9
LFA 25 PEI	11.0	1.0	6.3	1.1	2.9	0.5	6.5	2.4
MZ 26A1 NS	6.8	1.5	2.0	0.7	1.9	0.5	0.8	0.2
MZ 26A1 PEI	5.4	1.3	3.0	0.4	2.7	0.5	2.0	0.3
SubLFA 26A2	20.6	2.9	2.6	0.3	2.3	0.5	1.3	0.2
MZ 26A3	11.3	3.8	1.9	0.4	2.1	0.6	2.8	1.1
MZ 26B North	8.3	2.0	4.8	0.8	6.6	1.0	3.9	0.8
MZ 26B South	17.3	4.7	5.9	1.0	4.0	0.9	5.4	1.6
SGSL	**15.9**	**1.1**	**4.6**	**1.1**	**3.7**	**1.4**	**4.0**	**1.4**

Table 39: The average (Ave), and standard error (SE), number of traps over 5 years as reported by respondents in 2011 and 2016 survey years in the lobster management areas of the SGSL.

Lost traps over 5 years	**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**
SubLFA 23A	16.7	2.3	17.1	3.0
SubLFA 23B	12.6	2.5	15.4	2.3
SubLFA 23C	20.7	3.4	22.3	3.2
SubLFA 23D	18.6	2.8	20.8	4.5
LFA 24	21.7	2.0	14.8	1.2
LFA 25 NB	26.1	5.0	27.6	5.1
LFA 25 PEI	11.5	1.6	18.5	3.3
MZ 26A1 NS	6.6	1.3	4.7	1.0
MZ 26A1 PEI	12.2	2.1	9.5	1.0
SubLFA 26A2	10.6	2.4	6.5	1.0
MZ 26A3	9.6	1.4	6.5	1.2
MZ 26B North	39.3	9.5	20.2	3.1
MZ 26B South	34.3	8.9	27.8	7.4
SGSL	**19.5**	**6.4**	**17.4**	**5.2**

Table 40: The percentage (%) of respondents who replaced their traps in a pattern, or as needed during the 2011 and 2016 survey years in the lobster management areas of the SGSL.

Trap replacement pattern	**2011**		**2016**	
	No pattern/As needed	**On a time frame**	**No pattern/As needed**	**On a time frame**
SubLFA 23A	45.7	54.3	64.8	35.2
SubLFA 23B	52.3	47.7	36.8	63.2
SubLFA 23C	38.8	61.2	23.1	76.9
SubLFA 23D	27.4	72.6	68.7	31.3
LFA 24	11.1	88.9	18.7	81.3
LFA 25 NB	44.4	55.6	57.9	42.1
LFA 25 PEI	13.1	86.9	18.2	81.8
MZ 26A1 NS	20.0	80.0	22.2	77.8
MZ 26A1 PEI	29.9	70.1	30.2	69.8
SubLFA 26A2	24.7	75.3	39.6	60.4
MZ 26A3	62.5	37.5	25.0	75.0
MZ 26B North	25.0	75.0	9.1	90.9
MZ 26B South	29.2	70.8	44.0	56.0
SGSL	**29.2**	**70.8**	**34.3**	**65.7**

Table 41: The average number (Ave) of traps, and standard error (SE) replaced annually by respondents over the survey time series in the lobster management areas of the SGSL.

Traps replaced annually	**1993**		**2005**		**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	45.3	3.1	20.0	2.7	32.0	4.0	28.4	4.3
SubLFA 23B	45.8	3.0	13.4	2.7	28.6	4.4	43.4	4.1
SubLFA 23C	52.9	3.5	19.6	1.9	33.6	2.6	43.4	1.5
SubLFA 23D	50.7	3.3	13.8	2.2	35.4	2.9	52.8	8.0
LFA 24	65.0	2.5	48.5	1.5	49.3	1.1	50.6	1.2
LFA 25 NB	22.4	2.1	17.8	1.0	26.0	1.5	34.7	2.6
LFA 25 PEI	49.1	2.9	44.5	2.7	46.4	1.9	51.5	2.7
MZ 26A1 NS	32.0	3.6	23.4	1.8	34.4	2.2	30.2	1.9
MZ 26A1 PEI	38.4	10.6	35.3	1.1	34.2	1.8	36.9	1.5
SubLFA 26A2	45.5	4.0	30.9	2.4	39.0	2.1	38.4	1.9
MZ 26A3	20.4	4.7	14.5	1.7	29.3	4.5	21.8	2.9
MZ 26B North	36.5	5.3	37.5	2.9	43.4	3.4	44.1	2.0
MZ 26B South	44.6	6.6	34.5	3.5	37.8	4.6	48.0	4.2
SGSL	**43.8**	**0.3**	**30.8**	**3.1**	**37.0**	**0.6**	**42.3**	**0.8**

Table 42: The average (Ave) life span, and standard error (SE), years of traps in 2011, and divided into the life span of wood and wire traps in 2016 in the lobster management areas of the SGSL.

Trap life span	**2011**		**Wire 2016**		**Wood 2016**	
	Ave	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	11.3	0.9	11.0	0.9	6.7	0.0
SubLFA 23B	13.1	0.7	10.5	0.8	6.0	1.8
SubLFA 23C	9.1	0.4	8.7	0.4	3.6	0.3
SubLFA 23D	13.0	0.5	9.7	0.6	4.3	0.8
LFA 24	8.2	0.2	4.8	0.4	7.1	0.1
LFA 25 NB	12.3	0.5	11.2	0.4	1.4	0.0
LFA 25 PEI	7.0	0.3	0.0	0.0	6.5	0.2
MZ 26A1 NS	10.8	0.6	14.7	1.0	9.1	1.1
MZ 26A1 PEI	11.2	0.3	10.8	0.4	10.0	0.4
SubLFA 26A2	9.1	0.5	11.6	0.8	7.9	0.6
MZ 26A3	14.0	1.9	20.7	1.5	10.5	2.4
MZ 26B North	8.5	0.6	6.0	0.0	8.0	0.4
MZ 26B South	10.3	0.7	16.3	1.9	7.1	0.5
SGSL	**10.3**	**0.7**	**8.9**	**0.8**	**6.1**	**0.6**

Fishing pattern and strategies:

Table 43: Average (Ave), and standard error (SE), time of the day of departure from the wharf reported by the respondents (in decimal) over the survey time series in the lobster management areas of the SGSL.

Departure time	**1993**		**2005**		**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	4.8	0.1	4.8	0.1	5.0	0.1	4.9	0.1
SubLFA 23B	4.4	0.2	4.9	0.1	4.8	0.1	4.9	0.1
SubLFA 23C	4.6	0.1	4.4	0.1	4.9	0.1	4.7	0.1
SubLFA 23D	4.8	0.1	5.0	0.1	5.1	0.1	4.7	0.1
LFA 24	4.9	0.0	4.8	0.1	4.9	0.0	4.8	0.0
LFA 25 NB	5.0	0.1	5.3	0.1	5.2	0.1	4.9	0.1
LFA 25 NS	5.5	0.2	5.3	0.2	4.8	0.4	5.1	0.6
LFA 25 PEI	4.9	0.1	5.1	0.1	5.3	0.1	5.1	0.1
MZ 26A1 NS	4.7	0.1	4.6	0.1	4.6	0.1	4.6	0.1
MZ 26A1 PEI	4.5	0.1	4.6	0.1	4.7	0.1	4.6	0.1
SubLFA 26A2	5.0	0.1	4.7	0.1	4.8	0.1	4.9	0.1
MZ 26A3	4.5	0.1	4.8	0.1	4.5	0.2	4.6	0.1
MZ 26B North	4.6	0.2	4.6	0.1	4.4	0.1	4.4	0.1
MZ 26B South	5.0	0.1	4.9	0.1	4.9	0.1	4.9	0.1
SGSL	**4.8**	**0.2**	**4.8**	**0.1**	**4.9**	**0.1**	**4.8**	**0.1**

Table 44: Average time of arrival (Ave; time of the day in decimal), and standard error (SE), of the respondents back to the wharf over the survey time series in the lobster management areas of the SGSL.

Arrival time	**1993**		**2005**		**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	12.9	0.3	13.5	0.2	13.2	0.3	13.5	0.2
SubLFA 23B	14.0	0.2	13.5	0.4	13.8	0.3	12.8	0.2
SubLFA 23C	13.4	0.3	13.9	0.2	14.1	0.2	13.5	0.1
SubLFA 23D	15.1	0.2	15.1	0.2	15.5	0.2	14.8	0.2
LFA 24	13.7	0.1	13.5	0.1	13.8	0.1	13.7	0.1
LFA 25 NB	14.7	0.1	15.8	0.1	15.9	0.2	15.6	0.1
LFA 25 PEI	15.4	0.2	15.5	0.2	16.0	0.2	15.6	0.2
MZ 26A1 NS	12.2	0.5	13.4	0.2	12.8	0.2	12.8	0.2
MZ 26A1 PEI	13.2	0.4	12.9	0.1	12.9	0.1	13.1	0.2
SubLFA 26A2	11.9	0.3	12.0	0.2	11.6	0.2	11.7	0.3
MZ 26A3	16.1	0.4	15.2	0.4	15.4	0.3	14.4	0.4
MZ 26B North	13.0	0.8	12.6	0.1	13.1	0.2	12.4	0.3
MZ 26B South	13.8	0.4	13.8	0.2	13.2	0.2	13.0	0.3
SGSL	**13.9**	**0.5**	**14.0**	**0.3**	**14.2**	**0.3**	**13.9**	**0.3**

Table 45: The average (Ave), and standard error (SE), time (hours of travel in decimal) to steam to and from the fishing grounds in 2005, 2011, and 2016 in the lobster management areas of the SGSL.

Sail to and from fishing grounds	**2005**		**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	0.7	0.1	1.0	0.1	0.7	0.1
SubLFA 23B	1.3	0.1	1.3	0.1	0.7	0.1
SubLFA 23C	1.8	0.1	2.0	0.1	1.4	0.1
SubLFA 23D	1.7	0.1	2.3	0.1	1.7	0.1
LFA 24	1.1	0.1	1.2	0.0	1.0	0.0
LFA 25 NB	1.6	0.1	2.3	0.1	1.9	0.1
LFA 25 PEI	2.0	0.5	1.2	0.1	1.4	0.1
MZ 26A1 NS	1.1	0.1	0.9	0.1	1.0	0.1
MZ 26A1 PEI	1.6	0.1	1.1	0.1	1.2	0.1
SubLFA 26A2	0.9	0.1	0.6	0.1	0.6	0.1
MZ 26A3	1.3	0.2	1.4	0.2	1.2	0.2
MZ 26B North	0.9	0.1	0.9	0.1	1.0	0.1
MZ 26B South	0.9	0.1	0.8	0.1	0.7	0.1
SGSL	**1.4**	**0.3**	**1.5**	**0.1**	**1.2**	**0.1**

Table 46: The average (Ave), and standard error (SE), time (hours of time to haul, in decimal) it took respondents to haul all of their traps over the survey time series in the lobster management areas of the SGSL.

Time needed to haul traps	**1993**		**2005**		**2011**		**2016**	
	Ave	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	6.8	0.3	7.9	0.2	7.3	0.4	8.0	0.2
SubLFA 23B	7.3	0.2	7.2	0.2	7.8	0.3	7.2	0.2
SubLFA 23C	7.0	0.2	7.6	0.2	7.4	0.2	7.4	0.2
SubLFA 23D	8.3	0.2	8.4	0.1	8.0	0.3	8.3	0.2
LFA 24	7.5	0.1	7.4	0.1	7.5	0.1	7.9	0.1
LFA 25 NB	8.0	0.1	8.6	0.1	8.5	0.2	8.8	0.1
LFA 25 PEI	8.7	0.2	8.2	0.4	8.9	0.2	9.2	0.2
MZ 26A1 NS	6.9	0.3	8.0	0.2	7.3	0.2	7.2	0.3
MZ 26A1 PEI	7.3	0.5	6.8	0.1	7.1	0.1	7.3	0.2
SubLFA 26A2	6.4	0.2	7.1	0.1	6.3	0.1	6.1	0.3
MZ 26A3	9.5	0.3	9.9	0.4	9.1	0.3	8.6	0.4
MZ 26B North	6.9	0.4	7.4	0.2	7.8	0.2	7.0	0.3
MZ 26B South	8.0	0.3	8.1	0.2	7.3	0.2	7.4	0.2
SGSL	**7.6**	**0.5**	**7.8**	**0.3**	**7.7**	**0.3**	**7.9**	**0.3**

Table 47**:** The percentage (%) of respondents hauling all traps every day, or a different pattern in 2005, 2011, and 2016 in the lobster management areas of the SGSL.

Fishing pattern	**2005**		**2011**		**2016**	
	All every day	**Changing pattern**	**All every day**	**Changing pattern**	**All every day**	**Changing pattern**
SubLFA 23A	82.9	17.1	60.3	30.4	95.5	4.5
SubLFA 23B	78.9	21.1	69.2	30.8	100.0	0.0
SubLFA 23C	71.2	28.8	77.5	22.5	91.6	8.4
SubLFA 23D	74.4	25.6	93.6	6.4	91.9	2.7
LFA 24	99.2	0.8	100.0	0.0	100.0	0.0
LFA 25 NB	34.8	62.8	56.6	38.9	79.7	12.8
LFA 25 PEI	89.4	1.9	92.9	4.7	95.5	0.0
MZ 26A1 NS	88.0	4.0	93.6	6.4	96.4	3.6
MZ 26A1 PEI	94.2	1.1	98.6	0.0	98.7	0.0
SubLFA 26A2	100.0	0.0	97.1	2.9	100.0	0.0
MZ 26A3	80.0	20.0	12.5	25.0	100.0	0.0
MZ 26B North	100.0	0.0	100.0	0.0	100.0	0.0
MZ 26B South	96.3	0.0	91.7	8.3	100.0	0.0
SGSL	**80.3**	**16.9**	**83.9**	**13.3**	**93.8**	**3.7**

Table 48: The percentage (%) of respondents who hauled some or all of their traps twice a day (Double haul) in 1993, 2005, 2011, and 2016 in the lobster management areas of the SGSL.

	1993		**2005**		**2011**		**2016**	
	Never	**Double haul**	**Never**	**Double haul**	**Never**	**Double haul**	**Never**	**Double haul**
SubLFA 23A	96.3	3.7	100.0	0.0	100.0	0.0	100.0	0.0
SubLFA 23B	87.8	12.2	91.7	8.3	85.9	14.1	94.6	5.4
SubLFA 23C	92.2	7.8	95.0	5.0	90.8	9.2	88.3	11.7
SubLFA 23D	67.2	32.8	100.0	0.0	86.1	13.9	86.1	13.9
LFA 24	67.7	32.3	90.2	9.8	92.0	8.0	89.9	10.1
LFA 25 NB	88.2	11.8	94.9	5.1	98.2	1.8	99.0	1.0
LFA 25 PEI	63.2	36.8	96.3	3.7	94.1	5.9	61.2	38.8
MZ 26A1 NS	89.3	10.7	100.0	0.0	96.0	4.0	96.0	4.0
MZ 26A1 PEI	96.1	3.9	95.8	4.2	98.7	1.3	91.8	8.2
SubLFA 26A2	100.0	0.0	100.0	0.0	100.0	0.0	87.0	13.0
MZ 26A3	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0
MZ 26B North	100.0	0.0	100.0	0.0	100.0	0.0	95.5	4.5
MZ 26B South	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0
SGSL	**84.3**	**15.7**	**95.5**	**4.5**	**95.0**	**5.0**	**90.5**	**9.5**

Table 49: The percentage (%) of respondents who fished on Sundays in 2005, 2011, and 2016 in the lobster management areas of the SGSL. Replies were no (by verbal or gentleman's agreement), if needed, or they fished weekly on Sunday.

Sunday fishing	**2005**			**2011**			**2016**		
	No by gentleman's agreement	**If needed**	**Every week**	**No by gentleman's agreement**	**If needed**	**Every week**	**No by gentleman's agreement**	**If needed**	**Every week**
SubLFA 23A	38.9	19.0	42.1	41.6	11.8	17.7	30.5	4.5	60.8
SubLFA 23B	0.0	0.0	100.0	0.0	4.7	95.3	0.0	0.0	100.0
SubLFA 23C	0.0	0.0	100.0	1.7	6.4	88.7	0.0	1.6	98.4
SubLFA 23D	21.3	21.3	57.4	26.3	13.3	31.2	45.7	13.9	37.4
LFA 24	100.0	0.0	0.0	100.0	0.0	0.0	81.2	13.3	0.0
LFA 25 NB	97.9	2.1	0.0	68.9	0.9	2.1	94.8	2.1	0.0
LFA 25 PEI	100.0	0.0	0.0	100.0	0.0	0.0	93.2	4.6	0.0
MZ 26A1 NS	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0
MZ 26A1 PEI	100.0	0.0	0.0	97.4	0.0	1.3	100.0	0.0	0.0
SubLFA 26A2	100.0	0.0	0.0	94.2	2.9	0.0	100.0	0.0	0.0
MZ 26A3	90.0	10.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0
MZ 26B North	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0
MZ 26B South	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0
SGSL	**79.8**	**2.1**	**18.2**	**73.4**	**2.4**	**15.6**	**75.4**	**4.7**	**17.6**

Table 50: The weekly percentage (%) of traps set in deep, mid, and shallow water, as categorized by the respondents, for week 1 and 2 at the start of the fishing season in 2011 and 2016 in the lobster management areas of the SGSL.

	Week 1						**Week 2**					
	2011			**2016**			**2011**			**2016**		
	Deep	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**
SubLFA 23A	36.0	57.0	7.0	50.0	44.6	5.4	35.4	57.0	7.7	49.6	45.0	5.4
SubLFA 23B	60.5	33.0	6.5	83.7	16.3	0.0	57.1	36.4	6.5	83.7	16.3	0.0
SubLFA 23C	87.8	11.0	1.2	79.5	19.2	1.3	88.0	10.0	2.0	77.8	20.5	1.7
SubLFA 23D	72.0	19.4	8.6	73.0	15.7	11.3	63.4	26.0	10.7	69.8	20.0	10.2
LFA 24	80.0	16.8	3.2	48.6	49.1	2.3	69.7	25.2	5.1	48.4	48.5	3.1
LFA 25 NB	31.2	32.1	36.7	25.7	48.7	25.7	26.0	34.1	39.9	30.1	47.9	22.1
LFA 25 PEI	25.9	45.4	28.7	13.5	80.7	5.8	23.4	51.4	25.2	14.6	80.7	4.7
MZ 26A1 NS	29.4	46.0	24.6	14.8	50.3	34.8	29.4	46.0	24.6	12.4	52.8	34.8
MZ 26A1 PEI	45.2	40.5	14.3	27.9	61.3	10.8	46.6	39.1	14.3	29.5	59.7	10.8
SubLFA 26A2	33.6	50.5	15.9	40.7	52.2	7.0	33.6	50.4	16.0	40.7	52.2	7.0
MZ 26A3	18.9	44.1	37.0	38.1	27.5	34.4	20.2	46.7	33.2	38.1	27.5	34.4
MZ 26B North	46.4	30.2	23.3	34.5	53.4	12.1	41.8	30.3	27.9	29.1	55.0	15.9
MZ 26B South	48.5	29.7	21.8	47.2	44.7	8.1	34.2	35.1	30.7	47.2	44.7	8.1
SGSL	**53.1**	**30.6**	**16.3**	**42.9**	**46.5**	**10.7**	**48.7**	**33.5**	**17.7**	**43.1**	**46.6**	**10.3**

Table 51: The weekly percentage (%) of traps set in deep, mid, and shallow water, as categorized by the respondents, for week 3 and 4 of the fishing season in 2011 and 2016 in the lobster management areas of the SGSL.

	Week 3						**Week 4**					
	2011			**2016**			**2011**			**2016**		
	Deep	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**
SubLFA 23A	22.5	66.2	11.4	34.0	51.0	15.0	16.0	63.4	20.5	21.9	55.6	22.4
SubLFA 23B	39.6	45.0	15.3	21.9	53.5	24.6	23.7	44.4	31.9	21.9	53.5	24.6
SubLFA 23C	76.8	19.0	4.2	46.6	42.0	11.3	62.5	30.2	7.3	38.4	46.9	14.6
SubLFA 23D	47.9	30.1	22.0	34.1	21.7	44.2	34.4	35.4	30.1	16.7	19.4	63.9
LFA 24	44.6	44.3	10.3	43.7	52.7	3.6	31.1	48.5	20.4	23.0	62.7	14.3
LFA 25 NB	21.1	40.4	38.5	37.5	44.9	17.6	21.4	45.0	33.6	46.1	39.2	14.7
LFA 25 PEI	24.9	39.9	35.1	16.4	76.8	6.7	27.5	47.3	25.0	19.1	74.8	6.1
MZ 26A1 NS	24.6	48.8	26.6	16.7	54.3	29.0	24.6	49.5	26.0	17.1	53.9	29.0
MZ 26A1 PEI	43.9	39.0	17.1	28.7	59.5	11.7	41.7	40.2	18.3	22.8	59.4	17.7
SubLFA 26A2	31.2	53.1	15.7	41.1	49.4	9.5	29.8	52.4	17.8	24.1	41.1	34.8
MZ 26A3	22.5	44.1	33.3	38.1	27.5	34.4	17.5	45.4	33.3	41.3	27.5	31.3
MZ 26B North	26.3	35.1	37.8	20.5	63.3	16.2	28.3	36.5	34.4	16.3	59.1	24.6
MZ 26B South	29.2	35.8	34.9	44.0	47.9	8.1	16.6	39.9	43.4	18.7	49.1	32.1
SGSL	**38.3**	**40.0**	**21.5**	**35.3**	**50.7**	**13.9**	**31.9**	**44.0**	**24.1**	**27.3**	**51.8**	**20.9**

Table 52: The weekly percentage (%) of traps set in deep, mid, and shallow water, as categorized by the respondents, for week 5 and 6 of the fishing season in 2011 and 2016 in the lobster management areas of the SGSL.

	Week 5						Week 6					
	2011			2016			2011			2016		
	Deep	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**
SubLFA 23A	11.1	52.2	36.7	14.5	54.9	30.5	4.3	46.9	48.8	10.1	41.2	48.6
SubLFA 23B	18.5	36.9	44.6	3.9	56.1	40.0	14.1	38.4	47.4	3.9	56.1	40.0
SubLFA 23C	32.9	42.2	24.9	17.2	41.2	41.6	20.1	43.7	36.0	14.4	39.4	46.2
SubLFA 23D	11.0	40.7	48.3	7.8	16.5	75.7	4.7	36.6	58.8	3.6	17.2	79.2
LFA 24	17.2	46.8	35.9	11.3	61.2	27.5	10.2	42.7	47.0	8.1	56.7	35.3
LFA 25 NB	35.9	41.4	22.7	57.7	30.9	11.5	46.4	33.2	20.4	62.3	28.2	9.5
LFA 25 NS	16.5	50.5	33.0	72.0	14.0	14.0	16.5	50.5	33.0	72.0	14.0	14.0
LFA 25 PEI	26.9	47.4	25.7	21.8	69.8	8.4	40.7	36.4	22.8	26.3	65.4	8.2
MZ 26A1 NS	22.5	54.3	23.2	23.9	51.0	25.1	21.9	54.3	23.8	27.0	50.3	22.6
MZ 26A1 PEI	27.3	47.8	24.8	17.9	56.2	25.8	25.1	45.4	28.4	12.7	56.7	30.6
SubLFA 26A2	21.6	47.0	31.4	23.8	41.9	34.3	23.2	42.2	34.6	23.8	41.9	34.3
MZ 26A3	21.3	44.1	34.6	41.3	27.5	31.3	21.1	44.1	34.7	41.3	27.5	31.3
MZ 26B North	16.2	33.9	49.9	12.2	52.6	35.2	16.2	23.9	59.9	12.2	49.1	38.7
MZ 26B South	15.0	34.3	50.7	18.7	49.1	32.1	14.6	35.4	50.1	18.7	48.1	33.2
SGSL	**24.0**	**44.4**	**31.6**	**22.9**	**48.3**	**28.8**	**23.0**	**40.2**	**36.6**	**22.1**	**45.8**	**32.1**

Table 53: The weekly percentage (%) of traps set in deep, mid, and shallow water, as categorized by the respondents for week 7 and 8 at the end of the fishing season in 2011 and 2016 in the lobster management areas of the SGSL.

	Week 7						Week 8					
	2011			2016			2011			2016		
	Deep	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**	**Deep**	**Mid**	**Shallow**
SubLFA 23A	4.3	34.1	61.6	8.0	32.9	59.2	4.4	34.2	61.4	8.0	27.4	64.6
SubLFA 23B	1.5	40.7	57.8	4.7	27.4	67.9	0.6	37.9	61.5	6.0	30.1	63.8
SubLFA 23C	9.1	36.4	54.5	6.3	30.7	63.0	8.4	34.7	57.0	6.4	29.2	64.4
SubLFA 23D	3.0	30.8	66.2	2.5	17.8	79.7	1.5	29.4	69.1	3.3	16.7	80.0
LFA 24	7.6	36.9	55.4	4.9	44.0	51.0	6.9	36.3	56.8	4.9	43.4	51.6
LFA 25 NB	54.1	24.3	21.5	63.1	27.4	9.5	54.8	22.6	22.4	62.5	28.2	9.3
LFA 25 NS	8.0	41.5	50.5	72.0	14.0	14.0	8.0	41.5	50.5	72.0	14.0	14.0
LFA 25 PEI	46.8	33.8	19.3	30.2	61.2	8.6	51.3	30.7	17.9	31.1	60.3	8.6
MZ 26A1 NS	21.5	53.7	24.7	27.4	46.3	26.3	21.5	53.7	24.7	27.2	46.1	26.7
MZ 26A1 PEI	24.1	45.0	29.8	10.5	49.2	40.3	22.8	43.4	33.9	10.5	48.8	40.7
SubLFA 26A2	20.0	38.9	41.1	24.7	41.6	33.6	19.8	38.1	42.1	24.7	41.6	33.6
MZ 26A3	21.1	45.4	33.5	41.3	27.5	31.3	18.6	47.9	33.5	41.3	27.5	31.3
MZ 26B North	16.2	23.9	59.9	12.7	46.1	41.3	16.2	23.9	59.9	12.7	46.1	41.3
MZ 26B South	17.6	35.3	47.1	20.0	44.2	35.8	18.8	34.7	46.5	20.0	44.2	35.8
SGSL	**22.4**	**35.4**	**42.0**	**20.7**	**39.1**	**40.1**	**22.4**	**34.2**	**43.4**	**20.8**	**38.7**	**40.5**

Table 54: The average (Ave), minimum (Min), and maximum (Max), depth, in meters (m), with standard error (SE), of vessels fishing in shallow water, categorized by the deepest (high range) or shallowest (low) locations within the lobster management areas of the SGSL in 2016. Depths were reported by the respondents.

Shallow water	**High range**				**Low range**			
m	**Ave**	**SE**	**Min**	**Max**	**Ave**	**SE**	**Min**	**Max**
SubLFA 23A	6.1	0.6	1.5	12.2	5.0	0.7	1.5	13.4
SubLFA 23B	4.7	0.5	0.9	9.8	4.2	0.5	0.9	9.8
SubLFA 23C	7.2	0.4	1.2	15.2	6.1	0.3	0.6	14.6
SubLFA 23D	9.8	0.6	4.3	18.3	4.9	0.4	1.2	12.2
LFA 24	12.4	0.2	3.0	15.2	4.0	0.2	1.5	9.1
LFA 25 NB	9.3	0.3	4.6	15.2	6.7	0.3	0.6	15.2
LFA 25 PEI	13.0	0.6	9.1	18.3	4.1	0.9	1.2	9.1
MZ 26A1 NS	7.7	0.6	1.8	12.2	3.5	0.6	1.5	8.5
MZ 26A1 PEI	9.8	0.4	2.1	15.2	2.9	0.5	1.2	11.0
SubLFA 26A2	5.5	0.4	1.5	13.4	3.5	0.3	1.5	9.1
MZ 26A3	5.8	0.5	3.0	9.1	2.2	0.3	1.2	4.6
MZ 26B North	6.0	0.8	1.8	18.3	4.2	0.3	1.5	11.0
MZ 26B South	10.8	1.4	1.8	27.4	5.4	0.6	1.2	18.3
SGSL	**9.5**	**0.7**	**0.9**	**27.4**	**4.6**	1.0	**0.6**	**18.3**

Table 55: The average (Ave), minimum (Min), and maximum (Max), depth, in meters (m), with standard error (SE), of vessels fishing in mid- water, categorized by the deepest (high range) or shallowest (low) locations within the lobster management areas of the SGSL in 2016. Depths were reported by the respondents

Mid water	**High range**				**Low range**			
m	**Ave**	**SE**	**Min**	**Max**	**Ave**	**SE**	**Min**	**Max**
SubLFA 23A	12.3	0.4	6.1	18.3	9.8	0.5	6.1	18.3
SubLFA 23B	11.2	0.4	7.6	15.2	10.4	0.4	6.1	13.7
SubLFA 23C	15.9	0.4	8.2	24.4	14.5	0.3	7.3	21.3
SubLFA 23D	18.4	0.9	12.2	24.4	12.8	1.1	6.1	18.3
LFA 24	24.1	0.2	9.1	27.4	12.5	0.1	6.1	18.3
LFA 25 NB	16.6	0.3	12.2	24.4	12.4	0.3	6.1	21.3
LFA 25 PEI	23.7	0.4	13.7	27.4	13.2	0.4	7.6	21.3
MZ 26A1 NS	14.7	0.8	5.5	24.4	9.5	0.6	3.0	15.2
MZ 26A1 PEI	22.0	0.4	12.2	30.5	12.3	0.4	3.0	21.3
SubLFA 26A2	13.2	0.7	6.1	22.9	10.4	0.5	6.1	18.3
MZ 26A3	13.5	0.9	9.1	15.2	8.5	1.5	5.2	13.7
MZ 26B North	18.3	1.4	7.6	32.9	12.2	1.2	6.1	27.4
MZ 26B South	20.1	1.5	9.1	43.9	12.8	1.2	3.0	27.4
SGSL	**19.0**	**0.7**	**5.5**	**43.9**	**12.2**	**0.7**	**3.0**	**27.4**

Table 56: The average (Ave), minimum (Min), and maximum (Max), depth, in meters (m), with standard error (SE), of vessels fishing in deep water, categorized by the deepest (high range) or shallowest (low) locations within the lobster management areas of the SGSL zone in 2016. The average of the reported deepest traps is also presented with the minimum and maximum depths.. Depths were reported by the respondents.

Deep water	**High range**				**Low range**				**Deepest depth to set traps**			
m	**Ave**	**SE**	**Min**	**Max**	**Ave**	**SE**	**Min**	**Max**	**Ave**	**SE**	**Min**	**Max**
SubLFA 23A	18.1	0.4	12.2	22.9	15.4	0.3	12.2	18.3	17.2	0.4	11.6	22.86
SubLFA 23B	19.1	0.7	13.7	27.4	18.3	0.7	13.7	27.4	19.1	0.7	13.7	27.43
SubLFA 23C	27.1	0.5	18.3	36.6	25.9	0.5	15.2	36.6	27.2	0.5	18.3	36.58
SubLFA 23D	27.3	0.7	21.3	35.4	21.2	0.7	13.7	27.4	24.9	0.9	6.1	35.36
LFA 24	34.7	0.3	27.4	45.7	24.4	0.2	18.3	30.5	32.0	0.4	15.2	45.72
LFA 25 NB	26.1	0.5	18.3	42.7	19.9	0.4	15.2	42.7	24.6	0.5	12.2	42.67
LFA 25 PEI	34.3	0.6	30.5	39.6	25.1	0.4	21.3	27.4	30.0	0.7	13.7	39.62
MZ 26A1 NS	21.7	1.1	12.2	36.6	16.8	0.9	8.8	24.4	20.7	1.1	12.2	36.58
MZ 26A1 PEI	35.7	1.1	21.3	45.7	25.9	0.6	16.8	33.5	28.0	0.9	10.7	45.72
SubLFA 26A2	24.4	1.2	12.2	47.5	22.5	1.3	10.7	47.5	23.2	1.2	12.2	47.55
MZ 26A3	20.6	0.7	16.8	22.9	15.2	0.7	12.2	18.3	20.6	0.7	16.8	22.86
MZ 26B North	31.8	1.3	16.5	42.1	28.3	1.4	16.5	36.6	31.8	1.3	16.5	42.06
MZ 26B South	28.6	1.6	15.2	49.4	22.8	1.6	12.2	36.6	28.8	1.6	15.2	49.38
SGSL	**29.3**	**1.1**	**12.2**	**49.4**	**22.8**	**0.9**	**8.8**	**47.5**	**27.0**	**1.1**	**6.1**	**49.4**

Table 57: Respondents rationales, in percent (%), for where they decided to set their traps during the first week of the season in 2011 and 2016 in the lobster management areas of the SGSL; revisiting the same location as last season (Same), getting to the grounds first (First), weather conditions (Weather), or another reason (Other), and in 2016, water temperature (Water temp), searching for lobster (Search), and fishers experience (Experience) were added as responses.

Reason for setting traps on the first week	**2011**				**2016**						
	Same	**First**	**Weather**	**Other**	**Same**	**First**	**Weather**	**Other**	**Water temp**	**Search**	**Experience**
SubLFA 23A	72.1	0.0	6.9	21.1	72.8	0.0	14.0	0.0	0.0	4.2	9.0
SubLFA 23B	74.8	9.4	15.8	0.0	68.2	0.0	0.0	0.0	5.4	5.4	20.9
SubLFA 23C	73.8	1.5	18.3	6.4	75.0	5.0	6.6	0.0	1.6	8.4	3.4
SubLFA 23D	83.2	3.5	6.4	6.9	87.5	0.0	3.1	0.0	0.0	9.3	0.0
LFA 24	79.5	5.8	5.0	9.6	86.7	0.0	1.5	0.0	7.0	0.0	4.8
LFA 25 NB	74.2	0.0	11.9	13.8	78.9	0.0	5.2	4.2	0.0	7.4	4.3
LFA 25 PEI	75.4	2.1	0.0	22.5	77.2	0.0	2.3	0.0	4.6	6.8	9.1
MZ 26A1 NS	84.7	0.0	0.0	15.3	56.4	0.0	14.5	3.6	3.6	7.3	14.5
MZ 26A1 PEI	95.4	1.9	0.0	2.7	78.0	2.7	1.4	0.0	4.2	1.4	12.3
SubLFA 26A2	72.8	0.0	11.1	16.1	68.0	12.0	7.6	0.0	3.1	0.0	9.3
MZ 26A3	75.0	12.5	0.0	12.5	75.0	0.0	0.0	0.0	12.5	0.0	12.5
MZ 26B North	54.2	4.2	25.0	16.7	68.2	27.3	4.5	0.0	0.0	0.0	0.0
MZ 26B South	66.7	0.0	33.3	0.0	44.0	0.0	12.0	0.0	0.0	4.0	40.0
SGSL	**77.7**	**2.5**	**9.0**	**0.0**	**76.5**	**2.5**	**4.7**	**0.9**	**3.0**	**4.3**	**8.2**

Table 58: The percentage (%) of respondents who described their fishing effort relative to an average season as Less, Same, and More than usual in 2011 and 2016 in the lobster management areas of the SGSL.

Changes in fishing effort	**2011**			**2016**		
	Less	**Same**	**More**	**Less**	**Same**	**More**
SubLFA 23A	15.2	68.6	16.2	4.3	86.8	8.9
SubLFA 23B	16.2	63.0	20.8	5.0	89.9	5.0
SubLFA 23C	6.8	84.1	9.1	8.3	70.3	21.4
SubLFA 23D	32.7	57.5	9.9	8.5	68.4	23.1
LFA 24	13.2	74.2	12.6	0.0	100.0	0.0
LFA 25 NB	20.2	71.8	7.9	17.3	47.5	35.2
LFA 25 PEI	8.2	64.6	27.2	2.3	93.1	4.6
MZ 26A1 NS	20.0	69.6	10.4	11.3	74.2	14.5
MZ 26A1 PEI	11.3	74.9	13.8	0.0	90.6	9.4
SubLFA 26A2	5.8	83.9	10.3	13.8	80.0	6.2
MZ 26A3	62.5	37.5	0.0	0.0	50.0	50.0
MZ 26B North	4.2	75.0	20.8	9.1	86.4	4.5
MZ 26B South	20.8	75.0	4.2	4.0	88.0	8.0
SGSL	**14.9**	**72.8**	**12.3**	**6.4**	**80.1**	**13.5**

Table 59: The average (Ave), standard error (SE), minimum (Min), and maximum (Max), number of fishing days in 2011 and 2016 in the lobster management areas of the SGSL.

Fishing days	**2011**				**2016**			
	Ave	**SE**	**Min**	**Max**	**Ave**	**SE**	**Min**	**Max**
SubLFA 23A	46.3	0.9	30	61	54.4	0.0	40	61
SubLFA 23B	52.8	1.0	40	60	58.2	0.1	53	62
SubLFA 23C	52.1	0.6	31	62	56.3	0.1	46	61
SubLFA 23D	49.8	1.1	27	62	50.8	0.2	32	60
LFA 24	46.5	0.3	23	53	50.6	0.0	39	55
LFA 25 NB	43.9	1.0	23	63	45.3	0.1	27	55
LFA 25 PEI	46.6	0.6	37	53	49.8	0.0	41	55
MZ 26A1 NS	48.3	0.5	38	53	50.9	0.2	45	54
MZ 26A1 PEI	49.0	0.3	36	60	52.1	0.0	34	54
SubLFA 26A2	48.2	0.6	38	60	51.7	0.3	49	55
MZ 26A3	36.9	4.4	22	50	47.9	0.1	32	52
MZ 26B North	48.1	0.6	40	52	49.3	0.3	40	54
MZ 26B South	47.9	0.7	38	53	49.3	0.4	39	53
SGSL	**47.5**	**1.3**	**22**	**63**	**50.8**	**0.2**	**27**	**62**

Table 60: The average number of days (Ave) respondent finished their fishing before the end of season in 2011 and 2016, standard error (SE) and minimum (Min) and maximum (Max) days reported by respondents in the lobster management areas of the SGSL.

Days finished fishing before end of season	**2011**				**2016**			
	Ave	**SE**	**Min**	**Max**	**Ave**	**SE**	**Min**	**Max**
SubLFA 23A	1.4	0.3	0.0	9.0	0.4	0.1	0.0	2.0
SubLFA 23B	3.1	0.5	0.0	7.0	0.5	0.2	0.0	3.0
SubLFA 23C	1.0	0.2	0.0	14.0	0.5	0.2	0.0	7.0
SubLFA 23D	0.6	0.2	0.0	4.0	0.0	0.0	0.0	1.0
LFA 24	0.2	0.0	0.0	4.0	0.1	0.0	0.0	2.0
LFA 25 NB	3.1	0.4	0.0	18.0	1.7	0.2	0.0	7.0
LFA 25 PEI	1.9	0.3	0.0	6.0	1.5	0.1	0.0	3.0
MZ 26A1 NS	0.4	0.1	0.0	2.0	0.4	0.1	0.0	2.0
MZ 26A1 PEI	0.8	0.1	0.0	5.0	0.2	0.1	0.0	3.0
SubLFA 26A2	0.3	0.2	0.0	6.0	0.0	0.0	0.0	1.0
MZ 26A3	1.5	0.5	0.0	3.0	0.3	0.2	0.0	2.0
MZ 26B North	0.3	0.2	0.0	4.0	0.2	0.1	0.0	1.0
MZ 26B South	0.3	0.1	0.0	2.5	0.6	0.2	0.0	4.0
SGSL	**1.2**	**0.0**	**0.0**	**18.0**	**0.6**	**0.0**	**0.0**	**7.0**

Table 61: The average number (Ave), and standard error (SE), of fishing days lost in general and due to Weather, Illness, Mechanical issues, or another (Other) reason specifically, in 2016 in the lobster management areas of the SGSL. See Table 62 for 2011 responses.

Fishing days lost	**Total days lost**		**Weather**		**Illness**		**Mechanical**		**Other**	
2016	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	4.0	0.5	3.7	0.4	0.1	0.1	0.3	0.2	0.0	0.0
SubLFA 23B	3.3	0.4	3.0	0.3	0.0	0.0	0.3	0.1	0.1	0.0
SubLFA 23C	5.1	0.3	4.6	0.3	0.1	0.0	0.4	0.1	0.1	0.0
SubLFA 23D	6.2	0.5	5.6	0.4	0.0	0.0	0.5	0.2	0.0	0.0
LFA 24	3.4	0.1	3.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
LFA 25 NB	6.6	0.4	5.3	0.3	0.3	0.2	0.8	0.2	0.7	0.2
LFA 25 PEI	4.1	0.3	3.8	0.2	0.0	0.0	0.0	0.0	0.3	0.2
MZ 26A1 NS	2.9	0.4	2.3	0.3	0.0	0.0	0.6	0.2	0.0	0.0
MZ 26A1 PEI	1.5	0.2	1.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0
SubLFA 26A2	2.6	0.5	1.9	0.3	0.0	0.0	0.2	0.1	0.6	0.5
MZ 26A3	3.9	0.6	3.3	0.5	0.0	0.0	0.6	0.4	0.0	0.0
MZ 26B North	4.7	0.6	3.8	0.3	0.0	0.0	0.5	0.5	0.4	0.3
MZ 26B South	3.7	0.5	3.9	0.5	0.0	0.0	0.1	0.1	0.0	0.0
SGSL	**4.1**	**0.1**	**3.7**	**0.1**	**0.1**	**0.0**	**0.3**	**0.0**	**0.2**	**0.0**

Table 62: The average number (Ave), and standard error (SE), of fishing days lost in general and due to Weather, Illness, Mechanical issues, or another (Other) reason specifically, in 2011 in the lobster management areas of the SGSL. See Table 61 for 2016 responses.

Fishing days lost	**Total days lost**		**Weather**		**Illness**		**Mechanical**		**Other**	
2011	**Ave**	**SE**	**Aver**	**SE**	**Ave**	**SE**	**Ave**	**SE**	**Ave**	**SE**
SubLFA 23A	7.3	1.4	6.1	0.8	0.0	0.0	1.1	0.7	0.1	0.1
SubLFA 23B	3.5	0.3	3.3	0.3	0.0	0.0	0.2	0.2	0.0	0.0
SubLFA 23C	6.7	0.4	6.4	0.3	0.0	0.0	0.4	0.2	0.0	0.0
SubLFA 23D	8.4	0.7	8.4	0.7	0.0	0.0	0.3	0.2	0.0	0.0
LFA 24	6.3	0.3	6.0	0.3	0.2	0.1	0.2	0.1	0.0	0.0
LFA 25 NB	6.1	0.5	5.5	0.3	0.6	0.5	0.3	0.1	0.1	0.0
LFA 25 PEI	5.5	0.4	5.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26A1 NS	4.0	0.4	3.7	0.4	0.0	0.0	0.1	0.1	0.1	0.1
MZ 26A1 PEI	3.4	0.3	3.0	0.2	0.0	0.0	0.2	0.1	0.1	0.1
SubLFA 26A2	4.7	0.5	4.6	0.5	0.0	0.0	0.1	0.1	0.1	0.1
MZ 26A3	3.4	0.8	3.0	0.9	0.0	0.0	0.0	0.0	0.4	0.3
MZ 26B North	4.6	0.5	4.4	0.5	0.0	0.0	0.2	0.1	0.0	0.0
MZ 26B South	4.4	0.5	3.7	0.5	0.0	0.0	0.4	0.2	0.2	0.2
SGSL	**5.6**	**0.0**	**5.2**	**0.0**	**0.2**	**0.0**	**0.3**	**0.0**	**0.1**	**0.0**

Table 63: The percentage (%) of respondents who reported landing rock crab (Landed; Yes or No) in 2011 and 2016, and the average (Ave), standard error (SE), minimum (Min) and, maximum (Max), weight of rock crab landed (lbs) in the lobster management areas of the SGSL.

	2011						**2016**					
Rock crab	**Landed**		**Weight landed (lbs)**				**Landed**		**Weight landed (lbs)**			
	Yes	**No**	**Ave**	**SE**	**Min**	**Max**	**Yes**	**No**	**Ave**	**SE**	**Min**	**Max**
SubLFA 23A	0	100	0	0.0	0	0	0	100	0	0.0	0	0
SubLFA 23B	0	100	0	0.0	0	0	0	100	0	0.0	0	0
SubLFA 23C	13.8	86.2	106.6	39.9	0	1440	0	100	0	0.0	0	0
SubLFA 23D	13.3	86.7	157.4	94.9	0	3000	0	100	0	0.0	0	0
LFA 24	4.6	95.4	61.2	35.9	0	4000	0	100	0	0.0	0	0
LFA 25 NB	26.6	73.4	89.2	19.4	0	1500	1.1	98.9	0.3	0.2	0	25
LFA 25 PEI	30.8	69.2	458.4	190.9	0	9600	13.5	86.5	280	139.9	0	7500
MZ 26A1 NS	0	100	0	0.0	0	0	7.6	92.4	18.1	12.9	0	400
MZ 26A1 PEI	35.9	64.1	1065.0	221.5	0	12500	16.6	83.4	282	83.3	0	7000
SubLFA 26A2	2.9	97.1	11.5	10.0	0	400	0	100	0	0.0	0	0
MZ 26A3	0	100	0	0.0	0	0	0	100	0	0.0	0	0
MZ 26B North	0	100	0	0.0	0	0	0	100	0	0.0	0	0
MZ 26B South	0	100	0	0.0	0	0	0	100	0	0.0	0	0
SGSL	**14.7**	**85.3**	**211.8**	**32.0**	**0**	**12500**	**3.5**	**96.5**	**56.4**	**14.6**	**0**	**7500**

Table 64: Percentage (%) of respondent who fished more than or equal to 50% (≥ 50%), less than 50% (< 50%) or none (No) of their bait in 2011 and 2016. For those who replied that they fished for their lobster bait, also reported is the percentage of those who fished bait during (During) or outside (Off) of their lobster season in the lobster management areas of the SGSL.

	Bait fished						**Bait fished during or off season**			
	2011			**2016**			**2011**		**2016**	
	≥ 50%	**< 50%**	**No**	**> 50%**	**< 50%**	**No**	**During**	**Off**	**During**	**Off**
SubLFA 23A	17.7	24.5	57.9	13.1	8.7	78.2	57.6	42.4	76.5	23.5
SubLFA 23B	4.7	9.4	85.9	5.4	21.7	72.8	20.4	40.7	16.7	83.3
SubLFA 23C	11.1	18.8	70.1	6.9	20.2	72.9	76.8	12.8	88.9	11.1
SubLFA 23D	6.9	40.7	52.4	15.6	25.5	59.0	53.0	47.0	22.3	77.7
LFA 24	8.2	33.1	58.7	18.6	24.1	57.3	78.7	21.3	53.5	46.5
LFA 25 NB	5.5	16.0	78.4	0.0	8.5	91.5	50.9	49.1	49.1	50.9
LFA 25 PEI	4.3	42.4	53.4	15.9	11.4	72.7	87.9	12.1	45.6	54.4
MZ 26A1 NS	3.2	4.0	92.8	4.0	11.3	84.7	100.0	0.0	60.1	39.9
MZ 26A1 PEI	4.0	20.0	76.1	15.3	11.1	73.6	48.0	52.0	36.1	63.9
SubLFA 26A2	5.8	26.7	67.5	3.1	26.2	70.7	69.9	30.1	90.3	9.7
MZ 26A3	0.0	0.0	100.0	0.0	12.5	87.5	0.0	0.0	0	100.0
MZ 26B North	4.2	25.0	70.8	0.0	9.1	90.9	100.0	0.0	50.0	50.0
MZ 26B South	8.3	41.7	50.0	16.0	16.0	68.0	83.3	16.7	57.1	42.9
SGSL	**6.8**	**24.9**	**68.3**	**10.6**	**16.5**	**73.0**	**66.3**	**29.7**	**52.9**	**47.1**

Table 65: The top 3 baits reported as the percentage (%) of respondents selecting it as first, second, and third choices of baits used, in 2016 in the lobster management areas of the SGSL.

2016	**#1**			**#2**			**#3**		
	Frozen mackerel	**Frozen herring**	**Fresh mackerel**	**Frozen mackerel**	**Frozen herring**	**Fresh mackerel**	**Frozen flatfish**	**Redfish**	**Frozen mackerel**
SubLFA 23A	30.4	47.9	4.3	13.1	29.3	4.5	41.9	21.0	37.1
SubLFA 23B	86.7	13.3	0.0	14.9	20.9	13.4	60.0	19.9	0.0
SubLFA 23C	70.9	12.0	1.7	15.7	24.6	19.9	40.1	7.6	11.0
SubLFA 23D	36.4	15.6	0.0	41.8	6.7	3.1	27.3	3.5	25.0
LFA 24	9.4	9.1	17.6	19.9	19.5	20.5	6.5	12.5	16.0
LFA 25 NB	68.9	3.2	2.1	8.3	5.2	9.9	22.3	15.2	14.2
LFA 25 PEI	9.1	6.8	75.1	41.5	2.2	9.4	7.3	28.0	14.0
MZ 26A1 NS	8.1	7.3	0.0	7.6	8.8	0.0	10.4	16.0	5.3
MZ 26A1 PEI	1.3	8.2	9.7	16.3	10.3	16.5	0.0	16.6	15.0
SubLFA 26A2	6.2	32.0	4.5	13.8	32.4	0.0	4.3	19.2	21.6
MZ 26A3	0.0	37.5	0.0	0.0	37.5	0.0	0.0	37.5	0.0
MZ 26B North	19.0	61.9	0.0	55.0	15.0	0.0	26.3	26.3	10.5
MZ 26B South	12.5	33.3	0.0	21.7	34.8	4.3	33.3	11.1	11.1
SGSL	**29.1**	**14.5**	**11.5**	**20.0**	**15.9**	**11.8**	**17.7**	**15.6**	**14.9**

Table 66: Top 3 baits reported as the percentage (%) of respondents selecting it as first, second, and third baits used in 2011 in the lobster management areas of the SGSL.

2011	**#1**			**#2**				**#3**		
	Frozen mackerel	**Frozen herring**	**Fresh herring**	**Frozen mackerel**	**Frozen herring**	**Fresh herring**	**Fresh mackerel**	**Fresh mackerel**	**Frozen flat fish**	**Frozen mackerel**
SubLFA 23A	35.7	34.8	23.5	39.7	12.7	28.0	9.3	5.9	38.2	12.7
SubLFA 23B	89.7	5.6	0.0	6.1	6.1	6.1	0.0	15.3	34.7	19.5
SubLFA 23C	60.8	32.8	0.0	22.4	20.8	11.3	9.7	19.5	25.1	7.9
SubLFA 23D	64.8	6.7	3.8	21.2	4.2	2.9	27.5	6.5	15.7	5.9
LFA 24	6.6	35.3	34.5	10.1	25.1	23.1	16.9	29.6	6.7	7.8
LFA 25 NB	29.1	2.3	10.6	17.6	2.5	3.7	27.3	17.0	15.7	11.5
LFA 25 PEI	8.5	2.1	20.1	44.3	17.2	15.0	10.9	19.9	11.6	9.3
MZ 26A1 NS	4.0	16.0	16.8	12.8	16.8	16.0	8.1	6.9	3.5	5.0
MZ 26A1 PEI	2.6	12.0	23.9	13.6	13.8	13.3	19.0	28.2	0.0	15.6
SubLFA 26A2	5.8	32.5	35.0	5.8	35.0	20.1	6.6	19.3	9.9	9.9
MZ 26A3	0.0	75.0	25.0	0.0	25.0	75.0	0.0	0.0	28.6	14.3
MZ 26B North	33.3	33.3	29.2	21.7	26.1	21.7	13.0	16.7	0.0	22.2
MZ 26B South	13.0	65.2	13.0	16.7	16.7	50.0	8.3	10.5	0.0	26.3
SGSL	**24.2**	**22.0**	**18.8**	**17.8**	**16.1**	**16.0**	**16.0**	**19.4**	**12.3**	**11.8**

Table 67: Top 3 baits reported as the percentage (%) of respondents selecting it as first, second, and third baits used in 2005 in the lobster management areas of the SGSL.

2005	**#1**			**#2**			**#3**		
	Fresh herring	**Frozen mackerel**	**Fresh mackerel**	**Fresh mackerel**	**Fresh herring**	**Frozen mackerel**	**Fresh mackerel**	**Fresh herring**	**Frozen flatfish**
SubLFA 23A	76.3	19.0	4.7	43.5	19.0	31.3	27.2	9.5	29.1
SubLFA 23B	0.0	89.7	5.1	34.6	35.3	10.3	24.7	40.0	27.7
SubLFA 23C	8.6	86.0	3.6	36.0	49.1	8.3	11.7	37.0	15.7
SubLFA 23D	15.2	59.8	14.6	49.7	17.3	9.1	25.0	37.2	3.4
LFA 24	74.9	0.0	3.2	39.5	6.1	4.0	27.6	7.1	15.4
LFA 25 NB	9.2	22.6	41.5	28.3	14.8	26.4	11.2	8.1	7.6
LFA 25 PEI	46.7	0.0	51.3	32.9	21.2	2.1	16.9	8.4	36.5
MZ 26A1 NS	50.0	16.7	8.3	23.8	42.9	0.0	50.0	10.0	0.0
MZ 26A1 PEI	28.8	4.4	11.0	34.9	10.2	4.9	33.7	16.5	13.5
SubLFA 26A2	87.1	3.3	6.3	70.0	13.4	10.1	11.3	0.0	16.5
MZ 26A3	70.0	0.0	0.0	40.0	10.0	0.0	0.0	0.0	0.0
MZ 26B North	90.9	0.0	9.1	81.8	4.5	9.1	33.3	33.3	0.0
MZ 26B South	96.2	0.0	3.8	61.5	3.8	7.7	33.3	0.0	16.7
SGSL	**43.9**	**21.0**	**16.1**	**40.3**	**17.8**	**9.7**	**22.8**	**14.8**	**14.4**

Table 68: Top 3 preferred baits reported as the percentage (%) of respondents ranking them as first, second, and third choice in 2011 in the lobster management areas of the SGSL.

2011	**#1**			**#2**			**#3**		
preferred baits	**Fresh herring**	**Fresh mackerel**	**Gaspereau**	**Fresh mackerel**	**Fresh herring**	**Fresh flat fish**	**Fresh flat fish**	**Fresh herring**	**Fresh mackerel**
SubLFA 23A	66.1	18.6	0.0	41.1	26.5	14.7	20.6	0.0	24.6
SubLFA 23B	19.7	45.7	0.0	21.3	10.7	25.4	30.7	23.1	7.6
SubLFA 23C	39.0	19.1	4.6	46.0	13.2	7.0	37.0	21.8	11.3
SubLFA 23D	18.1	38.0	2.9	4.2	24.2	29.6	29.9	14.9	5.2
LFA 24	57.6	18.9	9.1	33.1	25.0	14.7	34.4	11.3	16.6
LFA 25 NB	8.2	64.0	0.0	15.7	12.9	11.7	15.7	11.8	0.0
LFA 25 PEI	22.5	55.0	0.0	36.7	24.9	34.6	31.0	42.9	5.9
MZ 26A1 NS	27.2	12.8	36.8	14.6	25.6	19.2	27.4	32.4	12.8
MZ 26A1 PEI	29.0	11.3	30.4	21.2	8.7	10.2	15.3	27.6	49.5
SubLFA 26A2	70.4	17.3	0.0	25.4	17.9	27.6	29.1	3.2	24.1
MZ 26A3	50.0	12.5	12.5	12.5	50.0	25.0	0.0	0.0	37.5
MZ 26B North	43.5	34.8	4.3	43.5	43.5	0.0	4.8	9.5	9.5
MZ 26B South	66.7	16.7	0.0	41.7	20.8	8.3	16.7	8.3	25.0
SGSL	**36.5**	**30.8**	**8.1**	**27.4**	**19.8**	**15.6**	**25.2**	**17.0**	**16.1**

Table 69: Top 3 preferred baits reported as the percentage (%) of respondents ranking them as first, second, and third choice in 2016 in the lobster management areas of the SGSL.

2016	**#1**			**#2**			**#3**		
preferred baits	**Mackerel**	**Fresh mackerel**	**Herring**	**Herring**	**Mackerel**	**Frozen mackerel**	**Mackerel**	**Herring**	**Gaspereau**
SubLFA 23A	8.9	21.7	8.9	8.9	8.9	9.6	13.8	6.9	0.0
SubLFA 23B	21.3	30.2	5.4	0.0	12.0	10.1	12.0	0.0	12.0
SubLFA 23C	10.0	29.8	3.4	3.5	10.2	13.9	6.3	14.1	15.8
SubLFA 23D	0.0	17.2	3.1	0.0	5.6	38.7	4.8	5.9	14.8
LFA 24	41.7	6.2	19.4	30.9	19.7	1.1	17.2	17.5	32.8
LFA 25 NB	6.3	45.5	3.1	3.5	5.1	35.4	6.7	6.7	0.0
LFA 25 PEI	49.7	34.5	2.2	21.2	5.7	3.4	0.0	0.0	0.0
MZ 26A1 NS	0.0	3.6	10.9	14.5	7.7	0.0	4.0	16.0	4.0
MZ 26A1 PEI	19.5	9.8	4.1	23.8	12.8	1.5	44.3	15.6	2.4
SubLFA 26A2	6.2	3.1	26.2	15.5	13.8	0.0	18.6	11.8	0.0
MZ 26A3	0.0	0.0	0.0	25.0	12.5	0.0	14.3	14.3	14.3
MZ 26B North	13.6	9.1	36.4	28.6	42.9	0.0	9.5	14.3	14.3
MZ 26B South	24.0	0.0	28.0	16.0	24.0	0.0	16.0	16.0	8.0
SGSL	**20.0**	**19.1**	**10.8**	**16.2**	**13.0**	**10.7**	**14.9**	**11.8**	**11.8**

Table 70: Average (Ave), standard error (SE), minimum (Min), and maximum (Max) of kilograms (kg) of rock crab used as bait in 2011 and 2016 in the lobster management areas of the SGSL.

	2011				**2016**			
Rock crab as bait (kg)	**Ave**	**SE**	**Min**	**Max**	**Ave**	**SE**	**Min**	**Max**
SubLFA 23A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SubLFA 23B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SubLFA 23C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SubLFA 23D	254.2	206.6	0.0	6804.0	243.2	112.4	0.0	2772.0
LFA 24	2.2	1.9	0.0	318.0	114.2	50.3	0.0	6940.0
LFA 25 NB	22.0	17.6	0.0	1851.0	61.1	50.5	0.0	5613.0
LFA 25 PEI	0.7	0.6	0.0	34.0	805.0	156.1	0.0	5552.0
MZ 26A1 NS	190.1	73.0	0.0	2268.0	904.1	199.7	0.0	3538.0
MZ 26A1 PEI	25.2	9.7	0.0	454.0	159.4	43.0	0.0	2948.0
SubLFA 26A2	2.6	2.3	0.0	91.0	56.7	33.1	0.0	885.0
MZ 26A3	0.0	0.0	0.0	0.0	977.0	459.17	0.0	3927.0
MZ 26B North	4.3	3.3	0.0	91.0	1.0	0.9	0.0	23.0
MZ 26B South	45.4	39.6	0.0	1089.0	15.5	7.7	0.0	177.0
SGSL	**33.1**	**13.5**	**0.0**	**6804.0**	**188.8**	**22.7**	**0.0**	**6940.0**

Table 71: The average amount (Ave), standard error (SE), minimum (Min) and maximum (Max) of kilograms (kg) of bait used by respondents during the 1993, 2005, 2011, and 2016 fishing seasons in the lobster management areas of the SGSL.

Yearly bait usage (kg)	**1993**				**2005**				**2011**				**2016**			
	Ave	**SE**	**Min**	**Max**	**Ave**	**SE**	**Min**	**Max**	**Ave**	**SE**	**Min**	**Max**	**Ave**	**SE**	**Min**	**Max**
SubLFA 23A	7291	600	136	18144	7082	353	4082	10160	5234	610	1089	13063	6838	400	2268	13608
SubLFA 23B	6178	334	454	13608	5472	265	2722	8890	4535	325	1814	7257	6212	476	3402	12701
SubLFA 23C	7062	368	680	17237	6916	186	2540	12701	5070	178	1814	8709	5790	246	1814	11839
SubLFA 23D	4894	302	680	11340	7139	369	2540	13608	5397	329	2268	13063	5974	352	1361	10206
LFA 24	4859	147	907	13608	6620	158	2585	12701	5423	128	2223	10015	6159	138	2722	12247
LFA 25 NB	7192	251	1361	15876	5716	154	1361	10433	5906	220	2177	13608	6951	275	2041	20412
LFA 25 PEI	6504	230	3402	11340	8617	353	3447	14969	7194	373	2395	10886	7958	342	3175	13880
MZ 26A1 NS	3395	257	1361	6804	5273	321	2268	10886	5568	309	2177	10886	5733	351	2041	10614
MZ 26A1 PEI	4989	246	2268	9072	4145	137	1134	7620	4179	193	1134	10886	4962	243	1588	13449
SubLFA 26A2	5747	351	907	11340	6023	194	3266	9525	5092	209	3266	7620	5152	336	1588	11340
MZ 26A3	3901	773	454	8165	4454	291	3175	6532	4123	348	2722	5443	3748	464	2449	6940
MZ 26B North	5035	344	2268	6804	6020	254	3175	8618	4916	183	2722	7620	5829	374	2268	8890
MZ 26B South	4175	245	3402	5670	5379	241	2722	8618	4546	237	2177	7620	4611	189	2268	6804
SGSL	**5704**	**84**	**136**	**18144**	**6148**	**66**	**1134**	**14969**	**5331**	**390**	**1089**	**13608**	**5658**	**405**	**1361**	**20412**

Table 72: The percentage (%) of respondents reporting to have had at least one interaction with a species of conservation concern, including wolffish, leatherback turtles, or whales, over a five year period; 2012-2016, in the lobster management areas of the SGSL.

	Wolffish					**Leatherback turtle**					**Whales**				
	2016	**2015**	**2014**	**2013**	**2012**	**2016**	**2015**	**2014**	**2013**	**2012**	**2016**	**2015**	**2014**	**2013**	**2012**
SubLFA 23A	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SubLFA 23B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	5.4
SubLFA 23C	4.9	0.0	1.7	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SubLFA 23D	2.7	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LFA 24	9.3	10.8	6.2	10.8	6.2	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
LFA 25 NB	2.1	1.0	1.0	1.0	2.1	0.0	0.0	2.1	0.0	1.0	2.1	0.0	1.1	2.1	1.0
LFA 25 PEI	2.3	0.0	0.0	2.3	0.0	0.0	0.0	4.5	0.0	0.0	0.0	2.3	0.0	0.0	0.0
MZ 26A1 NS	3.6	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26A1 PEI	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SubLFA 26A2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26A3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26B North	4.5	0.0	9.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MZ 26B South	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	4.0	0.0	0.0
SGSL	**3.7**	**2.5**	**2.2**	**3.6**	**1.8**	**0.2**	**0.2**	**0.9**	**0.3**	**0.3**	**0.5**	**0.2**	**0.5**	**0.3**	**0.3**

General statements:

Table 73**:** The percentage (%) of respondents who strongly agreed, agreed, disagreed, or strongly disagreed in 2011 and 2016 that there had been an increase in sublegal lobsters in their traps during the last few years, in the lobster management areas of the SGSL.

	2011				**2016**			
More sublegal lobsters	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	24.5	48.5	27.0	0.0	47.4	39.8	12.8	0.0
SubLFA 23B	65.4	29.0	5.6	0.0	10.4	57.0	32.6	0.0
SubLFA 23C	35.6	41.7	22.7	0.0	13.0	60.2	25.1	0.0
SubLFA 23D	28.5	40.1	31.4	0.0	32.4	47.1	20.5	0.0
LFA 24	5.2	48.8	45.3	0.7	2.3	50.4	44.2	0.0
LFA 25 NB	31.9	58.2	9.9	0.0	38.4	43.4	17.2	0.0
LFA 25 PEI	11.8	86.0	2.1	0.0	25.6	61.0	13.4	0.0
MZ 26A1 NS	7.2	83.2	9.6	0.0	10.9	81.5	7.7	0.0
MZ 26A1 PEI	7.9	52.5	36.9	1.3	12.3	64.4	21.9	1.4
SubLFA 26A2	9.5	60.9	29.6	0.0	7.6	61.3	31.1	0.0
MZ 26A3	12.5	37.5	50.0	0.0	12.5	62.5	25.0	0.0
MZ 26B North	25.0	37.5	29.2	8.3	9.1	59.1	31.8	0.0
MZ 26B South	25.0	45.8	29.2	0.0	8.0	76.0	16.0	0.0
SGSL	**19.9**	**53.5**	**25.9**	**0.6**	**17.3**	**56.0**	**25.5**	**0.2**

Table 74: The percentage (%) of respondents who strongly agreed, agreed, disagreed, or strongly disagreed in 2016, that there had been an increase in berried lobsters in their traps, and lower rock crab bycatch over the past few years, in the lobster management areas of the SGSL.

2016	**During the last few years, there was an increase of berried female lobsters in my traps**				**During the last few years, rock crab bycatch was lower in my traps**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	43.3	43.1	13.6	0.0	34.6	65.4	0.0	0.0
SubLFA 23B	22.2	52.1	25.7	0.0	37.5	57.0	0.0	5.6
SubLFA 23C	27.9	62.3	9.8	0.0	43.6	48.3	6.4	0.0
SubLFA 23D	29.5	55.8	14.8	0.0	8.9	61.7	20.6	0.0
LFA 24	6.2	63.5	27.2	0.0	5.4	37.4	54.1	0.8
LFA 25 NB	26.3	38.0	32.7	0.0	31.1	54.8	8.8	0.0
LFA 25 PEI	9.3	62.7	25.6	2.4	29.7	47.5	16.0	0.0
MZ 26A1 NS	7.7	70.2	18.1	0.0	0.0	77.8	22.2	0.0
MZ 26A1 PEI	8.2	71.2	19.2	0.0	23.3	60.3	10.9	2.7
SubLFA 26A2	3.1	62.7	34.2	0.0	12.0	49.3	29.3	0.0
MZ 26A3	0.0	62.5	37.5	0.0	0.0	50.0	50.0	0.0
MZ 26B North	4.5	59.1	27.3	0.0	0.0	40.9	31.8	0.0
MZ 26B South	4.0	72.0	24.0	0.0	4.0	56.0	32.0	4.0
SGSL	**15.0**	**58.7**	**23.9**	**0.2**	**19.5**	**51.5**	**23.4**	**0.8**

Table 75: The percentage (%) of respondents who strongly agreed, agreed, disagreed, or strongly disagreed, with three statements in 2016, (1) that timely and accurate landings are needed to properly manage the fishery, (2) that lobster habitat and fishing grounds are expanding, and (3) that by increasing the size of the escape mechanisms, the sorting time of small lobsters is reduced, in the lobster management areas of the SGSL.

2016	**To properly manage the lobster fishery, accurate and timely lobster landings are needed**				**Lobster habitat and fishing grounds are expanding in my fishing area**				**Increasing escape mechanism reduces sorting of small lobsters**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	9.1	48.3	42.6	0.0	9.1	48.3	42.6	0.0	35.6	34.6	29.8	0.0
SubLFA 23B	5.6	83.3	11.1	0.0	5.6	83.3	11.1	0.0	31.9	52.1	16.0	0.0
SubLFA 23C	9.6	71.8	13.6	1.8	9.6	71.8	13.6	1.8	19.7	52.9	27.4	0.0
SubLFA 23D	2.9	58.7	35.4	0.0	2.9	58.7	35.4	0.0	14.7	64.6	17.8	0.0
LFA 24	1.5	79.0	17.8	0.8	1.5	79.0	17.8	0.8	8.5	78.1	10.3	0.0
LFA 25 NB	7.0	47.8	31.5	0.0	7.0	47.8	31.5	0.0	13.3	68.0	15.4	0.0
LFA 25 PEI	0.0	88.6	9.1	0.0	0.0	88.6	9.1	0.0	11.6	84.1	4.3	0.0
MZ 26A1 NS	0.0	66.5	25.8	0.0	0.0	66.5	25.8	0.0	11.3	70.6	14.5	0.0
MZ 26A1 PEI	6.9	76.7	16.4	0.0	6.9	76.7	16.4	0.0	6.9	69.8	20.5	1.4
SubLFA 26A2	4.5	66.2	24.9	0.0	4.5	66.2	24.9	0.0	21.3	66.2	12.4	0.0
MZ 26A3	0.0	75.0	12.5	0.0	0.0	75.0	12.5	0.0	12.5	62.5	25.0	0.0
MZ 26B North	0.0	81.8	18.2	0.0	0.0	81.8	18.2	0.0	22.7	63.6	9.1	0.0
MZ 26B South	0.0	64.0	36.0	0.0	0.0	64.0	36.0	0.0	4.0	68.0	24.0	0.0
SGSL	**4.2**	**69.8**	**21.8**	**0.4**	**4.2**	**69.8**	**21.8**	**0.4**	**13.7**	**68.1**	**16.0**	**0.2**

Table 76: The percentage (%) of respondents who strongly agreed, agreed, disagreed, or strongly disagreed in 2011 and 2016, that artificial bait could be an option to replace fresh or frozen bait which can be more expensive and less available in the lobster management areas of the SGSL.

Artificial bait	**2011**				**2016**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	3.4	53.4	25.5	0.0	0.0	51.4	25.8	9.1
SubLFA 23B	0.0	26.1	33.7	19.7	0.0	21.5	16.0	16.7
SubLFA 23C	0.0	35.9	38.5	9.5	1.8	29.8	21.7	20.5
SubLFA 23D	3.5	21.5	55.3	6.4	0.0	23.6	55.9	8.8
LFA 24	0.0	22.7	54.9	12.2	0.8	30.3	58.9	7.6
LFA 25 NB	0.0	39.7	38.7	2.4	0.0	35.9	46.6	4.4
LFA 25 PEI	0.0	40.5	46.9	0.0	0.0	27.5	58.7	9.1
MZ 26A1 NS	0.0	30.4	36.8	16.8	0.0	11.3	73.8	3.6
MZ 26A1 PEI	0.0	20.5	59.9	11.2	0.0	38.3	43.8	16.4
SubLFA 26A2	2.9	26.7	47.4	8.6	7.6	35.5	38.7	7.6
MZ 26A3	0.0	25.0	50.0	12.5	0.0	0.0	100.0	0.0
MZ 26B North	0.0	12.5	25.0	45.8	0.0	59.1	31.8	9.1
MZ 26B South	0.0	33.3	37.5	12.5	0.0	48.0	48.0	0.0
SGSL	**0.5**	**30.1**	**45.4**	**9.9**	**0.8**	**32.9**	**47.2**	**9.5**

Table 77: The percentage (%) of respondents who strongly agreed, agreed, disagreed, or strongly disagreed in 2011 and 2016, that the lobster stock is in good condition in their fishing area in the lobster management areas of the SGSL.

Lobster stock	**2011**				**2016**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	10.3	83.8	5.9	0.0	29.9	70.1	0.0	0.0
SubLFA 23B	70.1	29.9	0.0	0.0	32.6	62.5	4.9	0.0
SubLFA 23C	34.8	63.7	1.5	0.0	23.9	71.5	3.1	0.0
SubLFA 23D	22.1	68.6	6.4	0.0	20.5	67.7	11.8	0.0
LFA 24	34.7	64.5	0.8	0.0	20.9	73.6	3.9	0.0
LFA 25 NB	9.5	61.8	21.9	0.0	23.8	70.0	3.3	0.0
LFA 25 PEI	6.4	73.7	17.8	0.0	22.8	74.8	0.0	0.0
MZ 26A1 NS	4.0	56.8	28.7	6.4	7.7	88.3	4.0	0.0
MZ 26A1 PEI	17.0	61.7	14.8	2.6	16.5	73.9	5.5	0.0
SubLFA 26A2	12.3	70.4	8.6	0.0	7.6	84.9	4.5	0.0
MZ 26A3	0.0	0.0	87.5	12.5	0.0	50.0	50.0	0.0
MZ 26B North	45.8	50.0	4.2	0.0	50.0	50.0	0.0	0.0
MZ 26B South	4.2	66.7	29.2	0.0	24.0	76.0	0.0	0.0
SGSL	**21.5**	**62.7**	**12.3**	**0.9**	**21.5**	**72.1**	**4.4**	**0.0**

Table 78: The percentage (%) of respondents who strongly agreed, agreed, disagreed, or strongly disagreed in 2005, 2011 and 2016, that poaching is a problem in their fishing area in the lobster management areas of the SGSL.

Poaching	**2005**				**2011**				**2016**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	4.7	39.1	50.0	0.0	0.0	28.0	68.6	3.4	8.5	22.1	60.2	9.1
SubLFA 23B	0.0	27.0	67.9	0.0	4.7	20.5	70.1	4.7	29.9	37.5	32.6	0.0
SubLFA 23C	6.8	39.2	54.1	0.0	5.6	33.6	57.6	3.2	10.1	39.8	45.1	1.8
SubLFA 23D	2.4	79.3	18.3	0.0	16.8	25.5	57.7	0.0	23.7	41.2	23.4	2.9
LFA 24	5.4	19.0	69.2	3.4	0.7	18.3	68.7	10.8	0.8	16.4	80.5	2.3
LFA 25 NB	33.2	27.1	37.3	1.3	5.5	35.0	51.1	0.9	7.2	38.9	49.6	1.0
LFA 25 PEI	13.0	17.8	59.5	3.9	0.0	24.2	73.7	0.0	0.0	24.7	70.6	2.3
MZ 26A1 NS	0.0	0.0	96.0	4.0	3.3	3.3	76.0	13.3	0.0	4.0	70.2	7.3
MZ 26A1 PEI	4.2	27.5	60.3	4.4	0.0	11.9	79.2	9.0	0.0	16.5	71.2	12.3
SubLFA 26A2	0.0	5.8	94.2	0.0	0.0	5.8	65.5	25.9	0.0	3.1	84.9	12.0
MZ 26A3	0.0	10.0	90.0	0.0	0.0	0.0	100.0	0.0	0.0	12.5	87.5	0.0
MZ 26B North	0.0	4.5	90.9	4.5	0.0	16.7	58.3	25.0	0.0	4.5	90.9	4.5
MZ 26B South	0.0	14.8	85.2	0.0	0.0	8.3	75.0	12.5	0.0	12.0	80.0	8.0
SGSL	**9.3**	**25.2**	**61.3**	**2.2**	**3.0**	**21.4**	**65.9**	**7.4**	**5.0**	**23.5**	**64.5**	**4.5**

Table 79: The percentage (%) of respondents who strongly agreed, agreed, disagreed, or strongly disagreed in 2011 and 2016, that seals are a problem for the lobster fishery in their area in the lobster management areas of the SGSL.

Seals	**2011**				**2016**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	22.0	40.7	33.8	0.0	26.7	30.5	42.8	0.0
SubLFA 23B	35.5	44.0	15.0	0.0	0.0	25.7	68.7	5.6
SubLFA 23C	42.3	43.1	9.9	0.0	17.7	52.6	26.4	0.0
SubLFA 23D	47.6	36.1	16.2	0.0	35.3	41.1	23.6	0.0
LFA 24	36.3	34.4	26.3	1.6	10.6	31.7	57.7	0.0
LFA 25 NB	45.8	35.8	16.6	0.0	29.2	28.6	41.2	0.0
LFA 25 PEI	63.5	29.4	7.1	0.0	22.7	54.3	23.0	0.0
MZ 26A1 NS	72.8	19.2	8.1	0.0	33.5	51.2	15.3	0.0
MZ 26A1 PEI	51.9	34.2	11.2	1.3	20.5	48.0	28.8	2.7
SubLFA 26A2	23.0	37.0	39.9	0.0	15.5	38.7	45.8	0.0
MZ 26A3	87.5	12.5	0.0	0.0	37.5	37.5	25.0	0.0
MZ 26B North	50.0	33.3	12.5	4.2	0.0	68.2	31.8	0.0
MZ 26B South	54.2	25.0	20.8	0.0	12.0	44.0	44.0	0.0
SGSL	**45.0**	**35.1**	**17.7**	**0.6**	**19.4**	**40.5**	**38.9**	**0.5**

Table 80: The percentage (%) of respondents who strongly agreed, agreed, disagreed, or strongly disagreed in 2011 and 2016, that obtaining eco-labelling certification, such as the Marine Stewardship Council (MSC), is an important issue for the lobster fishery in the lobster management areas of the SGSL.

MSC	**2011**				**2016**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	13.7	39.7	15.2	0.0	22.7	59.7	13.4	0.0
SubLFA 23B	0.0	44.0	30.8	0.0	38.2	50.7	11.1	0.0
SubLFA 23C	25.9	44.1	17.4	0.0	24.7	70.2	3.5	0.0
SubLFA 23D	6.4	44.2	13.3	2.9	8.9	58.8	14.7	0.0
LFA 24	16.3	56.9	11.7	0.0	10.8	85.4	2.3	0.0
LFA 25 NB	4.9	46.5	24.5	0.0	6.1	60.4	11.3	0.0
LFA 25 PEI	4.3	59.5	21.6	2.1	16.0	77.2	4.6	0.0
MZ 26A1 NS	20.0	70.4	3.2	0.0	12.3	68.1	7.3	0.0
MZ 26A1 PEI	6.5	63.8	12.3	1.4	13.7	71.3	13.6	0.0
SubLFA 26A2	0.0	69.5	18.9	2.9	15.1	64.9	9.3	0.0
MZ 26A3	0.0	62.5	37.5	0.0	0.0	62.5	12.5	0.0
MZ 26B North	16.7	41.7	16.7	0.0	4.5	86.4	0.0	4.5
MZ 26B South	16.7	41.7	20.8	4.2	4.0	84.0	12.0	0.0
SGSL	**11.1**	**52.9**	**17.2**	**0.8**	**13.0**	**71.6**	**8.1**	**0.2**

Table 81: The percentage (%) of respondents who strongly agreed, agreed, disagreed, or strongly disagreed in 2005, 2011 and 2016, that weather conditions permitting, the lobster fishing season should start earlier in their fishing area in the lobster management areas of the SGSL.

Earlier start	**2005**				**2011**				**2016**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	0.0	20.4	73.3	6.3	0.0	28.9	71.1	0.0	0.0	34.3	52.0	13.7
SubLFA 23B	0.0	45.6	49.3	0.0	60.7	20.5	18.8	0.0	0.0	38.2	41.7	20.2
SubLFA 23C	1.7	31.4	66.9	0.0	58.8	27.0	11.0	0.0	6.6	32.1	46.6	13.2
SubLFA 23D	0.0	3.0	97.0	0.0	3.5	22.1	55.3	12.8	0.0	0.0	61.9	35.2
LFA 24	0.9	7.1	86.6	5.4	3.0	17.5	67.2	5.0	0.0	17.0	76.7	3.9
LFA 25 NB	4.3	23.7	67.2	3.7	13.3	26.1	52.2	2.9	1.2	47.8	42.8	4.0
LFA 25 PEI	2.1	9.3	77.2	7.6	9.0	37.2	45.3	8.5	2.4	36.4	43.0	11.4
MZ 26A1 NS	0.0	0.0	60.0	0.0	7.2	59.2	26.4	0.0	3.6	10.9	81.5	0.0
MZ 26A1 PEI	0.0	11.7	76.9	4.2	2.6	26.6	55.7	1.3	0.0	5.5	72.6	20.6
SubLFA 26A2	0.0	0.0	64.9	0.0	12.3	25.5	50.6	8.6	4.5	29.3	58.7	0.0
MZ 26A3	0.0	10.0	60.0	0.0	0.0	62.5	25.0	0.0	0.0	25.0	62.5	0.0
MZ 26B North	0.0	0.0	59.1	4.5	0.0	4.2	58.3	33.3	0.0	9.1	81.8	9.1
MZ 26B South	0.0	0.0	48.1	7.4	4.2	12.5	70.8	12.5	0.0	20.0	80.0	0.0
SGSL	**1.3**	**13.4**	**72.9**	**3.6**	**13.5**	**25.4**	**50.2**	**5.4**	**1.5**	**24.0**	**61.6**	**9.9**

APPENDIX 1

Phone survey questions included in 1993 (and previous vessel), 2005, 2011, and 2016. Questions asked each year, or a version of the question, are marked with an "x".

Questions		2016	2011	2005	1993	Previous boat
Section A	**Vessel information**					
	How old is your boat or what year was it built?	x	x	x	x	
	What is the boat length?	x	x	x	x	x
	What is the tonnage	x				
	What is the boat made of?	x	x	x	x	
	Boat type, Open or deck?				x	
	What type of engine is on your boat?	x	x	x	x	x
	How much HP (horse power) does the engine have?	x	x	x	x	x
	Among the equipment listed below, which one do you use to fish lobster with?					
	GPS	x	x	x	x	x
	Loran C			x	x	
	Colored monitor depth sounder	x	x	x	x	x
	Plotter	x	x	x		
	Radar	x	x	x	x	x
	Bottom mapping system	x	x	x		
	Underwater camera	x	x	x		
	VHF	x	x	x	x	x
	CB	x	x	x	x	x
	Cell phone	x	x	x	x	x
	Disc hauler	x	x	x	x	x
	Hauler location	x	x	x	x	x
	Hydraulic boom	x	x	x		
	Trap lift	x	x	x	x	x
	Trap roller	x				
	Propeller guard	x	x	x	x	x
	Deck light				x	x
	How do you store the lobster on your boat?	x	x	x	x	
	How long have you used this system?			x	x	
	Do you band your lobsters?	x	x			
Section B	**Trap information**					

Questions		2016	2011	2005	1993	Previous boat
	How many traps did you fish?	x	x	x	x	
	Do you build your own traps?	x	x			
	What types of traps did you use?	x	x	x	x	
	Which part is made of wire on your hybrid traps?	x	x			
	What colour wire mesh do you use?	x				
	What are the outside dimensions and design of your traps?	x	x	x	x	
	Area m2		x	x	x	
	Length, width, height	x				
	Square or round	x	x			
	Single or double parlor (number of parlors)	x	x	x	x	
	Number of kitchens	x	x	x	x	
	Number of bait pins	x	x	x		
	Offset entrance	x	x	x		
	Hoop angled	x	x			
	Hoop size	x	x	x	x	
	2 or 4 entrances				x	
	What height was the escape mechanism on your traps?	x	x	x		
	Ghost fishing mechanism/Wood trap protection/Escape type				x	
	How many traps per line did you set?	x	x	x	x	
	As the season progressed; did you increase or decrease the number of traps per line?		x	x		
	Over the years, did you change number of traps per line?			x	x	
	How many traps per line would you rather set?	x	x			
	Last time you made changes on your traps what trend did you follow?			x	x	
	How many traps did you lose during the fishing season?	x	x	x	x	
	Including last year, how many traps did you lose during the last five years?	x	x			
	Over the years, how do you replace your traps? (pattern)	x	x	x	x	
	What is the life span of your traps?	x	x			
Section C	**Fishing pattern information**					
	What was your daily time of departure and arrival from and to the wharf?	x	x	x	x	

Questions		2016	2011	2005	1993	Previous boat
	Usually, how long is the sail to and from your fishing grounds?	x	x	x		
	Time needed to lift all traps?	x	x	x	x	
	How would you describe your fishing pattern?	x	x	x		
	Fishing pattern different than previous year			x		
	In your area, where do you set your traps (fishing grounds)?			x		
	On those grounds, how would you describe the way you set your traps?			x		
	Way of setting traps different than previous year?			x		
	Did you fish some traps twice (double haul) a day? Do you fish on Sunday?	x	x	x	x	
	What date was your last fishing day?	x	x			
	How many fishing days did you lose last year? (weather, illness, mechanical and others)	x	x			
	Overall, how many days did you fish	x				
	How many traps in what water range during the fishing season?	x	x			
	Average depth of your traps at the beginning and the end of the fishing season?	x	x	x	x	
	How did you decide where to set your traps for the first week?	x	x			
	How would you describe your effort for the fishing season compared to an average year?	x	x			
	Did you fish a percentage of your own bait? Did you fish during or off season?	x	x			
	Prevalence of bait	x	x	x		
	If rock crab was used, how many pounds approximately?	x	x			
	What kind of bait were you using? (please rank them)	x	x	x		
	What kind of bait were you using?				x	
	Regardless of availability, what bait would you prefer fish with?	x	x			
	How many pounds of bait have you used during the fishing season?	x	x	x	x	
	During the last 5 years (2012-2016) any interactions that kill, harm, harass, capture or take: wolffish (spotted/Northern), leatherback turtles, whales	x				

Questions		2016	2011	2005	1993	Previous boat
Section D	**General statement information (opinion questions)**					
	During the last few years, there was an increase in berried lobsters in my traps	x				
	During the last few years, rock crab bycatch was lower in my traps	x				
	To properly manage the lobster fishery, accurate and timely lobster landings are needed	x				
	Lobster habitat and fishing grounds are expanding in my fishing area	x				
	Increasing escape mechanism reduces sorting of small lobsters	x				
	The increase of fuel price has forced lobster harvesters to modify their fishing habits.		x			
	In 2011, the high price of bait forced harvesters to use less bait in their traps.		x			
	To replace expensive and less available types of bait, artificial bait (engineered) could be an option.	x	x			
	During the last few years, there was an increase of sub legal (small) lobsters in my traps.	x	x			
	The lobster stock is in good condition in my area.	x	x			
	The seals are a problem for the lobster fishery in my area.	x	x			
	There is double hauling in my area.		x			
	(Weather conditions permitting), the lobster fishing season should start earlier in my fishing area.	x	x	x		
	Poaching is a problem in my area.	x	x			
	Obtaining Eco-labeling certification such as MSC, is an important issue for the lobster fishery.	x	x			
	The Atlantic Lobster Sustainability Measures (ALSM) program to ensure long-term sustainability and economic prosperity of the lobster fishery has been beneficial to you.		x			
	The increase of fuel price has forced lobster harvesters to modify their fishing habits.			x		
	The lobster fishermen are interested of finding a way to decrease the fishing effort.			x		
	The rock crab fishery has a negative impact on the lobster fishery.			x		

Questions		2016	2011	2005	1993	Previous boat
	The fishing activities of the herring seiners are damaging the lobster habitat.			x		
	In 2006, lobster catches will increase in my fishing area.			x		
	DMP (dock side monitoring program) should be implemented for the lobster fishery.			x		
	A depth restriction for the scallop fishery is needed to protect the lobster habitat.			x		
	Poaching or landing sub-legal size lobster is a problem in my area.			x		
	A 10% trap reduction would not affect my total landings for the fishing season.			x		
	The biodegradable mechanism to prevent ghost fishing is working.			x		
Section E	**Personal information**					
	Captain's age		x	x	x	
	How many years of experience as a captain in the lobster fishery?	x	x	x	x	
	How many years of experience do you have in the lobster fishery?	x	x			
	How many persons (deck hands) are fishing lobster on your boat?	x	x	x		
	What is the smallest number of deckhands needed to fish lobster efficiently				x	
	Do you handle he traps with the deck hand?				x	
	Where was your homeport and landing port?	x	x	x		
	Did you fish other species?	x	x	x		
	In 2011, did you land any rock crab by-catch, if yes how many pounds?	x	x			
	Do you have another profession or type of employment in addition to fishing?	x	x	x		
	In how many years do you plan to retire?	x	x			
	Is there anyone interested to take over your license and equipment?	x	x			
Section F	**Appendix**					
	Questionnaires		x	x	x	
	Sampling coverage per district		x	x	x	
	Sampling coverage per LFA, sub LFA, MZ and Province		x	x	x	
	Fishing grounds description		x			

APPENDIX 2

2016 Lobster fishery information survey

Fishing grounds

Where are your fishing grounds and how many are you?

Section 1 Boat information

In this section we would like to gather some information about the boat you fish lobster with.

1.0 How old is your boat or what year was it built?

1.1 What is the boat length?

1.2 What is the tonnage?

1.3 What is the boat made of?

- Wood
- Fiberglass
- Aluminum
- Steel
- Epoxy or Fiberglass on wood
- Other

1.4 What kind of engine is on your boat?

- Inboard diesel
- Inboard gas
- Outboard gas
- Other

1.5 How much HP (horse power) does the engine have?

1.6 Among the equipment listed below, which one do you use to fish lobster with?

- Guidance system:
  - GPS
  - Other
- Depth sounder:
  - Colored monitor
  - Other
- Plotter
- Radar
- Bottom mapping system (Olex, RoxAnn)
- Underwater camera
- VHF radio
- CB
- Cell phone
- Hauler (disc):
  - stern hauler
  - bow hauler
- Hydraulic boom
- Trap lift (lander)
- Trap roller
- Propeller guard (basket)

Other

1.7 How do you store the lobster on your boat?

	Market	Canner
Wood crates (with ice)		
Wood crates (no ice)		
Plastic crates (with ice)		
Plastic crates (no ice)		
Xactic tub (with ice)		
Xactic tub (no ice)		
Xactic tub with circulating water		
Holding tank with circulating water		
Holding tank without circulating water (fill and drain)		
Under the deck (with ice)		
Under the deck (no ice)		
Other		

1.8 Do you band your lobsters? Markets
Canners

Section 2 Trap information

In this next section we would like to collect information regarding different aspect of the traps you are using to fish lobster.

2.0 How many traps did you fish in 2016?

2.1 Do you build your own traps

2.2 What types of traps did you use during the 2016 fishing season?

Wood traps (100%)
Wire traps: What color? How many?
Hybrid traps
Which part is made of wire: Bottom, Side, Door
Other

2.3 What are the outside dimensions and design of your traps used in 2016?

Trap type (round or square)	Number of traps	Length (inch)	Width (inch)	Height (inch)	Number of Kitchens	Number of parlors	Hoop size	Hoops angled	Offset entries	# Bait pins or bags

2.4 What height was the escape mechanism on your traps in 2016? ¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬On how many traps?

2.5 How many traps per line did you set during the 2016 fishing season?

__________ lines of ___________ traps
__________ lines of ___________ traps

2.6 How many traps per line would you rather set?
Same as it is 10 9 8 7 6 5 4 3 2 1

2.7 How many traps did you lose during the 2016 fishing season?

2.8 Including last year, how many traps did you lose during the last five years?

2.9 Over the years, how do you replace your traps (pattern)
No pattern/As needed
Time frame
# of traps

2.10 What is the life span of your traps? Wood Wire

Section 3 Fishing pattern information

In this section, we are interested in finding information related to your fishing habits and strategies.

3.0 What was your daily time of departure and arrival from and to the wharf during 2016 fishing season?
Departure Arrival Time needed to lift all traps

3.1 Usually, how long is the sail to and/or from your fishing grounds? (total)

3.2 In 2016, how would you describe your fishing pattern? Were you fishing…

All your traps every day, for how long
Half your traps every day, for how long
All your traps every 2 days, for how long
So many a day, how many?
Other

W1	W2	W3	W4	W5	W6	W7	W8
W1	W2	W3	W4	W5	W6	W7	W8
W1	W2	W3	W4	W5	W6	W7	W8
W1	W2	W3	W4	W5	W6	W7	W8

3.3 In 2016, did you fish some traps twice a day (double haul)
Never
Yes, how many times # traps per day

3.4 During the 2016 fishing season, did you fish on Sunday?
We don't, by gentlemen agreement
If needed
Every week
Other

3.5 In 2016, what date was your last fishing day? or # days before the end of the season

3.6 How many fishing days did you lose last year? Why?
days Weather
days Illness
days Mechanical failure
days Other

3.7 So overall, in 2016, you have fished for how many days?
days

3.8 Where were your traps set through the 2016 fishing season? (weekly %)

	Min	Max
Deep water	depth	
Mid water	depth	
Shallow water	depth	
Other		

W1	W2	W3	W4	W5	W6	W7	W8

3.9 How did you decide where to set your traps for the first week in 2016 (W1)?
Revisiting the same spot year after year
First come first served
Weather conditions
Water temperature
Search for the lobster
Experience
Other

3.10 How would you describe your effort for the 2016 fishing season compared to an average year?
Less than usual same as usual more than usual

3.11 In 2016, did you fish a percentage of your own bait? %
Was it during the fishing season or off season?

3.12 What kind of baits were you using in 2016? (ranked)

Fresh herring	Fresh flat fish	Frozen squid	Sculpins
Frozen herring	Frozen flat fish	Rock crab	Cunners
Salted herring	Salted flat fish	Gaspareaux	Artificial
Fresh mackerel	Salmon heads	Silversides	Frozen mackerel
Turbot heads	Red fish	Salted mackerel	Tuna heads
others			

If rock crab was used, how much approximately in pounds (lbs) or crates or how many per traps?

3.13 Regardless of availability, what bait would you prefer fish with?

1st _____
2nd _____
3rd _____

3.14 How many pounds of bait have you used during the 2016 fishing season?

3.15 During the last five years while fishing lobster, did you have any interactions that may accidentally kill, harm, harass, capture or take these species?

	2016	2015	2014	2013	2012
Wolffish (spotted or Northern)	____	____	____	____	____
Leatherback turtle	____	____	____	____	____
Whales	____	____	____	____	____

Section 4 General information

In this next section, I will read to you a series of statements related to the lobster fishery in your fishing area. We would like to know what is your opinion about these statements by saying if you* strongly agree*,* agree*,* disagree *or* strongly disagree*. Also, if you wish you may say that you have no opinion regarding these statements or say that you don't want to answer or that it is not applicable for your area.

4.0 During the last few years, there was an increase of sub legal (small) lobsters in my traps.

4.1 During the last few years, there was an increase of berried female lobsters in my traps.

4.2 During the last few years, rock crab bycatch was lower in my traps.

4.3 To replace expensive and less available types of bait, artificial (engineered) bait could be an option.

4.4 The lobster stock is in good condition in my area.

4.5 Poaching is a problem in my area.

4.6 Weather conditions permitting, the lobster fishing season should start earlier in my fishing area.

4.7 Seals are a problem for the lobster fishery in my area.

4.8 Obtaining Eco-labeling certification such as MSC, is important for the lobster fishery.

4.9 To properly manage the lobster fishery, accurate and timely lobster landings are needed.

4.10 Lobster habitat and fishing grounds are expanding in my fishing area.

4.11 Increasing escape mechanism reduces sorting of small lobsters.

Section 5 Personal information

In this last section we would like to gather some information about you and your crew.

5.0 How many years of experience do you have as a captain in the lobster fishery?

5.1 How many years of experience do you have in the lobster fishery?

5.2 How many persons (deck hands) are fishing lobster on your boat (not including you)?

Beginning of the season End of the season

5.3 Where was your homeport for the 2016 fishing season (wharf location)?

5.4 Which port did you sell your lobster last year? (landing port)?

5.5 Did you fish other commercial species (not for bait) in 2016?

No
Cod
Flat Fish
Herring
Mackerel
Oyster
Rock crab
Scallop
Snow crab
Smelt
Toad crab
Tuna
Other

5.6 In 2016, did you land any rock crab by-catch? If yes, how many lbs?

5.7 Do you have another profession or type of employment in addition to fishing?

No
Farmer
Construction worker
Business owner
Oil rig labor
Other

5.8 In how many years do you plan to retire? Unsure?

5.9 Is there anyone interested to take over your license and equipment?

No
Children
Relative
Acquaintance
I don’t know
Other

APPENDIX 3

Questions not asked in 2016

The questions asked in each survey varies by year, some previous questions are removed from the survey while others are added. Below are some of the results of questions that were not included in 2016.

Table A1: The percentage of respondents in 1993 with an open or deck boat in the lobster management areas of the SGSL. Deck boats were mostly found where lobster harvesters also took part in the herring fishery. The deck is not permanent and can be added on top of the lobster boat when needed.

	Boat type 1993	
	Open	**Deck**
SubLFA 23A	96.6	3.4
SubLFA 23B	72.4	27.6
SubLFA 23C	49.2	50.8
SubLFA 23D	90.7	9.3
LFA 24	100.0	0.0
LFA 25 NB	98.3	1.7
LFA 25 PEI	100.0	0.0
MZ 26A1 NS	92.9	7.1
MZ 26A1 PEI	100.0	0.0
SubLFA 26A2	86.7	13.3
MZ 26A3	50.0	50.0
MZ 26B North	100.0	0.0
MZ 26B South	100.0	0.0
SGSL	**92.1**	**7.9**

Table A2: The percentage respondents with a deck light on their vessel in 1993 and also onboard their previous vessel in the lobster management areas of the SGSL.

	Deck light	
	Previous vessel	**1993**
SubLFA 23A	20.4	63.2
SubLFA 23B	50.7	82.3
SubLFA 23C	31.9	73.6
SubLFA 23D	37.9	64.9
LFA 24	53.1	73.9
LFA 25 NB	61.4	79
LFA 25 PEI	40.8	63.8
MZ 26A1 NS	78.3	75
MZ 26A1 PEI	43.7	74.5
SubLFA 26A2	84.8	79.1
MZ 26A3	66.7	60
MZ 26B North	0.0	70
MZ 26B South	20	81.8
SGSL	**48.4**	**73.8**

Table A3: The average (Ave), standard error (SE), minimum (Min) and maximum (Max), number of traps replaced during the season in 1993 and 2005 in the lobster management areas of the SGSL.

Number of traps replaced yearly	**1993**				**2005**			
	Average	**SE**	**Min**	**Max**	**Average**	**SE**	**Min**	**Max**
SubLFA 23A	45.3	3.060	5	100	20.0	2.662	0	50
SubLFA 23B	45.8	3.028	5	100	13.4	2.651	0	50
SubLFA 23C	52.9	3.521	10	125	19.6	1.897	0	60
SubLFA 23D	50.7	3.286	11	100	13.8	2.238	0	75
LFA 24	65.0	2.450	0	200	48.5	1.473	10	100
LFA 25 NB	22.4	2.066	0	125	17.8	0.992	0	50
LFA 25 PEI	49.1	2.873	10	100	44.5	2.707	10	75
MZ 26A1 NS	32.0	3.618	0	100	23.4	1.812	10	50
MZ 26A1 PEI	38.4	10.589	0	180	35.3	1.118	0	50
SubLFA 26A2	45.5	4.025	0	150	30.9	2.372	6	50
MZ 26A3	20.4	4.708	5	65	14.5	1.712	10	30
MZ 26B North	36.5	5.322	0	50	37.5	2.941	10	50
MZ 26B South	44.6	6.560	11	100	34.5	3.537	4	100
SGSL	**43.8**	**0.291**	**0**	**200**	**30.8**	**3.051**	**0**	**100**

Table A4**:** The percentage (%) of respondents who strongly agreed, agreed, disagreed, or strongly disagreed, that the increase in fuel prices in 2005 forced lobster fishermen to modify their fishing habit, and those who agreed that lobster fishermen were interested in finding ways to reduce fishing effort in the lobster management areas of the SGSL.

2005	**The increase of fuel price has forced lobster fishermen to modify their fishing habits**				**The lobster fishermen are interested of finding a way to decrease the fishing effort**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	0.0	56.2	43.8	0.0	10.9	78.0	11.1	0.0
SubLFA 23B	0.0	63.5	36.5	0.0	6.4	85.3	5.1	0.0
SubLFA 23C	1.4	54.2	42.6	1.7	7.9	86.9	3.5	0.0
SubLFA 23D	0.0	67.0	33.0	0.0	0.0	83.5	10.4	0.0
LFA 24	0.9	50.8	47.4	0.0	0.9	37.1	49.2	2.2
LFA 25 NB	1.1	75.0	21.9	0.0	10.0	76.3	6.7	1.3
LFA 25 PEI	12.5	55.6	31.9	0.0	15.8	62.3	11.5	6.5
MZ 26A1 NS	0.0	56.0	44.0	0.0	0.0	84.0	16.0	0.0
MZ 26A1 PEI	9.5	55.5	31.8	1.1	12.4	59.3	16.2	2.8
SubLFA 26A2	3.2	55.4	41.5	0.0	0.0	68.3	31.8	0.0
MZ 26A3	0.0	70.0	30.0	0.0	0.0	80.0	20.0	0.0
MZ 26B North	0.0	36.4	63.6	0.0	4.5	81.8	13.6	0.0
MZ 26B South	3.7	40.7	55.6	0.0	0.0	74.1	18.5	0.0
SGSL	**3.2**	**57.4**	**38.3**	**0.3**	**6.4**	**67.0**	**19.4**	**1.6**

Table A5: The percentage (%) of respondents who strongly agreed, agreed, or disagreed, or strongly disagreed, in 2005, that the rock crab fishery had a negative impact on the lobster fishery, and herring seiners were damaging lobster habitat, in the lobster management areas of the SGSL.

2005	**The rock crab fishery has a negative impact on the lobster fishery.**				**The fishing activities of the herring seiners are damaging the lobster habitat**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	0.0	30.9	45.9	0.0	43.8	38.9	6.2	0.0
SubLFA 23B	5.1	37.2	36.5	0.0	34.0	50.0	6.4	0.0
SubLFA 23C	3.3	34.3	42.3	0.0	17.4	39.4	11.7	1.7
SubLFA 23D	0.0	14.0	53.7	0.0	2.4	41.4	6.1	0.0
LFA 24	8.2	29.4	30.6	2.7	28.0	41.6	10.5	1.3
LFA 25 NB	7.6	39.8	31.9	1.3	3.9	23.5	26.8	1.1
LFA 25 PEI	3.9	24.7	45.2	7.4	18.6	22.7	33.5	0.0
MZ 26A1 NS	0.0	28.0	44.0	0.0	0.0	28.0	20.0	0.0
MZ 26A1 PEI	8.5	20.7	30.3	4.6	34.6	30.7	20.4	3.0
SubLFA 26A2	15.9	18.5	33.9	0.0	3.2	45.2	11.5	0.0
MZ 26A3	0.0	30.0	60.0	0.0	0.0	40.0	0.0	0.0
MZ 26B North	0.0	0.0	27.3	0.0	4.5	31.8	31.8	0.0
MZ 26B South	0.0	0.0	59.3	0.0	0.0	25.9	18.5	0.0
SGSL	**5.7**	**26.7**	**37.5**	**2.0**	**17.1**	**34.0**	**17.6**	**1.0**

Table A6: The percentage (%) of respondents who strongly agreed, agreed, or disagreed, or strongly disagreed, in 2005, that the 2006 lobster catches would increase, and that a 10% trap reduction would not affect their landings, in the lobster management areas of the SGSL.

2005	**In 2006, lobster catches will increase in my fishing area**				**A 10% trap reduction would not affect my total landings for the fishing season**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	0.0	25.3	46.7	0.0	0.0	28.2	54.6	6.3
SubLFA 23B	0.0	57.1	30.1	3.2	0.0	26.2	70.6	3.2
SubLFA 23C	0.0	20.4	63.3	0.0	0.0	21.1	68.4	7.3
SubLFA 23D	0.0	28.1	64.6	0.0	0.0	17.7	70.7	8.5
LFA 24	0.0	28.5	28.7	0.9	0.0	37.2	42.0	8.3
LFA 25 NB	1.1	22.3	53.2	4.1	2.1	53.5	36.2	3.5
LFA 25 PEI	0.0	31.2	32.0	0.0	1.9	32.2	43.5	13.2
MZ 26A1 NS	0.0	16.0	72.0	0.0	0.0	48.0	44.0	0.0
MZ 26A1 PEI	1.4	24.0	33.5	2.8	2.5	38.5	38.6	9.2
SubLFA 26A2	0.0	8.9	75.2	0.0	0.0	41.5	55.4	0.0
MZ 26A3	0.0	10.0	80.0	0.0	0.0	70.0	30.0	0.0
MZ 26B North	0.0	63.6	27.3	0.0	0.0	86.4	9.1	0.0
MZ 26B South	0.0	37.0	37.0	0.0	3.7	66.7	25.9	0.0
SGSL	**0.4**	**26.7**	**45.6**	**1.3**	**1.0**	**40.6**	**45.1**	**6.1**

Table A7: The percentage (%) of respondents who strongly agreed, agreed, or disagreed, or strongly disagreed, in 2011, that the increase of fuel prices had forced lobster harvesters to modify their fishing habits, that the high price of bait forced harvesters to use less bait in their traps, and whether the Atlantic Lobster Sustainability Measures (ALSM) had been beneficial to them in the lobster management areas of the SGSL.

2011	**Increase of fuel price has forced lobster harvesters to modify their fishing habits**				**High price of bait forced harvesters to use less bait in their traps**				**ASLM program was beneficial to you**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	9.3	53.4	37.3	0.0	0	68.6	31.4	0.0	11.8	61.8	13.7	5.9
SubLFA 23B	9.4	44.9	45.7	0.0	18.8	45.7	35.5	0.0	62.4	23.5	9.4	0.0
SubLFA 23C	11.8	51.4	36.8	0.0	10.9	59.3	29.8	0.0	56.5	29.6	6.7	1.5
SubLFA 23D	21.5	58.8	16.8	0.0	9.9	55.8	34.3	0.0	15.1	57.5	15.1	0.0
LFA 24	8.2	64.6	26.4	0.0	8.4	55.3	34.9	0.0	2.1	57.1	28.4	3.0
LFA 25 NB	10.9	65.4	21.9	0.9	7.6	59.4	33.0	0.0	23.7	48.3	20.0	0.0
LFA 25 PEI	14.5	76.8	8.8	0.0	4.3	60.2	29.6	2.1	8.1	62.1	14.9	0.0
MZ 26A1 NS	0.0	87.2	12.8	0.0	3.2	64.0	26.4	0.0	6.4	86.4	7.2	0.0
MZ 26A1 PEI	5.3	77.0	17.7	0.0	5.9	39.5	52.0	0.0	12.5	56.2	26.1	3.8
SubLFA 26A2	5.8	77.0	17.3	0.0	15.2	60.1	24.7	0.0	2.9	61.7	21.0	5.8
MZ 26A3	0.0	100.0	0.0	0.0	0.0	62.5	37.5	0.0	12.5	37.5	12.5	0.0
MZ 26B North	54.2	33.3	8.3	0.0	50.0	41.7	8.3	0.0	45.8	33.3	8.3	0.0
MZ 26B South	37.5	33.3	29.2	0.0	20.8	45.8	33.3	0.0	8.3	45.8	33.3	8.3
SGSL	**12.3**	**63.9**	**23.0**	**0.2**	**9.9**	**54.9**	**33.8**	**0.2**	**18.6**	**51.7**	**19.6**	**2.1**

Table A8: The percentage (%) of respondents who strongly agreed, agreed, or disagreed, or strongly disagreed, in 2005, that the dockside monitoring program (DMP) should be implemented in the lobster fishery, and that depth restrictions for the scallop fishery would protect lobster habitat, and that the biodegradable mechanism to prevent ghost fishing by lost gear was working in the lobster management areas of the SGSL.

2005	**DMP should be implemented**				**Depth restriction for the scallop fishery is needed**				**The biodegradable mechanism is preventing ghost fishing**			
	Strongly Agree	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**	**Strongly Agree**	**Agree**	**Disagree**	**Strongly disagree**
SubLFA 23A	0.0	15.7	28.0	56.3	12.3	31.3	0.0	0.0	0.0	70.4	23.3	6.3
SubLFA 23B	0.0	48.0	36.5	10.3	39.0	35.3	0.0	0.0	0.0	81.4	15.4	0.0
SubLFA 23C	0.0	18.6	35.2	37.9	33.8	42.0	8.8	0.0	1.4	63.9	33.0	1.7
SubLFA 23D	0.0	18.9	46.3	29.3	8.5	63.4	3.0	0.0	0.0	51.8	48.2	0.0
LFA 24	2.2	4.3	40.3	50.1	38.9	39.2	3.6	0.0	3.9	77.7	6.7	0.0
LFA 25 NB	1.0	31.4	26.1	34.4	23.0	48.8	8.0	0.0	0.0	66.6	30.2	1.0
LFA 25 PEI	0.0	14.9	47.0	36.2	22.5	32.0	20.8	3.7	2.1	70.8	16.0	5.6
MZ 26A1 NS	0.0	8.0	60.0	28.0	12.0	56.0	16.0	0.0	0.0	76.0	16.0	0.0
MZ 26A1 PEI	1.4	5.8	44.6	44.6	35.3	37.5	8.1	0.0	2.5	69.7	7.1	0.0
SubLFA 26A2	3.2	12.1	54.2	27.4	17.9	63.7	0.0	0.0	0.0	75.8	6.4	0.0
MZ 26A3	0.0	10.0	60.0	20.0	0.0	20.0	40.0	0.0	0.0	60.0	30.0	10.0
MZ 26B North	0.0	13.6	68.2	9.1	0.0	40.9	13.6	0.0	0.0	54.5	4.5	0.0
MZ 26B South	0.0	18.5	51.9	22.2	11.1	51.9	11.1	0.0	3.7	88.9	0.0	0.0
SGSL	**1.0**	**15.4**	**41.9**	**36.8**	**25.9**	**43.5**	**8.4**	**0.3**	**1.6**	**70.0**	**17.8**	**1.2**

Table A9: The percentage (%) of fishers fishing vessels with Loran C on board as reported in each lobster fishing management area in the SGSL as available for the different survey years in the lobster management areas of the SGSL . “<1993” indicates their previous vessel.

Equipment	**Loran C**		
Survey year	**<1993**	**1993**	**2005**
SubLFA 23A	13.0	39.3	20.4
SubLFA 23B	50.7	82.2	18.6
SubLFA 23C	29.3	78.0	31.1
SubLFA 23D	63.2	90.4	35.9
LFA 24	52.4	91.8	24.5
LFA 25 NB	60.3	95.4	45.6
LFA 25 PEI	66.8	97.7	12.3
MZ 26A1 NS	56.5	82.1	20.0
MZ 26A1 PEI	66.2	75.0	26.3
SubLFA 26A2	66.7	94.8	24.2
MZ 26A3	66.7	90.0	10.0
MZ 26B North	100.0	50.0	4.5
MZ 26B South	20.0	72.7	11.1
SGSL	**55.3**	**84.2**	**26.3**