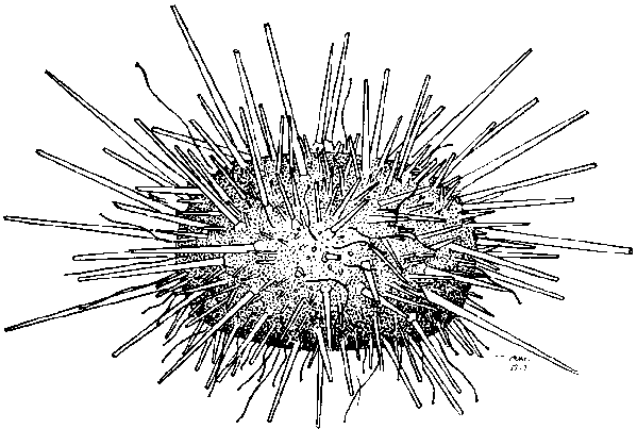
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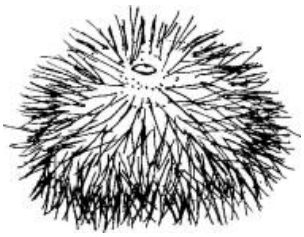
INTEGRATED FISHERIES MANAGEMENT PLAN

RED AND GREEN SEA URCHIN

AUGUST 1, 2026 TO JULY 31, 2027



Red Urchin: Mesocentrotus franciscanus



Green Urchin: Strongylocentrotus droebachiensis

Canada

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This Integrated Fisheries Management Plan is intended for general purposes only. Where there is a discrepancy between the Plan and the regulations, the regulations are the final authority. A description of Areas and Subareas referenced in this Plan can be found in the Pacific Fishery Management Area Regulations.

FOREWORD

The purpose of this Integrated Fisheries Management Plan (IFMP) is to identify the main objectives and requirements for the Red and Green Sea Urchin fisheries in the Pacific Region, as well as the management measures that will be used to achieve these objectives. This document also serves to communicate the basic information on the fisheries and its management to Fisheries and Oceans Canada (DFO) staff, legislated co-management boards and other stakeholders. This IFMP provides a common understanding of the basic "rules" for the sustainable management of the fisheries resource.

This IFMP is not a legally binding instrument which can form the basis of a legal challenge. The IFMP can be modified at any time and does not fetter the Minister's discretionary powers set out in the *Fisheries Act*. The Minister can, for reasons of conservation or for any other valid reasons, modify any provision of the IFMP in accordance with the powers granted pursuant to the *Fisheries Act*.

Where DFO is responsible for implementing obligations under land claims agreements, the IFMP will be implemented in a manner consistent with these obligations. In the event that an IFMP is inconsistent with obligations under land claims agreements, the provisions of the land claims agreements will prevail to the extent of the inconsistency.

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1. OVERVIEW

Introduction

The 2026/27 Pacific Region Red and Green Sea Urchin Integrated Fisheries Management Plan (IFMP) encompasses the period of August 1, 2026 to July 31, 2027.

The IFMP provides a broad context to the management and interrelationships of all fishing sectors of the Urchin fisheries. Section 2 considers present stock status. Section 3 describes new considerations for Indigenous knowledge. Section 4 provides a socio-economic profile. Section 5 describes the most important current management issues. Section 6 describes the objectives to address issues identified in Section 5. Sections 7 and 8 describe the management procedures that will be employed during the year. Section 9 describes shared stewardship arrangements in place to achieve objectives. Section 10 describes the enforcement measures to achieve the objectives. Section 11 describes the ways and means by which the achievement of the objectives will be assessed in the following year. Sections 12 and 13 provide references and a glossary to define terms.

Information in addition to that presented here is available in the Appendices. Harvesters are advised to review the appendices for information.

In this document 'Urchins' refers to both Red Sea Urchins and Green Sea Urchins.

History

Red Sea Urchin

The Red Sea Urchin (*Mesocentrotus franciscanus,*) is one of two sea urchin species commercially harvested in British Columbia. Red Sea Urchins are important to coastal First Nations, who harvest them for food, social and ceremonial purposes. Recreational harvest is minimal.

Red Sea Urchins are fished commercially under authority of a limited licence, category "ZC".

The commercial Red Sea Urchin dive fishery began in the 1970s and grew rapidly between 1982 and 1994. Licence limitation came into effect in 1991 in an attempt to control an increase in fishing effort and the number of licence eligibilities was reduced from 240 to 110. In 1992 the commercial industry formed the Pacific Urchin Harvesters Association (PUHA) which represents the interests of licence eligibility holders with regards to marketing and fishery sustainability. The PUHA is a member of the Red Sea Urchin Sectoral Committee (see Appendix 11) and provides advice and comments on this IFMP and other issues related to the commercial fishery.

Quotas and landings stabilized in 1994 when the PUHA voluntarily adopted an Individual Quota (IQ) program. The TAC was equally split between all licence holders. The implementation of the IQ program was beneficial for the B.C. Red Sea Urchin industry since it promoted safety and allowed harvesters to focus on quality rather than quantity. DFO officially implemented the IQ program in 1996 and quotas remained relatively constant until 2006. A significant reduction in landings started in 2006 and for many years the Total Allowable Catch (TAC) was not completed. This was due to increased competition from other countries supplying urchin roe to the Japanese market – mainly from an illegal, unreported, unregulated Russian fishery. Landings increased significantly between 2013 and 2016 to between 60% and 80% of the coastwide TAC but has since declined to approximately 50% over the last few seasons.

Recreational harvest of Red Sea Urchins is undocumented but effort is considered to be minimal.

Green Sea Urchin

The Green Sea Urchin (*Strongylocentrotus droebachiensis*) is one of two sea urchin species commercially harvested in British Columbia. Green Sea Urchins are important to coastal First Nations, who harvest them for food, social and ceremonial purposes. Recreational harvest is minimal.

Green Sea Urchins are fished commercially under authority of a limited licence category "ZA".

The Green Sea Urchin dive fishery began in 1987 and experienced steady increases in effort up to 1992. Landings peaked in 1992, when 49 vessels reported 1,042 tonnes for a landed value of $4.4 million. Since 1992, landings have decreased as a result of a more conservative approach to establishing quotas. Quotas since have remained relatively constant, however commercial catch declined through the early 2000 to a low of 13 tonnes in the 2006/07 season because of increased competition in the markets, primarily from Russia. However, since then, there has been a slow steady increase in landings to the present and now the TAC is, for the most part, fully harvested

Unlike Red Sea Urchins, where roe is extracted at British Columbia processing plants, Green Sea Urchins are shipped whole and live to Japan. The product quality, demand, and perishability have restricted the fishery to accessible south coast areas.

Licences were limited in 1991 due to concerns over increasing fishing effort. Currently there are 49 licences eligible for this fishery. Despite licence limitation, effort remained high and catch per unit effort (CPUE) continued to show a decline in most south coast areas until about 1993. This decline in CPUE necessitated a more conservative approach to establishing quotas and resulted in an annual TAC. Since 1993, the CPUE steadily increased until 2003/2004 where it has levelled off and remained fairly constant. The CPUE is currently higher than in 1987 when the fishery first began.

Beginning in 1995, a program of individual quotas (IQs) was implemented in the Green Sea Urchin fishery. Under the program, an industry funded catch validation and monitoring program was put in place to ensure monitoring of quotas and recovery of accurate catch data. During the first year of the program, south coast quotas were allocated equally among the licence holders, while the north coast remained as a competitive fishery. During the second year of the program, equal IQs were again applied to south coast areas. However, north coast areas were opened only under an exploratory protocol. The North Coast was last opened in 2003, see Appendix 1.

Type of Fishery and Participants

First Nations

Each year Fisheries and Oceans Canada (DFO) provides opportunities to First Nations for Food, Social and Ceremonial (FSC) purposes (or domestic purposes for First Nations with modern treaties). First Nations harvest for food, social and ceremonial (FSC) purposes may occur coast-wide where authorized by a communal licence or, under treaty, a harvest document. Urchins are important to First Nations, who harvest them for food, social and ceremonial purposes. The number of First Nations harvesters for Urchins is unknown.

Recreational

A recreational fishery may occur coast wide. A British Columbia Tidal Waters Sport Fishing Licence is required for the recreational harvest of any species of fish, including shellfish. Licences may be purchased online via the National Recreational Licensing System: http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/application-eng.html.

Alternatively licences may be purchased over the counter at Independent Access Providers (IAPs) in many areas (note that the IAP may charge an additional service fee).

A list of IAPs is available at:

http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/iap-fai-eng.html

The Tidal Waters licence includes access to numerous species, including Urchins. The number of recreational harvesters fishing for Urchins is minimal, based on information from the Sport Fishing Advisory Board (SFAB) and data from the IREC program. The majority of the Urchin stock is in subtidal depths and inaccessible without the use of SCUBA diving gear. A small portion of the Urchin stock may be accessible in some areas at extremely low tides.

Commercial

Urchins are harvested commercially by divers. There are 49 Green Urchin commercial licence eligibilities (ZA). Of these, one is designated communal commercial (FZA) licence for First Nations participation in the commercial fishery. There are 110 licence eligibilities for the Red Urchin fishery. Of these, 31 are designated communal commercial licences for First Nations participation in the commercial fishery. It is common practice within the industry for vessels to stack multiple licence eligibilities in order to make fishing more economical. A typical crew on a Sea Urchin vessel consists of a dive tender/vessel master and two divers.

Aquaculture

Currently there is little interest in Urchin aquaculture however DFO is working on a new echinoderm aquaculture policy See Appendix 4 for more information.

Location of Fishery

First Nations

First Nations' communal licences and harvest documents identify the location where First Nations may fish for food, social and ceremonial (FSC) harvest. Harvest areas are generally located within First Nation traditional territories. See Appendix 2 for more information.

Recreational

Recreational harvest may occur coast-wide, where appropriately licensed. More information can be found in Appendix 3.

Commercial

With the exception of permanent closures for various purposes (Appendix 1), the Red Urchin fishery occurs coastwide and the Green Urchin fishery has only occurred in recent years on the South Coast of Vancouver Island in units called Quota Management Areas (Appendix 1). Work is ongoing to investigate if Green Urchin harvest in the North Coast is feasible. These management areas are a defined portion of Pacific fisheries waters. Areas and Subareas, as described in the *Pacific Fishery Management Area Regulations*, are referenced in describing each management area. (Appendices 1 and 13).

Other areas of the coast may be considered for openings, subject to discussion. An independent stock assessment survey of the area may be required. Fish harvesters will be required to fund any stock assessment surveys.

Fishery Characteristics

First Nations

Fish and marine resources are central to the culture, society, and well-being of First Nations and provide a critical connection to language, traditional knowledge, economies and health of communities. Many

Indigenous communities are located adjacent to key fishing sites, oceans and aquatic resources, and consider the management of these resources to be important to their communities. DFO has heard through engagement that Indigenous groups are seeking to pursue a variety of broad interests, such as greater access to economic opportunities from aquatic resources as a potential driver for economic development, more stability in food, social and ceremonial (FSC) and treaty domestic fisheries, a greater role in aquatic resource and oceans management decisions, and a greater role in stewardship, including stock assessment, oceans and habitat management, conservation and protection, and recovery strategy development and implementation. The interests of individuals communities are further sought based on specific, localized needs and interests.

Commitment to Reconciliation

DFO is committed to the recognition and implementation of Indigenous and treaty rights related to fisheries, oceans, aquatic habitat, and marine waterways in a manner consistent with section 35 of the *Constitution Act, 1982*, the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP), the *United Nations Declaration on the Rights of Indigenous Peoples Act* (UNDA), the UNDA Action Plan 2023-2028, and the federal Principles Respecting the Government of Canada's Relationship with Indigenous Peoples. DFO-CCG Reconciliation Strategy provides a guidance document to better understand why and how reconciliation informs the work of the Department.

DFO recognizes the right of Indigenous peoples to participate in decision-making in matters that affect their rights through their own representative institutions and the need to consult and cooperate in good faith with the aim of securing their free, prior, and informed consent.

For further information on Canada's reconciliation commitments:

- *United Nations Declaration on the Rights of Indigenous Peoples Act*: https://laws-lois.justice.gc.ca/eng/acts/u-2.2/
- Implementing the *United Nations Declaration on the Rights of Indigenous Peoples Act*: https://www.justice.gc.ca/eng/declaration/index.html
- The *UNDA* Action Plan 2023-2028: https://justice.gc.ca/eng/declaration/ap-pa/index.htmlv
- *Principles Respecting the Government of Canada's Relationship with Indigenous peoples*: https://www.justice.gc.ca/eng/csj-sjc/principles-principes.html
- Fisheries and Oceans Canada and Canadian Coast Guard Reconciliation strategy: https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/reconciliation-eng.html
- Reconciliation, partnerships and Indigenous fisheries in British Columbia and Yukon: https://www.pac.dfo-mpo.gc.ca/reconciliation/reconciliation-pacific-pacifique-eng.html
- Information on the Government of Canada's work to advance reconciliation: https://www.rcaanc-cirnac.gc.ca/eng/1400782178444/1529183710887
- Canada's Collaborative Modern Treaty Implementation Policy: https://www.rcaanc-cirnac.gc.ca/eng/1672771319009/1672771475448

FSC and Treaty Domestic Fisheries

DFO remains committed to respecting First Nations' Aboriginal right to fish for food, social and ceremonial (FSC) purposes, or domestic purposes under Treaty which has priority – after conservation – over other uses of the resource. Section 35(1) of the *Constitution Act* recognizes and affirms the existing Aboriginal and Treaty rights of the Aboriginal peoples in Canada. However, it does not specify the nature or content of the rights. In 1990, the Supreme Court of Canada issued a landmark ruling in the Sparrow decision, which found that the Musqueam First Nation has an Aboriginal right to fish for FSC purposes. The Supreme Court found that where an Aboriginal group has a right to fish for FSC purposes, it takes priority after conservation over other uses of the resource. The Supreme Court has also indicated the duty to consult with Aboriginal peoples when their fishing rights might be affected. The Aboriginal Fisheries Strategy (AFS) was implemented in 1992 to address several objectives related to First Nations and their access to the resource: https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/afs-srapa-eng.html.

These include:

- Improving relations with First Nations
- Providing a framework for the management of the First Nations fishery in a manner that was consistent with the Supreme Court of Canada's 1990 *Sparrow* decision
- Greater involvement of First Nations in the management of fisheries
- Increased participation in commercial fisheries (Allocation Transfer Program (ATP))

In addition to consultation, planning and implementation of fisheries, and the development of capacity to undertake fisheries management, stock assessment, enhancement and habitat protection programs, AFS continues to be one of the principal mechanisms, in addition to Treaties and reconciliation agreements, to support the development of relationships with First Nations.

Treaties and Reconciliation Agreements

Treaties and Self Government Agreements

There are currently four modern treaties with eight First Nations in British Columbia, which all have fisheries chapters: Nisga'a Final Agreement, Tsawwassen First Nation Final Agreement (TFA), Maa-nulth First Nations Final Agreement (MNA), and Tla'amin (Sliammon)ʔaʔǰɯnxʷegəs ("Tla'amin Treaty") . Through these treaties, Nations work with DFO to manage treaty fisheries on an annual basis. There are also historic treaties in British Columbia (Douglas Treaties and Treaty 8). The Douglas Treaty right to 'fish as formerly' was affirmed by Canadian courts through *Claxton v. Saanichton Bay Marina (1989)*.

Eleven of the Fourteen Yukon First Nations have Final and Self-Government Agreements derived from the Umbrella Final Agreement (Champagne and Aishihik First Nations, First Nation of Na-cho Nyäk Dun, Teslin Tlingit Council, Vuntut Gwitchin First Nation, Little Salmon/Carmacks First Nation, Selkirk First Nation, Tr'ondëk Hwëch'in, Ta'an Kwäch'än Council, Kluane First Nation, Kwanlin Dün First Nation, Carcross/Tagish First Nation). There are also two Transboundary treaties: the Gwich'in and Inuvialuit of the Northwest Territories have land claim agreements that identify their land and rights in Yukon. Many of these treaties have fisheries provisions.

A detailed list of final agreements relating to Comprehensive Land Claims and Self Government is provided at: https://www.rcaanc-cirnac.gc.ca/eng/1100100030583/1529420498350

Kitselas and Kitsumkalum First Nations have both ratified their Treaties in 2025, with Provincial and Federal ratification processes anticipated to follow. The Effective Date of the Treaties is currently anticipated to take place in 2028. The ratification versions of the Treaties and associated appendices can be publicly accessed via:

https://engage.gov.bc.ca/govtogetherbc/engagement/kitselas-and-kitsumkalum-treaty-negotiations/
Fisheries chapters in modern treaties articulate a treaty fishing right for domestic purposes that is protected under Section 35 of the *Constitution Act*, 1982. In addition, some modern treaties contain provisions that enable those Treaty First Nations to make laws relating to certain internal aspects of their fisheries. Negotiated through a side agreement, some modern treaty First Nations have commercial access through a Harvest Agreement outside of the constitutionally protected treaty.

Reconciliation Agreements

In addition to negotiating treaties, the Government of Canada and Indigenous peoples can also negotiate Recognition of Indigenous Rights and Self-Determination agreements, to explore new ways of working together to advance the recognition of Indigenous rights and self-determination. These agreements are led by Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). DFO can also negotiate Fisheries Resources Reconciliation Agreements directly with First Nations to enhance collaborative governance between First Nations and DFO on management of fisheries, marine and aquatic matters.

Reconciliation agreements work within the legislative framework of the *Fisheries Act*. The Act provides the Minister of Fisheries and Oceans with the legislative authority for the proper management and control of the fisheries, the conservation and protection of fish, and regulation of the fishery.

Since 2019, the Government of Canada has entered into reconciliation agreements that include substantive commitments the Parties have agreed to implementing and that govern the relationship between the Parties for its term of the agreement.

As DFO and First Nations develop and implement new fisheries and collaborative governance arrangements, DFO works with these Nations to engage neighbouring First Nations and stakeholders (e.g. commercial and recreational sectors).

See the BC Treaty Commission at https://www.bctreaty.ca/, and CIRNAC for more information on current treaty tables and RIRSD tables at https://www.cirnac-rcaanc.gc.ca/eng/1100100030285/1529354158736#chp2

For more information on fisheries reconciliation agreements, see**:** Long-term fisheries arrangements in British Columbia and Yukon | Pacific Region | Fisheries and Oceans Canada

Right-based fisheries
Five Nuu-chah-nulth First Nations located on the west coast of Vancouver Island - Ahousaht, Ehattesaht, Hesquiaht, Mowachaht/Muchalaht, and Tla-o-qui-aht (the five Nations) – have aboriginal rights to fish for any species, with the exception of Geoduck, within their court-defined Fishing Territories and to sell that fish.

The *2023/24 Five Nations Multi-species Fishery Management Plan* (FMP) outlined the fishing opportunities for the five Nations to exercise their rights to harvest and sell salmon, groundfish, crab, prawn, gooseneck barnacles, and sea cucumber. The FMP was extended to March 31, 2025 while the Government of Canada and the five Nations completed negotiations for an *Incremental Reconciliation Agreement for Fishery Resources* (IRAFR).

The IRAFR finalized in 2024 is a two-year agreement providing the framework for an effective and collaborative approach to governance, management and planning of the five Nations' fisheries resources. The agreement recognizes that the five Nations, through their respective ha'wiih (hereditary leadership) and elected leadership, have a role in the management of fisheries in their territories. In response to the Nations' interests, DFO and the five Nations authorized an extension of the Nations' fishing area from 9 nautical miles offshore to 69 nautical miles, effective July 17, 2024.

The IRAFR also provides funding to the five Nations for implementation, capacity building, and to acquire commercial fishing access. It sets out mechanisms for a Community-Based Economic Fishery plan, including shared goals and objectives to support the development of healthy, self-reliant and sustainable fisheries for the five Nations that will contribute to the local and Canadian economy.

The extended 2023/24 FMP is available here: https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/41253413.pdf

Indigenous Community Based Fisheries

As outlined in the DFO-Coast Guard Reconciliation Strategy (https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/reconciliation-eng.html), the Department is committed to reconciliation with First Nations through strengthened Indigenous-Crown relationships, recognizing self-determination and reducing socio-economic gaps. In support of these objectives, DFO and several First Nations have finalized, or are negotiating, reconciliation agreements that include provisions for Community Based Fisheries.

Community Based Fisheries (CBFs), including Community Based Economic Fisheries (CBEFs), are collaboratively-managed (by DFO and First Nations) sale fisheries that are designed to enable enhanced community participation by supporting First Nations to fish existing commercial fishing access with management flexibilities that are not available in the general commercial fishery. CBFs will have a defined area and will be characterized by fishery management measures that are consistent with community objectives of enhanced participation and self-determination in fisheries, and will be designed and implemented to ensure conservation, sustainable use and orderly fishery management.

As DFO and First Nations develop and implement new fisheries and collaborative governance arrangements, DFO works with these Nations to engage neighbouring First Nations and stakeholders (e.g., commercial and recreational sectors).

Recreational

The recreational fishery is open year-round (except for areas closed to fishing) and is an open entry fishery with a daily bag limit, two-day possession limit and gear limits. The recreational catch is limited to 12 per day (all urchin species combined). There is no size limit for recreational harvesters and the type of gear permitted is limited to hand picking only.

Commercial

The commercial licence year is from August 1 to July 31 of the following year. The fishery may open and close during that timeframe based on market demand and completion of area quotas. The majority of Urchin landings occur between October and February when roe quality is at its best. Harvest is by hand picking while diving.

The Urchin fisheries operate under a Total Allowable Catch (TAC) with Individual Quotas (IQ). All commercial landings are tracked using a Dockside Monitoring Program (DMP). Other management measures include limited entry licensing, a minimum size limit and area quotas. For a full description of management measures please see Appendix 1 and 5.

Governance

The Urchin fisheries are governed by the *Fisheries Act* (R.S., 1985, c. F-14) and regulations made thereunder, including the *Fishery (General) Regulations* (e.g. conditions of licence), the *Pacific Fishery Regulations* (e.g. open times), the *British Columbia Sport Fishing Regulations*, the *Aboriginal Communal Fishing Licences Regulations*, *Marine Mammal Regulations* and the *Pacific Aquaculture Regulations*. Areas and Subareas are described in the *Pacific Fishery Management Area Regulations*.

Marine Protected Areas (MPAs) may be established under the *Oceans Act* (1996, c. 31). National Marine Conservation Areas may be established under the *Canada National Marine Conservation Areas Act* (2002, c. 18). Marine National Wildlife Areas may be established under the *Canada Wildlife Act* (1985, c. W-9).

Species listed as extirpated, endangered, threatened or special concern are governed by the *Species At Risk Act* (2002, c. 29) (SARA) which has implications for the management of fisheries that impact listed species. In addition to prohibitions under the *Fisheries Act*, it is illegal under the SARA to kill, harm, harass, capture, take, possess, collect, buy, sell or trade any listed endangered or threatened animal or any part or derivative of an individual.

These documents are available on the internet at: https://www.dfo-mpo.gc.ca/acts-lois/index-eng.htm

More information on the SARA is available at: https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html

Scientific advice for this fishery is peer-reviewed primarily through a committee called the Canadian Science Advisory Secretariat (CSAS). Information about the CSAS and publications are available at: http://www.dfo-mpo.gc.ca/csas-sccs/index-eng.htm

Consultation

A consultative process exists for the Urchin fisheries and is a major part of the planning for the fishery. The primary consultative process is the Urchin Sectoral Committee. This committee invites representation from Fisheries and Oceans Canada, commercial vessel owners, processors, First Nations, BC Ministry of Water, Lands, and Resource Stewardship and recreational fish harvesters. Members of the Pacific Urchin Harvesters' Association (PUHA) represent commercial fish harvesters on this committee. However, at this time there is no restrictions on participation in the advisory processes for these fisheries and advice can be provided directly to managers for those who cannot participate.

The Sectoral Committee typically meets annually in the spring prior to the new Integrated Fisheries Management Plan (IFMP) to review and provide advice to the Department regarding management issues pertaining to the fishery and on the proposed IFMP. The Sectoral Committee and Research Subcommittee terms of reference and meeting calendar are available from the Resource Managers listed in Contacts.

Bilateral meetings with First Nations including through Treaty processes and Reconciliation Agreements are also part of the consultation process.

The draft IFMP incorporates any new science advice and all practical advice on quota options, and is made available to all interested parties: PUHA, First Nations, recreational organizations, DFO (Science Branch, Conservation and Protection, Commercial Licensing, the Oceans Directorate, the Aquaculture Division, Negotiations and Implementation Division, Policy Branch), and the Province (Ministry of Environment and Parks) for review and comment.

Once the IFMP is finalized it then progresses through an internal DFO approval process.

Approval Process

The Regional Director General for the Pacific Region approves this plan.

SCIENCE

Biological Synopsis

Red Urchin

Red Sea Urchins (*Mesocentrotus franciscanus*) occur in waters from Baja California to Alaska and from the Aleutian Islands to Hokkaido Island, Japan. It is the largest of five species of sea urchins occurring in B.C. Red Sea Urchins are usually found on rocky substrates in shallow water areas of moderate to strong currents, typically from the intertidal zone to depths of 50 metres, although some individuals occur as deep as 284 metres (Lowe and Galloway 2020).

Red Sea Urchins have separate sexes, mature at about 50 mm test diameter (TD), and recruit into the fishery at 85 mm TD. Reproduction occurs annually with timing of the spawning season varying from March to September depending on local environmental conditions such as food availability and temperature. Gonads increase in size usually from September to January. Mature males and females release eggs and sperm into the water and fertilization success will depend on local density of adults and dilution of gametes. The larvae are planktonic for at least 6 to 9 weeks prior to settlement on suitable habitat but can remain planktonic for longer periods in response to factors such as food availability (Rogers-Bennett and Okomoto 2020). Juvenile (4-50 mm TD) density is known to be high in areas of high adult densities due to the protection provided by the spine canopy of adults (Zhang et al. 2011). This juvenile-adult association may be important to the recruitment success of juveniles to legal size. Red Sea Urchins can live to well over 100 years old. Large specimens (over 19 cm in test diameter) found in parts of B.C. may be around 200 years old (Ebert and Southon 2003)

Green Urchin

Green Sea Urchins (Strongylocentrotus droebachiensis) are a benthic invertebrate with a wide geographic distribution, occurring in cool temperate circumpolar waters of the Atlantic and Pacific oceans. In the Pacific, they occur from northern Washington State, through the Aleutian Islands, Alaska, and west to the Korean Peninsula, Kamchatka, Russia and Hokkaido, Japan. Green Sea Urchins occur intertidally and subtidally to depths of over 140 metres. Preferred habitat is rocky, gravel or shell substrates. Kelp and marine algae are their principal food, and Green Sea Urchins are an important food source for sea stars (especially the sunflower sea star *Pycnopodia helianthoides*), crabs, large fish (including wolf eels *Anarrhichthys ocellatus*), and sea otters (*Enhydra lutris).*

Green Sea Urchins have separate sexes and are broadcast spawners. Spawning is seasonal and varies by region, occurring from February to March in B.C. The larval period can last from 7 to 22 weeks. In southern B.C., Green Sea Urchins reach sexual maturity at a test diameter of about 25 mm (Waddell et al., 2003) and the previous legal size was 55 mm, which in Alaska correspond to 2-3 year olds and 4 year olds, respectively (Munk 1992). Growth is highly variable and is dependent on food supply and environmental conditions.

Ecosystem Interactions

Kelp forests are some of the most productive and complex marine habitats and support many species of fish and invertebrates. Although Urchins have a diverse diet, kelp is one of their preferred foods. Once Urchin populations reach a certain threshold, they tend to aggregate and form high density fronts along the edge of the kelp forest and graze through it, potentially destroying the kelp forest. If this occurs, the area becomes urchin-dominated grounds (known as ‘urchin barrens’), with a high density of crustose coralline

algae (Harrold and Pearse 1987). This leads to a simplification of the habitat and food webs, and consequent lowering of the productivity and species diversity in nearshore waters (Hagen 1983). The abundance of urchins alone is not enough to explain the grazing intensity of urchin populations (Harrold and Pearse 1987), and the switch to an active feeding mode depends on many factors, including the availability of drift algae in the area.

Sea urchins are eaten by sea stars and crabs, although large adults appear to be less susceptible to predation by virtue of their size and have fewer predators. Sea urchins are a main food source for Sea Otters (*Enhydra lutris*) and even the largest sea urchins are eaten by these marine mammals. Sea Otters use rocks as a tool to crack open urchin tests. Sea Otters have had a significant impact on Red Sea Urchin populations in certain areas of B.C. (e.g. Curtis and Leus 2022). The commercial Green Sea Urchin fishery occurs in areas mostly void of sea otters however Sea otter expansions into some of these areas is being observed and decreases in the abundance of Red and Green Sea Urchin stocks in the future is possible.

The presence of sea urchins is considered a habitat attribute for Northern Abalone (*Haliotis kamtschatkana*) in British Columbia (COSEWIC Assessment and Update Status Report on the Northern Abalone 2009). Abalone larval settlement is thought to occur on encrusting coralline algae. The layer of encrusting algae may be maintained by sea urchins and other herbivores which, by grazing, prevent the growth and settlement of algae and sessile invertebrates.

Stock Assessment

Fisheries and Oceans Canada stock assessment activities continue coastwide through the Multispecies Benthic Marine Invertebrate Dive Survey, MSBIDS (also discussed in section 2.6). The DFO co-ordinates vessel and diver participation in surveys with First Nations communities. The main survey goals are to estimate density and size frequencies of benthic marine invertebrate populations, including Red and Green Sea Urchins, along the coast. Scientific research and stock assessment surveys are of vital importance to these fisheries as it continues to be managed by the precautionary approach to Canadian fisheries and towards a biologically based fishery.

The Science Branch of Fisheries and Oceans Canada and the Pacific Urchin Harvesters Association (PUHA) continue to conduct joint stock assessment surveys at selected study sites (since 1995) to obtain fishery-independent information on Green Sea Urchins. Fisheries and Oceans Canada developed the survey protocol, conducts the lab and data analyses, and prepares a report of the survey results. See Appendix 5 for more detail.

Stock Scenarios

Both Red and Green Sea Urchin fisheries are managed conservatively and both stocks are healthy. A precautionary approach to management, which ensures the Department is meeting its conservation goals, will continue for the future. This in turn, will ensure sustainable harvests in all areas. The long-term goal of the Department is to improve the assessment and management frameworks through a better understanding of the resource. This will be accomplished through a collaborative process involving First Nations organizations, the commercial industry, other stakeholders and the Department.

The Urchin fisheries are gonad (roe) fisheries. Population levels in most areas are higher than can be supported by the available food (kelp) and, as a result, many of the Urchins have poor or no gonad development. Since only those individuals with the highest quality gonads are targeted by the fishery, there is a natural reserve of animals that remain after commercial harvest that consists of urchins smaller than the minimum size limit and urchins with poor quality gonads. Urchins that are located in cracks and crevices and at deeper than safe diving depths, are inaccessible to harvesters, and represent additional reserves.

In some areas of the B.C. coast very high densities of Urchins exist which may negatively impact ecosystem function (see sections 2.2 and 5.5).

There is no indication of a conservation concern for the Red Sea Urchin stock at this time. Preliminary assessment suggests that the coastwide stock is above the limit reference point and upper stock reference and in the healthy zone (Lochead et al. 2023).

The Red Sea Urchin fishery is managed conservatively, and only a few areas have been closed or quotas reduced in response to declining abundances due to Sea Otter predation. A precautionary approach to management, which ensures the Department is meeting its conservation goals, will continue for the foreseeable future. This, in turn, will ensure sustainable harvests by all user groups. The long-term goal of the Department is to increase the biological basis of the management regime through continued research on the Red Sea Urchin resource. This will be accomplished through a collaborative process involving the commercial industry, First Nations organizations and others with an interest in the resource.

Sea Otter populations are expanding in B.C. and, as Sea Otters are a major predator on Sea Urchins, they have had an impact on Red Sea Urchin populations in certain areas of B.C. The main Sea Otter populations exist along the West Coast of Vancouver Island, Northern Vancouver Island and the central portion of the mainland coast. Sea Otter predation on Red Sea Urchins has led to the closure of some quota areas or reduction in quota along these areas of the coast (Curtis and Leus 2022). Sea Otters are expected to continue their expansion along the B.C. coast and, over time, this will cause a greater and greater impact on the Urchin industry in B.C.

There is no indication of a conservation concern for Green Sea Urchin stocks at this time. A recent stock assessment (DFO 2025) indicated that the CPUEs (catch per unit of effort) for both the Northern and Southern Vancouver Island regions have increased marginally since the last assessment, but remain higher than in the early years of the fishery. Recent fishery-independent survey data indicate that densities are high for all size categories.

Precautionary Approach

The Sustainable Fisheries Framework (SFF) is a toolbox of policies to ensure that Canadian fisheries support conservation and sustainable use of resources.

These policies include:

- *Fishery Decision-Making Framework Incorporating the Precautionary Approach*
    - Guidelines for Implementing the Fish Stocks Provisions in the *Fisheries Act*
    - Guidelines for writing rebuilding plans per the Fish Stocks Provisions and A Fishery-Decision-making Framework Incorporating the Precautionary Approach
- *Fishery Monitoring Policy*
    - Introduction to the procedural steps for implementing the Fishery Monitoring Policy
- *Policy for Managing the Impacts of Fishing on Sensitive Benthic Areas*
    - Ecological Risk Assessment Framework (ERAF) for Coldwater Corals and Sponge Dominated Communities
- *Policy on Managing Bycatch*
- *Policy on New Fisheries for Forage Species*
- *Canada's Policy for Conservation of Pacific Salmon* (Wild Salmon Policy)

For more information on the Sustainable Fisheries Framework and its policies, visit: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/overview-cadre-eng.htm

Sustainability Surveys for Fisheries: DFO annually tracks the performance of key fish stocks that it manages through the Sustainability Survey for Fisheries. Results of previous Sustainability Surveys are available at: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/survey-sondage/index-en.html

***Sustainable Fisheries Framework work plans*:** Each year, DFO develops a work plan and reports on priorities and targets regarding the sustainable management of Canada's marine resources. These work plans are available at: https://www.dfo-mpo.gc.ca/about-notre-sujet/publications/work-plan-travail/index-eng.html

Precautionary Approach Framework

The Sustainable Fisheries Framework policy suite includes a decision-making framework incorporating a precautionary approach to commercial, recreational, and food, social, and ceremonial fishing: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/precaution-eng.htm

The precautionary approach in fisheries management requires caution when scientific knowledge is uncertain. The absence of adequate scientific information should not result in postponed action or failure to take action to avoid the risk of serious harm to the resource.

Applying the precautionary approach to fisheries management decisions entails establishing harvest strategies that:

- identify three stock status zones – Healthy, Cautious, and Critical – delineated by an upper stock reference point and a limit reference point;
- set the removal rate at which fish may be harvested within each stock status zone; and
- adjust the removal rate according to fish stock status (i.e. spawning stock biomass or another index/metric relevant to population productivity), based on pre-agreed decision rules.

The framework requires that a harvest strategy be incorporated into respective fisheries management plans to keep the removal rate moderate when the stock status is in the Healthy Zone, to promote rebuilding when stock status is low, and to ensure a low risk of serious or irreversible harm to the stock.

A key component of the *Precautionary Approach Framework* requires that when a stock has declined to the Critical Zone, a rebuilding plan must be in place with the aim of having a high probability of the stock growing out of the Critical Zone within a reasonable timeframe: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/precautionary-precaution-eng.htm

Fisheries Act: Fish Stock Provisions

Amendments to the *Fisheries Act* (Bill C-68) were passed into legislation in 2019 and include new authorities to amend the *Fishery (General) Regulations* and requirements to maintain major fish stocks at sustainable levels, and to develop and implement rebuilding plans for stocks that have declined to their critical zone. Amendments are available at: https://www.parl.ca/LegisInfo/en/bill/42-1/C-68

Associated regulatory amendments to prescribe major fish stocks and describe requirements for rebuilding plans are published in the Canada Gazette. Available at: https://gazette.gc.ca/accueil-home-eng.html. For latest publications, enter the search terms "fish stock" or "rebuilding plan" into the *Find a publication* box on that website.

Major fish stocks are defined in Schedule IX, and requirements for rebuilding plans are described in Part XIV (Fish Stocks Provisions) of the *Fishery (General) Regulations*. Available at: https://laws-lois.justice.gc.ca/eng/regulations/SOR-93-53/index.html

Fishery Monitoring and Catch Reporting

DFO released the national *Fishery Monitoring Policy* in 2019, which replaces the regional *Strategic Framework for Fisheries Monitoring and Catch Reporting* in the Pacific Fisheries (2012). The national policy seeks to provide dependable, timely and accessible fishery information through application of a common set of steps used to establish fishery monitoring requirements across fisheries. Available at: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/fishery-monitoring-surveillance-des-peches-eng.htm

From 2023 to 2028, Pacific Region is pursuing a project-based approach to implementation of the national Fishery Monitoring Policy, with a focus on the recreational fishery.

Further guidance on implementation of the national Fishery Monitoring policy is available at:

https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/fmp-implementation-psp-mise-en-oeuvre-eng.htm

For more information on the 2012 Pacific *Strategic Framework for Fisheries Monitoring and Catch Reporting,* please visit: https://www.pac.dfo-mpo.gc.ca/fm-gp/docs/framework-monitoring-cadre-surveillance-eng.html

See Appendix 8 for more detail on Urchin catch monitoring and reporting.

Policy for Managing the Impacts of Fishing on Sensitive Benthic Areas

To avoid serious or irreversible harm to sensitive benthic habitat, species and communities and to otherwise address impacts to benthic habitat, communities and species, this policy outlines a five step process. Available at: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/benthi-eng.htm

Ecological Risk Assessment Framework & Cold-Water Coral and Sponge Conservation Strategy

The *Ecological Risk Assessment Framework for Coldwater Corals and Sponge Dominated Communities* (or ERAF) outlines a process for identifying the level of ecological risk of fishing activity and its impacts on sensitive benthic areas in the marine environment. Available at: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/risk-ecolo-risque-eng.htm

DFO's *Pacific Region Cold-water Coral and Sponge Conservation Strategy* aims to promote the conservation, health and integrity of Canada's Pacific Ocean cold-water coral and sponge species. For more information, visit: https://www.dfo-mpo.gc.ca/oceans/ceccsr-cerceef/conservation-eng.html

Policy on Managing Bycatch

The *Policy on Managing Bycatch* supports sustainable fisheries management by minimizing the risk of fisheries causing serious or irreversible harm to bycatch species, and by accounting for total catch,

including retained and non-retained bycatch. Available at: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/bycatch-policy-prise-access-eng.htm

The *Guidance on Implementation of the Policy on Managing Bycatch* supports policy implementation: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/bycatch-guide-prise-access-eng.htm

Policy on New Fisheries for Forage Species

While other new fisheries may be started under the *New and Emerging Fisheries Policy*, this policy outlines the special considerations for new fisheries on forage species, which must not threaten the conservation of other species that depend on the forage species for food. Available at: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/forage-eng.htm

Research

Red Sea Urchin

In 2019, the Centre for Science Advice Pacific published a peer-reviewed paper on a range of harvest rates for use in areas of the coast not yet impacted by Sea Otter predation (Lochead et al. 2019). The harvest rate currently in use for the commercial fishery is a generic conservative harvest rate for use in data-limited fisheries. B.C.'s Red Sea Urchin fishery is not a data-limited fishery. Over the last twenty years, the PUHA, DFO, and First Nations have worked together on research projects. Results collected from these projects were used in the development of Curtis and Leus 2022, Lochead et al. 2019, Zhang et al. 2011, and Zhang et al 2008. Harvest rate recommendations from the paper are incorporated into the management of the Red Sea Urchin fishery after further consultation with First Nations and Industry.

Current research is focused on the implementation of the multi-species benthic invertebrate monitoring program. This program was designed to collect the data necessary to evaluate the coastwide stock status for multiple benthic invertebrate stocks, as described in Section 2.6 above.

Green Sea Urchin

An understanding of the biology of Green Sea Urchins and the impacts of commercial harvest on Green Sea Urchin populations is required to ensure conservation and sustainable harvests while optimizing potential production in this fishery. Studies have included experimental growth and behavioural studies in the lab, developing reliable ageing techniques and conducting transect-quadrat surveys in various locations of the B.C. coast. From these fishery-independent surveys, information is gathered on variations in population size distributions (for the whole size range, including sublegal-sized Green Sea Urchins), population densities, preferred habitats (depth, substrate, and vegetation), length (or test diameter)-weight relationships and gonad (roe) weight and quality. DFO Science has recently developed a multispecies benthic invertebrate dive survey protocol that is intended to gain efficiencies by surveying multiple commercial species at once (Lochead et al. 2023). The survey design will allow more spatial and temporal coverage than is possible under the current single species approach, and may enable the monitoring of stock abundance over time.

DFO Science is also undertaking research into developing robust management approaches and population and genomic connectivity for a few species of benthic marine invertebrates, including Green Sea Urchin.

3. INDIGENOUS KNOWLEDGE

There is no universal definition of Indigenous Knowledge. It is intricately tied to Indigenous worldviews and ways of life, and its composition is determined by Indigenous Peoples. The term “Indigenous Knowledge” is a generally accepted and is consistent with the United Nation’s Declaration on the Rights of Indigenous Peoples as well as language in federal legislation. Other synonymous terms include Indigenous Knowledge Systems, Traditional Knowledge, Inuit Qauijimajatuqangit, Métis Traditional Knowledge, Traditional Ecological Knowledge, and Aboriginal Traditional Knowledge.

In 2019, the *Fisheries Act* was amended to include provisions for where the Minister may or shall consider Indigenous Knowledge that has been provided in making decisions pertaining to fisheries, fish and fish habitat. Section 61 of the Act ensures this knowledge is protected and can only be shared with consent. There are also provisions under the *Species At Risk Act* (s.10.2, s.15.2, s.16, s.18.1) that support inclusion of Indigenous Knowledge to inform the assessment and protection of species at risk. Likewise, the *Oceans Act* (s.42) allows the Minister to consider Indigenous Knowledge in oceans related decisions.

In June of 2023, the Department of Justice released the *United Nations Declaration on the Rights of Indigenous People’s Act* Action Plan outlining the Government of Canada’s five-year plan to begin implementing the Act. DFO was identified to lead 11 of the measures in the Action Plan, including Measure 40 pertaining specifically to inclusion of Indigenous Knowledge in the management of fisheries, fish habitat, conservation, marine safety and protection of the marine environment. DFO is committed to implementing this measure in collaboration with Indigenous Peoples.

The Government of Canada and the scientific community acknowledge the need to ensure Indigenous Knowledge, worldviews, values, and priorities are considered and holistically integrated into scoping, assessment, and monitoring components of decision-making.

Work is underway at a national level to develop a comprehensive approach to support the respectful consideration, integration, and safeguarding of Indigenous Knowledge within departmental programs, policies and decision-making processes. However, DFO recognizes that meaningful and respectful inclusion of Indigenous Knowledge in decision making processes will not follow a one-size-fits-all approach. Given the diversity of knowledge and relationships, regional work will involve an iterative process in collaboration with First Nations, Inuit and Métis peoples, Indigenous organizations, and knowledge holders, to ensure appropriate inclusion and protection of the knowledge provided. Many outstanding questions remain on how to move forward in a way that respects, meaningfully incorporates, and protects the knowledge that may be shared with DFO, to mutual benefit. For example, how to engage knowledge holders, and how to ensure that the knowledge can be shared and considered in a mutually acceptable manner by both knowledge holders and the broader community of First Nations, stakeholders, managers, and policy makers involved in the fisheries. DFO is committed to finding a way forward that respects the knowledge and the knowledge holders, and upholds the Principles respecting the Government of Canada's relationship with Indigenous Peoples, which are available online at: https://www.justice.gc.ca/eng/csj-sjc/principles-principes.html.

Some areas where DFO staff are working with knowledge-holders to incorporate Indigenous Knowledge, include (but are not limited to):

- Regulatory authorizations for projects that impact fish and fish habitat
- Aquaculture and fisheries management
- Scientific research, monitoring, and assessment
- Marine safety and ecosystems protection
- Marine conservation measures (e.g., marine protected areas)
- Training and professional development

For more information on the updates to the *Fisheries Act*: https://www.dfo-mpo.gc.ca/campaign-campagne/fisheries-act-loi-sur-les-peches/reconciliation-eng.html

See Sections 2.5, 34.1, and 61.2 in the *Fisheries Act* (2019): https://laws-lois.justice.gc.ca/eng/acts/f-14/.

Section 61.2 protections for Indigenous Knowledge have also been included in the *Access to Information Act*, Schedule 2: https://laws-lois.justice.gc.ca/eng/acts/a-1/page-15.html#h-1230

See the full *UN Declaration Act* Action Plan (2023): United Nations Declaration on the Rights of Indigenous Peoples Act Action Plan (justice.gc.ca)

ECONOMIC PROFILE OF THE FISHERIES

The intent of this section is to provide a socio-economic context for the Urchin fisheries in B.C. An overview of the First Nations, recreational and commercial sectors of the fishery is provided.

First Nations

First Nations are interested in fisheries related economic opportunities. Currently one (1) of the 49 (2%) commercial Green Sea urchin licence eligibilities and thirty-one (31) of the 110 (28%) commercial Red Sea Urchin licence eligibilities are held by First Nations for participation in the commercial fisheries. In the past, the Allocation Transfer Program (ATP) and the Pacific Integrated Commercial Fisheries Initiative (PICFI) had retired existing commercial licence eligibilities from fish harvesters on a voluntary basis and reissues them to eligible First Nation organizations and Indigenous community-owned Commercial Fishing Enterprises (CFEs) as communal commercial licences.

For more information on the Aboriginal Fisheries Strategy (AFS) ATP, contact the resource manager listed in Appendix 11 or see the internet at:

https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/afs-srapa-eng.html

More information on the PICFI is available on the internet at:

http://www.pac.dfo-mpo.gc.ca/fm-gp/picfi-ipcip/index-eng.html

Recreational

Recreational fishing may occur to provide food for personal use, as a leisure activity, or as a combination of the two. The recreational community includes local residents, multi-species charter operators and lodges, and visiting anglers and boaters. In the 2024/25 recreational angling season, 349,000 adult fishers licensed to fish in B.C.'s tidal waters recreational fishery. These activities provide a range of benefits to the participants as well as contribute directly and indirectly to economic activity.

Recreational interest in harvesting shellfish species is directed mainly at crab, clam, prawns and shrimp. The recreational harvest of Urchins is believed to be minimal, supported by data from iREC reporting program and Sport Fishery Advisory Boards.

Commercial

Red Sea Urchin

The Pacific Region is home to the only commercial Red Sea Urchin fishery in Canada. Red Sea Urchins are harvested by divers and are either delivered whole for export or further processed, where gonads are extracted, treated and sold as a specialty product in parts of Asia, Europe and North America.

Fishery characteristics differ between the north coast and south coast licence areas. The majority of Red Sea Urchin quota (77%) and landings (59%) were attributable to the north coast licence area in 2023. This distribution is due to higher availability of quota in the north coast, which leads to greater licence availability in the south coast area. Most fishing in the north coast occurs in remote areas and in order to make fishing economical, multiple vessels fish together in a fleet and offload daily to a packer vessel. The fleet will stay out fishing for weeks at a time and the packer will travel to and from port to offload catch and to bring supplies to the fleet.

In the south coast licence area vessels usually fish individually. Harvesters tend to prefer to fish in the south coast due to increased availability of offloading ports close to productive fishing areas allowing harvesters to fish during the day and return home in the evening.

Many Red Sea Urchin vessels also participate in other dive fisheries, including Green Sea Urchin, Sea Cucumber and Geoduck. Of the 39 vessels active within the 2023 fishery (vessels with >0 landings), 23 (59%) were active under other licences. These licences included Sea Cucumber, Green Sea Urchin, Prawn and Shrimp by Trap and Geoduck and Horse Clam.

Viability and Market Trends

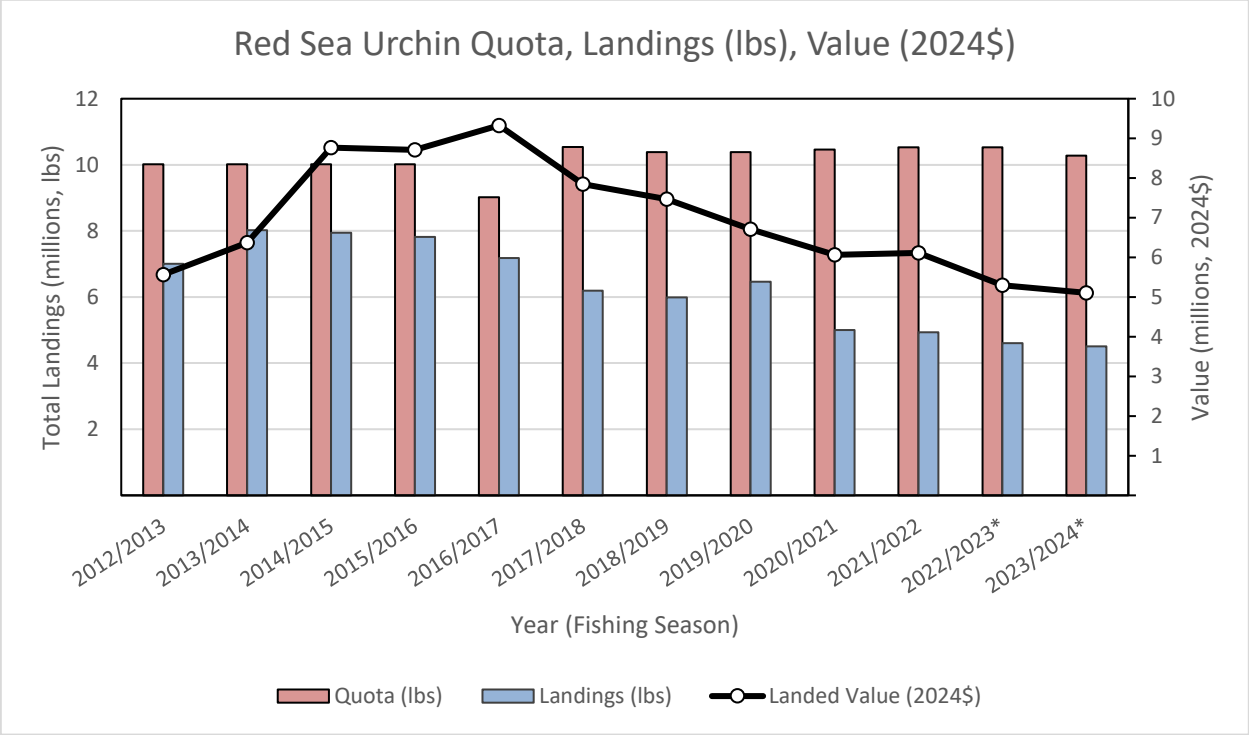
The commercial fishery operates year-round with the highest market demand being in December and March. In the summer months the fishery slows down considerably since gonad quality decreases substantially as the sea urchins begin to spawn.

From the historic peak of landings in 1992 (approximately 27.5M lbs.), the market demand for B.C. Red Sea Urchin decreased drastically with landings dropping to below 50% of the Total Allowable Catch (TAC) between 2006 and 2011, and again since 2020 (2023: 44% of TAC). Fishery participation has also declined during this period, affecting the Pacific Urchin Harvesters Association (PUHA) revenues and funding for monitoring programs and market initiatives.

Landed weight in the fishery increased from 2010-2015, hitting a 10-year high of 8.6M lbs. Beginning in 2016, there was a gradual decline in RSU landed weight observed over the subsequent years, with the trend continuing until 2023 when it reached its lowest point at 4.37M lbs. 2023 marked the year with the lowest total landed weight and the second lowest value ($6.3M) in the RSU fishery from 2012 to 2023. Landed weight declined an estimated 11% in 2023 compared to the previous year, and equated to only 67% of the previous 10-year average (6.5M lbs. ; 2013-2022). Reasons cited for these declines include increases in Sea Otter predation, particularly on the West Coast of Vancouver Island, as well as fishery complications from weather disruptions, particularly in the North.

Fishery landed value has closely tracked landed weight in recent years, with prices averaging $1.42 per lb. from 2019-2023, and 2020 marking a 10 year high in prices ($1.47 per lb.). The total estimated value of RSU landed in 2023 was 11% lower than in 2022, at an estimated $6.3M. Observed increases in price since 2015 have been due to market diversification, consisting of a decreasing reliance on the Japanese market and an expansion into other countries. Prices cited within industry engagement in 2023 stood at $1.10, reflecting a 14% decrease from the previous 5-year average ($1.28/lbs. ; 2018-2022).

Over the past decade, the coastwide total quota of Red Sea Urchin has remained relatively steady at approximately 10 million pounds. In 2023, 44% of the annual quota has been landed in the fishery. Separating 2023 landed quota by licence area (North/South), only 33% of available quota was landed in the North, compared to 80% of available quota being landed in the South. Many harvesters indicated that the inability to harvest quota in the North Coast region in 2023 was primarily attributable to weather disruptions and higher costs of fishing in the North.



Source: DFO Logbook and Sales Slips and DFO Fisheries Management – multiple years, quota is from Appendix 1 of previous IFMPs and reported by fishing seasons (i.e. August of one year to July of the following year). *Please note that 2022 and 2023 data is preliminary.

Sea Otter predation is impacting quota in some parts of B.C. which led to a decrease in the coastwide TAC in 2016. There are a number of areas (e.g. Haida Gwaii) that are being harvested at well below the commercial harvest rate and the Department may consider increasing quota in these areas in future years. However, it is expected that Sea Otters will have greater and greater impacts on Red Sea Urchin stocks over time.

Japan is the largest consumer of urchin roe and the majority of B.C. product is shipped there as processed roe. The PUHA has been working to develop markets in China, other parts of Asia, Europe, and the United States. Some processors have also been successful in shipping live sea urchins to market, given available logistics. The hope is that live product will increase the value of Red Sea Urchins similar to how the value of Geoduck increased substantially when the B.C. Geoduck industry started shipping live Geoduck clams to Asian markets. Some harvesters have had success selling small amounts of live urchins to the public and to local restaurants in the Vancouver area.

B.C. Red Sea Urchins have been recognized by the Vancouver Aquarium's Ocean Wise program as "Recommended" choice, and as a "Best Choice" by the Monterey Bay Aquarium's Seafood Watch program. Such recommendations create marketing opportunities and raise the profile of Red Sea Urchins in local, domestic, and growing export markets.

The COVID-19 pandemic has had both direct and lasting impacts on the Red Sea Urchin fleet. One example of direct fleet impacts is disruptions to fishing red sea urchins due to the inability of processors/buyers to staff local processing capacity. Overall this has impacted the season by reducing the amount of urchins landed and the number of harvesters taking part in the fishery. Impacts to overseas exports have also been felt by the fleet since the COVID-19 pandemic, due to the reliance of the fleet on international demand for urchin products and the impacts of the pandemic to shipping logistics.

Processing & Exporting

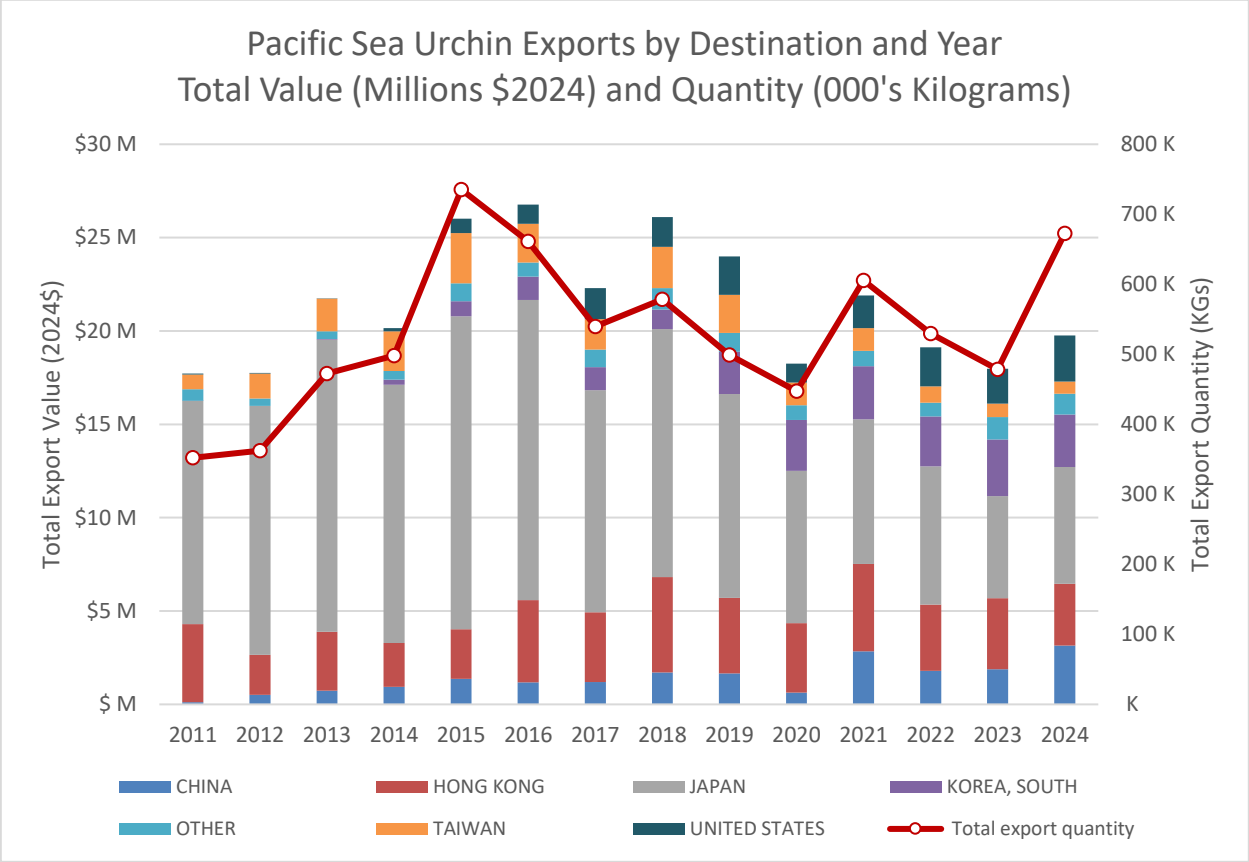
Most of the processing of landed urchins occurs in B.C., contributing an additional source of economic value from the fishery. Data from B.C.'s Annual Fisheries Production Schedule (AFPS) estimates the total wholesale value of Red Sea Urchin products to be $23.0 million in 2023 (value in 2024 dollars). Landed Red Sea Urchins are typically shipped live by truck for processing in Vancouver where the urchin shells (tests) are broken open to remove the roe. Once removed from the urchin, the roe is treated and placed in shallow trays for transit to markets.

A 2017 report, commissioned by DFO to link seafood with processing areas and employment, estimated that the processing of Red Sea Urchins requires 88 hours of labour per metric tonne of product processed (the second most labour intensive seafood after prawns). Attributing these per-unit labor intensities to the 2023 total for RSU processed product, generates an estimate of $4.36M in processing wages and roughly 174,333 labour-hours (equivalent to 89 full-time positions) created through the processing of Red Sea Urchins.

The B.C. Red Sea Urchin industry is primarily an export market. Red and Green Sea Urchins are exported in various forms: either live, fresh, chilled, prepared, or preserved. In 2024, the total value of sea urchin exports from B.C. was $19.8M (2024$). This represents a 10% increase from 2023, and a 2.4% decline from the previous 5 year average (2019-2023). This rise in total export value in 2024 was driven by an increase in the exported quantity (weight), as total kilograms exported increased by 41%. However, the average price per kilogram of Canadian Sea Urchin products exported in 2024 dropped by 22%. Export data since the 2020 season indicates that international demand for Red Sea Urchin may still be lower than prior to the COVID-19 lockdown, which greatly impacted the export of the product to overseas markets. Transportation issues stemming from the pandemic have been cited in difficulties in getting Red Sea Urchin products to market.

Overall, this has impacted the season by reducing the amount of Red Sea Urchin exports. The majority of urchin exports are roe, representing roughly 67% of the value of B.C.'s total urchin exports over the past 5 years (2020-2024). The majority of B.C. sea urchin roe product is shipped fresh or chilled. Japan is the largest global consumer of urchin roe; however, B.C. urchin roe is also shipped to other countries in Asia and Europe. From 2020-2024, B.C. has exported an average of about 173,760 kilograms of processed urchin roe per year, of which 31% went to Japan.

B.C. sea urchin exports to Japan were steadily increasing until 2015, but have since declined. Exports to Hong Kong, South Korea and the United States have increased in recent years.



Source: Statistics Canada (EXIM), 2024.

The Canadian industry has many competitors including the Illegal, Unregulated, Unreported (IUU) fishery in Russia. Russian urchins are fished close to Japan and are therefore delivered to market fresher and cheaper than the higher-priced B.C. roe. The illegal Russian fishery is able to further reduce the price of roe as it does not have the associated management, stock assessment, and shipping costs. There are also commercial Red Sea Urchin fisheries in California, Oregon, Washington, and Alaska. The roe market is a global one, where the harvest and market trends of other fisheries can have an impact on the B.C. Red Sea Urchin fishery.

Green Sea Urchin

Green Sea Urchins are harvested from both the West and East Coast of Canada. Green Sea Urchins on the West Coast of Canada are harvested by divers and sold whole and live, mainly to Japan where it is known as “uni”. The product quality and perishability has restricted the fishery primarily to accessible South Coast areas. The Japanese are the largest consumers of Green Sea Urchin but more recently, sales have increased to local restaurants and the public in B.C. The 2024 Annual Fisheries Production Statistics estimates that the wholesale value of both Red Sea Urchins and Green Sea Urchins was $20.2 million in 2024. The bulk of this value (83%) was from the Red Sea Urchin fishery since the Green Sea Urchin fishery is much smaller, with a wholesale value of approximately $3.4 million[1].

[1] Values are in 2025 dollars.

The Canadian industry has multiple competitors with the largest being the Illegal, Unregulated, Unreported (IUU) fishery in Russia. Russian urchins are fished close to Japan and are delivered to market fresher and are sold cheaper than the higher priced B.C. product. Competing markets, mainly from Russia, are identified as the largest threat to the sustainability of this fishery.

Viability and Market Trends

The best roe typically comes from sea urchins harvested between October and March, after which quality decreases as the sea urchins begin to spawn. The fishery generally operates from September to March with the highest market demand being between November and February.

Pacific coastwide landings of Green Sea Urchin peaked in the 1992 season at approximately 954 tonnes. Since then, annual landings dropped consistently until the 2006/07 season. These drops were initially due to setting of Total Allowable Catch (TAC) but continued to drop due to poor market conditions.

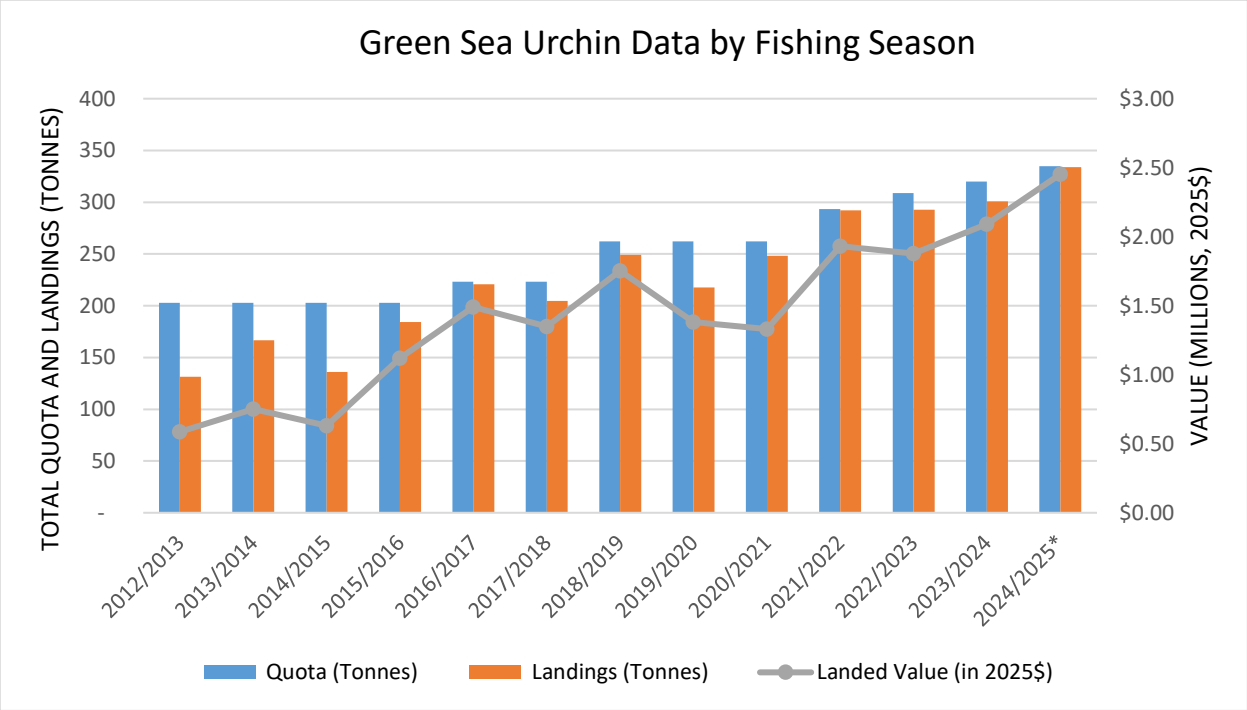
Since 2006/07, landings have trended upwards. The highest landings on record since the 1994 season occurred in the 2024/25 at 334 tonnes (almost 100% of the quota)[2].

Over the past decade, the coastwide TAC of Green Sea Urchin has slowly increased. In the 2016/17 season, it increased to 223 tonnes after remaining constant between the 2006/07 season and 2015/16 season at 203 tonnes. It continued to increase in subsequent years, from 223 tonnes in 2017/18 to 262 tonnes in 2018/19, followed by further incremental increases since, reaching 334.9 tonnes in 2024/25.

The implicit price[3] was relatively constant until 2014, after which it increased, with some fluctuations. Prices declined to a low in 2020/2021 before recovering and continuing an overall upward trend.

2 Green Sea Urchin quota data is from the fisheries manager. Landing data are from DFO logbook (except for 2024/2025 fishing season landing and landed value data, which are taken from the fisheries manager). Fishing season is from Sep to Aug of the following year.

[3] Implicit price is calculated by dividing total landed value by the total landed weight.



Source: Shellfish quota data is from the fisheries manager. Landing and landed value (LV) data are from DFO logbook (except for 2024/2025 fishing season landing and LV data, which are taken from the fisheries manager).
***Note:** 2024/2025 data is preliminary data from fishery management and subject to change. The fishery management data (quota and landings) are recorded in fishing season.

Processing and Exporting

Green Sea Urchins are harvested for their reproductive organs (gonad) or "roe". The annual value of Green Sea Urchins processed in B.C. in 2024 was $3.4 million (2025$), representing an increase of 23% from 2023. In 2024, value-added revenues of $93.6 thousand were generated through local processing mainly in the lower mainland and Vancouver Island, with 6 processors in Richmond and one processor in Victoria engaged in processing these species.

Green Sea Urchins are shipped live and whole. In 2024, the demand for sea urchins (both red and green) was mainly in overseas markets in Japan (41%), followed by China (25%), and, to a lesser extent, Hong Kong (9%), USA (8%) and South Korea (7%)[4]. Percentages are of total volume. The domestic market for Green Sea Urchins is small but increasing with more sales to local restaurants and the public in B.C.

Red Sea Urchin

The Pacific Region is home to the only commercial Red Sea Urchin fishery in Canada. Red Sea Urchins are harvested by divers and are either delivered whole for export or further processed, where gonads are extracted, treated and sold as a specialty product in parts of Asia, Europe and North America.

[4] Source: EXIM 2025, 2024 data are considered preliminary and subject to change.

Fishery characteristics differ between the north coast and south coast licence areas. The majority of Red Sea Urchin quota (77%) and landings (65%) were attributable to the north coast licence area in 2024. Most fishing in the north coast occurs in remote areas and in order to make fishing economical, multiple vessels fish together in a fleet and offload daily to a packer vessel. The fleet will stay out fishing for weeks at a time and the packer will travel to and from port to offload catch and to bring supplies to the fleet.

In the south coast licence area vessels usually fish individually. Harvesters tend to prefer to fish in the south coast due to increased availability of offloading ports close to productive fishing areas allowing harvesters to fish during the day and return home in the evening.

Many Red Sea Urchin vessels also participate in other dive fisheries, including Green Sea Urchin, Sea Cucumber and Geoduck. Of the 39 vessels active within the 2023 fishery (vessels with >0 landings), 23(59%) were active under other licences. These licences included Sea Cucumber, Green Sea Urchin, Prawn and Shrimp by Trap and Geoduck and Horse Clam.

Viability and Market Trends

The commercial fishery operates year-round with the highest market demand being in December and March. In the summer months the fishery slows down considerably since gonad quality decreases substantially as the sea urchins begin to spawn.

From the historic peak of landings in 1992 (approximately 27.5M lbs.), the market demand for B.C. Red Sea Urchin decreased drastically with landings dropping to below 50% of the Total Allowable Catch (TAC) between 2006 and 2011, and again since 2020 (2024 landing was 36% of TAC). Fishery participation has also declined during this period, affecting the Pacific Urchin Harvesters Association (PUHA) revenues and funding for monitoring programs and market initiatives.

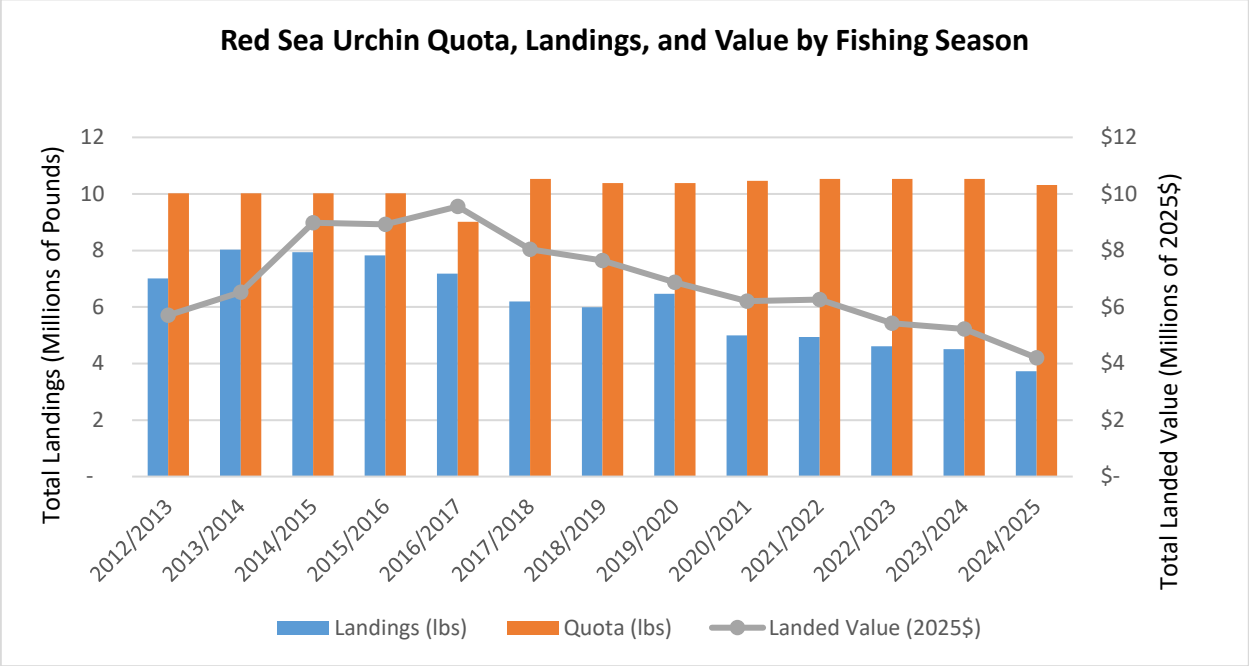
Landed weight in the fishery increased from 2010-2015, hitting a 10-year high of 8.6M lbs. Beginning in 2016, there was an overall decline in RSU landed weight observed over the subsequent years, with the trend continuing until 2024 when it reached its lowest point at 4.1M lbs. 2024 marked the year with the lowest total landed weight. Landed weight declined an estimated 7% in 2024 compared to the previous year, and equated to only 66% of the previous 10-year average (6.2M lbs.; 2014-2023)[5]. 2024 data is preliminary. Reasons cited for these declines include increases in Sea Otter predation, particularly on the West Coast of Vancouver Island, as well as fishery complications from weather disruptions, particularly in the North.

Fishery landed value has closely tracked landed weight in recent years. The total estimated value of RSU landed in 2024 was 7% higher than the previous year, at an estimated $6.9M (2025$). Observed increases in price since 2015 have been due to market diversification, consisting of a decreasing reliance on the Japanese market and an expansion into other countries. 2024 Red sea urchin price estimated from DFO price survey is $1.65/lb., reflecting a 13% increase from the previous 5-year average ($1.46/lbs. ; 2019-2023)[6].

[5] Values are from DFO price matched logbook data, reported by calendar year except for 2024 (2024 values are from wild commercial fisheries production stats for BC).

[6] 2019-2023 prices are implicit price (calculated by dividing total landed value by the total landed weight).

Over the past decade, the coastwide total quota of Red Sea Urchin has remained relatively steady at approximately 10 million pounds. In 2024, 36% of the annual quota has been landed in the fishery. Separating 2024 landed quota by licence area (North/South), only 30% of available quota was landed in the North, compared to 55% of available quota being landed in the South.



Source: values are from fisheries managers and reported by fishing seasons (i.e. August of one year to July of the following year).
*Please note that 2024/25 data is preliminary.

Japan is the largest consumer of urchin roe and the majority of B.C. product is shipped there as processed roe. The PUHA has been working to develop markets in China, other parts of Asia, Europe, and the United States. Some processors have also been successful in shipping live sea urchins to market, given available logistics. The hope is that live product will increase the value of Red Sea Urchins similar to how the value of Geoduck increased substantially when the B.C. Geoduck industry started shipping live Geoduck clams to Asian markets. Some harvesters have had success selling small amounts of live urchins to the public and to local restaurants in the Vancouver area.

B.C. Red Sea Urchins have been recognized by the Vancouver Aquarium's Ocean Wise program as "Recommended" choice, and as a "Best Choice" by the Monterey Bay Aquarium's Seafood Watch program. Such recommendations create marketing opportunities and raise the profile of Red Sea Urchins in local, domestic, and growing export markets.

The COVID-19 pandemic has had both direct and lasting impacts on the Red Sea Urchin fleet. One example of direct fleet impacts is disruptions to fishing red sea urchins due to the inability of processors/buyers to staff local processing capacity. Overall this has impacted the season by reducing the amount of urchins landed and the number of harvesters taking part in the fishery. Impacts to overseas exports have also been felt by the fleet since the COVID-19 pandemic, due to the reliance of the fleet on international demand for urchin products and the impacts of the pandemic to shipping logistics.

Processing & Exporting

Most of the processing of landed urchins occurs in B.C., contributing an additional source of economic value from the fishery. Data from B.C.'s Annual Fisheries Production Schedule (AFPS) estimates the total wholesale value of Red Sea Urchin products to be $16.8 million in 2024 (value in 2025 dollars). Landed

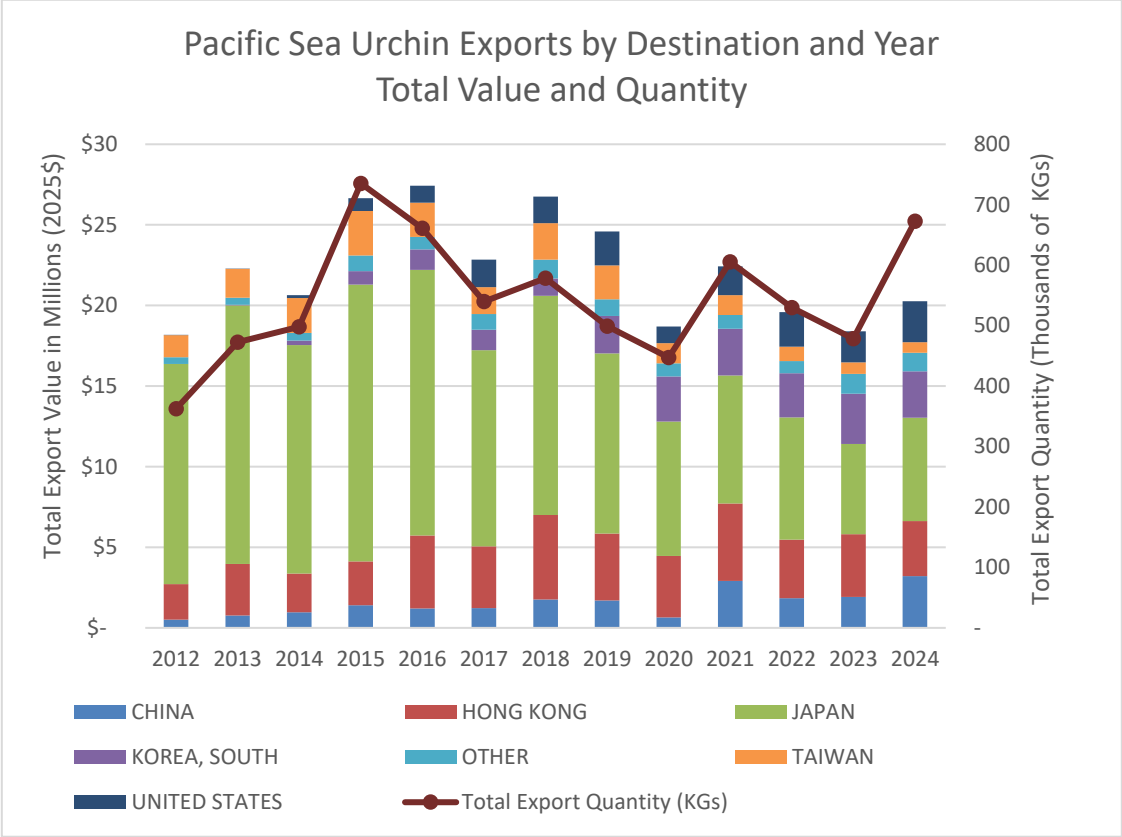
Red Sea Urchins are typically shipped live by truck for processing in Vancouver where the urchin shells (tests) are broken open to remove the roe. Once removed from the urchin, the roe is treated and placed in shallow trays for transit to markets.

A 2017 report, commissioned by DFO to link seafood with processing areas and employment, estimated that the processing of Red Sea Urchins (RSU) requires 88 hours of labour per metric tonne of product processed (the second most labour intensive seafood after prawns). Attributing these per-unit labor intensities to the 2024 total for RSU processed product, generates an estimate of $4.1M in processing wages (values are in 2016$) and roughly 162,305 labour-hours (equivalent to approximately 83 full-time positions) created through the processing of Red Sea Urchins.

The B.C. Red Sea Urchin industry is primarily an export market. Red and Green Sea Urchins are exported in various forms: either live, fresh, chilled, prepared, or preserved. In 2024, the total value of sea urchin exports from B.C. was $20.3M (2025$). This represents a 10% increase from the previous year, and a 2% decline from the previous 5 year average (2018-2022). This rise in total export value in 2024 was driven by a increase in exported quantity (weight), as total kilograms exported increased by 41%. However, the average price per kilogram of Canadian Red Sea Urchin products exported in 2024 has dropped by 22%.

Overall, this has impacted the season by reducing the amount of Red Sea Urchin exports. The majority of urchin exports are roe, representing roughly 67% of the value of B.C.'s total urchin exports over the past 5 years (2020-2024). The majority of B.C. sea urchin roe product is shipped fresh or chilled. Japan is the largest global consumer of urchin roe; however, B.C. urchin roe is also shipped to other countries in Asia and Europe. From 2020-2024, B.C. has exported an average of about 173,760 kilograms of processed urchin roe per year, of which 30% went to Japan.

B.C. sea urchin exports volumes to Japan increased from approximately 294,000 in 2012 to a peak of 431,146 kilograms in 2015. After 2015, exports to Japan generally declined, reaching a low of 187,786 kg in 2023 before rebounding to 275,246 kg in 2024. Exports to Hong Kong remained relatively stable in recent years, fluctuating between approximately 44,000 and 65,000. Volumes increased from 44,772 kg in 2020 to 64,767 kg in 2021, before moderating slightly to 57,449 kg in 2024. Exports to South Korea showed continued growth over the last four years. Volumes increased from 37,571 kg in 2020 to 50,327 kg in 2024. Exports to the United States remained volatile during recent years. Volumes declined significantly from 67,095 kg in 2020 to 13,128 kg in 2023, before rebounding to 50,836 kg in 2024.



Source: Statistics Canada (EXIM), 2025.

The Canadian industry has many competitors including the Illegal, Unregulated, Unreported (IUU) fishery in Russia. Russian urchins are fished close to Japan and are therefore delivered to market fresher and cheaper than the higher-priced B.C. roe. The illegal Russian fishery is able to further reduce the price of roe as it does not have the associated management, stock assessment, and shipping costs. There are also commercial Red Sea Urchin fisheries in California, Oregon, Washington, and Alaska. The roe market is a global one, where the harvest and market trends of other fisheries can have an impact on the B.C. Red Sea Urchin fishery.

MANAGEMENT ISSUES

The following sections highlight the on-going or longer-term management issues that may impact the management measures in place for these fisheries. Specific management objectives designed to mitigate these issues are detailed in Section 6. There may be immediate or annual management issues that need addressing.

First Nations

The level of First Nations' effort and harvest of Urchins for food, social and ceremonial purposes is unknown at this time. Although harvest is believed to be minimal due to much of the stock only being available for harvest by dive. Catch monitoring programs are being developed in collaboration with some First Nations organizations.

Recreational

The level of recreational harvest of Urchins is generally accepted by DFO to be low and supported by data received through recreational licence surveys and information from the Sport Fishery Advisory Boards. Catch monitoring programs for all sport caught fish are being improved in collaboration with recreational fishery organizations.

Commercial

- Impacts of the commercial Urchin fisheries on the ability of First Nations to harvest for food, social and ceremonial purposes need to be considered. Although DFO has not been made aware of any Nations that are struggling to acquire Urchins for FSC or domestic use purposes.
- The impacts of sea otters on Urchin populations need to be further evaluated for future consideration in the management of this fishery.
- High densities of urchins in some areas may require alternative management strategies to support ecosystem management. See Section 5.5
- Further assessment work may be required to continue to expand the Green Sea Urchin fishery.

Conservation and Sustainability

There is currently no concern for the conservation of Green or Red Sea Urchins. Conservation for the B.C. Urchin resource is defined as maintaining the stock to a level that will ensure the population isn't at risk of becoming extirpated or extinct.

Sustainability is the ability to be maintained at a certain rate or level. This term is being used to reflect the sustainability of the fishery, the ability to maintain the level of harvest. This may be difficult over time due to, but not limited to, impacts of Sea Otters, impact of climate change and closures implemented to achieve Marine Conservation Targets.

Sea Otters

The PUHA has identified Sea Otters as their biggest concern for the future sustainability of the Urchin industry in B.C. Given that the Green Sea Urchin fishery has only occurred in the waters of the south coast of B.C. in recent years, sea otters have not had a significant impact the fishery. This may change as the Sea Otter's range expands.

Sea Otter predation has impacted the Red Sea Urchin resource in several areas of B.C. Several First Nations on the west coast of Vancouver Island have reported issues accessing Red Sea Urchins for Food, Social and Ceremonial purposes in Sea Otter occupied areas. Sea Otter populations are expanding in British Columbia and, because they are major predators on Red Sea Urchins, they are having a large impact on the fishery. As a result, the Department has had to consider Sea Otters in the management of the Red Sea Urchin resource. For example, some quota areas on the West Coast of Vancouver Island, the mainland Central Coast and Northern Vancouver Island have had reductions in quota or have been closed because commercially harvestable densities of Red Sea Urchins no longer exist in areas occupied by Sea Otters. Red Sea Urchin managers need more flexibility to manage around the impacts of Sea Otters. Some options to consider include:

- Increase quotas in portions of the coast that are currently being under-harvested (harvested at a harvest rate less than 2%) due to logistical reasons. For example, parts of Haida Gwaii have been harvested at a harvest rate of 1% or less since 2008 due to its remote location and the higher cost of fishing there in comparison to mainland areas.
- Increase harvest rates in areas that are starting to be impacted by Sea Otter predation.
- Look at opening portions of the coast currently closed to commercial harvest (e.g Marine reserves, ecological reserves, etc.) that are impacted negatively by Red Sea Urchin barrens.

- Increase the harvest rate in areas that are currently open for commercial harvest but are still being negatively impacted by Red Sea Urchin barrens (e.g. portions of Haida Gwaii, the mainland North Coast and Campbell River, etc.)

Impacts of Climate Change

Climate change will likely result in a wide variety of impacts, including rising sea level, loss of marine habitat, shifting distribution ranges for marine organisms and an imbalance between growth and recruitment within ecosystems. Ocean acidification is one of the climate impacts that could affect Urchin populations in B.C. Oceans absorb carbon dioxide (CO_2) which increases the acidity of the water. There are concerns about the ability of marine ecosystems to adapt to acidification. Organisms that form calcium carbonate ($CaCO_3$) skeletons and shells, such as urchins, may be greatly limited in their ability to form their skeletons or shells since a decline in pH decreases the saturation state of $CaCO_3$. Fecundity, juvenile survival, and the ability to handle temperature stress may also be impacted negatively by ocean acidification (Haigh et al. 2015). Another emerging issue has been higher than normal water temperatures over the last few years (Chandler et al. 2016). Warmer water temperatures cause the amount of dissolved nitrogen in seawater to decrease leading to reduced growth rates of kelp and are associated with the decline of apex predators like the *Pycnopodia* sea star. Kelp, the main food source of Urchins, recruits most successfully in areas with continuously cold, high nutrient waters. Higher water temperatures may also place physiological stress on Urchins and could lead to increased instances of disease. Kelp loss may also be further exacerbated by the decline of the Urchin predator the *Pycnopodia* sea star and the resulting population increases of urchins (Burt et al. 2018).

Disease

In the spring of 2016 sick or dying urchins were observed along the North and Central coasts of B.C. Some urchins were still attached to the substrate but were missing all or a portion of their spines and some had already died. Samples were collected from afflicted individuals and were sent in for testing. Preliminary examination of the samples done by a disease expert at DFO suggests that the urchins were suffering from ‘bald urchin disease’. This disease has been reported in species of urchins all over the world. It has been hypothesized that increasing sea temperature will lead to an increase in the frequency of disease outbreaks due to decreased host immunity, increased virulence of pathogens or pathogen range expansion (Burge et al., 2014).

A large scale disease event that impacted seas stars was first noticed in 2014/15, ‘sea star wasting disease’. It is believed that as a result of decreases in sea star populations we have seen increases in urchin populations in many locations.

Marine Conservation Targets.

To protect biodiversity and meet its marine conservation targets, Canada is establishing marine protected areas and other effective area-based conservation measures (OECMs), in consultation with First Nations, other levels of government, industry, non-governmental organizations, and the public. Closures to Urchin harvest will likely be implemented to meet Canada’s conservation targets. Closures will reduce the biomass available to the fishery and thus reduce harvest opportunity and may impact this fishery’s sustainability.

Alternatively there is concern that areas closed to the Urchin commercial fisheries could result in high densities of Urchin that will decrease biodiversity. See Section 5.5.1.

Ecosystem

High Densities of Urchins (Urchin Barrens)

There are a some areas of the B.C. coast where there are areas of high Urchin density (urchin barrens). Urchin barrens are detrimental to the ecosystem since the combined grazing activity of the urchins inhibits the growth of kelp and sessile invertebrates, which in turn affects other species that may rely on kelp and/or sessile invertebrates for food and/or habitat. Urchins also directly compete with other herbivores such as abalone, snails and other species of urchins for food resources. Closures for conservation purposes may not be necessary for Urchins in areas of B.C. where urchin barrens are a known issue, especially if the goal of the closure is to promote a healthy ecosystem. Harvesters tend to not harvest urchins out of barrens since the gonad quality is typically low due to a lack of food. Only a small portion of the population located right below the kelp line (where food is abundant) is taken. Sea urchin barrens no longer exist in Sea Otter impacted areas, but for areas of the coast not yet impacted by Sea Otters other options could be tried to reduce the occurrence of barrens. One such option is to consider an increase in the harvest rate used in areas impacted by urchin barrens. DFO has started using an increased harvest rate in some areas where populations have seen an increase. Another option is to decrease the minimum size limit in order to allow a greater size range of urchins to be harvested. The minimum size limit was decreased for both species by 5 millimetres Test Diameter in the 2025/26 season.

Urchin Culling

The practice of killing large numbers of urchins by squishing or cracking in situ (culling) in order to support increased kelp growth (kelp restoration) is a practice not supported by current policy. Red and Green Sea Urchins are not invasive species in B.C. and high densities are a natural part of a dynamic, changing ecosystem, especially in the absence of key predators like the sea otter and the sunflower star. Increased commercial harvest in areas of concern could be used as a tool to decrease the number of urchins over time in support of healthy ecosystems.

Depleted Species Concerns

The commercial Urchin fishery is a selective fishery and there are no concerns or potential impacts on depleted species. Each Urchin is individually selected by the harvester which eliminates bycatch of other species. Harvest of any species other than the Urchin is illegal under a commercial Urchin licence.

The purposes of the *Species at Risk Act* (SARA) are “to prevent wildlife species from being extirpated or becoming extinct, to provide for the recovery of wildlife species that are extirpated, endangered or threatened as a result of human activity and to manage species of special concern to prevent them from becoming endangered or threatened”.

It is prohibited under SARA to kill, harm, harass, capture, take, possess, collect, buy, sell, or trade an individual or part of a wildlife species listed as extirpated, endangered, or threatened. It also prohibits the damage or destruction of residences and the destruction of any part of the critical habitat of a listed endangered or threatened species, or of any listed extirpated species if a recovery strategy has recommended the reintroduction of the species in the wild in Canada. Critical habitat is the habitat necessary for the survival or recovery of a listed wildlife species and is identified in the recovery strategy or an action plan for the species.

Activities affecting a listed species, any part of its critical habitat, or the residences of its individuals may require permitting (subject to meeting specific purposes and pre-conditions set out in SARA) or an exception/exemption. SARA prohibitions do not apply to species listed as special concern and there is no requirement to identify or protect critical habitat for special concern species.

For information on aquatic species listed under SARA or assessed as at risk by the Committee on the Status of Endangered Wildlife in Canada, please visit the Species at Risk Public Registry at https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html.

A species identification guide can be found here: https://www.pac.dfo-mpo.gc.ca/fm-gp/rec/identify-identifier-eng.html

Marine Mammal Regulations

The *Marine Mammal Regulations* provide direction on conservation and protection of marine mammals, provide guidance for recovery of listed species under the *Species at Risk Act*, and set out provisions related to reducing human disturbance of marine mammals (e.g. viewing of marine mammals) and mandatory reporting requirements in the case there is accidental contact with a marine mammal and a vessel or fishing gear. These regulations were amended in 2018 and specify mandatory requirements to prevent disturbance of marine mammals.

As per section 7(2) of the *Marine Mammal Regulations*, disturbance is defined as a number of human actions including:

- Feeding, swimming or interacting with a marine mammal.
- Moving a marine mammal (or enticing/causing it to move).
- Separating a marine mammal from its group or going between it and a calf.
- Trapping a marine mammal or a group either between a vessel and the shore, or between a vessel and other vessels.
- Tagging or marking a marine mammal.

Boats are required to maintain a minimum approach distance of 100 m for whales, dolphins or porpoises, 200m when whales, dolphins or porpoises are in a resting position or with a calf, and 200m from all Killer Whales in Pacific Canadian waters except when in southern B.C. coastal waters which has an increased approach distance of 1,000 m in support of Southern Resident Killer Whale recovery.

Please visit the Southern Resident Killer Whale management measures website for more information on the management measures and potential amendments to the approach distances to Southern Resident Killer Whales under the *Marine Mammal Regulations* for 2026/2027: https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-baleines/srkw-measures-mesures-ers-eng.html

Any operator of a vessel or fishing gear involved in accidental contact with a marine mammal must notify DFO of the incident, as per section 39 of the *Marine Mammal Regulations.* Incident reporting includes:

- Reporting an injured, stranded, entangled or dead marine mammal to the BC Marine Mammal Response Network (Observe, Record, Report) 1-800-465-4336.
- Reporting as bycatch in a log book.
- Reporting accidental contact through the marine mammal interaction form.
- Depredation reporting to DFO by email at Mammals.Marine@dfo-mpo.gc.ca, by calling 1-800-465-4336 or Reporting accidental contact through the marine mammal interaction form.

Please note, incidents involving abuse or harassment of a marine mammal should be reported as a fisheries violation, while injured, stranded, entangled or dead marine mammals should be reported to the BC Marine Mammal Response Network to enable a response if appropriate.

For more information on safe boating behavior around whales please visit: Watching Marine Mammals and Be Whale Wise, or by contacting the DFO Marine Mammal Unit (MMU) (Mammals.Marine@dfo-mpo.gc.ca).

Sighting Reporting

Fisheries and Oceans Canada appreciates your assistance in tracking the sightings of live cetaceans (whales, dolphins and porpoises), sea turtles and basking sharks. While there are many whale species found in Pacific Canadian waters, sightings of basking shark and leatherback sea turtles are infrequent. The collection of sighting data is useful to scientists in determining population size and species distribution and aids in recovery efforts under the *Species at Risk Act* (SARA).

To report whale or turtle sightings contact the Ocean Wise Sighting Network:

Toll free: 1.866.I.SAW.ONE (1-866-472-9663)

Email: sightings@ocean.org

Website: https://ocean.org/action/send-a-sighting-save-a-whale/

App: WhaleReport

To report basking shark sightings, contact the Basking Shark Sightings Network:

Toll free: 1-877-50-SHARK (1-877-507-4275)

Email: Sharks@dfo-mpo.gc.ca

Website: www.pac.dfo-mpo.gc.ca/SharkSightings

A species identification guide for sharks is available at https://waves-vagues.dfo-mpo.gc.ca/Library/40757067.pdf

Guides to distinguish between pinnipeds, emphasizing differences between Steller and California Sea Lions can be found here: https://oceanorg.blob.core.windows.net/oceanorg/2023/10/Pinniped_IDGuide-email-2022.pdf

and between Sea and River Otters:
https://oceanorg.blob.core.windows.net/oceanorg/2023/10/Otters_IDGuide-ffp-2022.pdf

Incident Reporting

The Department is responsible for assisting marine mammals and sea turtles in distress. If your vessel strikes a whale, or if you observe an entangled, sick, injured, distressed, or dead marine mammal in B.C. waters, please contact the B.C. Marine Mammal Response Network Incident Reporting Hotline immediately:

1-800-465-4336 OR VHF CHANNEL 16



What to report:

- *Your name and contact information*
- *Date and time of incident*
- *Location: Latitude/Longitude coordinates, landmarks*
- *Species*
- *Animal alive/dead (animal condition)*
- *Nature of injury and supporting details (if possible)*
- *Pictures/Video taken*

Best practices to reduce entanglement and reporting an incident: https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-baleines/docs/entanglements-empetrements-pub-eng.html

Southern Resident Killer Whales

The Government of Canada is taking important steps to protect and recover the Southern Resident Killer Whale population, in keeping with direction provided in *Species at Risk Act* (SARA) recovery documents. In May 2018, the Minister of Fisheries, Oceans and the Canadian Coast Guard and Minister of Environment and Climate Change determined the Southern Resident Killer Whale population faces imminent threats to its survival and recovery. Given the status of the population and ongoing threats to Southern Resident Killer Whale recovery, DFO implemented a number of measures since 2018, including measures aimed at increasing prey availability and accessibility for Southern Resident Killer Whales - particularly Chinook salmon—and reducing threats related to physical and acoustic disturbance with a focus in key foraging areas within Southern Resident Killer Whale critical habitat. These measures include fishing closures, Interim Sanctuary Zones (i.e. no go zones), Speed Restricted Zones (vessel slowdown areas), vessel avoidance distances, and a number of voluntary measures in the presence of killer whales.

Since 2018, Indigenous groups, Indigenous Multi-Nation Group, the Indigenous and Multi-Stakeholder Advisory Group (IMAG), Technical Working Groups (TWGs), stakeholders, and the public have provided recommendations and feedback to Ministers and Departments on a range of measures (including measures related to increasing prey availability, sanctuaries, vessel disturbance [both noise and physical disturbance], and contaminants) to support Southern Resident Killer Whale recovery.

The Government of Canada is working with Indigenous groups and stakeholders to inform potential changes to vessel measures for 2026 and 2027. The Government of Canada intends for actions for the 2026 season be implemented to coincide with the return of Southern Resident Killer Whales in typically greater numbers to Canadian Pacific waters. These restrictions do not apply to individuals or vessels being used to fish for food, social or ceremonial purposes, or for domestic purposes pursuant to a treaty, under a license issued under the *Aboriginal Communal Fishing License Regulations*. For up-to-date information regarding the Southern Resident Killer Whale management measures, please visit:

https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-baleines/srkw-measures-mesures-ers-eng.html

Additionally, the Government of Canada is asking vessel operators to respect the following voluntary measures:

- Stop fishing (do not set or haul gear) within 1,000 metres of killer whales and let them pass;
- Reduce speed to less than 7 knots when within 1000m of the nearest killer whale
- When safe to do so, turn off echo sounders and fish finders
- Place engine in neutral idle and allow animals to pass if your vessel is not in compliance with the approach distance regulations
- For more information on the best ways to help whales while on the water, when on both sides of the border, please visit: bewhalewise.org

For information regarding the Southern Resident Killer Whale management measures to support recovery, please contact the Marine Mammal Team (DFO.SRKW-ERS.MPO@dfo-mpo.gc.ca) or visit: https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-baleines/srkw-measures-mesures-ers-eng.html

Oceans and Habitat Considerations

Canada's Marine and Coastal Areas Conservation Mandate

To protect biodiversity and meet its marine conservation targets, Canada is establishing marine protected areas and other effective area-based conservation measures (OECMs), in consultation with First Nations, other levels of government, industry, non-governmental organizations, and the public.

More information is available online for:

Canada's marine conservation targets: https://www.dfo-mpo.gc.ca/oceans/conservation/index-eng.html

Canada's marine protected and conserved areas:

https://www.dfo-mpo.gc.ca/oceans/conservation/areas-zones/index-eng.html

Marine refuges and fisheries management measures that qualify as OECMs: https://www.dfo-mpo.gc.ca/oceans/oecm-amcepz/index-eng.html

Marine Protected and Conserved Areas

Canada uses a variety of legislative tools for marine conservation, depending on the lead federal department or agency and their coastal mandates. As goals, objectives, and management plans are finalized for these initiatives, DFO's management of fisheries will be adapted as appropriate, in consultation with interested parties through initiative-specific consultations and annual Integrated Fisheries Management processes. The implementation of spatial marine conservation initiatives is informed by considerations under the *Oceans Act, Fisheries Act* and the *Sustainable Fisheries Framework* policy suite, and mandate commitments to the Blue Economy Strategy and reconciliation with First Nations.

For more information on Canada's marine conservation tools: https://www.dfo-mpo.gc.ca/oceans/conservation/plan/index-eng.html

For more information on relevant legislation, please see the following:

Marine refuges and other measures under the *Fisheries Act*: https://laws.justice.gc.ca/eng/acts/f-14/page-1.html

Marine Protected Areas - *Oceans Act*: https://laws-lois.justice.gc.ca/eng/acts/O-2.4/

National Wildlife Areas - *Canada Wildlife Act*: https://laws.justice.gc.ca/eng/acts/w-9/page-1.html

National Marine Conservation Areas (Reserves) - *National Marine Conservation Areas Act*: https://laws.justice.gc.ca/eng/annualstatutes/2002_18/page-1.html

An overview map of federal marine conservation initiatives in the Pacific Region is provided in Figure 1, followed by a table outlining relevant details by initiative – both established and in progress. Many initiatives are types of marine protected areas (MPAs) or marine refuges (OECMs). See site-specific regulations and management plans for any restrictions on activities, or Fishery Notices where applicable.

Figure 1. Pacific Fisheries Management Areas and Federal Marine Conservation Initiatives and Closures

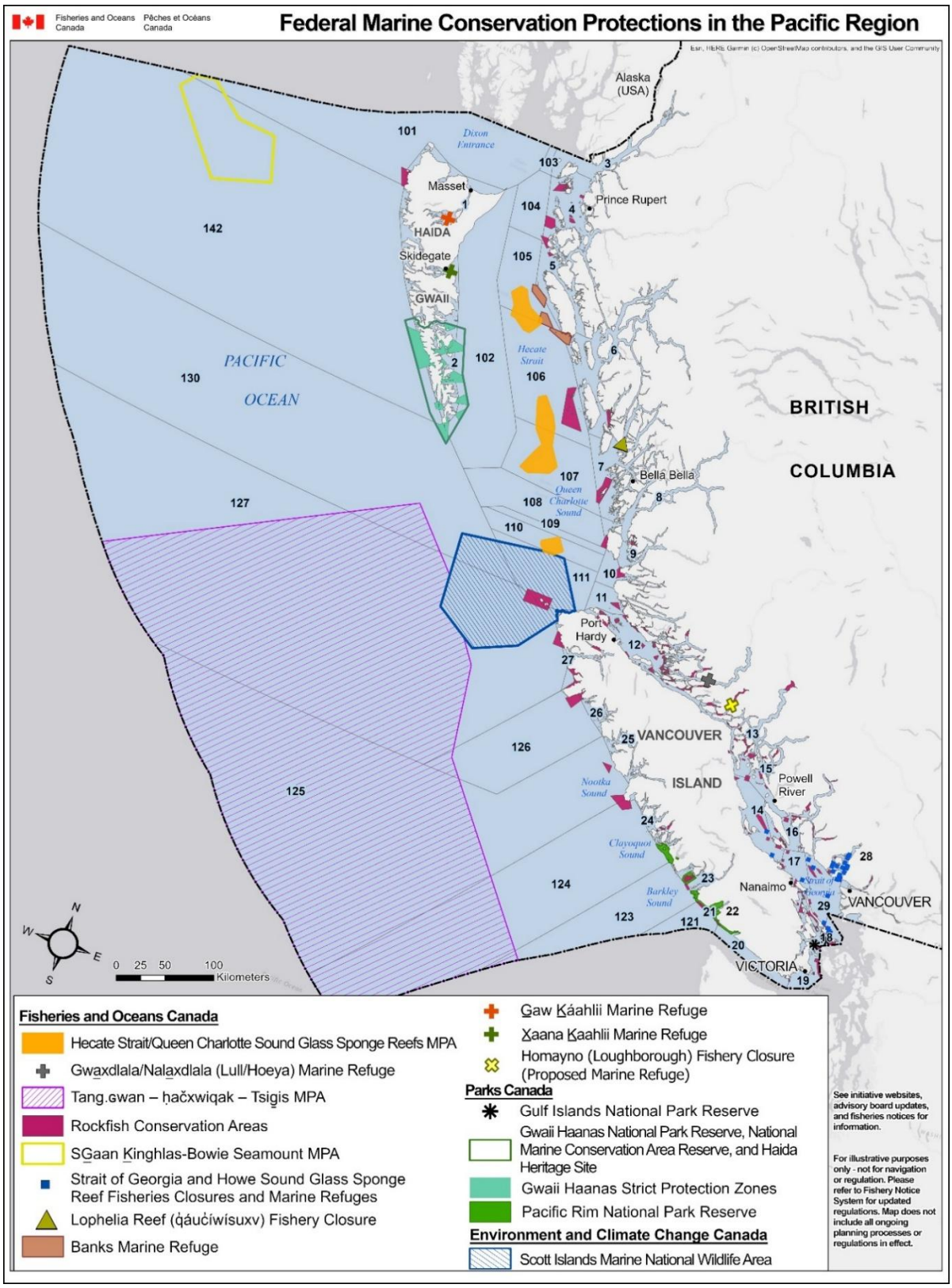


Table 1. Overview and status of Federal Marine Conservation Initiatives in DFO Pacific Region (see Figure 1 map)

Name	Type	Lead	Weblinks	Contact	Fishery Considerations
Fisheries and Oceans Canada, *Oceans Act* and *Fisheries Act*					
Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Marine Protected Area	MPA	DFO	https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/hecate-charlotte/index-eng.html	DFO.OceansPacific-OceansPacifique.MPO@dfo-mpo.gc.ca	See MPA website and regulations for more details: https://laws-lois.justice.gc.ca/eng/regulations/SOR-2017-15/index.html In the MPA there are 3 different management zone types: Core Protection Zones, Vertical Adaptive Management Zones and Adaptive Management Zones **The entire MPA is closed to commercial bottom-contact fishing activities. Core Protection Zones (CPZ) are closed to anchoring and all fishing activities**. Commercial fishing in a Vertical Adaptive Management Zone (VAMZ) is permitted if the fishing is carried out by means of midwater hook and line, troll, seine or gillnet and the gear does not enter a CPZ. Recreational fishing in a VAMZ is permitted if the fishing is carried out by means of midwater hook and line and the gear does not enter a CPZ. For more detail on the fishery closure within the MPA, please review the FN0198 (2017) Fishery Notice.
Kitkatla Inlet Area of Interest (AOI)	MPA	DFO & Gitxaała Nation	https://www.dfo-mpo.gc.ca/oceans/aoi-si/kitkatla-eng.html	DFO.OceansPacific-OceansPacifique.MPO@dfo-mpo.gc.ca	The proposed Kitkatla Inlet MPA was identified in the Network Action Plan (2023). Site Partners are currently in the feasibility assessment stage and working on an approach for advancing future consultation and engagement on the AOI. Discussion of any protection measures and/or permitted activities will occur during the feasibility assessment. No fisheries closures associated with the proposed Kitkatla Inlet MPA are anticipated for the 2026 IFMP / fishing season.

North Coast Fjords Area of Interest (AOI)	MPA	DFO & Gitga'at First Nation, Gitxaała Nation, Haisla Nation	TBD	DFO.OceansPacific-OceansPacifique.MPO@dfo-mpo.gc.ca	The proposed North Coast Fjords MPA was identified from a portion of the Caamaño Sound site in the Network Action Plan (2023). Site Partners are currently in the feasibility assessment stage and working on an approach for external consultation and engagement on the AOI. Discussion of any protection measures and/or permitted activities will occur during the feasibility assessment. No fisheries closures associated with the proposed North Coast Fjords MPA are anticipated for the 2026 IFMP / fishing season.
Offshore Haida Gwaii Area of Interest (AOI)	MPA	DFO & Council of the Haida Nation	TBD	DFO.OceansPacific-OceansPacifique.MPO@dfo-mpo.gc.ca	The proposed Offshore Haida Gwaii MPA was identified in the Network Action Plan (2023). Site Partners are currently in the feasibility assessment stage and working on an approach for external consultation and engagement on the AOI. Discussion of any protection measures and/or permitted activities will occur during the feasibility assessment. No fisheries closures associated with the proposed Offshore Haida Gwaii MPA are anticipated for the 2026 IFMP / fishing season.
SG̲áan K̲ínghlas-Bowie Seamount Marine Protected Area	MPA	DFO & Council of Haida Nation	https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/sgaan-kinghlas-bowie/index-eng.html	DFO.OceansPacific-OceansPacifique.MPO@dfo-mpo.gc.ca	See MPA website and regulations for more details: https://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-124/ The MPA is closed to all commercial fishing activities. The MPA is also closed to recreational and FSC bottom-contact fishing activities. For more detail on the fishery closures within the MPA, please review the FN0089 (2018) Fisheries Notice.

Tang.ɢwan – ḥačxwiqak – Tsig̱is Marine Protected Area **Offshore Pacific Seamounts and Vents Closure †**	MPA	DFO	https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/tht/index-eng.html	DFO.OceansPacific-OceansPacifique.MPO@dfo-mpo.gc.ca	See MPA regulations for more details: Canada Gazette, Part 2, Volume 158, Number 13: Tang.ɢwan - ḥačxwiqak - Tsig̱is Marine Protected Area Regulations. The MPA has 3 different management zones: General Zone, Dellwood Zone and Union Zone. Bottom-contact gear is prohibited in the entire MPA. Commercial and recreational fishing using pelagic hook and line gear is allowed in all three of the MPA's zones, provided the gear does not go below a depth of 100 m from the sea surface in the Union or Dellwood Zones, or 500 m from the sea surface in the General Zone. Midwater trawl is allowed in the General Zone, provided the gear does not go below a depth of 500 m from the sea surface and is prohibited in the Union and Dellwood Zones. Fishery Notice for these closures can be found in FN0096 (2025). † Offshore Pacific Seamounts and Vents Closure Variation Orders have been replaced by the Variation Orders for this MPA.
Banks Marine Refuge	Marine Refuge	DFO & Gitxaała Nation	https://www.dfo-mpo.gc.ca/oceans/oecm-amcepz/refuges/banks-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions can be found in Fishery Notices FN0102 and FN0101 (2025). In addition to all RCA closures remaining in effect, as of February 14, 2025, commercial prawn and crab by trap fisheries are closed around western portions of Banks Island, and as of March 4, 2025, recreational prawn and crab by trap fisheries are closed around western portions of Banks Island.
G̱aw K̲áahlii Marine Refuge	Marine Refuge	DFO & Council of Haida Nation	https://www.dfo-mpo.gc.ca/oceans/oecm-amcepz/refuges/masset-inlet-embouchure-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions can be found in Fishery Notices FN0100 and FN0099 (2025). As of February 14, 2025, all commercial fisheries are indefinitely closed in portions of

					Gaw K̲áahlii (Masset Inlet). As of March 4, 2025, all recreational fisheries, except shore-based angling, are closed in portions of Gaw K̲áahlii (Masset Inlet).
GSR-RCA Project: Proposed sites in Howe Sound and Jervis Inlet*	*Proposed* Marine Refuges	DFO	TBD	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	DFO is proposing multiple sites as marine refuges. Input was sought on proposed fisheries closures at these sites in fall 2025. Feedback received will inform the development of a new proposal that is anticipated to be released for review and feedback in fall 2026.
Gwa̲xdlala/Nala̲xdlala (Lull/ Hoeya) Marine Refuge	Marine Refuge	DFO & Mamalilikulla First Nation	https://www.dfo-mpo.gc.ca/oceans/oecm-amcepz/refuges/lull-hoeya-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions can be found in Fishery Notice FN0118 (2023). The Gwa̲xdlala/Nala̲xdlala (Lull/Hoeya) marine refuge is closed to all fisheries (commercial, recreational and FSC fishing activities).
Homayno Proposed Marine Refuge*	*Proposed* Marine Refuge	DFO & Wei Wai Kum First Nation	TBD	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions can be found in Fishery Notices FN0330, FN0336 and FN0331 (2026). DFO has established fisheries closures in the proposed Homayno Marine Refuge within portions of Heydon and Loughborough Inlet. As of April 1, 2026, commercial fisheries for crab by trap, prawn/shrimp by trap, salmon by seine and salmon by gillnet are closed in the northern portions (existing RCA closures remain in effect) and commercial fisheries for crab by trap, salmon by seine, salmon by gillnet, and salmon by troll are closed in the southern portions of the proposed marine refuge. As of April 1, 2026, recreational fisheries for all invertebrates are closed in the northern portions (existing RCA closures remain in effect) and recreational fisheries for salmon via angling and all invertebrates (except prawn/shrimp by trap) are closed in the southern

					portions of the proposed marine refuge.
Strait of Georgia and Howe Sound Glass Sponge Reef (GSR) Marine Refuges*	Marine Refuges	DFO	https://www.dfo-mpo.gc.ca/oceans/eccsr-cerceef/closures-fermetures-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the site descriptions, closures, and restrictions for individual sites can be found in Fishery Notices FN0571 (2015), FN0205 (2019), FN0039 (2022), and FN0521 (2026)*. Sites listed in FN0571 (2015) restrict **all commercial, recreational and Indigenous food, social and ceremonial (FSC) bottom-contact fishing activities**, including: • prawn and crab by trap • shrimp by trawl • groundfish by midwater and bottom trawl • groundfish by hook and line Sites listed in FN0205 (2019) and FN0039 (2022)/FN0521 (2026)* restrict **all commercial, recreational and Indigenous food, social and ceremonial (FSC) bottom-contact fishing activities**, as listed above and the **use of downrigger gear in recreational salmon trolling** via licence condition.
X̲aana K̲aahlii Marine Refuge	Marine Refuge	DFO & Council of Haida Nation	https://www.dfo-mpo.gc.ca/oceans/oecm-amcepz/refuges/skidegate-inlet-embouchure-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions can be found in Fishery Notices FN0100 and FN0099 (2025). As of February 14, 2025, all commercial fisheries are indefinitely closed in portions of X̲aana K̲aahlii (Skidegate Inlet). As of March 4, 2025, all recreational fisheries, except shore-based angling, are closed in portions of X̲aana K̲aahlii (Skidegate Inlet).

Rockfish Conservation Areas (RCAs)	RCA	DFO	https://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/rca-acs/index-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	There are 162 Rockfish Conservation Areas (RCAs) in British Columbia, covering roughly 4,350km^2 of Canadian Pacific waters. These areas are closed to a range of recreational and commercial fisheries to protect inshore rockfish and their habitat. See website for details on individual RCAs by area.
Lophelia Reef (ǧáuc̓íwísuxv)	Fishery Closure	DFO, Kitasoo Xai'xais and Heiltsuk First Nations	https://notices.dfo-mpo.gc.ca/fns-sap/index-eng.cfm?pg=view_notice&DOC_ID=296056&ID=allhttps://www.canada.ca/en/fisheries-oceans/news/2024/03/fisheries-and-oceans-canada-closes-the-first-and-only-known-live-coral-reef-in-pacific-canada-to-all-commercial-and-recreational-bottom-contact-fis.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions of this site can be found in Fishery Notice FN0085 (2024). The Lophelia Reef is closed to all bottom-contact commercial and recreational fisheries (including midwater trawl).
Parks Canada, *National Marine Conservation Areas Act*					
Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site	NMCAR	Parks Canada	https://www.pc.gc.ca/en/pn-np/bc/gwaiihaanas	gwaiihaanas@pc.gc.ca	Refer to Fishery Notice FN0536 (2019), released June 13, 2019 for a detailed description of the Strict Protection Zones. There is "no extraction or harvesting by anyone of the resources of the lands and non-tidal waters of the Archipelago for or in support of commercial enterprise" (s3.3). Contact the Gwaii Haanas administration office: 1-877-559-8818.
Proposed Mia-yaltwa Ha'lidzogm hoon National Marine Conservation Area Reserve*	*Proposed* NMCAR	Parks Canada	https://parks.canada.ca/amnc-nmca/cnamnc-cnnmca/cotecentrale-centralcoast	nmca-pacific-amnc@pc.gc.ca	An Establishment Agreement for this site was finalized in May 2026. The focus for the site will now shift to implementation and will involve setting up an advisory committee comprised of representatives from a range of marine sectors and interests, including the commercial fishing sector. This work is

					anticipated to begin in fall / winter 2026 / 2027. No fisheries closures associated with the Central Coast NMCAR will occur in the 2026 IFMP / fishing season.
Gulf Islands National Park Reserve	National Park marine area	Parks Canada	https://parks.canada.ca/pn-np/bc/gulf	gulfinfo@pc.gc.ca	Park regulations can be found at: Canada National Parks Act
Pacific Rim National Park Reserve	National Park marine area	Parks Canada	https://www.pc.gc.ca/en/pn-np/bc/pacificrim	Pacrim.info@pc.gc.ca	Park regulations can be found at: Canada National Parks Act
Environment and Climate Change Canada, *Canada Wildlife Act*					
Proposed marine National Wildlife Area at Nearshore Haida Gwaii	*Proposed Marine National Wildlife Area*	ECCC & Council of Haida Nation	TBD	RNFMilieuMarinSCFPAC-CWSPACMarineNWA@ec.gc.ca	The marine NWA was identified in the Network Action Plan (2023) as a potential tool to support meeting some of Network Goals and Objectives for the Nearshore Haida Gwaii Site. CHN and ECCC are currently advancing a feasibility assessment and engaging with stakeholders through the Nearshore Haida Gwaii Advisory Committee (NHG AC). NHG AC is made up of a range of sector stakeholders, such as commercial fisheries, and the Haida Gwaii Integrated Advisory Committee. In 2026, the NHG AC will be reviewing and providing advice on draft Overview reports (Ecological, Mineral & Energy, and Socio-Economic Overview). Discussion of potential protection measures and/or permitted activities will occur during the Regulatory Strategy phase. No fisheries closures associated with the Nearshore Haida Gwaii site are anticipated for the 2026 IFMP / fishing season.

Scott Islands Marine National Wildlife Area*	Marine National Wildlife Area	ECCC	https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/locations/scott-islands-marine.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca Enviroinfo@ec.gc.ca rnfis-sinwa@ec.gc.ca	The Scott Islands Protected Marine Area regulations can be found at: https://laws-lois.justice.gc.ca/eng/regulations/SOR-2018-119/index.html Scott Islands marine NWA specific NOTMAR (notice: Annual Edition - Notice - A5E). The most recent consultations on the proposed Scott Islands Biodiversity Protections Regulations occurred in fall 2025. The process to develop regulations is ongoing.

**** Indicates ongoing planning process. See initiative websites, advisory board updates, and Fishery Notices for information.***

Marine Planning and Integrated Oceans Management in Canada

DFO undertakes marine planning, management and knowledge coordination to fulfill Canada's *Oceans Act* commitment to integrated ocean management.

Key marine planning and management tools in the Pacific region include the Canada Marine Planning Atlas (Pacific), the Marine Spatial Planning Framework for the Southern B.C., and the Marine Protected Area (MPA) Network Action Plan for the Northern Shelf Bioregion. The Southern B.C. MSP Framework was developed with collaboration from the Province of British Columbia, other Federal departments, and Indigenous groups. The Northern Shelf Bioregion MPA Network Action Plan was endorsed by a trilateral partnership of First Nations, the Province of British Columbia, and the Government of Canada in February 2023.
As well, in June 2024, 17 First Nations, the Government of Canada, the Province of B.C. and Coast Funds announce the signing and launch of the Great Bear Sea Project Finance for Permanence (PFP) agreement. The initiative supports the implementation of the Northern Shelf Bioregion MPA Network Action Plan.

The Canada Marine Planning Atlas for Pacific Region is available online at: Canada Marine Planning Atlas (dfo-mpo.gc.ca).

The Southern B.C. Marine Spatial Planning framework is available online at: Southern British Columbia Marine Spatial Planning Framework.

The MPA Network Action Plan for the Northern Shelf Bioregion is available online at: https://mpanetwork.ca/nap/MPA_Network-Action-Plan_web.pdf, with a summary available at: MPA Network BC Northern Shelf Initiative (2023) Network Action Plan – a summary.

The Great Bear Sea Project Finance for Permanence (PFP) Initiative announcement and related links can be found at: Protecting more of our marine ecosystems together, for future generations | Prime Minister of Canada.

OBJECTIVES

National

DFO aims to:

- Meet conservation objectives and ensure healthy and productive fisheries and ecosystems;
- Manage fisheries to provide opportunities for economic prosperity;
- Provide stability, transparency, and predictability in fisheries management and improved governance.

Pacific Region Biological Objectives

In 1994, the Biological Objective Working Group of the Pacific Scientific Advice Review Committee (PSARC) identified three biological objectives for management of Pacific Region fish and invertebrate stocks (Rice et al, 1995):

- Ensure that subpopulations over as broad a geographical and ecological range as possible do not become biologically threatened (in the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) sense of "threatened").
- Operationally, the above objective requires at least that management allow enough spawners to survive, after accounting for all sources of mortality (including all fisheries and natural mortality), to ensure production of enough progeny that they will, themselves, be able to replace themselves when mature.
- Fisheries may have collateral effects on other species, mediated by the ecological relationships of the target species. Fisheries should be managed in ways that do not violate the above objectives for ecologically related species, as well as target species.

The objectives remain relevant today, particularly in light of development of the national objectives around sustainable fisheries.

Stock Conservation

Red Sea Urchin

DFO's species-specific objectives for the conservation and sustainability of Red Sea Urchin stocks are:

- *To monitor the Red Sea Urchin stock using the Multispecies Benthic Invertebrate Survey.*
- *To continue to gather information from harvesters on the impacts of Sea Otters on the Red Sea Urchin resource.*
- *To continue to gather information from harvesters on Red Sea Urchin barrens and any impacts observed due to ecosystem changes (e.g Sea Star Wasting Disease, changing ocean conditions, etc.) and use for consideration in management decisions.*
- *To track accurate harvest information for all users. For the commercial fishery this will be accomplished through a Dockside Monitoring Program. There are currently no programs in place for tracking First Nations FSC for domestic purposes, and recreational sector harvests.*

Green Sea Urchin

A comprehensive understanding of the biology of Green Sea Urchins and the impacts of commercial harvest on Green Sea Urchin populations is required in order to ensure conservation and sustainable harvests in this fishery. Studies have included density estimates through transect surveys in various locations of the B.C. coast, and experimental harvest and study areas where populations are manipulated to examine urchin growth, migration, and recruitment.

A method to accurately determine the age of Green Sea Urchins has not been developed despite research into various ageing methods. Green Sea Urchins display indeterminate growth that is dependent upon environmental conditions and food availability and recent research indicates that growth bands are an unreliable indicator of age (Scheibling and Hatcher 2013; Narvaez et al. 2016).

Given that we know little about the age of Green Sea Urchins, the Research Subcommittee may consider prioritizing the assessment of spatial and seasonal juvenile growth, survival and recruitment. This information could assist managers in determining the appropriate level of fishing pressure by time and area. Appropriate techniques for the assessment of juvenile recruitment are imperative for fisheries such as sea urchins, where recruitment is inconsistent throughout the fishing areas.

Ecosystem

The Urchin fisheries are selective and the harvest is conservative. It is believed that harvesting practices have little impact on the surrounding ecosystem. However, in some areas of the BC coast there are high densities of Urchins which may negatively impact ecosystem function. DFO's goal is to consider the ecosystem in management decisions.

Social, Cultural and Economic

DFO's objective is to continue to work collaboratively with the Urchin Sectoral Committee to ensure sustainable fisheries and to collect input from all interested fishing sectors in the annual development of the IFMP.

First Nations

DFO remains committed to respecting First Nations' Aboriginal right to fish for food, social and ceremonial (FSC) purposes, or domestic purposes under Treaty which has priority – after conservation – over other uses of the resource. Section 35(1) of the *Constitution Act* recognizes and affirms the existing Aboriginal and Treaty rights of the Aboriginal peoples in Canada. However, it does not specify the nature or content of the rights. In 1990, the Supreme Court of Canada issued a landmark ruling in the Sparrow decision, which found that the Musqueam First Nation has an Aboriginal right to fish for FSC purposes. The Supreme Court found that where an Aboriginal group has a right to fish for FSC purposes, it takes priority after conservation over other uses of the resource. The Supreme Court has also indicated the duty to consult with Aboriginal peoples when their fishing rights might be affected. The Aboriginal Fisheries Strategy (AFS) was implemented in 1992 to address several objectives related to First Nations and their access to the resource: https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/afs-srapa-eng.html.

These include:

- Improving relations with First Nations
- Providing a framework for the management of the First Nations fishery in a manner that was consistent with the Supreme Court of Canada's 1990 *Sparrow* decision
- Greater involvement of First Nations in the management of fisheries
- Increased participation in commercial fisheries (Allocation Transfer Program (ATP))

In addition to consultation, planning and implementation of fisheries, and the development of capacity to undertake fisheries management, stock assessment, enhancement and habitat protection programs, AFS continues to be one of the principal mechanisms, in addition to Treaties and reconciliation agreements, to support the development of relationships with First Nations.

Recreational

The Department will continue to provide opportunities for a recreational fishery for Red and Green Sea Urchins. For more information, see Appendix 3.

Commercial

DFO's objective is to continue to work collaboratively with the commercial industry on sustainable resource use and long-term economic viability of the Urchin seafood industry recognizing that commercial fisheries play a vital role in Canada's economy. This includes adapting to changing resource and market conditions and extracting optimal value from world markets.

Compliance

DFO's objective is to pursue opportunities to monitor and enforce the Urchin fisheries, in conjunction with the monitoring and enforcement priorities in the Pacific Region. For more information please see the compliance plan in section 10.

ACCESS AND ALLOCATION

The Minister can, for reasons of conservation or for any other valid reasons, modify access, allocations and sharing arrangements as outlined in this IFMP in accordance with the powers granted pursuant to the *Fisheries Act.*

First Nations

To date there are no limits on the First Nations harvest of Urchins for domestic use under Treaty (other than a defined Red Sea Urchin allocation in Treaty for Tla'amin) or for food, social and ceremonial (FSC) purposes. Fisheries and Oceans Canada is confident that with the precautionary approach to these fisheries, the reserved allocation of TAC and the provision of additional allocations where necessary, First Nations in all areas will have sufficient opportunities to harvest Urchins for these purposes. Allocations of Urchins may be provided to First Nations who identify their FSC or domestic use needs are not being met.

Recreational

The daily limit for sea urchins (aggregate of all urchin species) is 12 with a possession limit of 24.

Commercial

The commercial fisheries are managed using a Total Allowable Catch (TAC), limited entry licensing, Individual Quotas (IQ), a minimum size limit and area quotas. For more information please see Appendices 1 and 5.

Information on Total Allowable Catch (TAC), area quotas and Individual Quotas (IQ) can be found in Appendix 1, Commercial Harvest Plan.

Experimental, Scientific, Education or Public Display

DFO supports and facilitates scientific investigations related to Urchins. Scientific licence requests received from scientific, educational, and public display institutions, including biological collecting firms, are considered. Existing policies with respect to scientific licences and the use-of-fish apply.

MANAGEMENT MEASURES FOR THE DURATION OF THE PLAN

See the Management Measures (Harvest Plans), Appendix 1 to 4 for detail on the following:

- *Total Allowable Catch (TAC);*
- *Fishing Seasons/Areas;*
- *Size Limits*
- *Control and Monitoring of Removals*
- *Licensing*

SHARED CONTRIBUTION TO THE COMMERCIAL FISHERY

Commercial

The PUHA and DFO may undertake a collaborative agreement for annual stock assessment activities in support of the commercial fisheries. The PUHA may fund surveys and research activities and their costs include vessel time, diver salaries, travel costs and a salary for a biologist. DFO may also provide vessel and divers and provide in-kind support and data analysis.

The PUHA funds a dockside monitoring program and a hail program to track all commercial urchin landings as required by conditions of licence for each licence holder.

Several coastal First Nations contribute time and expertise through collaborative research surveys with the PUHA and the Department by providing biologists, vessels, and divers.

Fisheries and Oceans Canada

Two Stock Assessment and two Resource Management personnel are directly involved in these fisheries. Contributions to the IFMP are provided by Fisheries Management, the Science Branch, the Shellfish Data Unit, Conservation and Protection, the Pacific Fishery Licence Unit, Reconciliation and Partnership Branch, the Recreational Fisheries Division, the Oceans Directorate and numerous administrative personnel. Generally, all personnel are multi-tasked, i.e. fishery managers work on all dive fisheries.

COMPLIANCE PLAN

Overview

General information about the Conservation and Protection (C&P) program is available at: Fisheries enforcement (dfo-mpo.gc.ca)

The enforcement policy and activities of the Department are the responsibility of the Conservation and Protection program (C&P). Fishery officers and marine enforcement officers working throughout the Pacific Region carry out enforcement activities for the C&P program. First Nations fishery guardians may assist DFO Fishery Officers in a number of locations where joint enforcement protocols are in place. Observers designated by the Department complement enforcement staff by performing a monitoring and verification function.

C&P staff will pursue opportunities to monitor and enforce issues and problems related to this fishery in conjunction with the monitoring and enforcement activities dedicated to the identified priority fisheries in the Pacific Region. This industry is mostly self-enforcing and, because of the present management principles, conservation is not an issue.

In general, compliance with the regulations and Conditions of Licence in the Urchin commercial fishery is good, largely due to dockside validation, mandatory harvest logs and validation logs. Enforcement actions have resulted in charges in past years and misreporting may lead the Department to make management changes in the fishery to reduce problems.

Users of the resource have a responsibility to report violations. Any suspected or actual fisheries, wildlife or pollution violations can be quickly and discretely reported to the appropriate enforcement officer by using the toll free observe, record and report hotline. This toll-free number is available 24 hours a day.

OBSERVE, RECORD AND REPORT 1-800-465-4DFO (1-800-465-4336)

Enforcement enquiries can also be directed to the local field offices during regular office hours.

Main Program Activities

In-season

Boardings are conducted by at-sea fishery officers operating program vessels, marine enforcement officers operating Canadian Coast Guard (CCG) vessels and charter patrolmen on a variety of contracted vessels.

Commercial fishing vessels are boarded and checks are conducted for licensing of the vessel and participants, approved containers and tagging of harvested product and harvest log completion.

Packer vessels are checked for licensing compliance and to ensure adherence to the Conditions of Licence (requirements for containers, tags, and harvest log data).

Dockside Monitoring

Commercial vessels and packer vessels are checked at dockside to ensure compliance with Conditions of Licence and to provide verification of all catch.

Vehicle Inspection

Transport trucks are inspected during fishing seasons in concert with other enforcement agencies. They may be inspected at plants, loading and offload sites and other control points.

Fishery Patrol Vessels

All at-sea patrols will be conducted using CCG patrol vessels staffed with marine enforcement officers and/or fishery officers and program vessels (primarily seven metre rigid hull inflatable boats) with fishery officers on board. Patrols will be conducted in both open and closed areas as priorities allow.

Air Surveillance

Patrol coverage using charter aircraft is utilized by Fisheries and Oceans Canada to identify concentrations and distribution of fishing effort. In large geographical areas this allows for a better utilization of C&P resources.

Flight reports, photographs and other data collected from over flights are readily available to Departmental managers and fishery officers through an intranet-based flight information system. Digital images of vessels will be collected and added to a web-based licence system, providing fishery officers ready access to recent vessel photographs to assist in field identification.

Enforcement Issues and Strategies

In the following table: PFR: *Pacific Fisheries Regulations*, 1993, F(G)R: *Fisheries (General) Regulations*, S: Section.

ISSUE	SECTION	STRATEGY
Licensing Verification • *Vessel licensed.* • *Experimental licence.* • *No Fisher Registration Card (FRC).* • *Fail to produce FRC.*	PFR S.22 F(G)R S.52 F(G)R S.68(1) PFR S.25 F(G)R S.11	At-sea and dockside inspections will occur when opportunities exist. These inspections may include checks of all licensing documents on board the vessel to ensure compliance with the regulations.
Fishing during closed time/area.	PFR S.63	Patrols utilizing patrol vessels will be pursued when opportunities exist. Possibilities may exist to use the regional enforcement charter aircraft in co-ordination with other patrols scheduled for priority fisheries.
Size Limit	PFR S 70(1)	At sea and dockside inspections will be pursued when opportunities exist.
Fail to provide proper landing and hail information, lack of notification for change of area, cancellation of trip, or incorrect reporting of area fished.	F(G)R S.22(7)	At sea and dockside inspections will occur when opportunities exist. Investigations will occur on an opportunistic basis after C&P have been notified by fisheries management that a violation has occurred. The investigation will be pursued when larger priorities permit. Possibilities may exist to use the regional enforcement charter aircraft in co-ordination with other patrols scheduled for priority fisheries, to track vessels in the fishery.
Fail to maintain a Validation & Harvest Logbook.	F(G)R S.22(7)	At sea and dockside inspections will occur when opportunities exist. Investigations may also occur on an opportunistic basis after C&P have been notified by fisheries management that a violation has occurred. The investigation will be pursued when larger priorities permit.

ISSUE	SECTION	STRATEGY
Marking and tagging of pick bags, and any other type of enclosures containing harvested Green Sea Urchins.	F(G)R S.22(7)	At sea and dockside inspections will occur when opportunities exist.
Landings validated at time of offloading.	F(G)R S.22(7)	Dockside inspections and monitoring will be pursued when opportunities exist.
Fail to carry on-board observer when requested by Fisheries and Oceans Canada.	F(G)R S.22(7)	At sea and dockside inspections will occur when opportunities exist.

PERFORMANCE REVIEW

Performance indicators are reported in the Post-Season Review (Appendix 6).

Stock Assessment and Research

Stock Assessment activities undertaken during the previous season will be outlined.

First Nations Fishery

The post season review may include outcomes of meetings with First Nations on specific issues, and sea urchin information contributing to, or resulting from, the treaty process. Improvements are needed to collection of annual catch and effort data to monitor the fishery.

Recreational Fishery

The post season review may include interactions with the recreational fishing representatives of the Sport Fishing Advisory Board (SFAB). Any recommendations and action taken in response by DFO will be described. Improvements are needed to collection of annual catch and effort data to monitor the fishery.

Commercial Fishery

The delivery of the Urchin commercial fisheries will be assessed by performance measures including the number of vessels participating, the number of licence eligibilities fished, the amount of urchins landed and the estimated values of both Urchin fisheries. Input from representatives at the Urchin Sectoral Committee meetings may also be included.

Compliance

The post season review may include time spent attending to enforcement of the Urchin fisheries. It should be noted that low numbers of violations may be indicative of a successful proactive program, establishing a visible presence of enforcement authority as a deterrent to non-compliance.

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GLOSSARY

Aquaculture	The process of spawning animals and rearing the progeny to marketable size, involving some level of intervention (e.g. feeder, predator protection) by the aquaculturist.
Area and Subarea	Defined in Section 2 of the *Pacific Fishery Management Area Regulations*. A map of Pacific Fishery Management Areas is available on the Department's Internet site at: http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/areas-secteurs/index-eng.htm
Biomass	Total weight of all individuals in a stock or a population.
Bycatch	The unintentional catch of one species when the target is another.
catch verification program	A program designed to monitor, record, and verify catches, also called the Validation Program.
Communal Licence	Issued to First Nations organizations pursuant to the *Aboriginal Communal Fishing Licences Regulations*, to carry on fishing and related activities.
communal commercial licence	Issued to First Nations organizations pursuant to the *Aboriginal Communal Fishing Licences Regulations* for participation in the general commercial fishery. Licences issued are equivalent to the capacity of licences that have been retired under the Treaty and Aboriginal Policy Directorate Licence Retirement/Allocation Transfer Program.
COSEWIC	The Committee on the Status of Endangered Wildlife in Canada. Committee of experts that assess and designate which wild species are in some danger of disappearing from Canada.
Centre for Scientific Advice – Pacific (CSAP)	Centre for Scientific Advice - Pacific, chaired by DFO and including other federal and provincial government agency representatives and external participants.
Canadian Science Advisory Secretariat (CSAS)	Canadian Science Advisory Secretariat - coordinates the peer review of scientific issues for Fisheries & Oceans Canada. The different Regions of Canada conduct their resource assessment reviews independently, tailored to regional characteristics and stakeholder needs. CSAS facilitates these regional processes, fostering national standards of excellence, and exchange and innovation in methodology, interpretation, and insight.

chart datum	The zero tide elevation on a hydrographic chart which usually approximates the lowest tide level for the local area.
dockside monitoring program (DMP)	A monitoring program that is conducted by a company that has been designated by the Department, which verifies the species composition and landed weight of all fish landed from a commercial fishing vessel.
enhancement	The culture and release of wild stocks for stock rehabilitation and/or to increase stock sizes above natural levels of abundance. An enhanced stock is a common property resource and is subject to the public right to fish.
Food, Social and Ceremonial (FSC)	A fishery conducted by First Nations for food, social and ceremonial purposes.
fishing effort	Quantity of effort using a given fishing gear over a given period of time.
IQ	Individual quota. In the Red Sea Urchin fishery differs between the north and south licence areas depending on the number of licences in each area. Individual quota. In the Green Sea Urchin fishery, equivalent to 1/49th of the commercial total allowable catch (TAC).
Indigenous Knowledge	There is no universal definition of Indigenous Knowledge, and the composition of Indigenous Knowledge is for Indigenous Peoples to determine. Indigenous Knowledge is intricately tied to Indigenous worldviews and ways of life, and is a complex and dynamic product of the unique histories, cultures, languages, and governance systems of the Indigenous peoples of the specific area. The term Indigenous Knowledge may not be universally used. Other terms such as Indigenous Knowledge Systems, Traditional Knowledge, Traditional Ecological Knowledge, or Aboriginal Traditional Knowledge, all convey similar concepts. When working with Inuit, the term Inuit Qaujimajatuqangit (IQ) is more likely to be used than Indigenous knowledge. Similarly, when working with Métis knowledge holders, the term Métis Traditional Knowledge is more likely to be used than Indigenous Knowledge. Indigenous Peoples define Indigenous Knowledge for their communities. The term Indigenous Knowledge is used throughout this document in line with the terminology in the *Fisheries Act* and the *UN Declaration on the Rights of Indigenous Peoples (UNDRIP)*.
intertidal	The area of the ocean shoreline located between the highest high water and lowest low water tidal levels.
Invertebrate	An animal without a backbone.
Landed or off-loaded	The transfer of Green Sea Urchins from a vessel in water to land.
landed value	Value of the product when landed by a licensed fishing vessel.
landings	Quantity of a species caught and landed.
Observer	An individual who has been designated as an observer by the Regional Director General for Pacific Region pursuant to Section 39 of the *Fishery (General) Regulations*.

PICFI	Pacific Integrated Commercial Fisheries Initiative - DFO's PICFI is an initiative aimed at achieving environmentally sustainable and economically viable commercial fisheries, where conservation is the first priority and First Nations' aspirations to be more involved are supported.
Precautionary Approach (PA)	In resource management, the PA is, in general, about being cautious when scientific information is uncertain, unreliable, or inadequate and not using the absence of adequate scientific information as a reason to postpone or fail to take action to avoid serious harm to the resource. Information on the adoption of a PA framework for fisheries management in Canada is available at: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/precaution-eng.htm
PUHA	Pacific Urchin Harvesters Association
PSARC	Pacific Scientific Advice Review Committee.
quota	Portion of the total allowable catch that a unit such as vessel class, country, etc. is permitted to take from a stock in a given period of time.
Quota Area	A defined portion of Pacific fisheries waters. Areas and Subareas, as described in the *Pacific Fishery Management Area Regulations*, are referenced in describing Quota Areas. Each Quota Area has a name, e.g. 13A, and is assigned a maximum allowable catch in pounds (lb.).
recruitment	Amount of individuals becoming part of the exploitable stock e.g. that can be caught in a fishery. The process whereby young animals are added to a fishable stock or population.
Service provider	An agency contracted by fish harvesters or their harvesters' association to co-ordinate notification, catch validation, fishery monitoring, biological sampling, and data submission requirements. The service bureau may train and recommend candidates for certification by Fisheries and Oceans Canada as observers.
SFAB	Sports Fishing Advisory Board, which provides advice to DFO on matters of recreational (sport) fishing.
Stakeholder	All people and groups with an interest in the fisheries resource.
stock	Describes a population of individuals of one species found in a particular area, and is used as a unit for fisheries management. Ex: NAFO area 4R herring.
Stock assessment	Results of analyses of fisheries and research data used to evaluate the effects of fishing on a stock or population and to predict the reaction of populations to alternative management choices.
substrate	The ground (often the ocean bottom) and its composition, in or on which animals live.
subtidal	A portion of the bottom of the ocean that is not exposed at low tide stages. The ocean bottom at elevations below low water or chart datum.
TAC	Total allowable catch. The amount of catch that may be taken from a stock, determined by analytical procedures to achieve management objectives.

Traditional Ecological Knowledge (TEK)	A cumulative body of knowledge and beliefs handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment.
Tranship	The transfer of Green Sea Urchins from a vessel to another vessel.
Validated	Green Sea Urchins that have been weighed by an observer and the weight entered into the Green Sea Urchin Validation and Harvest Logbook, or an approved alternative log.
Vessel Monitoring System (VMS)	A near real-time location monitoring system installed on Red Sea Urchin commercial vessels.

Appendix 1: 2026/2027 Red and Green Sea Urchin Commercial Fishery Harvest Plan

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MANAGEMENT CHANGES AND HIGHLIGHTS FOR 2026/2027

RED SEA URCHIN

- **Minimum Size Limit:** 85 mm test diameter, between the spines, measured through the greatest diameter of the Red Sea Urchin test (shell). The minimum size limit will continue to be reduced from 90 millimeters Test Diameter (TD) to 85 millimeters TD for the 2026/27 season as a pilot program. This is a low risk approach given the current stock status of Red Sea Urchin and will allow harvesters to target a larger size range of urchins. This is part of an ecosystem management approach in response to reports of very high Red Sea Urchin densities in parts of the coast.

- **Area Licensing(NEW):** A two-staged area selection process was conducted in the spring of 2026 to allow harvesters to select the licence area they wished to fish for the period of August 1, 2026 to July 31, 2028. No limits were placed on the number of licences in either area. Final results: **45** licences in the North Coast and **65** in the South Coast.

- **Total Available Quota (TAQ) (Unchanged):** 10,187,000 lbs (4,620.7 tonnes). The north coast TAQ is set at 7,958,000 lbs. (3,609.7 tonnes) and the south coast TAQ is set at 2,229,000 lbs. (1,011.1 tonnes).

- **Total Allowable Catch (TAC) (NEW):** 6,054,000 lbs (2,746.0 tonnes). This is a significant decrease from 10,187,000 lbs last season. This decrease is a result in a change in the way the TAC is calculated for the north coast. Instead of being based upon the TAQ, the TAC will be based upon market and logistical considerations for the fishery. For an explanation of this change please see section 3.2 in Appendix 5. The north coast TAC is set at 3,825,000 lbs. (1,735.0 tonnes) and the south coast TAC is set at 2,229,000 lbs. (1,011.1 tonnes)..

- **Quota Area Boundaries (NEW):** A portion of Quota Area 18B is being split off into a new Quota Area 18C. Quota Area descriptions are located in section 4 or in Appendix 12.

- **Quota Area Quotas:** There are no changes to Quota Area quotas for this season. Quota Area quotas are outlined in Section 4 – changes are marked in bold type..

- **Exploratory Quota (NEW):** Portions of Management Areas 14 (14-1 to 14-4), 15 (15-1 and 15-5, 16 (16-1 to 16-4, 16-9 to 16-12, 16-16 to 16-22) and 29 (29-1 and 29-3) will be fished under an exploratory protocol. Quotas are limited and any product harvested from these areas will have quota removed from existing quota areas to not exceed the overall TAC but allows for opportunity to look for new fishing locations. See Section 4.11

- **Individual Quota (IQ) (NEW):** For the period of August 1, 2026 to July 31, 2027 the individual quotas in the north and south coast will differ. The IQ for each licence area will be determined by dividing the TAC for the licence area by the number of licences who selected the licence area for the season. North Coast IQ: 85,000 lb. South Coast IQ: **34,292 lb**.

- **Managing the Fishery in Portions of the B.C. coast impacted by Red Sea Urchin Barrens:** A harvest rate of up to 5% will be considered in areas with Red Sea Urchin barrens (overabundances) as part of an ecosystem management approach. In addition several Subareas have been added to existing quota areas to promote exploration of suspected urchin barrens. For more information please see section 4 and Appendix 5.

- **Opening Schedule:** The commercial Red Sea Urchin fishery will open August 1, 2026.

GREEN SEA URCHIN

- **Minimum Size Limit:** 50 mm test diameter, between the spines, measured through the greatest diameter of the Green Sea Urchin test (shell). The minimum size limit will continue to be reduced from 55 millimeters Test Diameter (TD) to 50 millimeters TD for the 2026/27 season as an ongoing pilot program. This is a low risk approach given the current stock status of Green Sea Urchin and will allow harvesters to target a larger size range of urchins. This is part of an ecosystem management approach in response to reports of very high Green Sea Urchin densities in parts of the coast.

- **Commercial Total Allowable Catch (TAC) (NEW):** An annual commercial TAC has been set at 372.86 tonnes (822,000 lbs). Increased from last management plan set at 362.4 tonnes (799,000 lbs). See Section 5.

- **Individual Quota (NEW):** The annual individual quotas (IQ) will equal 1/49th of the coast-wide commercial TAC or 7.61 tonnes (16,776 lbs) per licence. Increased from last management plan set at 7.39 tonnes (16,306). See Section 5.

- **Exploratory Area/quota for the North Coast (NEW):** Area 4 will be fished under the exploratory protocol. Quotas are limited and any product harvested from these areas will have quota removed from existing quota areas to not exceed the overall TAC but allows for opportunity to look for new fishing locations. See Section 5.4

- **Quota area split:** Area 18 has been split into 18A and 18B to focus some harvest effort on known areas of high density urchins.

- **Exploratory Quotas:** Allison Harbour (Area 11), the Sunshine Coast (ptn of Area 14, Area 16 and portions of Area 28) and Nanaimo (Area 17 and 29-5) remain as exploratory quotas. Cape Lazo (ptn. Area 14) will also hold an exploratory option above the set quota. These areas will be fished under an exploratory protocol. Quotas are limited and any product harvested from these areas will have quota removed from existing quota areas to not exceed the overall TAC but allows for opportunity to look for new fishing locations. See Section 5.4

- **Seasonal Research Closures:** Specific areas of the coast may be closed temporarily or be delayed in opening to allow for research surveys. Area descriptions Section 6. Notification of closure will be through Fishery Notices.

LICENSING REQUIREMENTS FOR THE URCHIN COMMERCIAL FISHERIES

National Online Licensing System (NOLS) Client Support – Licensing Services

All fish harvesters/licence holders/vessel owners are required to use the National Online Licensing System (NOLS) to view, pay for and print their commercial fishing licences, licence conditions and/or receipts. NOLS website: http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/licence-permis-eng.htm

Training materials, including step-by-step guides and a detailed user training manual, are available online (http://www.dfo-mpo.gc.ca/FM-GP/SDC-CPS/licence-permis-eng.htm) to guide users of the system in completing their licensing transactions. The Department also provides client support and assistance on

how to use the system via email at fishing-peche@dfo-mpo.gc.ca or by calling toll-free at 1-877-535-7307 (7:00AM to 8:00PM Eastern, Monday to Friday).

Information on the National Online system may be found on the DFO internet site at: http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/licence-permis-eng.htm

For more information on how to register and use the system, visit the Department's website at the website address above, or contact our client support.

Licence Category

A commercial Red Sea Urchin by dive (category ZC) or communal commercial (category FZC) licence eligibility is required to commercially harvest Red Sea Urchins by dive.

A commercial Green Sea Urchin by dive (category ZA) or communal commercial (category FZA) licence eligibility is required to commercially harvest Green Sea Urchins by dive.

Category ZC and ZA licence eligibilities are limited entry and party-based. Category FZC and FZA licences have a First Nations group as the licence eligibility holder.

Licence Renewal Fees

In accordance with the *Service Fees Act*, annual licence renewal fees will be adjusted by the annual rate of inflation determined by the Consumer Price Index (CPI) published by Statistics Canada. The commercial Urchin (Category ZA and ZC) licence renewal fee may be found on the following link: Licence renewal fees for the 2026/2027 fishing season | Pacific Region | Fisheries and Oceans Canada

There is no annual licence renewal fee for communal commercial category FZC or FZA licences.

Licence Application and Issuance

Renewal of a commercial Red Sea Urchin or Green Sea Urchin licence and payment of the fees must be done on an annual basis to retain the privilege to be issued the licence in the future regardless of whether or not fishing is carried out. Those commercial Red Sea Urchin or Green Sea Urchin licences not renewed by July 31st will cease to exist and licence issuance will be unable to be considered in the future.

Prior to annual licence issuance licence eligibility holders are required to annually designate the fishing vessel to hold the licence. This must be done by navigating to the 'Submit a Request' menu selection within the National Online Licensing System (NOLS). Full instructions are available at:

http://www.dfo-mpo.gc.ca/fisheries-peches/sdc-cps/products-produits/request-demande-eng.html

Prior to licence issuance, licence eligibility holder(s) must:

Meet any Ministerial conditions placed on the licence eligibility.

Ensure any conditions of the previous year's licence such as submission and approval of logbooks have been met.

Designate a registered commercial fishing vessel eligible for a commercial or communal commercial licence for salmon, schedule II, Sablefish, Halibut, crab, shrimp, prawn, Geoduck or groundfish trawl.

To avoid delays please ensure the payment and vessel designation information is submitted all at the same time through the 'Submit a Request' menu selection within the NOLS.

Vessel length restrictions for vessels used to harvest Red Sea Urchins or Green Sea Urchins under the IQ program have been waived by Fisheries and Oceans Canada. Fisheries and Oceans Canada reserves the right to reinstate vessel length restrictions at the lengths associated with each licence eligibility.

Licence Documents

Red Sea Urchin and Green Sea Urchin licence documents are valid from the date of issue to July 31 of the following calendar year.

Replacements for lost or destroyed licence documents may be obtained by reprinting the licence document through the National Online Licensing System.

Vessel Re-designations

Re-designation of Red Sea Urchin and Green Sea Urchin licences is allowed as long as any Condition of Licence such as the completion of logbooks have been met and accepted by the Shellfish Data Unit.

Navigate to 'Submit a Request' Re-Designate a vessel. Full instructions can be found:

Online Licensing - Submitting a Request and Checking the Request Status (dfo-mpo.gc.ca)

Designation of Harvesters to Fish a Communal Commercial Licence

Under the *Aboriginal Communal Fishing Licence Regulations*, every person working on a vessel that is fishing under authority of a Communal Commercial Licence must be designated by the First Nation that holds the licence. The designation must be made in writing and include the person's name and reference the Communal Commercial Licence.

The designation must be carried on-board and be produced on request of any Fishery Officer.

First Nations licence holders interested in obtaining an example template to use to designate their fish harvesters may contact a DFO Resource Manager or Pacific Fishery Licensing Unit office (see Contacts in Appendix 11).

Area Licensing – Red Sea Urchin Only

Licence eligibilities have been assigned to either the South Coast licence area or the North Coast licence area based on the two staged licence eligibility holder selection process for the period of August 1, 2026 to July 31, 2028. There were no limits placed on the number of applications in either area; however all applications for licence area selection must have been received by the Department prior to March 20, 2026. The distribution of licences for the next two seasons (August 1, 2026 to July 31, 2028) will be:

North Coast (Areas 1 to 10 and adjacent offshore areas) – **45 licences**
South Coast (Areas 11 to 29 and adjacent offshore areas) – **65 licences**

Individual Quotas (IQ)

Red Sea Urchins:

The holder of a licence eligibility for commercial harvest of Red Sea Urchin is provided the opportunity to harvest up to the amount of product listed on their area licence. This amount will equal the total allowable commercial catch for the licence area divided by the number of licences choosing to apply for a licence in that area. The individual quota for the 2026/2027 season will be as follows:

North Coast (Areas 1 to 10 and adjacent offshore areas) – **1/45th of the North Coast TAC (85,000 lbs).**
South Coast (Areas 11 to 29 and adjacent offshore areas) – **1/65th of the South Coast TAC (34,292 lbs).**

Green Sea Urchins:

The holder of the licence eligibility to the commercial harvest of Green Sea Urchins is provided the opportunity to harvest up to 7.61 tonnes (16,776 lbs.) of Green Sea Urchins.

Licence Eligibility Nominations

Category ZC (Red Sea Urchin) and ZA (Green Sea Urchin) licence eligibilities may be nominated from one party to another. Nominations must be completed and submitted to the Pacific Fishery Licence Unit via the National Online Licensing System (NOLS) by the licence holder. Notarized application 'Nomination for Party-Based Licence Eligibility'. Scan the document and attach it to a 'Submit Request' in NOLS. PDF or standard picture formats are accepted (jpg, etc.).

The following requirements must be met:

Any Condition of Licence such as the completion of logbooks have been submitted and approved by the Shellfish Data Unit.

Communal commercial (category FZC and FZA) licence eligibilities are not eligible for Nomination.

Fishery Identification Number (FIN)

A unique FIN is assigned to each vessel owner and holders of commercial licence eligibilities, or Fisher Registration Cards (FRC) in the Pacific Region. This allows for quick and accurate identification. (The FIN is printed on the FRC and both party and vessel based licences.)

Licence holders may be asked to provide their FIN when applying for a licence, or for dockside monitoring, or for enforcement purposes.

For further information, please contact a PFLU or a resource manager (see Contacts, Appendix 11).

Vessels

All diving and fishing operations for Red Sea Urchins and Green Sea Urchins must take place from the ZC/FZC or ZA/FZA licensed vessel. All product harvested under a ZC/FZC or ZA/FZA licence must be harvested from and retrieved by the vessel designated on the licence. Vessels used to hold or transport Red Sea Urchins or Green Sea Urchins must conform to Canadian Food Inspection Agency (CFIA) inspection regulations for holding or transporting fish and have appropriate licences.

Licence to Transport Red Sea Urchins and Green Sea Urchins

Any registered vessel with a commercial or communal commercial salmon, schedule II, Geoduck, Sablefish, crab, shrimp, groundfish and Prawn licence, a transporting, category D or a Herring seine licence, category HS may transport Red Sea Urchins and Green Sea Urchins under special Conditions of Licence which are included with all vessel-based licences issued for the current fishing year. For further information contact a Pacific Fishery Licence Unit.

Note: When product is transferred from one vessel to another vessel or a vehicle, that vessel or vehicle requires a provincial Fish Buying Station licence. This licence is required for all types of vessels and vehicles including aircraft. The licence may also be required for personal vehicles in some instances, when a vehicle is carrying the catch from more than one vessel, even if the licence holder owns both

vessels. Fish harvesters should check the Province of British Columbia's website for additional information: http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/fisheries-and-aquaculture/seafood-industry-licensing

Processing

Any processing beyond that permitted in Section 14 of the *Fish Inspection Regulations* (FIR) must be done in a registered fish processing facility and in full compliance with a Quality Management Program (QMP).

CONTROL AND MONITORING OF COMMERCIAL FISHING ACTIVITIES

To accompany the IQ program, an industry-funded monitoring and validation program was developed collaboratively between the Pacific Urchin Harvesters Association (PUHA) and Fisheries and Oceans Canada for both the Red and Green Sea Urchin fisheries.

Fish Harvesters are required to report harvest time and location information to a service provider prior to fishing, following fishing, and prior to landing Red Sea Urchins or Green Sea Urchins. To track daily harvests and ensure that area quotas are not exceeded, all catch must be weighed and validated at the first point of landing by a Fisheries and Oceans Canada certified observer.

The agency (service provider) contracted by the PUHA to provide notification, validation, biological sampling and data services for the 2026/2027 Red Sea Urchin and Green Sea Urchin fisheries is:

D&D Pacific Fisheries Ltd.
Box 1445, Gibsons, BC V0N 1V0

Tel: (604) 886-4819
Fax: (604) 886-8288
Hail-in Line: (800) 775-5505

The following sections mirror those in the Conditions of Licence (issued with each commercial licence) that outline the requirements for fishery control and monitoring. See Appendix 9 for an example of the Conditions of Licence.

Quantities Permitted to be Taken

Red Sea Urchins: Annual IQ for the period of this management plan has been set at:

North Coast (Areas 1 to 10 and adjacent offshore areas) – **1/45th of the North Coast TAC (85,000 lbs).**
South Coast (Areas 11 to 29 and adjacent offshore areas) – **1/65th of the South Coast TAC (34,292 lbs).**

Green Sea Urchins: Annual IQ for the period of this management plan has been set at **7.61 tonnes (16,776 lbs).**

Harvest of Red Sea Urchins and Green Sea Urchins over the IQ, after the permitted quota overage adjustments, may be subject to prosecution and seizure of the overage.

Fishing Multiple Quota Areas

All Urchins caught in a Quota Area must be landed or transhipped prior to the commencement of fishing in a new Quota Area. In this way, area quotas and individual quotas are closely monitored to avoid over-harvesting of either.

Containers Used to Hold or Transport Urchins

There are several requirements for the type, size, and marking of containers used to hold or transport Red Sea Urchins or Green Sea Urchins and the condition of containers for food inspection purposes.

Any containers used in the transport of "fish" (including urchins) for export must meet the requirements outlined in Part 4 of the *Safe Food for Canadians Regulations* (SFCR). See CFIA's website for further information: https://inspection.canada.ca/food-safety-for-industry/toolkit-for-food-businesses/sfcr-handbook-for-food-businesses/eng/1481560206153/1481560532540?chap=0

Transhipment

All product harvested under a Red Sea Urchin or Green Sea Urchin licence must be harvested from and retrieved by the vessel designated on the licence. If that product is to be retrieved at a later time by the licensed vessel, it must be appropriately tagged. If that product is going to be transhipped to another vessel (i.e. for landing purposes), that vessel must be appropriately licensed for packing purposes. At no time should unlicensed vessels be used to harvest, retrieve, store, or tranship product.

Locations Permitted for the Landing of Urchins

Urchins must be landed at one of the designated landing ports listed in the Conditions of Licence for either a Red Sea Urchin Licence or a Green Sea Urchin Licence. The specific landing ports have been established as part of the IQ validation program. Fisheries and Oceans Canada certified observers are available at these ports to oversee offloading and validation of sea urchin catch. This condition applies to both the licensed vessel and the packer vessel, if one is used.

Oral Reports

Fishing notification requirements that are described in the Conditions of Licence must be followed by each vessel in order for the service provider and the Department to track effort and harvest on a daily basis.

When vessels do not hail into a harvest area, there is a risk of exceeding the quota. In order to maintain a sustainable fishery, it is extremely important that effort and landings in a particular harvest area be reported and recorded accurately.

Validation of Catch

All Urchins harvested or removed from the sea bed floor must be validated by a Fisheries and Oceans Canada certified observer at the point and time the fish are landed, to track daily harvests and ensure that area quotas are not exceeded.

The vessel master must be in possession of a Fisheries and Oceans Canada approved catch Validation and Harvest Logbook assigned to the Red Sea Urchin or Green Sea Urchin licence. The Validation and Harvest Logbook must be on board the licensed vessel while fishing for Red Sea Urchins or Green Sea Urchins or while Urchins are on board. Validation and Harvest Logbooks that meet the Department's approval are available from the service provider or from the Pacific Urchin Harvesters Association.

Red Sea Urchins only - The PUHA and Fisheries and Oceans Canada have developed two alternate methods of validation in order to support the development of a live market program for Red Sea Urchins. Traditionally urchins destined for the processed market are landed dry, but to maintain the quality required for live markets, urchins must be transported in sea water. One of the alternate validation methods includes a volumetric measurement of containers holding urchins that will then be converted to a 'dry' weight. The other method includes removing urchins briefly from a container of sea water to weigh them and then returning them to the container. The 'wet' weight would then be converted to a 'dry' weight. The PUHA has agreed to pay for the enhanced dockside monitoring that will be required.

Validation and Harvest Log Entries

At the first point of landing, all Red Sea Urchins and Green Sea Urchins will be weighed with a government-certified scale and the weight entered on the Validation and Harvest Log. The vessel master is responsible for completing sections A and C of the Validation and Harvest Log. The vessel master shall also ensure that chart entries are completed showing all locations fished for that validation. All harvest information must be fully entered and complete before validation takes place. The Validation and Harvest Log will remain with the licensed vessel, with one copy accompanying the product to its destination and one copy handed over to the observer at the time of validation, along with the harvest charts. The observer shall compare harvest charts to Validation and Harvest Logs to ensure that harvest information is consistent between both. The original white copy of the Validation and Harvest Log handed to the observer, along with the harvest charts for each day's harvest must be received by the service provider contracted by the Pacific Urchin Harvesters Association, within one month of the harvesting having occurred. To meet the one month requirement for submission of data, it is recommended that fish harvesters forward their information to the service provider well in advance of this time limit.

Quota Confirmation

Prior to fishing, the vessel master must confirm the remaining vessel quota from the Validation and Harvest Logbook.

Quota Overages

Quota Area TAC Overages

Any Quota Area TAC overages may be deducted from the next year's Quota Area quota.

IQ Overages

Small quantities of Urchins which exceed the licence's annual quota (up to 500 lb. for Red Sea Urchins or up to 200 lb. for Green Sea Urchins) can be transferred to another Red Sea Urchin licence or Green Sea Urchin licence provided certain conditions are fulfilled. If all of these conditions are not met, overages will not be transferred to another licence. In the following explanation, the Red Sea Urchin or Green Sea Urchin licence which has exceeded its quota is called Licence "A", and the licence to which quota is transferred is called Licence "B".

i) Transfer of Quota to another Licence on the Same Vessel - If two or more licences are assigned to the same vessel then a quota overage from one licence may be transferred to the licence which has quota remaining. Overage of the last licence quota on the same vessel may be transferred to another vessel's licence in accordance with policy described below.
ii) Maximum Allowable Transfer of Quotas between Licences on Different Vessels - In the event of a quota overage on Licence "A", a maximum of 500 lb. of Red Sea Urchins or a maximum

of 200 lb. of Green Sea Urchins may be transferred to another vessel's Red Sea Urchin or Green Sea Urchin licence (Licence "B"). Harvest of Urchins over the IQ after the permitted quota overage adjustments may be subject to prosecution and seizure of the overage. Only one transfer of quota overage is allowed. The quota overage cannot be divided between multiple licences.

iii) Remaining Quota on Second Licence - The amount transferred cannot exceed the remaining quota of Licence "B".

iv) Red Sea Urchin or Green Sea Urchin Licence Area - Both vessels involved in the transfer must be licensed to fish in the same licence area and have active licences for that licence year (the provision for landing at the same port has been removed).

v) Documentation - The Red Sea Urchin or Green Sea Urchin Validation and Harvest Log for each of the licences involved in the transfer must be present at the time of the validation. Both vessel masters must make their intention to transfer or receive quota overage clear to the observer prior to unloading. In the event of a packer landing, a note signed by both vessel masters should accompany the product to advise the observer that there is a mutual agreement to transfer.

Harvest Logs and Chart Data

It is a Condition of Licence and the responsibility of the licence holder to ensure that harvest and chart information is received by Fisheries and Oceans Canada Shellfish Data Unit. Specific requirements of the Catch Monitoring and Reporting Program for Urchins can be found in Appendix 8.

Harvest Data

The vessel master is responsible for the provision and maintenance of an accurate record, a "log", of daily harvest operations. This log must be completed and a copy submitted in both hard (paper) copy and electronic form in an approved format as defined by Fisheries and Oceans Canada, Shellfish Data Unit, appendix 8.

The vessel master is responsible for the provision of a daily harvest chart record for each location fished by each diver. This harvest chart must have marked directly on it the vessel registration number (VRN), the licence tab number and the validation ID numbers. The harvest site must be clearly marked on the chart with dive or record numbers pertaining to each harvest catch record and with dates that fishing activity occurred at each site. The vessel master is also responsible for the electronic capture of harvest location data into the Shellfish Data Unit Geographic Information System (GIS).

Validation & Harvest Logbooks meeting Fisheries and Oceans Canada requirements are available from the service provider contracted by the PUHA to provide data services for the Urchin fisheries. The service provider will provide the Validation & Harvest Logbook coding and data entry service, including the electronic capture of harvest chart information into GIS, thus complying with the requirements for submission of a hard (paper) copy and electronic copy including fishing location information, for harvest data.

The original white page copy of the log, the accompanying chart record and the electronic copies must be forwarded within one month of the harvesting having occurred. Fish harvesters having validation services completed by the service provider contracted by the PUHA will receive this service as part of that contract. The information must be sent to:

Fisheries and Oceans Canada
Shellfish Data Unit

Pacific Biological Station
3190 Hammond Bay Road
Nanaimo, BC V9T 6N7

Tel: (250) 756-7022 or email PACSDU@dfo-mpo.gc.ca

Catch information must be recorded in the harvest log by midnight of the day of fishing. The logbook must be kept aboard the licensed vessel. Logbooks must be produced for examination on demand of a fishery officer, guardian, or a fishery observer designated under the *Fisheries Act.*

Submission and Release of Harvest Log Data

The licence eligibility holder of record reported with the Pacific Fishery Licence System is responsible to ensure that the vessel master has completed and submitted a copy of the harvest data. Fisheries and Oceans Canada can only release harvest data to the reported licence holder and only upon written request.

Nil Report for Harvest Log - Licence Issued But Not Fished

In the event that a licence is issued but not fished, the licence holder is responsible for submitting a nil report for the season. The nil report must be submitted prior to the issuing of approval for licence renewal. One page from the harvest logbook, identifying the vessel, licence tab number and the year, with "nil" entered in the body of the log and signed by the licence holder constitutes a nil report.

Fisheries and Oceans Canada wishes to remind fish harvesters that harvest logs must be completed accurately during fishing operations and submitted to Fisheries and Oceans Canada in accordance with the timing set out in Conditions of Licence. Failure to complete or submit logs in a timely manner is a violation of Condition of Licence.

Confidentiality of Harvest Data

Harvest data, including fishing location data supplied through latitude/longitude co-ordinates, loran or chart records, collected under the Validation and Harvest Logbooks for Shellfish Fisheries programs, are collected for use by Fisheries and Oceans Canada in the proper assessment, management, and control of the fisheries. Upon receipt by Fisheries and Oceans Canada of harvest data and/or fishing location information supplied by the fish harvester in accordance with conditions of licence, Section 20(1)(b) of the *Access to Information Act* prevents the Department from disclosing to a third party, records containing financial, commercial, scientific, or technical information that is confidential information. Further, Section 20(1)(c) of the *Act* prevents the Department from giving out information, the disclosure of which could reasonably be expected to result in material financial loss or could reasonably be expected to prejudice the competitive position of the fish harvester.

Fish Slip Requirements

It is a condition of this licence that an accurate written report shall be furnished on a fish slip of all fish and shellfish caught under the authority of this licence. A report must be made even if the fish and shellfish landed are used for bait, personal consumption, or otherwise disposed. The written report shall be posted not later than seven days after the offloading and sent to:

Fisheries and Oceans Canada
Catch Statistics Unit
200-401 Burrard Street
Vancouver, B.C. V6C 3S4

For more information: Fish slip information (dfo-mpo.gc.ca).

Export of Red Sea Urchins and Green Sea Urchins

Licence conditions regarding Validation & Harvest Logbooks and fish slips must be complied with for all sea urchins.

It is important to note that Urchins being processed for export out of the province must be processed at a federally registered facility. Each country receiving Urchins may have different import requirements. The Canadian Food Inspection Agency posts export requirements on the following website: https://inspection.canada.ca/food-safety-for-industry/eng/1299092387033/1299093490225. However, as these requirements can vary, exporters of sea urchins are encouraged to verify foreign country import requirements though their customers prior to export.

Lost Product

Product lost or wasted at sea will use the following protocol.

i) The weight of product lost from the deck of the catcher vessel and/or packer vessel during transport will be applied to both the catcher vessel's individual quota and the applicable area quota.
ii) The weight of product spoiled or wasted because of weather-related delays will also be applied to both the catcher vessel's individual quota and the applicable area quota.
iii) The Department, in consultation with the service provider, will use the estimated packer or ground weight and appropriate water loss calculation for the harvest site to determine an estimated dock weight.

Situations requiring use of this protocol will be discussed with the PUHA prior to implementation.

OPEN TIMES AND QUOTA AREAS – RED SEA URCHINS

General Information

The commercial Red Sea Urchin fishery will open no earlier than August 1, 2026 and close no later than July 31, 2027. Red Sea Urchin Quota Areas within the North and South Coast licence areas will be fished in the following manner. Please note research and permanent area closures as listed in Section 6.

A fishery notice will announce the actual opening date and time. All openings referred to in this plan are tentative until confirmed by issuance of variation order accompanied by fishery notice.

Fishery timing is determined by consultation with the PUHA and the Sea Urchin Processors Association (SUPA) to maintain optimal value for the sea urchin roe.

The following is the protocol for requesting Quota Area openings:

a) The PUHA, on behalf of licence eligibility holders, will co-ordinate Quota Area openings with Fisheries and Oceans Canada. The Department requires a **minimum of 48 hours notice** from the PUHA (exclusive of weekends and holidays) to open a new Quota Area.
b) A "Quota Area" is a defined portion of Pacific fisheries waters. Areas and Subareas, as described in the *Pacific Fishery Management Area Regulations*, are referenced in describing Quota Areas. Each Quota Area has a name (i.e. RU01a Lepas Bay), and is assigned a total allowable catch.

c) Fishers are required to offload their catch at a designated landing port or to a packer prior to fishing in a new Quota Area.

Supplemental Harvest

Supplemental harvest of Red Sea Urchins will be considered for research purposes. Any authorized supplemental harvest is expected to be in addition to the TAC and IQ allocated for the current season and must be performed by either a ZC or FZC licensed vessel. If a supplemental harvest opportunity is approved, ZC and FZC licence holders will be able to apply for supplemental conditions of licence that will permit this activity. A selection process, harvest amount and schedule will be developed in consultation with the PUHA and other project proponents.

North Coast Licence Area (Areas 1 through 10 and adjacent off-shore areas)

Fisheries and Oceans Canada and the PUHA will collaborate to schedule North Coast openings over the season in order to meet market demands and to prevent local stock depletion.

The North Coast commercial Red Sea Urchin Total Available Quota (TAQ) for 2026/2027 will be **7,958,000 lbs**, (**3,609.7 t**) apportioned between the Quota Areas shown in the table below. All weights referred to in the tables below are the weights that are determined during validation at the **first point of landing** (in pounds).

Opening Sequence	Quota Area	Name	Description	Quota (lbs.)
Note: Most Quota Areas area comprised of portions of Areas and Subareas. Complete descriptions of Quota Areas are provided in Appendix 12. **Changes marked in bold type.**				
HAIDA GWAII (Areas 1, 2 and adjacent offshore areas)				
TBA	RU01a	Lepas Bay	Ptn. Subarea 1-1	100,000
TBA	RU01b	Frederick Island	Ptn. Subarea 1-1	35,000
TBA	RU02a	Langara Island	Ptn. Subareas 1-2, 1-7, 101-2, 101-3, 101-6, 101-7 except closures	205,000
TBA	RU02b	Virago Sound	Subarea 1-3, ptn. Subareas 1-2, 1-7, 101-6, 101-7 except closures	105,000
TBA	RU03a	Cumshewa Inlet	Subareas 2-2, 2-3 except closure	0
TBA	RU03b	Kunga Island	Subareas 2-8, 2-10 except closures	84,000
Closed for research	RU04a	Juan Perez Sound (Tar Island)	Ptn. Subarea 2-11	0
TBA	RU04b	Section Cove	Subareas 2-12, 2-13 except closures	75,000
TBA*	RU04c	Murchison-Gogit	Ptn. Subarea 2-11	80,000
TBA	RU05a	Skincuttle Inlet	Subareas 2-14, 2-15 except closures	116,000
TBA	RU05b	Carpenter Bay	Subarea 2-17 except closures	88,000
TBA	RU06	Lower 2E	Subareas 2-18, 2-19 except closures	200,000
TBA	RU07	Lower 2W	Ptn. Subarea 2-31; Subareas 2-32 to 2-34 except closures, ptn. Subarea 142-1	220,000
TBA	RU08a	Flamingo	Ptn. Subareas 2-31, 2-38 and 142-1 except closures; Subareas 2-35 and 2-36.	90,000
TBA	RU08b	Englefield	Ptn. Subareas 2-38, 142-1 and 142-2 except closure; Subareas 2-42 to 2-62.	100,000

Opening Sequence	Quota Area	Name	Description	Quota (lbs.)
Note: Most Quota Areas area comprised of portions of Areas and Subareas. Complete descriptions of Quota Areas are provided in Appendix 12. **Changes marked in bold type.**				
TBA	RU09	Van Inlet	Subarea 2-68	100,000
TBA	RU10	Rennel Sound	Subareas 2-69 to 2-84 except closure	200,000
TBA	RU11	Hippa Island	Subareas 2-85 to 2-87, ptn. Subarea 2-88	110,000
TBA	RU12	Port Louis	Ptn. Subarea 2-88, Subareas 2-89 to 2-100	90,000
Haida Gwaii Total:				**1,998,000**
*Please see Section 4.5				
MAINLAND NORTH COAST (Areas 3 to 6 and adjacent offshore areas)				
TBA	RU13a	Dundas Island North	Subareas 3-1, 3-2, 3-3, 3-7, 3-11	380,000
TBA	RU13b	Dundas Island South	Ptn. Subareas 4-1, 4-5	200,000
TBA	RU13c	Melville Island	Ptn. Subareas 4-1, 4-5, 4-9, 4-13	60,000
TBA	RU13d	Nares Islets	Ptn. Subarea 4-1	60,000
TBA	RU14	Tree Nobs	Ptn. Subareas 4-1, 4-2, 4-13	320,000
TBA	RU15	Outside Stephens Island	Ptn. Subarea 4-2	100,000
TBA	RU16	Inside Stephens Island	Ptn. Subareas 4-9, 4-13	120,000
TBA	RU17	Kelp Pass	Subarea 4-12	60,000
TBA	RU18a	Edye Pass	Ptn. Subarea 4-2, Subarea 4-4	120,000
TBA	RU18b	Oval Bay	Ptn. Subarea 4-2, Ptn. Subarea 4-3	140,000
TBA	RU19	Porcher Inlet	Subarea 5-9	60,000
TBA	RU20a	Cape George	Ptn. Subarea 4-3	60,000
TBA	RU20b	Freeman Passage	Ptn. Subareas 5-11, 5-12 (closed inside Freeman Spit)	80,000
TBA	RU21	Willis Bay	Ptn. Subareas 5-10, 5-11	100,000
TBA	RU22a	Hankin Rock	Ptn. Subarea 5-10	50,000
TBA	RU22b	Beaver Pass	Ptn. Subarea 5-10	54,000
TBA	RU23	Upper Principe Channel	Subarea 5-13	142,000
TBA	RU24a	Mid Principe Channel	Ptn. Subarea 5-17; Subarea 5-18	54,000
TBA	RU24b	Lower Principe Channel	Ptn. Subarea 5-17, Subarea 5-19, Ptn. Subarea 6-9 north of Fleishman Point	70,000
TBA	RU25	Petrel Channel	Subareas 5-14, 5-15, 5-16.	20,000
TBA	RU26	Larsen Harbour	Ptn. Subareas 5-11, 5-20	108,000
TBA	RU27a	Upper Banks Island	Ptn. Subarea 5-20	160,000
TBA	RU27b	Mid Banks Island	Ptn. Subarea 5-20	108,000
TBA	RU28	Bonilla Island	Ptn. Subarea 5-20, Subarea 105-1, ptn. Subarea 105-2	250,000
TBA	RU29	Kingkown Inlet	Ptn. Subarea 5-20, Subarea 5-21	130,000
TBA	RU30	Lower Banks Island	Subarea 5-22, ptn. Subareas 105-2, 106-1	400,000

Opening Sequence	Quota Area	Name	Description	Quota (lbs.)
Note: Most Quota Areas area comprised of portions of Areas and Subareas. Complete descriptions of Quota Areas are provided in Appendix 12. **Changes marked in bold type.**				
TBA	RU32	Calamity Bay	Ptn. Subarea 6-9	250,000
TBA	RU33	Otter Pass	Ptn. Subarea 6-9	300,000
TBA	RU34a	Langley Pass	Ptn. Subarea 6-9	50,000
TBA	RU34b	Develin Bay	Ptn. Subarea 6-9	50,000
TBA	RU35	Oswald Bay	Ptn. Subareas 6-9, 106-1	200,000
TBA	RU36a	Estevan Group East	Ptn. Subareas 6-9, 6-10	200,000
TBA	RU36b	Estevan Group South	Ptn. Subareas 6-9, 106-1	110,000
TBA	RU37	Rennison Island	Ptn. Subareas 6-9, 6-10, 6-11, 6-13	96,000
TBA	RU38a	Campania Island	Ptn. Subarea 6-10 (west Campania Island)	200,000
TBA	RU38c	Surf Inlet	Ptn. Subarea 6-10, Subarea 6-12	50,000
TBA	RU38d	Gil Island West	Subareas 5-24**,** 6-5, 6-27 and 6-28	54,000
TBA	RU38e	McKay Reach	Subarea 6-7	20,000
TBA	RU38f	Whale Channel	Subareas 6-6, 6-8, Ptn. Subarea 6-10, Subarea 6-26	54,000
TBA	RU39	Upper West Aristazabal	Ptn. Subareas 6-13, 106-2	120,000
TBA	RU43	Upper Laredo	Ptn. Subarea 6-11, Subarea 6-14	30,000
TBA	RU44	Lower Laredo	Subarea 6-15, ptn. Subarea 6-16	50,000
TBA	RU45	Laredo Inlet	Ptn. Subarea 6-16, Subarea 6-19	20,000
Mainland North Coast total:				**5,260,000**
MAINLAND CENTRAL COAST SPECIAL MANAGEMENT AREA (Areas 6, 7 to 10, 106 and adjacent offshore areas) See Section 4.6				
TBA	RU31a	Moore Islands	Ptn. Subarea 106-2	300,000
	RU31b	Harvey Islands	Ptn. Subarea 106-2	
TBA	RU40	Woodcock Islands	Ptn. Subareas 6-13, 106-2	134,000
	RU41	Normansell Islands	Ptn. Subareas 6-13, 106-2	
TBA	RU42	Lower West Aristazabal	Ptn. Subareas 6-13, 106-2	74,000
TBA	RU46a	Laredo Sound	Ptn. Subareas 6-16, 6-17	192,000
	RU46b	Prior Pass	Ptn. Subareas 6-13, 6-17	
Mainland Central Coast Special Management Area Total:				**700,000**
TOTAL AVAILABLE QUOTA _ NORTH COAST LICENCE AREA :				**7,958,000**

North Coast Protocol

For the 2026/27 season the On-Grounds Monitoring program for the north coast fishery will once again be suspended. The PUHA and DFO will work together to develop and implement a fishing protocol for the 2026/27 fishing season. Certain members of the PUHA will be designated as "On-Grounds Co-ordinators" and will aid in keeping track of fleet movements and north coast area quotas.

A Vessel Monitoring System (VMS) will continue to be piloted by the north coast fishing groups for the in order to increase monitoring efficiency. This will be the fifteenth year of the VMS pilot program.

Each north coast fishing group will be required to have at least one vessel equipped with a functional VMS unit at all times or fishing activity will cease. More detail will be available in the North Coast Fishing Protocol available from the service provider or resource managers (please see contacts in Appendix 11).

The Department will evaluate the north coast fishing protocol as the season progresses to ensure that all licence conditions and management requirements for the fishery are being met. If enforcement, quota tracking, or management issues arise in-season, the Department may reinstate the On-grounds Monitoring (OGM) requirement for the fishery or may implement other management actions.

Gwaii Haanas Kelp Restoration Management Area Pilot Program

Gwaii Haanas Archipelago Management Board (AMB) partners – Department of Fisheries and Oceans, Council of the Haida Nation and Parks Canada Agency – and the PUHA are piloting a Gwaii Haanas Kelp Restoration Management Area as part of the Chiixuu tll iinasdll Nurturing Seafood to Grow kelp research project at Murchison Island in northern Juan Perez Sound (Subarea 2-11). The research area is within a community-driven Abalone Stewardship Area that has been closed to commercial Red Sea Urchin harvest since 2003 and is now also a high protection zone in the Gwaii Haanas Land-Sea-People Management Plan from 2018. Red Sea Urchin barrens are extensive around the study site area, negatively impacting the growth of kelp, sessile invertebrate communities and overall rocky reef biodiversity. A pilot kelp forest restoration program to improve abalone habitat was initiated in 2017 along 3-km of northeast Murchison Island. In order to try to maintain restoration gains over the longer term, the Gwaii Haanas AMB has partnered with the PUHA to maintain low urchin densities at the restoration site. The pilot program will involve using targeted urchin fishing and crushing unmarketable and undersized urchins within the study area and will include additional commercial harvest in an agreed upon area surrounding the study site.

A pre-season discussion with the Gwaii Haanas AMB will be held annually to determine if, when, and under what specified conditions, the research area will be open for harvest for restoration purposes. A post-season discussion involving the Gwaii Haanas AMB and PUHA will be held to debrief on the restoration maintenance activities and fishery to see if there is support to continue this pilot program in future seasons. Quota cannot be moved from the Gwaii Haanas Kelp Restoration Management Area to other areas of Haida Gwaii.

Mainland Central Coast Special Management Area

Sea Otters have expanded their range in Management Areas 6, 7 to 10 and 106 (Mainland Central Coast) over the last few years and have adversely affected the commercial Red Sea Urchin fishery. In the past, Quota Areas that have been impacted by Sea Otter predation have either been closed or have had their quotas reduced. The Mainland Central Coast Special Management Area will allow greater flexibility in portions of Management Areas 6, 7 to 10 and 106. See Appendix 5.

'Fallback' quota will be available in Quota Areas impacted by Sea Otters. This will allow harvesters an opportunity to scout for and harvest Red Sea Urchins in these areas since not all portions of a Quota Area may be impacted by Sea Otters. This does not increase the overall Total Allowable Catch (TAC) or Individual Quotas (IQ). Any quota fished in these areas will reduce available quota in (an)other area(s) within the Mainland Central Coast Special Management Area so the overall TAC is not exceeded.

Exploratory Quota

The PUHA has advised that urchin barrens continue past the current Quota Area boundary for Quota Area RU38d. Starting in the 2021/2022 season, one adjacent Subarea (5-24) was added to RU38d to allow harvesters to explore these urchin barrens. No additional quota was added to RU38d and any quota taken from Subarea 5-24 was deducted from the existing quota for this Quota Area. This exploratory opportunity will also be permitted for the 2026/2027 season.

Fallback quota for the Mainland Central Coast Special Management Area

Quota Area	Name	Description	Quota (lb.)
RU47a	Thompson Bay	Ptn. Subareas 7-1, 7-2, Subareas 7-19, 7-20, ptn. Subarea 7-21, Subarea 7-32	TBD
RU47b	Day Point	Ptn. Subareas 7-1, 7-2, 7-3, 7-31	TBD
RU48	Milbanke Sound	Ptn. Subarea 7-3	TBD
RU49	Finlayson Channel	Subareas 7-4, 7-5, 7-6, ptn. Subarea 7-9	TBD
RU50	Mathieson Channel	Ptn. Subarea 7-9	TBD
RU51	Seaforth Channel	Subarea 7-8, ptn. Subarea 7-9, Subareas 7-12, 7-15, ptn. Subarea 7-21	TBD
RU52	Tribal Group	Subarea 7-18; Ptn. Subareas 7-23, 7-24	TBD
RU53	Spider/Kildidt	Subareas 7-26, 7-27, 7-28	TBD
RU54	McNaughton Group	Ptn. Subarea 7-17, Subarea 7-25	TBD
RU55	Hakai Pass	Subareas 8-1, 8-2	TBD
RU56a	Nalau Pass	Ptn. Subarea 8-4	TBD
RU56b	Fitz Hugh Sound	Subarea 8-3, ptn. Subarea 8-4, Subarea 8-16, Ptn. Subarea 9-12	TBD
RU57a	Rivers Inlet	Subareas 9-1 to 9-4, 9-10, 9-11, Ptn. Subarea 9-12, Ptn. Subareas 10-1 and 10-2	TBD
RU57b	West Calvert Island	Area 109, Ptn. Subarea 10-1	TBD
RU57c	Grief Bay	Ptn. Subarea 10-1	TBD
RU58	Smith Inlet	Ptn. Subarea 10-2, Subareas 10-3, 10-4, 10-5, 10-7, 10-8, 10-12	TBD
Note: Quota will be determined in-season (TBD).			

South Coast (Areas 11 through 29 and adjacent offshore areas)

The South Coast TAC will be **2,229,000 lb. (1,011.1 tonnes)**, apportioned between the Quota Areas shown in the table below. All weights referred to in the tables below are the weights that are determined during validation at the **first point of landing** (in pounds). Openings in the South Coast are to be determined in-season based on advice from the PUHA. The timing of each area's harvest is expected to be similar to last season's schedule. **The PUHA has requested that Quota Area 17 (Nanaimo) be set aside for vessels involved with the fresh/live market program for the 2026/27 season.**

Opening Sequence	Quota Area	Name	Description	Quota (lb.)
Note: Most Quota Areas area comprised of portions of Areas and Subareas. Complete descriptions of Quota Areas are provided in Appendix 12. **Changes marked in bold type.**				
NORTHERN VANCOUVER ISLAND SPECIAL MANAGEMENT AREA (Areas 11 and 12) – See section 4.8				
TBA	12H	Northern Johnstone Strait	Subareas 12-1 to 12-3, 12-21 to 12-24	150,000
TBA	12M	Southern Queen Charlotte Strait	12-4 to 12-8, 12-17 to 12-20, 12-26, 12-38 to 12-42 except closures.	420,000
Northern Vancouver Island total:				**570,000**
CENTRAL VANCOUVER ISLAND URCHIN BARREN MANAGEMENT AREA (Area 13) – See Section 4.9				
TBA	13A	Kelsey Bay - Proper	Subareas 13-32 to 13-34	82,000
TBA	13B	Campbell River South	Subareas 13-1, 13-2, ptn Subarea 13-3, ptn. Subarea 14-13	250,000
TBA	13C	Campbell River North	Subareas ptn. 13-6, 13-7 to 13-9, 13-11, 13-27, 13-28	230,000
TBA	13D	Campbell River East	Subareas 13-10, 13-12	134,000
TBA	13E	Cordero Channel	Subareas 13-25, 13-41, 13-42	34,000
TBA	13F	Kelsey Bay – East	Subareas 13-29 to 13-31, 13-35 to 13-40	85,000
TBA	13G	Stuart Island	Subareas 13-13 to 13-24, 13-26, 15-2 to 15-4	190,000
TBA	13J *	Discovery Pass	Ptn. Subarea 13-3; Subareas 13-4 and 13-5, ptn. 13-6	100,000
Central Vancouver Island total:				**1,105,000**
SOUTHERN VANCOUVER ISLAND) Areas 14, 17 to 20 and 29				
TBA	14A	Comox	Subareas 14-5, 14-7, 14-8, 14-10, ptn. Subareas 14-9, 14-11 and 14-12	25,000
TBA	14B	Cape Lazo	Ptn. Subareas 14-9, 14-11, 14-12, 14-13	12,000
TBA	**EX****	**South Coast Exploratory Area**	**Subareas 14-1 to 14-4, 15-1, 15-5, 16-1 to 16-4, 16-9 to 16-12, 16-16 to 16-22, 29-1 and 29-3**	**TBD**
Set aside Fresh/ Live Program	17	Nanaimo	Area 17 except closure, Subarea 29-5	70,000
TBA	18A	Sidney	Subareas 18-3, 18-4, 18-6, ptn. Subarea 19-5, Subarea 19-6	45,000
TBA	18B (new split)	Mayne/Saturna Island	Subareas 18-1, 18-2, portion of Subarea 18-5, 18-9, 29-4	70,000

Opening Sequence	Quota Area	Name	Description	Quota (lb.)
Note: Most Quota Areas area comprised of portions of Areas and Subareas. Complete descriptions of Quota Areas are provided in Appendix 12. **Changes marked in bold type.**				
TBA	18C (new split)	East Point/Tumbo Channel	Portion of Subarea 18-5 and Subarea 18-11	8,000
TBA	19	Victoria	Subareas 19-3, 19-4, ptn. Subarea 19-5	50,000
TBA	20	Sooke	Subareas 20-4 to 20-6 except closure	30,000
Southern Vancouver Island total:				**310,000**
WEST COAST OF VANCOUVER ISLAND (Areas 23 and 123)				
TBA	23D	Area 23	Subareas 23-5 to 23-7, 23-11, 123-3 and 123-5 except closures	252,000
West Coast Vancouver Island total:				**252,000**
SOUTH COAST LICENCE AREA TOTAL:				**2,229,000**

* Please see section 4.10.
** Please see section 4.11

Northern Vancouver Island Special Management Area

Sea Otters have expanded their range in Management Areas 11 and 12 (Northern Vancouver Island) over the last few years and have adversely affected the commercial Red Sea Urchin fishery. In the past, Quota Areas that have been impacted by Sea Otter predation have either been closed or have had their quotas reduced. The Northern Vancouver Island Special Management Area, in keeping with DFO Science advice, will allow greater flexibility in portions of Management Areas 11 and 12.

'Fallback' quota will be available in quota areas impacted by Sea Otters. This will allow harvesters an opportunity to scout for and harvest Red Sea Urchins in these areas, since not all portions of a Quota Area may be impacted by Sea Otters. This does not increase the overall Total Allowable Catch (TAC) or Individual Quotas (IQ). Any quota fished in these areas will reduce available quota in other area(s) within the Northern Vancouver Island Special Management Area so the overall TAC is not exceeded.

Within the Special Management Area, quota may be moved from regular quota areas to fallback quota areas but may not be moved between regular quota areas.

Fallback quota for the Northern Vancouver Island Special Management Area

Quota Area	Name	Description	Quota (lb.)
11	Allison Harbour	Ptn. Area 11	TBD
12A	Bates Pass	Ptn. Subarea 12-12	TBD
12B	Christie/Browning Pass	Subarea 12-10, ptn. Subarea 12-11	TBD
12C	Port Hardy	Subarea 12-15, ptn. 12-16	TBD
12F	Deserter Island	Ptn. Subarea 12-13	TBD
12J	Shadwell Pass	Ptn. Subarea 12-12	TBD
Note: Quota will be determined in-season (TBD).			

Central Vancouver Island Urchin Barren Management Area

The Department, A-Tlegay Fisheries Society and the PUHA are piloting a Central Vancouver Island Urchin Barren Management Area as part of an ecosystem management approach in Management Area 13. This pilot program started in the 2018/19 season and will continue until further notice. Red Sea Urchin barrens exist around Management Area 13 and may be negatively impacting the growth of kelp and sessile invertebrates. In order to reduce the number of Red Sea Urchins in this area, the harvest rate has been increased from 2% to up to 5% and a closure has been temporarily reopened in Discovery Passage. A post-season discussion involving DFO, A-Tlegay Fisheries Society and PUHA will be held to see if there is support to continue this pilot program in future seasons. A pre-season discussion will also be held to determine when the 13J Discovery Passage quota area will open for harvest.

Within the Central Vancouver Island Urchin Barren Management Area, quota may not be moved between quota areas.

Exploratory Quota

The PUHA has advised that urchin barrens continue past the current Quota Area boundaries in portion of B.C. Starting in the 2021/2022 season three adjacent Subareas (15-2 to 15-4) were added to Quota Area 13G to allow harvesters to explore possible urchin barrens. This opportunity will continue for the 2026/2027 season. No additional quota will be added to 13G and any quota taken from Subareas 15-2 to 15-4 will be deducted from the existing quota for this Quota Area. In addition, portions of Management Areas 14 (14-1 to 14-4), 15 (15-1 and 15-5, 16 (16-1 to 16-4, 16-9 to 16-12, 16-16 to 16-22) and 29 (29-1 and 29-3) will be fished under an exploratory protocol. Quota taken from these areas will be deducted from an adjacent quota area. Any quota taken from exploratory areas will not increase the overall TAC but will allow harvesters to determine the feasibility of fishing in these areas. Feedback from harvesters will inform whether surveys should be undertaken and if quota should be added on a longer term basis moving forward.

Live Market Validation Pilot Program

Alternate catch validation methods are permitted for use for the PUHA's live market program. The two validation methods are intended to allow the validated weight of urchins destined for the live-market (transported submerged in sea water) to count towards the same amount of quota as urchins destined for the traditional processed market (transported out of water).

The two alternate validation methods include a volumetric method and a water-loss conversion method and are described in the Live Market Validation Pilot Program Protocol available from the service provider or resource managers (see contacts in Appendix 11). Participants will be limited to those landing urchins destined for the live/fresh market. These alternate methods of validation are not to be used for urchins heading to the processed market.

OPEN TIMES AND QUOTA AREAS – GREEN SEA URCHINS

General Information

The commercial fishery will open no earlier than August 1, and close no later than July 31, of the following year. The commercial fishery generally opens early in the fall depending on market demand and generally closes in the spring of the following year. Markets generally guide harvest. The majority of the harvesting effort has historically occurred in December and January, however, more recently effort

has been higher earlier in the season to get the most benefits from market conditions. Commercial harvest schedules are determined in consultation with the Pacific Urchin Harvesters Association (PUHA).

The Department would like to remind all fish harvesters of the importance of providing accurate harvest information. If problems of misreported landing or harvest locations to the Department and/or dockside validators exist, the openings for this fishery may be adjusted in-season to limited rotational openings. These limited openings will restrict the fleet to fish small areas as a group in order to concentrate the fleet for monitoring purposes. At-sea observers may also be required if obtaining accurate harvest information remains problematic.

Harvesters are encouraged to fish throughout the quota areas to prevent localized overharvesting. Localized overharvesting may result in quota decreases or quota areas may need to be split and portions may be closed.

Quota

The commercial Total Allowable Catch (TAC) is 372.86 tonnes (822,000 lbs) apportioned between the Quota Areas shown below. All weights referred to in the tables below are the weights that are determined during validation at the first point of landing (in pounds).

Quota Area	Name	Description	Quota(lbs)	Quota (tonnes)
4*	Area 4	All of Area 4	***25,000***	***11.34***
11*	Allison Harbour	All of area 11	***3,000***	***1.36***
12A	12 West	12-1 to 12-21, 12-24, 12-26, 12-39	280,000	127.01
12B	12 East	12-22, 12-23, 12-27 to 12-38, 12-40 to 12-48	55,000	24.95
13A	Cape Mudge	13-1, 13-14 and 13-15	119,000	53.98
13B	S. Johnstone St.	13-27 to 13-35	63,000	28.58
13C	Cordero Channel	13-23 to 13-26 & 13-36 to 13-43	30,000	13.61
13D	Discovery Pass North/Sonora Island	13-7 to 13-13 and 13-16 to 13-22	32,000	14.52
13E	Willow Point	13-2	45,000	20.41
13F	Discovery Pass South	13-3, 13-4, 13-5 and 13-6	39,000	17.69
14**	14	Area 14 excluding 14-3	20,000	9.07
16*	Sunshine Coast/Howe Sound	14-03, 15-01 to 15-05, 16-01 to 16-04, 16-09 to 16-12, 16-16 to 16-22, 28-1 to 28-8	***16,000***	***7.26***
17*	Nanaimo	Area 17 and Subarea 29-5	***3,000***	***1.36***

18A (new split)	Southern Gulf Islands	Area 18; Subareas 29-4, 19-6 and that portion of subarea 19-5 north of a line running due east from Cormorant Point	30,000	13.61
18B (new split)	East Point/Tumbo Channel	Portion of Subarea 18-5 and Subarea 18-11	3,000	1.36
19A	19 East	Area 19 except subareas 19-3, 19-6 and ptn of 19-5 north of a line running east from Cormorant Pt	43,000	19.50
19B	19 West	Subarea 19-3	7,000	3.18
20A	Sooke East	Ptn of Area 20-5 East of Otter Pt. 20-6, 20-7	46,000	20.87
20B	Sooke West	Area 20-3, 20-4 and ptn of 20-5 West of Otter Pt.	10,000	4.54
Coastwide Total			**822,000**	**372.86**

* Exploratory
** Quota plus 10,000 lb Exploratory option

Any Quota Area overages may be deducted from the next year's quota for the Quota Area.

Urchin Barren Management

The Department, A-Tlegay Fisheries Society and PUHA are piloting an Urchin Barren Management Approach for both Red Sea Urchins and Green Sea Urchins as part of an ecosystem management approach in Management Area 13. Urchin barrens exist around Management Area 13 and may be negatively impacting the growth of kelp and sessile invertebrates. In order to reduce the number of Green Sea Urchins in this area, for the past five seasons a TAC has been allocated to a previously closed area in Discovery Passage. Discussions involving DFO, A-Tlegay Fisheries Society and PUHA will be ongoing to determine the future of the pilot program. Urchin Barrens continue to persists, this season a higher quota was recommended and implemented in this area.

The Department is aware that Green Sea Urchin Barrens are becoming more common within other areas within the Strait of Georgia. Increased harvest rates will be considered in urchin barren areas as part of the ecosystem management approach.

Exploratory Quota Protocol

The Green Sea Urchin fishery has been limited, for many years, due to poor market conditions. In recent years market conditions have improved and at the same time urchin populations have increased due to changes in ocean conditions and a decrease in predators. This increase in urchin populations has been detrimental to the local ecosystem. In order to meet the increased market demand and attempt to reduce urchin numbers, a number of areas have been recently added to allow harvesters to explore beyond current quota area boundaries. Any quota taken from exploratory areas will not increase the overall TAC but will allow harvesters to determine the feasibility of fishing in these areas. Feedback from harvesters will inform whether surveys should be undertaken and if quota should be added on a longer term basis moving forward.

Other Areas

Areas of the coast not listed in the Quota Areas above may be considered for openings upon discussion with PUHA and local First Nations. An independent stock assessment survey of the area that demonstrate a sustainable harvest quota can be established, may be required to include quota options within the TAC outside the exploratory protocol. Fish harvesters will be required to fund any stock assessment surveys. Proposals for new areas may be sent to the Department for review.

CLOSURES

It is the fish harvesters' responsibility to ensure that an area is open before harvesting.

Human Waste Containment Regulation

Disposal of human waste into waters where shellfish are harvested or adjacent to shellfish harvest areas creates unnecessary and potentially serious health risks for shellfish consumers. In accordance with the Canadian Shellfish Sanitation Program (CSSP) and Regulations administered by Transport Canada, raw sewage (human wastes, sewage or refuse) shall not be discharged from vessels while in or adjacent to shellfish areas. Vessels operating at a distance which does not allow for timely access to on-shore washroom facilities are expected to have a designated human waste receptacle on board. Receptacles could include a portable toilet, a fixed toilet, or other containment device as appropriate. Such devices must be made of impervious, cleanable materials and have a tight-fitting lid. (Refer to Division 4 of the *Vessel Pollution and Dangerous Chemicals Regulations* under the *Canada Shipping Act*):

1. Portable toilets or other designated human waste receptacles shall be used only for the purpose intended, and shall be so secured and located as to prevent contamination of the shellfish area or any harvested shellfish on board by spillage or leakage.

2. The contents of toilets or other designated human waste receptacles shall be emptied only into an approved sewage disposal system.

3. Every person onboard a shellfish harvest vessel must wash and sanitize their hands after using or cleaning a waste receptacle, or after using an onshore washroom facility.

Information on Human Waste Containment Receptacle Requirements under the CSSP can be found at the following Canadian Food Inspection Agency internet site:

https://www.inspection.gc.ca/preventive-controls/fish/cssp/questions-and-answers/eng/1563470479199/1563470589053

Notification of Closures

Additional closures may be announced in-season by Fishery Notice. Prior to fishing in an area, fish harvesters are advised to consult the local Fisheries and Oceans Canada office or to contact a resource manager listed in Appendix 11.

Harvesting on Aquaculture Tenures

Licensed aquaculture facilities are considered private property. Under the *Fisheries Act*, fishing within an aquaculture facility already under federal licence (PAR aquaculture licence) is prohibited. The Department recommends that commercial harvesters familiarize themselves with the location of aquaculture tenures in fishing areas. As per the conditions of licence, all sub-tidal and intertidal boundaries shall be marked clearly.

Research Area Closures

Some areas have been designated as research or study areas and are closed to commercial fishing. Fishing is permitted in these areas only under a scientific licence. Studies undertaken in these areas are a co-operative effort between Fisheries and Oceans Canada, the PUHA and local First Nations, and include things like investigations into size limits, the effects of various harvest strategies on resident stocks, quantifying variability in population structure and density over time in commercially unfished areas. For further information on the research areas, please contact the Science Branch (see contacts in Appendix 11).

Year Round Research Closures – Green Urchin

Area 12: Stubbs Island/Plumber Islands: Portion of Subareas 12-5 and 12-18. All waters within 0.25 nautical miles of Stubbs Island. Those waters of the Plumper Islands commencing at the most westerly point on Ksuiladas Island thence in a straight line to Stubbs Island thence due east for 1.4 nautical miles, thence in a straight line to the most northerly point on Ksuiladas Island, thence following the western shore of said island to the point of commencement.

Area 13: Kelsey Bay: The waters of Subarea 13-34 (Salmon Bay) and that portion of Subarea 13-33 lying southerly or inside of a line from the ferry landing at the Kelsey Bay Government Dock easterly to Petersen Islet Light.

Area 18: Java Islets Research Closure: Those waters of Subarea 18-5 within 0.25 nautical miles of Java Islets.

Area 26: Kyuquot Sound Marine Communities Study Area: A portion of 26-6 inside or northerly of a line from White Cliff Head to Racoon Point (Kyuquot Bay). A portion of 26-6 on the west side of Union Island commencing at position 50°0.4’ N, 127°19.3’ W (Entrance to Crowther Channel)

Seasonal Research Closures – Green Urchin

Seasonal research closures will be determined in season. Larger areas around research closures may be closed prior to the survey to prevent pre-survey fishing effort to affect the survey results. These will be announced in-season by Fishery Notice.

Area 12: Stephenson Islets/Stubbs Island/Plumper Islands: Portion of Subareas 12-3, 12-4, 12-5 and 12-18 inside a line commencing on Malcolm Island at 50°37.13’ N, 126°49.75’ W to the most westerly point on Pearse Islands 50°35.04’ N, 126°53.19’ W along the shore to 50°34.51’ N, 126°51.70’ W then easterly to a point of Hanson Island at 50°33.88’ N, 126°46.52’ W along the shore to 50°35.37’ N, 126°45.06’ W to the point of commencement. (See Appendix 12)

Area 19: Chain Islets: That portion of Subarea 19-4 inside a line commencing at 48°25.62’ N, 123°16.90’ W south to 48°24.89’ N, 123°16.63’ W east to 48°24.99’ N, 123°14.99’ W northwest to 48°25.83’ N, 123°16.11’ W then back to the point of commencement. (See Appendix 12)

Area 19: Fulford Reef: That portion of Subarea 19-4 inside a line commencing at the North Cardinal Buoy located at 48°26.89’ N, 123°14.38’ W southwest to 48°26.74’ N, 123°14.75’ W southeast to 48°26.52’ N, 123°14.13’ W northeast to 48°26.62’ N, 123°13.98’ W northwest to the point of commencement the North Cardinal Buoy. (Appendix 12)

Permanent Closures

The following areas are closed for commercial Red Sea Urchin and Green Sea Urchin harvest. Closures in place for only the Red Sea Urchin fishery or only the Green Sea Urchin fishery will be indicated by 'Red Sea Urchin only' or 'Green Sea Urchin only'.

Area 1

Kiusta I.R.: That portion of Subarea 1-2 inside a line commencing at 54 degrees 10.5 minutes north latitude, 133 degrees 00.9 minutes west longitude, then due north to the 20 fathom contour line as shown on Canadian Hydrographic Service Chart #3868, then following the 20 fathom contour line to 54 degrees 11.4 minutes north latitude, 133 degrees 01.8 minutes west longitude, then due south to 54 degrees 11.1min north latitude, 133 degrees 01.8 minutes west longitude. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchin only.

Dadens I.R.: That portion of Subarea 1-2 inside a line commencing at 54 degrees 11.2 minutes north latitude, 132 degrees 58.9 minutes west longitude, then running true south to the north shore of Lucy Island; then following the north shore of Lucy Island to the westernmost point; then running to 54 degrees 11.3 minutes north latitude, 132 degrees 59.9 minutes west longitude, then running true east to 54 degrees 11.3 minutes north latitude, 132 degrees 59.3 minutes west longitude. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchin only.

Egeria Bay I.R.: That portion of Subarea 1-2 inside a line commencing at 54 degrees 12.9 minutes north latitude, 132 degrees 59.1 minutes west longitude, then running true east to the 20 fathom contour as shown on Canadian Hydrographic Service Chart #3868, then following the 20 fathom contour to 54 degrees 13.2 minutes north latitude, 132 degrees 58.5 minutes west longitude, then running true west to 54 degrees 13.2 minutes north latitude, 132 degrees 59.2 minutes west longitude. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchin only.

Dibrell Bay I.R.: That portion of Subarea 1-2 inside a line commencing at 54 degrees 13.8 minutes north latitude, 132 degrees 58.3 minutes west longitude, then running true east to the 20 fathom contour; the following the 20 fathom contour as shown on Canadian Hydrographic Service Chart #3868 to 54 degrees 14.05 minutes north latitude, 132 degrees 57.6 minutes west longitude, then true west to 54 degrees 14.05 minutes north latitude, 132 degrees 58.3 minutes west longitude. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchin only.

Rhodes Point I.R.: A portion of Subarea 1-2 inside a line commencing at 54 degrees 12.9 minutes north latitude and 133 degrees 01.7 minutes west longitude, then running true south to the 10 fathom contour as shown on Canadian Hydrographic Service Chart #3868, then following the 10 fathom contour to 54 degrees 13.2 minutes north latitude, 133 degrees 02.8 minutes west longitude, then running true east to 54 degrees 13.2 minutes north latitude, 133 degrees 02.2 minutes west longitude. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchin only.

Langara Point I.R.: That portion of Subarea 101-6 inside a line commencing at 54deg 15.03min north latitude, 133 degrees 03.7 minutes west longitude, then running true west to the 20 fathom contour as shown on Canadian Hydrographic Service Chart #3868, then following the 20 fathom contour to 54 degrees 15.3 minutes north latitude, 133 degrees 04.4 minutes west longitude, the running true east to 54 degrees 15.3 minutes north latitude, 133 degrees 03.6 minutes west longitude. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchin only.

Shag Rock: That portion of Subarea 1-3 inside a 0.25 nautical mile ribbon boundary off Indian Reserve #13 located due south of Shag Rock. The boundary begins 0.25 nautical miles north of Indian Reserve

#13 and ends 0.25 nautical miles south of Indian Reserve #13. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchin only.

Subarea 1-6 (First Nations access for food, social and ceremonial purposes) – Green Sea Urchins only.

Nankivell Point: That portion of Subarea 1-7 inside a 0.25 nautical mile ribbon boundary beginning at Nankivell Point and heading westerly along the shore for one nautical mile. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchins only

Area 2

Subareas 2-4 to 2-7 (Cumshewa Inlet/Skedans): This area is closed to undertake recruitment and mortality studies – Red Sea Urchin only.

McCoy Cove (in Cumshewa Inlet): That portion of Subarea 2-3 lying inside a line from a boundary sign located true north of Haans Islet, thence easterly to the sector light located at the south-easterly entrance to McCoy Cove. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchins only.

Skedans Bay: That portion of Subarea 2-7 shoreward of a line from Skedans Point to Vertical Point. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchins only.

Richardson Pass: That portion of Subarea 2-8 including the southerly shore of Richardson Island within Richardson Passage. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchins only.

Kwoon Cove to Gowgaia Bay: Those waters of Subareas 2-38 to 2-41 and 142-1 inside a line commencing at a point on land on T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°23.311'N and 131°35.794'W northwesterly to a point on land on GuuGaalas Gwaay (south Gowdas Islands) at 52°23.340'N and 131°35.859'W, thence northerly following the shoreline of GuuGaalas Gwaay (south Gowdas Islands) to 52°23.489'N and 131°36.092'W, thence southwesterly to a point in water at 52°19.074'N and 131°43.794'W, thence northwesterly to a point in water at 52°38.115'N and 132°09.939'W, thence southeasterly to a point on land on T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°38.177'N and 131°56.374'W, and thence southerly following the western shoreline of T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) to the beginning point. [Kun Skuujii sda GawGaay.ya (Kwoon Cove to Gowgaia Bay)]

Wailing Island: Those waters of Subareas 2-31 and 142-1 inside a line commencing at a point on the western shoreline of T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°07.210'N and 131°15.838'W easterly following the shoreline to 52°07.440'N and 131°14.307'W, thence southeasterly to a point on the northern shoreline of K'il (Flatrock Island) at 52°06.468'N and 131°10.300'W, thence easterly following the shoreline to 52°06.388'N and 131°10.079'W, thence southeasterly to the westernmost point of Sii.niihl Gwaay.yaay (Gordon Islands) at 52°06.018'N and 131°09.391'W, thence southerly following the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52°05.884'N and 131°09.283'W, thence southeasterly to 52°05.806'N and 131°09.208'W, thence easterly following the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52°05.787'N and 131°09.097'W, thence northeasterly to the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) at 52°05.788'N and 131°08.938'W, thence easterly following the shoreline and thence crossing the channel to 52°05.778'N and 131°08.861'W, thence southeasterly following the shoreline to 52°05.741'N and 131°08.788'W, thence following the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52°05.708'N and 131°08.697'W, thence easterly across the channel to 52°05.709'N and 131°08.673'W, thence southerly following the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52°05.468'N and 131°08.425'W,

thence southeasterly to a point on the western shoreline of Gangxid Gwaay.yaay (Kunghit Island) at 52°04.414’N and 131°07.720’W, thence northerly and southerly following the shoreline of Gangxid Gwaay.yaay (Kunghit Island) to 52°04.366’N and131° 07.720’W, thence southwesterly to a point in water at 52°03.175’N and 131°14.399’W, thence northwesterly to a point in water at 52°05.826’N and 131°17.913’W, and thence northeasterly back to the beginning point. [SGang Gwaay (Wailing Island)]

South Kunghit Island: Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line commencing at a point on the western shoreline of Gangxid Tllgaay (South Kunghit Island) at 51°57.689’N and 131°03.375’W easterly following the southern shoreline of Gangxid Tllgaay (South Kunghit Island) to 52°00.343’N and 130°59.788’W, thence southeasterly to a point in water at 51°50.163’N and 130°53.208’W, thence southwesterly to a point in water at 51°47.954’N and 130°53.612’W, thence northwesterly to a point in water at 51°54.940’N and 131°07.779’W, and thence northeasterly to the beginning point. [Gangxid Tllgaay (South Kunghit Island)]

Lyman Point to Receiver Point: Those waters of Subareas 102-2 and 102-3 inside a line commencing at a point on land of Kildaga T’awts’iiGaay (unnamed islet) at 52°04.541’N and 130°56.293’W following the shoreline of the islet to 52°04.591’N and 130°56.348’W, thence northwesterly to the eastern shoreline of Gangxid Gwaay.yaay (Kunghit Island) at 52°04.652’N and 130°56.414’W, thence northerly following the eastern shoreline of Gangxid Gwaay.yaay (Kunghit Island) to 52°05.734’N and 130°56.365’W, thence northeasterly to a point in water at 52°10.222’N and 130°49.514’W, thence southwesterly to a point in water at 52°02.635’N and 130°50.918’W, thence northwesterly back to the beginning point. [Gangxid Xyuu Kun sda Kan ’Láas Kun (Lyman Point to Receiver Point)]

Benjamin Point: Those waters of Subareas 2-17, 2-18 and 102-2 inside a line commencing at a point on the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°10.262’N and 131°01.993’W northerly following the eastern shoreline to 52°13.232’N and 131°00.777’W, thence northeasterly to a point in water at 52°17.735’N and 130°55.064’W, thence southeasterly to a point in water at 52°12.476’N and 130°49.103’W, and thence southwesterly back to the beginning point. [Kayjuu Kun (Benjamin Point)]

Head of Flamingo Inlet: Those waters of Subarea 2-37 north of a line drawn from a point on T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°14.455’N and 131°22.232’W southeasterly across St’aa K’ii GawGa (Flamingo Inlet) to a point on land on the opposite shore at 52°14.228’N and 131°21.503’W. [St’aa K’ii GawGa (Flamingo Inlet) – Head]

Head of Louscoone Inlet: Those waters of Subarea 2-34 north of a line drawn from a point on land on T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°11.841’N and 131°15.670’W northeasterly across the inlet to a point on the opposite shoreline of GawGajaang (Louscoone Inlet) at 52°12.245’N and 131°14.568’W. [GawGajaang (Louscoone Inlet) – Head]

Head of Rose Inlet: Those waters of Subarea 2-18 north of a line drawn from the western shoreline of K’insiGid (Rose Inlet) on T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°11.327’N and 131°08.370’W northeasterly across the inlet to a point on the opposite shore at 52°11.328’N and 131°07.115’W. [K’insiGid (Rose Inlet) – Head]

Head of Huston Inlet: Those waters of Subarea 2-15 south of a line drawn from a point on the western shoreline of GawGan (Huston Inlet) at 52°15.732’N and 131°15.643’W northeasterly across the inlet to a point on the opposite shore at 52°16.111’N and 131°14.231’W. [GawGan (Huston Inlet) – Head]

Skincuttle Inlet to Burnaby Island: Those waters of Subareas 2-13 to 2-16 and 102-2 inside a line commencing at a point on the eastern shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°26.521'N and 131°14.153'W southeasterly to a point in water at 52°25.979'N and 131°04.470'W, thence southeasterly to a point in water at 52°22.829'N and 131°00.867'W, thence southwesterly to a point on the eastern shoreline of T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°18.124'N and 131°18.347'W, thence northerly following the eastern shoreline of T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) to 52°23.055'N and 131°23.441'W, thence northeasterly to the western shoreline of Gwaay GudgiiGaagid (Kat Island) at 52°23.082'N and 131°22.916'W, thence easterly following the southern shoreline of Gwaay GudgiiGaagid (Kat Island) to 52°23.147'N and 131°22.260'W, thence northeasterly to the western shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°23.276'N and 131°21.333'W, thence southerly following the western shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) to 52°20.949'N and 131°15.569'W, thence northeasterly to the easternmost point of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°22.315'N and 131°14.689'W, thence following the western shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) to 52°22.377'N and 131°14.683'W, thence northwesterly to a point on the eastern shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°24.494'N and 131°15.832'W, and thence following the eastern shoreline to the beginning point. [Suu Kaahlii sda SGwaay Kun Gwaay.yaay (Skincuttle Inlet to Burnaby Island)]

Poole Inlet: Those waters of Subarea 2-14 south of a line drawn from a point on the shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) in Gid Gwaa GyaaGa GawGa (Poole Inlet) at 52°22.764'N and 131°18.249'W southeasterly across the inlet to a point on the opposite shore at 52°22.505'N and 131°17.665'W. [Gid Gwaa GyaaGa GawGa (Poole Inlet)]

Mathieson Inlet to Huxley Island: Those waters of Subareas 2-12 and 2-13 inside a line commencing on the eastern shoreline of T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°30.038'N and 131°28.071'W southeasterly to a point on land on Gwaay Guusdagang (All Alone Stone Island) at 52°29.081'N and 131°24.042'W, thence southeasterly to a point on the northern shoreline of Gaaduu Gwaay (Huxley Island) at 52°28.066'N and 131°21.772'W, thence southerly following the western shoreline of Gaaduu Gwaay (Huxley Island) to 52°25.934'N and 131°21.927'W, thence southwesterly to the northern shoreline of GaysiiGas K'iidsii Gwaay (Section Island) at 52°25.435'N and 131°22.425'W, thence westerly following the northern shoreline of GaysiiGas K'iidsii Gwaay (Section Island) to 52°25.460'N and 131°22.513'W, thence northwesterly to a point on the eastern shoreline of T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°26.039'N and 131°25.343'W, thence northerly following the eastern shoreline of T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) to 52°28.460'N and 131°27.972'W, and thence northerly to the beginning point. [Kuuniisii Xaw GawGa sda Gaaduu Gwaay (Matheson Inlet to Huxley Island)]

Juan Perez Sound to Lyell Island: Those waters of Subareas 2-11 and 102-2 inside a line commencing on the eastern shoreline of Tllga Kun Gwaay.yaay (Lyell Island) at 52°42.074'N and 131°26.535'W southeasterly to a point in water at 52°41.070'N and 131°14.485'W, thence southeasterly to a point in water at 52°38.677'N and 131°12.957'W, thence southwesterly to 52°35.106'N and 131°22.254'W, thence following the northern shoreline of Xiina Gwaay.yaay (Ramsay Island) to 52°34.964'N and 131°22.963'W, thence southwesterly following the shoreline to 52°34.116'N and 131°25.603'W, thence southwesterly following the shoreline to 52°33.844'N and 131°26.324'W, thence southwesterly to a point on Gandaawuu.ngaay Gwaay.yaay (Marco Island) at 52°31.498'N and 131°30.354'W, thence northwesterly to a point on Gandaawuu.ngaay Gwaayts'idaay (Hoskins Islets) at 52°32.405'N and 131°32.946'W, thence following the northern shoreline of Gandaawuu.ngaay Gwaayts'idaay (Hoskins Islets) to 52°32.435'N and 131°33.055'W, thence southwesterly to a point on the eastern shoreline of

T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°32.211’N and 131°34.475’W, thence easterly following the eastern shoreline to 52°32.956’N and 131°37.729’W, thence northeasterly to a point on the shoreline of Kingts’ii Gwaay.yaay (Bischof Islands) at 52°34.143’N and 131°33.379’W, thence easterly following the southeastern shoreline of Kingts’ii Gwaay.yaay (Bischof Islands) to 52°34.340’N and 131°33.098’W, thence northeasterly to a point on an islet at 52°34.530’N and 131°32.890’W, thence northeasterly to a point on the southern shoreline of Tllga Kun Gwaay.yaay (Lyell Island) at 52°35.767’N and 131°32.891’W, and thence easterly and northerly following the shoreline of Tllga Kun Gwaay.yaay (Lyell Island) to the beginning point. [Gandaawuu.ngaay Xyangs sda Tllga Kun Gwaay.yaay (Juan Perez Sound to Lyell Island)]

Darwin Sound: Those waters of Subarea 2-10 inside a line commencing at a point on land on Shuttle Island at 52°40.053’N and 131°42.328’W northeasterly to a point on the western shoreline of Tllga Kun Gwaay.yaay (Lyell Island) at 52°40.466’N and 131°41.105’W, thence southerly following the western shoreline of Tllga Kun Gwaay.yaay (Lyell Island) to 52°37.301’N and 131°38.800’W, thence northwesterly to a point on land of Gwaay DaaGaaw (Shuttle Island) at 52°38.522’N and 131°41.409’W, and thence following the eastern shoreline of Shuttle Island to the beginning point. [Didxwahxyangs (Darwin Sound)]

Klue Passage to Lost Islands: Those waters of Subareas of 2-7 and 2-8 inside a line commencing on a point of the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°48.606’N and 131°39.403’W northeasterly to a point in water at 52°49.405’N and 131° 29.042’W, thence southeasterly to a point in water at 52°48.148’N and 131°28.849’W, thence southwesterly to a point in water at 52°44.898’N and 131°34.035’W, thence northwesterly to 52°45.113’N and 131°34.125’W, thence following the northern shoreline of K’ang.Guu Gwaay.yaay (Kunga Island) to 52°45.220’N and 131°35.574’W, thence southwesterly to a point on T’aanuu Gwaay (Tanu Island) at 52°45.002’N and 131°36.770’W, thence northerly following the eastern shoreline of T’aanuu Gwaay (Tanu Island) to 52°46.725’N and 131°38.878’W, thence northwesterly across to a point on T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°47.837’N and 131°39.371’W, and thence northerly following the eastern shoreline to the beginning point. [T’aanuu K’aadxwah Xyangs sda Gwaay Xaa’ans (Klue Passage to Lost Islands)]

West Skidegate Channel and Buck Channel: Subareas 2-63, 2-64, 2-66 and 2-67. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchins only.

Shields Bay: That portion of Subarea 2-77 south of a line from Dawson Head true north to the opposite shore. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchins only.

Area 5

Kitkatla Inlet/Schooner Pass: Subarea 5-3 and a portion of Subarea 5-10 north of a line running from the north-western tip of McCauley Island to a boundary sign on the northwest tip of Spicer Island and north of a line running from Boys Point on Dolphin Island to a boundary sign located on the south-westernmost tip of Spicer Island. (First Nations access for food, social and ceremonial purposes)

Kitkatla Village: That portion of Subarea 5-10 north and east of a line running from the northern tip of the entrance to Dolphin Lagoon on Dolphin Island west to a point on the Prager Islands located at 53 degrees 46.85 minutes north latitude, 130 degrees 29.8 minutes west longitude, thence northerly to a point on the Shakes Islands located at 53 degrees 47.5 minutes north latitude, 130 degrees 29.0 minutes west longitude; thence true north to the boundary line. (First Nations access for food, social and ceremonial purposes)

Area 7

West Price Island: That portion of Subarea 7-31 north of a parallel passing through 52 degrees 16.3 minutes north latitude. (Research area: recruitment and mortality studies.) – Red Sea Urchins only.

Area 12

Numas Islands: In Area 12, those waters in the vicinity of the Numas Islands that lie inside a line that begins at 50 degrees 47.9 minutes north latitude, 127 degrees 07.6 minutes west longitude, then to 50 degrees 46.6 minutes north latitude, 127 degrees 02.4 minutes west longitude, then to 50 degrees 44.3 minutes north latitude, 127 degrees 04.0 minutes west longitude, then to 50 degrees 45.7 minutes north latitude, 127 degrees 09.3 minutes west longitude, then to the beginning point. (Interim Restricted Fishing Area for Rockfish Conservation; Red Sea Urchin Commercial Fishery Closure)

Subarea 12-25 (Port Neville) (Marine Reserve/Research Area)

Area 14

Hornby Island: Portions of Subareas 14-5, 14-6, 14-7, 14-9 and 14-12 described as those waters of Lambert Channel and the Strait of Georgia, inside a line commencing at Shingle Spit on Hornby Island, thence 239 degrees true for 0.5 nautical miles, thence 126 degrees true for 3.5 nautical miles, thence 64 degrees true for 6.7 nautical miles, thence 304 degrees true for 2.3 nautical miles, thence 213 degrees true for 0.5 nautical miles to Cape Gurney on Hornby Island. (Marine Reserve)

Area 15

All waters within a 0.25 nautical mile radius of the southerly end of the Beach Gardens breakwater in Subarea 15-1. (Marine Reserve)

All waters within 0.5 nautical miles of Vivian Island located approximately 5.0 nautical miles west of Powell River in Subarea 15-2. (Marine Reserve)

All waters within 0.25 nautical miles of Rebecca Rock located 2.5 nautical miles west of Powell River in Subarea 15-2. (Marine Reserve)

All waters within 0.25 nautical miles of Dinner Rock located 2.5 nautical miles south of Lund in Subarea 15-2. (Marine Reserve)

All waters within 0.5 nautical miles of the unnamed reef off Emmonds Beach located approximately 4.0 nautical miles south of Lund in Subarea 15-2. (Marine Reserve)

All waters within 1.0 nautical mile of Mitlenatch Island, located in the upper Strait of Georgia intersected by the Subareas 15-2, 13-1, 13-3 and 14-13. (Marine Reserve)

Area 16

Skookumchuck Narrows Provincial Park: Those waters of Skookumchuck Narrows and Sechelt Rapids in Subarea 16-9 bounded on the west by a line commencing at a point on the foreshore at the westerly limit of Secret Bay on Sechelt Peninsula thence 50 degrees true to a point on the foreshore on the mainland; on the east by a line from Roland Point on Sechelt Peninsula, thence 50deg true to a point on the foreshore on the mainland. (Park)

Area 17

Subareas 17-4 to 17-9 (Stuart Channel) (First Nations access for food, social and ceremonial purposes) – Red Sea Urchins only.

Area 18

Subareas 18-7 (Sansum Narrows, Burgoyne Bay and Maple Bay), 18-8 (Cowichan Bay) and 18-10 (Fulford Harbour) (Navigational Closure)

Area 19

Ogden Point: Those waters of Subarea 19-3 inside a line commencing at the navigation light at the western end of the Ogden Point Causeway thence to Brotchie Ledge Light, thence to Holland Point on Vancouver Island. (Marine Reserve)

10 Mile Point: Those waters of Subareas 19-4 and 19-5 within 0.4 nautical miles of Cadboro Point navigation light. (Marine Reserve)

Race Rocks: Those waters of Subareas 19-3 and 20-5 within 0.5 nautical miles of Great Race Rock. (Marine Reserve) This area is being considered for a Marine Protected Area (MPA). The closure boundary description may change.

Area 20

Race Rocks: Those waters of Subareas 19-3 and 20-5 within 0.5 nautical miles of Great Race Rock. (Marine Reserve). This area is being considered for a Marine Protected Area (MPA). The closure boundary description may change.

Botanical Beach Provincial Park: That portion of Subarea 20-3 between the lowest low water on record and the highest high water on record from San Juan Point thence following the Vancouver Island shoreline easterly to the mouth of Tom Baird Creek. (Marine Reserve)

Pacific Rim National Park, Juan de Fuca: That portion of Subarea 20-1 between the lowest low water on record and the highest high water on record from Bonilla Light thence following the shoreline of Vancouver Island easterly to Owen Point. (Park)

Beecher Bay: Those waters of Subarea 20-5 north of a line running from Church Point to Beechy Head. (First Nations access for food, social and ceremonial purposes).

Area 23

Pacific Rim National Park: Those waters lying within Park Boundaries as shown, since 1989, on Canadian Hydrographic Service Chart 3671. (Park)

Bamfield Marine Station Research Area Closure: Those waters of Subareas 23-4, 23-6 and 23-7 bounded by a line commencing at the light at Whittlestone Point and running directly to the southern tip of Haines Island; from the north-western tip of Haines Island to the southern tip of Seppings Island; from the north-western tip of Seppings Island to Kirby Point on Diana Island; from Kirby Point directly to the northwest tip of Fry Island; from the north-western tip of Fry Island to the nearest adjacent point on Tzartus Island; from Foucault Bluff on Tzartus Island to the northwest tip of Nanat Island; from the eastern tip of Nanat Island to the nearest adjacent point on Vancouver Island and thence along the coastline of Vancouver Island to the point of commencement. (Research Area)

Area 24

Area 24: Moser Point Study Area: That portion of Subarea 24-8 in the vicinity of Moser Point on Vargas Island described as: “inside of, or northerly of, a line from the most south-westerly point of Echachis Island, thence north-westerly to Wilf Rock; thence north-westerly 312 degrees true east for 0.45 nautical miles to an unnamed island in the La Croix Group designated on Canadian Hydrographic Service Chart #3649 as having a height of land of 20 feet, thence due north to the shore of Vargas Island; thence following along the shore of Vargas Island in a north-easterly direction to the unnamed point immediately south of the Yarksis Indian Reserve; thence south-easterly across Father Charles Channel to the northernmost point on Wickaninnish Island; thence along the western shoreline of Wickaninnish Island to the southernmost point; thence in a straight line to the north-western point of Echachis Island; thence southerly along the western shoreline of Echachis Island to the point of commencement.” (Research Area) – Red Sea Urchins only.

Pacific Rim National Park, Grice Bay and McBey Islets: The waters of Tofino Inlet within Pacific Rim National Park including McBey Islets and Dinner Island in Tsapee Narrows, Browning Passage in Subarea 24-9 and Grice Bay west and south of Indian Island in Subarea 24-11. (Park)

Hotsprings Cove: Those waters of Subarea 24-2 and 124-3 enclosed by a line commencing at a point on the Vancouver Island shoreline 2.5 km northwest of Barney Rocks, thence to a point 500 m true south (offshore), thence to Barney Rocks, thence to Sharp Point and returning along the shoreline to the point of commencement. This closure includes Hotsprings Cove, Mate Islands, Barney Rocks and the bays west of Mate Islands. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchins only.

Ahous Point: The area within 1 nautical mile radius of Ahous Point on Vargas Island at 49 degrees 09.59.2 minutes north latitude, 126°01.21.5min west longitude. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchins only.

Siwash Cove: The area within 0.5 nautical mile radius of the prominent point of land at 49 degrees 15.43.6 minutes north latitude, 126 degrees 11.18.5 minutes west longitude, immediately to the southeast of Siwash Cove on Flores Island. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchins only.

Chetarpe: All waters within 0.5 (1/2) nautical miles of the prominent point on Vancouver Island near Chetarpe at position 49 degrees 14.64 minutes north latitude and 126 degrees 0.85 minutes west longitude. (First Nations access for food, social and ceremonial purposes)

Hayden Pass: The waters known as Hayden Pass between Obstruction Island and Flores Island. (First Nations access for food, social and ceremonial purposes) – Red Sea Urchins only.

Area 25

Friendly Cove and Santa Gertrudis Cove: That portion of Subareas 25-6 and 25-7 inside a line from a white triangular fishing boundary sign on Nootka Island near the northerly entrance to Santa Gertrudis Cove, thence true east 0.25 nautical miles, thence true south one nautical mile, thence westerly to Yuquot Point on Nootka Island, thence to the point of commencement. (First Nations access for food, social and ceremonial purposes).

Area 26

Kyuquot Bay: A portion of Subarea 26-6 inside or northerly of a line from White Cliff Head to Racoon Point. (Kyuquot Sound Marine Communities Study Area)

Entrance to Crowther Channel: A portion of Subarea 26-6 on the west side of Union Island commencing at position 50 degrees 0.4 minutes north latitude, 127 degrees 19.3 minutes west longitude. (Kyuquot Sound Marine Communities Study Area)

Checleset Bay Fishery Closure Area: Those portions of Areas 26 and 126 enclosed by a line drawn from a point on the Brooks Peninsula (50 degrees 05.18 minutes north latitude, 127 degrees 49.58 minutes west longitude), thence due south to the 50 degrees parallel, thence due east to Alert Point on Lookout Island, thence north-easterly to a point on Vancouver Island near McLean Island (50 degrees 02.1 minutes north latitude, 127 degrees 25.03 minutes west longitude), thence north-westerly along the shore of Vancouver Island to Malksope Point (50 degrees 05.53 minutes north latitude, 127 degrees 28.95 west longitude), thence due west to a point midchannel on the southeast end of Gay Passage (50 degrees 05.53 minutes north latitude, 127 degrees 30.1 minutes west longitude), thence midchannel through Gay Passage to a point midchannel on the northwest end of Gay Passage (50 degrees 06.7 minutes north latitude, 127 degrees 31.8 minutes west longitude), thence north-westerly to the shore of Vancouver Island, just west of Theodore Point (at 127 degrees 32.8 minutes west longitude, 50 degrees 07.7 minutes north latitude), thence westerly along the Vancouver Island shore to an unnamed point on the east side of Nasparti Inlet (50 degrees 08.75 minutes north latitude, 127 degrees 38.6 minutes west longitude), thence westerly across Nasparti Inlet to an unnamed point on Vancouver Island (50 degrees 08.7 minutes north latitude, 127 degrees 37.8 minutes west longitude), thence along the Vancouver Island shore to the point of commencement. (Sea Otter Reserve)

Area 28

Porteau Cove: That portion of Subarea 28-4, east of a line drawn from a white fishing boundary sign located on the south shore of Porteau Cove to a white fishing boundary sign located on the north shore of Porteau Cove. (Marine Reserve)

Whytecliff Park: That portion of Subarea 28-2 bounded by a line commencing from the most southerly point of Whytecliff Park; thence in a straight line to a point located 100 m east of the most south-easterly point of Whyte It.; thence following the southern shoreline of Whyte It. at a distance of 100 m to a point lying 100 m from the most south-westerly point of Whyte It.; thence in a straight line to a point lying 100 m west of Whytecliff Point; thence following the shoreline at a distance of 100 m in a northerly direction to a point 100 m north of Lookout Point; thence following the shoreline at a distance of 100 m in an easterly direction to a point 100 m perpendicular to the most northerly point of Whytecliff Park; thence to the most northerly point of Whytecliff Park on the mainland. (Marine Reserve)

Portions of Subareas 101-1 and 142-2

Bowie Seamount Marine Protected Area (Portions of Subareas 101-1 and 142-2): Area bounded by a series of rhumb lines drawn from a point 53°03′07.6″ N, 135°50′25.9″ W, to a point 53°16′20.9″ N, 134°59′55.4″ W, then to a point 53°39′49.2″ N, 135°17′04.9″ W, then to a point 53°39′18.0″ N, 135°53′46.5″ W, then to a point 53°52′16.7″ N, 136°30′23.1″ W, then to a point 53°49′19.6″ N, 136°47′33.1″ W, then to a point 53°40′02.5″ N, 136°57′03.5″ W, then to a point 53°13′59.2″ N, 136°10′00.0″ W, then back to the point of commencement as laid out in the Bowie Seamount *Marine Protected Area Regulations*. (Marine Protected Area)

WORKSAFE BC

WorkSafeBC exercises jurisdiction over workplace health and safety, including the activities of crews of fishing vessels. Commercial fishing, diving and other marine operations are subject to the provisions of the *Workers Compensation Act (WCA)* and requirements in Part 24 of the *Occupational Health and Safety Regulation* (OHSR). Examples of Part 24 regulatory requirements related to fishing include, but are not limited to, the requirement to establish emergency procedures, to conduct emergency drills, to provide immersion suits for the crew, to provide stability documentation for the vessel, safe work procedures, injury reporting, correction of unsafe working conditions, the requirement to wear personal floatation devices (PFDs), etc.

Other sections of the OHSR also apply to commercial fishing operations. For example, Part 3 addresses training of young and new workers, first aid, and employer incident/accident investigations. Part 4 addresses general conditions such as maintenance of equipment, workplace conduct and impairment. Part 8 addresses issues related to safety headgear, safety footwear, eye and face protection, limb and body protection and personal flotation devices (PFDs) when working on the dock. Part 12 addresses issues related to tools, machinery and equipment, including safeguarding. Part 15 addresses issues related to rigging.

Both owners and masters of fishing vessels are considered to be employers. Under the *Workers Compensation Act* and the *OHS Regulation* (OHSR) they have varying and overlapping duties and responsibilities. Masters, because they have the most control during fishing and related activities, are considered to be the employer with primary responsibility for the health and safety of the crew.

The OHSR and the *WCA* are available from the Provincial Crown Printers or by visiting the WorkSafeBC website: www.worksafebc.com

NOTE: Regarding the OHSR requirement to wear PFD's, WorkSafeBC has produced a video entitled "Turning the Tide – PFD's in the Fishing Industry". For more information on PFD use, including a link to the video, please access the following site:

https://www.worksafebc.com/en/about-us/news-events/news-releases/2018/November/new-fishing-industry-safety-video?origin=s&returnurl=https%3A%2F%2Fwww.worksafebc.com%2Fen%2Fsearch%23q%3DTurning%2520the%2520Tide%26sort%3Drelevancy%26f%3Alanguage-facet%3D%5BEnglish%5D

The Red Sea Urchin and Green Sea Urchin fisheries, and other dive fisheries, is legislated by the requirements for occupational divers, found in Part 24 of the *Occupational Health and Safety Regulation* (OHSR) and as commercial fishing ventures, also found in Part 24 of the OHSR. Many of the general sections of the Regulation also apply, for example: Part 8 - Personal Protective Equipment, addresses issues related to safety head gear, safety foot ware and personal floatation devices. Part 17 addresses issues on rigging and Part 5 addresses issues of exposure to chemical and biological substances. The entire regulation can be acquired from the Provincial Crown Printers or by visiting the WorkSafeBC website at: http://www.worksafebc.com

For WorkSafe BC contacts please see Appendix 11.

APPENDIX 2: URCHIN FIRST NATIONS HARVEST PLAN

OVERVIEW OF THE FISHERY

Fish and marine resources are central to the culture, society, well-being, and economy of First Nations and provide a critical connection to language, traditional knowledge, and health of communities. Fisheries & Oceans Canada (DFO) remains committed to respecting First Nations' Aboriginal right to fish for food, social and ceremonial (FSC) purposes, or domestic purposes under Treaty, which has priority after conservation over other users of the resource.

DFO seeks to provide for the effective management and regulation of the First Nation fishery through negotiation of mutually acceptable and time-limited agreements which outline provisions pertaining to the fisheries and co-management activities. The agreements include provisions by which First Nations manage fishing by their members for FSC purposes, in addition to outlining First Nation involvement in a range of co-management activities and economic development opportunities which may include, but not be limited to, habitat enhancement, FSC catch monitoring and enforcement, fish management and community research.

Communal licences and, under Treaty, harvest documents (domestic purposes) are issued annually to First Nations under the authority of the *Aboriginal Communal Fishing Licences Regulations* made under the *Fisheries Act*. Communal licences and harvest documents can be amended in-season for resource conservation purposes. Where an agreement cannot be concluded, Fisheries & Oceans Canada still issues communal fishing licences to First Nations organizations.

First Nations may also participate in the commercial fishery.

MANAGEMENT MEASURES FOR FIRST NATIONS' FISHERIES

The amount of Urchins harvested for FSC or domestic use purposes under treaty coastwide is believed to be minimal.

Under the Individual Quota (IQ) program, two percent of the coast-wide total allowable catch (TAC) for Urchins is reserved, for planning purposes, for First Nations fisheries for food, social and ceremonial purposes (FSC). Fisheries and Oceans Canada is confident that with the precautionary approach to this fishery, the reserved allocation of TAC, and the provision of additional allocations where necessary, First Nations in all areas will have sufficient opportunities to harvest Urchins for food, social and ceremonial purposes or domestic use under treaty.

Allocations of Urchins may be provided to First Nations who identify their FSC or domestic use needs are not being met.

There is no size limit for the First Nations Urchin fishery.

OPEN TIMES AND AREAS

First Nations harvest for Urchins for FSC, and for domestic purposes under treaty, are open year round if authorized by a communal licence or harvest documents.

LICENSING

First Nations access to fish for FSC purposes is managed through a communal licence, or under treaty, a harvest document which can permit the harvest of Green Sea Urchins. These licences are issued under the authority of the *Aboriginal Communal Fishing Licences Regulations*. Additional information on communal licences, are available at www.pac.dfo-mpo.gc.ca/abor-autoc/index-eng.html

CLOSURES

Harvesting on Aquaculture Tenures

Under the *Fisheries Act*, fishing within an aquaculture facility already under federal licence (PAR aquaculture licence) is prohibited. The Department recommends that harvesters familiarize themselves with the location of aquaculture tenures in fishing areas. For more information on regulated aquaculture, see Appendix 4.

CONTROL AND MONITORING OF FIRST NATIONS' FISHING ACTIVITIES

This fishery is regulated through the issuance of communal licences to First Nations organizations. Further arrangements for First Nations fishing may be identified in agreements between the Department and individual First Nations organizations.

Communal licences and Fisheries Agreements may contain provisions for the designation of individuals by the First Nations organization to access the allocation provided under the communal licence, as well as provisions for monitoring and reporting by the group of the First Nations fishery in co-operation with the Department.

Communal licences and harvest documents can be amended in-season for resource conservation purposes. Even where agreement cannot be concluded, Fisheries & Oceans Canada issues communal licences to First Nations organizations.

Treaty Fisheries

There are currently four modern treaties with eight First Nations in British Columbia, which all have fisheries chapters: Nisga'a Final Agreement, Tsawwassen First Nation Final Agreement (TFA), Maa-nulth First Nations Final Agreement (MNA), and Tla'amin (Sliammon)ʔaʔǰɯnxʷegəs ("Tla'amin Treaty") . Through these treaties, Nations work with DFO to manage treaty fisheries on an annual basis. There are also historic treaties in British Columbia (Douglas Treaties and Treaty 8). The Douglas Treaty right to 'fish as formerly' was affirmed by Canadian courts through *Claxton v. Saanichton Bay Marina (1989)*.

Eleven of the Fourteen Yukon First Nations have Final and Self-Government Agreements derived from the Umbrella Final Agreement (Champagne and Aishihik First Nations, First Nation of Na-cho Nyäk Dun, Teslin Tlingit Council, Vuntut Gwitchin First Nation, Little Salmon/Carmacks First Nation, Selkirk First Nation, Tr'ondëk Hwëch'in, Ta'an Kwäch'än Council, Kluane First Nation, Kwanlin Dün First Nation, Carcross/Tagish First Nation). There are also two Transboundary treaties: the Gwich'in and Inuvialuit of the Northwest Territories have land claim agreements that identify their land and rights in Yukon. Many of these treaties have fisheries provisions.

A detailed list of final agreements relating to Comprehensive Land Claims and Self Government is provided at: https://www.rcaanc-cirnac.gc.ca/eng/1100100030583/1529420498350

Kitselas and Kitsumkalum First Nations have both ratified their Treaties in 2025, with Provincial and Federal ratification processes anticipated to follow. The Effective Date of the Treaties is currently anticipated to take place in 2028. The ratification versions of the Treaties and associated appendices can be publicly accessed via:

https://engage.gov.bc.ca/govtogetherbc/engagement/kitselas-and-kitsumkalum-treaty-negotiations/
Fisheries chapters in modern treaties articulate a treaty fishing right for domestic purposes that is protected under Section 35 of the *Constitution Act*, 1982. In addition, some modern treaties contain provisions that enable those Treaty First Nations to make laws relating to certain internal aspects of their fisheries. Negotiated through a side agreement, some modern treaty First Nations have commercial access through a Harvest Agreement outside of the constitutionally protected treaty.

Five Nations Right-Based Fishery

Five Nuu-chah-nulth First Nations located on the west coast of Vancouver Island - Ahousaht, Ehattesaht, Hesquiaht, Mowachaht/Muchalaht, and Tla-o-qui-aht (the five Nations) – have aboriginal rights to fish for any species, with the exception of Geoduck, within their court-defined Fishing Territories and to sell that fish.

The *2023/24 Five Nations Multi-species Fishery Management Plan* (FMP) outlined the fishing opportunities for the five Nations to exercise their rights to harvest and sell salmon, groundfish, crab, prawn, gooseneck barnacles, and sea cucumber. The FMP was extended to March 31, 2025 while the Government of Canada and the five Nations completed negotiations for an Incremental Reconciliation Agreement for Fishery Resources (IRAFR).

The IRAFR finalized in 2024 is a two-year agreement providing the framework for an effective and collaborative approach to governance, management and planning of the five Nations' fisheries resources. The agreement recognizes that the five Nations, through their respective ha'wiih (hereditary leadership) and elected leadership, have a role in the management of fisheries in their territories. In response to the Nations' interests, DFO and the five Nations authorized an extension of the Nations' fishing area from 9 nautical miles offshore to 69 nautical miles, effective July 17, 2024.

The IRAFR also provides funding to the five Nations for implementation, capacity building, and to acquire commercial fishing access. It sets out mechanisms for a Community-Based Economic Fishery plan, including shared goals and objectives to support the development of healthy, self-reliant and sustainable fisheries for the five Nations that will contribute to the local and Canadian economy.

The extended 2023/24 FMP is available here: https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/41253413.pdf

APPENDIX 3: URCHIN RECREATIONAL HARVEST PLAN

1. INTRODUCTION

1.1. Tidal Waters Sport Fishing Licence

The recreational harvest of various fish and invertebrate species in B.C. is regulated via the *British Columbia Sport Fishing Regulations*, 1996 made under the *Fisheries Act*. A DFO Tidal Waters Sport Fishing licence is required for the recreational harvest of all species of fish and marine invertebrates.

Tidal Waters Sport Fishing licences may be purchased for a 1 day, 3 day, or 5 day period, or as an annual licence, covering the period April 1 (or date of purchase, whichever is later) to March 31 the following year. The annual licence fee is not pro-rated for annual licences purchased mid-season. Fees depend on licence duration, age (senior, adult, juvenile) and residency status. Licences for juveniles (under 16 years old) are free. Concessionary fees are not otherwise available. There were over 352,000 adult fishers participating in B.C.'s tidal waters recreational fishery in 2025/26.

Licences may be purchased online via the National Recreational Licensing System:

http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/application-eng.html.

Alternatively, licences may be purchased over the counter at Independent Access Providers (IAPs) in many areas (note that the IAP may charge an additional service fee).

A list of IAPs is available at:

http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/iap-fai-eng.html.

1.2. Online Regulations

The regulations for recreational fishing are provided online in the British Columbia Tidal Waters Sport Fishing Guide, which lists open and closed times, catch limits, admissible gear types, size limits (where applicable), and open and closed areas. In addition, please check your Conditions of Licence (printed on your fishing licence) for other regulatory requirements.

Changes to regulations are issued in Fishery Notices which are posted online and sent to subscribers by email; these changes are also updated to the Sport Fishing Guide.

The printed Sport Fishing Guide booklet is no longer being produced or distributed to reduce costs and environmental impacts. The online Sport Fishing Guide allows for in-season regulations to be accurately provided and ensures all the regulations are current. Staff at local DFO offices can also provide regulatory information.

The British Columbia Tidal Waters Sport Fishing Guide is available at:

http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/index-eng.html

Viewing Fishery Notices and application to receive Fishery Notices by email is available at:

http://notices.dfo-mpo.gc.ca/fns-sap/index-eng.cfm

Contact information for DFO offices is available at:

https://www.dfo-mpo.gc.ca/contact/regions/pacific-pacifique-eng.html

For questions or comments of a general nature regarding DFO in the Pacific Region,

call 604-666-0384 or email info@dfo-mpo.gc.ca

1.3. Using mobile devices and the FishingBC App

The FishingBC App, developed by the Sport Fishing Institute of B.C., can be downloaded to a mobile device to assist with access to regulatory information for species, areas, fishing gear while on the water (along with other functionalities). The FishingBC App may be linked (using the internet) with your National Recreational Licensing System (NRLS) account to download a copy of your tidal water sports fishing licence to your mobile device and record catch (chinook salmon, halibut and lingcod) using the app Catch Log for real-time display to your licence on your mobile device. Note that catch records will then be automatically shared between your NRLS account and your app account. In the event of any technical issues with these new features of the app, a paper licence must be used for regulatory catch recording purposes (or NRLS).

Please note: the DFO Sport Fishing Guide website is the official site for regulatory information in the event of a discrepancy with the FishingBC App. The FishingBC App may be downloaded from the App Store (Apple devices) and from the Google Play Store (Android devices). Learn more about these app features at https://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/fishingbc-pechecb-app-faq-eng.html and at http://www.fishingbcapp.ca/

1.4. E-licences and Paper licences

At this time most fishers continue to use the traditional paper copy of their licence; however, an e--licence, which is an electronic/pdf copy of the licence, may be used on a mobile device but there are restrictions on its use.

Please consider these licensing requirements before fishing in tidal waters:

- For all recreational tidal waters fishers that do not have an electronic copy of their licence on their mobile device, fishers must have a paper copy of their licence to show to a fishery officer.
- For users of the FishingBC App or on any electronic device, an electronic copy of their licence on the device is acceptable and must be immediately presented to a fishery officer upon request.
- Currently the FishingBC App is the only app authorized to download a licence for catch recording purposes on the electronic licence (using the app Catch Log).
- Catch recording requirement: Immediately upon retention of Chinook and Halibut in any Management Area and Lingcod in Management Areas 12 to 19 (excluding Subarea 12-14), Subareas 20-5 to 20-7 and 29-5, fishers must record these catches on
    - either their paper licence, or
    - their National Recreational Licensing System account (NRLS) which requires internet access, or

    - in the FishingBC App Catch Log when their app account is linked to their NRLS account (which does not require internet access, if the app account link is currently maintained to NRLS).

- The catch recording requirement above applies to all fishers (whether with a paper or e-licence).
    - Fishers who record their Chinook, Halibut, and Lingcod catch records in their NRLS account may find it helpful to immediately take a screenshot of their catch records when they have internet access should they subsequently move out of range of a mobile network. Note that a FishingBC app account will continue to allow you to record catch to the app Catch Log even while out of range of a mobile network.

1.5. Supporting Sustainable Fisheries

The Sport Fishing Advisory Board (SFAB) is the primary consultative body for the recreational fishing community and includes individual representatives from all geographic regions in B.C. as well as delegates from a number of fishing and service provider organizations. The SFAB and the recreational fishing sector strongly support effective fishery monitoring and catch reporting programs in recreational fisheries. The SFAB continues to work with DFO on initiatives to strengthen fishing monitoring and catch reporting in the recreational fishery.

1.6. Mandatory Reporting of Fishing Activity and Catch

Recreational fishers are required as a condition of the Tidal Waters Sport Fishing Licence to report accurate information on their recreational fishing activity and catch upon request of designated authorities including creel surveyors, fishery officers and fishery guardians and if assigned to the online iREC reporting program (see below).

1.7. Internet Recreational Effort and Catch (iREC) Reporting program

The internet Recreational Effort and Catch (iREC) reporting program is an online program that has been collecting effort and catch information from Tidal Waters Sport Fishing licence holders since July 2012. All 2026/27 standard adult Tidal Water Recreational Fishing licences will be assigned to the iREC reporting program. Annual licence holders are required to report for only one month to limit their reporting burden. Information regarding the iREC reporting requirement is printed on each licence including the reporting period, the website at which to report, a unique iREC Access ID and reporting deadline. Further, licence holders with a valid email address in the National Recreational Licencing system (NRLS) will receive emails reminding them to complete their iREC reports. Licence holders who have linked the FishingBC App with their NRLS account will also receive in-app notifications reminding them to complete their iREC reports. Providing complete and accurate information to the iREC program when assigned is a condition of licence (i.e., mandatory requirement).

The iREC reporting program is one of the sources used in developing DFO official catch and effort estimates. The iREC reporting program methodology was peer reviewed and published by the Canadian Science Advisory Secretariat (CSAS) in 2015. This program provides monthly estimates of effort for six fishing methods and catch for over 80 species of sport caught finfish and invertebrates in all Pacific Fishery Management Areas based on responses by Tidal Waters Sport Fishing Licence holders. The recreational fishing methods covered by the iREC reporting

program include boat-based angling, angling from shore, shellfish trapping from boat and shore, beach collecting, and diving. iREC estimates are developed for methods and species not covered by the marine creel surveys, which cover only boat-based angling, and for months and areas not covered by marine creel surveys.

More information about the iREC reporting program is available at:

https://www.pac.dfo-mpo.gc.ca/fm-gp/rec/report-declarez-eng.html

2. LOCATION OF THE FISHERY

Recreational harvest of urchins can occur coastwide.

3. OPEN TIMES AND AREAS

Recreational fisheries are open as described in the British Columbia Tidal Waters Sport Fishing Guide for the recreational fishery

4. CLOSURES

Recreational fisheries are open year-round in all areas, or as described in the British Columbia Tidal Waters Sport Fishing Guide for the recreational fishery. All commercial and recreational fisheries are closed within the following areas within the Gwaii Haanas National Marine Conservation Area:

1. Kwoon Cove to Gowgaia Bay: Those waters of Subareas 2-38 to 2-41 and 142-1 inside a line commencing at a point on land on T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°23.311'N and 131°35.794'W northwesterly to a point on land on GuuGaalas Gwaay (south Gowdas Islands) at 52°23.340'N and 131°35.859'W, thence northerly following the shoreline of GuuGaalas Gwaay (south Gowdas Islands) to 52°23.489'N and 131°36.092'W, thence southwesterly to a point in water at 52°19.074'N and 131°43.794'W, thence northwesterly to a point in water at 52°38.115'N and 132°09.939'W, thence southeasterly to a point on land on T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°38.177'N and 131°56.374'W, and thence southerly following the western shoreline of T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) to the beginning point. [Kun Skuujii sda GawGaay.ya (Kwoon Cove to Gowgaia Bay)]

2. Wailing Island: Those waters of Subareas 2-31 and 142-1 inside a line commencing at a point on the western shoreline of T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°07.210'N and 131°15.838'W easterly following the shoreline to 52°07.440'N and 131°14.307'W, thence southeasterly to a point on the northern shoreline of K'il (Flatrock Island) at 52°06.468'N and 131°10.300'W, thence easterly following the shoreline to 52°06.388'N and 131°10.079'W, thence southeasterly to the westernmost point of Sii.niihl Gwaay.yaay (Gordon Islands) at 52°06.018'N and 131°09.391'W, thence southerly following the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52°05.884'N and 131°09.283'W, thence southeasterly to 52°05.806'N and 131°09.208'W, thence easterly following the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52°05.787'N and 131°09.097'W, thence northeasterly to the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) at 52°05.788'N and 131°08.938'W, thence easterly following the shoreline and thence crossing the channel to 52°05.778'N and 131°08.861'W, thence southeasterly following the shoreline to 52°05.741'N and 131°08.788'W, thence following the

shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52°05.708'N and 131°08.697'W, thence easterly across the channel to 52°05.709'N and 131°08.673'W, thence southerly following the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52°05.468'N and 131°08.425'W, thence southeasterly to a point on the western shoreline of Gangxid Gwaay.yaay (Kunghit Island) at 52°04.414'N and 131°07.720'W, thence northerly and southerly following the shoreline of Gangxid Gwaay.yaay (Kunghit Island) to 52°04.366'N and131° 07.720'W, thence southwesterly to a point in water at 52°03.175'N and 131°14.399'W, thence northwesterly to a point in water at 52°05.826'N and 131°17.913'W, and thence northeasterly back to the beginning point. [SGang Gwaay (Wailing Island)]

3. South Kunghit Island: Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line commencing at a point on the western shoreline of Gangxid Tllgaay (South Kunghit Island) at 51°57.689'N and 131°03.375'W easterly following the southern shoreline of Gangxid Tllgaay (South Kunghit Island) to 52°00.343'N and 130°59.788'W, thence southeasterly to a point in water at 51°50.163'N and 130°53.208'W, thence southwesterly to a point in water at 51°47.954'N and 130°53.612'W, thence northwesterly to a point in water at 51°54.940'N and 131°07.779'W, and thence northeasterly to the beginning point. [Gangxid Tllgaay (South Kunghit Island)]

4. Lyman Point to Receiver Point: Those waters of Subareas 102-2 and 102-3 inside a line commencing at a point on land of Kildaga T'awts'iiGaay (unnamed islet) at 52°04.541'N and 130°56.293'W following the shoreline of the islet to 52°04.591'N and 130°56.348'W, thence northwesterly to the eastern shoreline of Gangxid Gwaay.yaay (Kunghit Island) at 52°04.652'N and 130°56.414'W, thence northerly following the eastern shoreline of Gangxid Gwaay.yaay (Kunghit Island) to 52°05.734'N and 130°56.365'W, thence northeasterly to a point in water at 52°10.222'N and 130°49.514'W, thence southwesterly to a point in water at 52°02.635'N and 130°50.918'W, thence northwesterly back to the beginning point. [Gangxid Xyuu Kun sda Kan 'Láas Kun (Lyman Point to Receiver Point)]

5. Benjamin Point: Those waters of Subareas 2-17, 2-18 and 102-2 inside a line commencing at a point on the eastern shoreline of T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°10.262'N and 131°01.993'W northerly following the eastern shoreline to 52°13.232'N and 131°00.777'W, thence northeasterly to a point in water at 52°17.735'N and 130°55.064'W, thence southeasterly to a point in water at 52°12.476'N and 130°49.103'W, and thence southwesterly back to the beginning point. [Kayjuu Kun (Benjamin Point)]

6. Head of Flamingo Inlet: Those waters of Subarea 2-37 north of a line drawn from a point on T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°14.455'N and 131°22.232'W southeasterly across St'aa K'ii GawGa (Flamingo Inlet) to a point on land on the opposite shore at 52°14.228'N and 131°21.503'W. [St'aa K'ii GawGa (Flamingo Inlet) – Head]

7. Head of Louscoone Inlet: Those waters of Subarea 2-34 north of a line drawn from a point on land on T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°11.841'N and 131°15.670'W northeasterly across the inlet to a point on the opposite shoreline of GawGajaang (Louscoone Inlet) at 52°12.245'N and 131°14.568'W. [GawGajaang (Louscoone Inlet) – Head]

8. Head of Rose Inlet: Those waters of Subarea 2-18 north of a line drawn from the western shoreline of K'insiGid (Rose Inlet) on T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°11.327'N and 131°08.370'W northeasterly across the inlet to a point on the opposite shore at 52°11.328'N and 131°07.115'W. [K'insiGid (Rose Inlet) – Head]

9. Head of Huston Inlet: Those waters of Subarea 2-15 south of a line drawn from a point on the western shoreline of GawGan (Huston Inlet) at 52°15.732’N and 131°15.643’W northeasterly across the inlet to a point on the opposite shore at 52°16.111’N and 131°14.231’W. [GawGan (Huston Inlet) – Head]

10. Skincuttle Inlet to Burnaby Island: Those waters of Subareas 2-13 to 2-16 and 102-2 inside a line commencing at a point on the eastern shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°26.521’N and 131°14.153’W southeasterly to a point in water at 52°25.979’N and 131°04.470’W, thence southeasterly to a point in water at 52°22.829’N and 131°00.867’W, thence southwesterly to a point on the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°18.124’N and 131°18.347’W, thence northerly following the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) to 52°23.055’N and 131°23.441’W, thence northeasterly to the western shoreline of Gwaay GudgiiGaagid (Kat Island) at 52°23.082’N and 131°22.916’W, thence easterly following the southern shoreline of Gwaay GudgiiGaagid (Kat Island) to 52°23.147’N and 131°22.260’W, thence northeasterly to the western shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°23.276’N and 131°21.333’W, thence southerly following the western shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) to 52°20.949’N and 131°15.569’W, thence northeasterly to the easternmost point of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°22.315’N and 131°14.689’W, thence following the western shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) to 52°22.377’N and 131°14.683’W, thence northwesterly to a point on the eastern shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°24.494’N and 131°15.832’W, and thence following the eastern shoreline to the beginning point. [Suu Kaahlii sda SGwaay Kun Gwaay.yaay (Skincuttle Inlet to Burnaby Island)]

11. Poole Inlet: Those waters of Subarea 2-14 south of a line drawn from a point on the shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) in Gid Gwaa GyaaGa GawGa (Poole Inlet) at 52°22.764’N and 131°18.249’W southeasterly across the inlet to a point on the opposite shore at 52°22.505’N and 131°17.665’W. [Gid Gwaa GyaaGa GawGa (Poole Inlet)]

12. Mathieson Inlet to Huxley Island: Those waters of Subareas 2-12 and 2-13 inside a line commencing on the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°30.038’N and 131°28.071’W southeasterly to a point on land on Gwaay Guusdagang (All Alone Stone Island) at 52°29.081’N and 131°24.042’W, thence southeasterly to a point on the northern shoreline of Gaaduu Gwaay (Huxley Island) at 52°28.066’N and 131°21.772’W, thence southerly following the western shoreline of Gaaduu Gwaay (Huxley Island) to 52°25.934’N and 131°21.927’W, thence southwesterly to the northern shoreline of GaysiiGas K’iidsii Gwaay (Section Island) at 52°25.435’N and 131°22.425’W, thence westerly following the northern shoreline of GaysiiGas K’iidsii Gwaay (Section Island) to 52°25.460’N and 131°22.513’W, thence northwesterly to a point on the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°26.039’N and 131°25.343’W, thence northerly following the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) to 52°28.460’N and 131°27.972’W, and thence northerly to the beginning point. [Kuuniisii Xaw GawGa sda Gaaduu Gwaay (Matheson Inlet to Huxley Island)]

13. Juan Perez Sound to Lyell Island: Those waters of Subareas 2-11 and 102-2 inside a line commencing on the eastern shoreline of Tllga Kun Gwaay.yaay (Lyell Island) at 52°42.074’N and 131°26.535’W southeasterly to a point in water at 52°41.070’N and 131°14.485’W, thence southeasterly to a point in water at 52°38.677’N and 131°12.957’W, thence southwesterly to 52°35.106’N and 131°22.254’W, thence following the northern shoreline of Xiina Gwaay.yaay

(Ramsay Island) to 52°34.964’N and 131°22.963’W, thence southwesterly following the shoreline to 52°34.116’N and 131°25.603’W, thence southwesterly following the shoreline to 52°33.844’N and 131°26.324’W, thence southwesterly to a point on Gandaawuu.ngaay Gwaay.yaay (Marco Island) at 52°31.498’N and 131°30.354’W, thence northwesterly to a point on Gandaawuu.ngaay Gwaayts’idaay (Hoskins Islets) at 52°32.405’N and 131°32.946’W, thence following the northern shoreline of Gandaawuu.ngaay Gwaayts’idaay (Hoskins Islets) to 52°32.435’N and 131°33.055’W, thence southwesterly to a point on the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°32.211’N and 131°34.475’W, thence easterly following the eastern shoreline to 52°32.956’N and 131°37.729’W, thence northeasterly to a point on the shoreline of Kingts’ii Gwaay.yaay (Bischof Islands) at 52°34.143’N and 131°33.379’W, thence easterly following the southeastern shoreline of Kingts’ii Gwaay.yaay (Bischof Islands) to 52°34.340’N and 131°33.098’W, thence northeasterly to a point on an islet at 52°34.530’N and 131°32.890’W, thence northeasterly to a point on the southern shoreline of Tllga Kun Gwaay.yaay (Lyell Island) at 52°35.767’N and 131°32.891’W, and thence easterly and northerly following the shoreline of Tllga Kun Gwaay.yaay (Lyell Island) to the beginning point. [Gandaawuu.ngaay Xyangs sda Tllga Kun Gwaay.yaay (Juan Perez Sound to Lyell Island)]

14. Darwin Sound: Those waters of Subarea 2-10 inside a line commencing at a point on land on Shuttle Island at 52°40.053’N and 131°42.328’W northeasterly to a point on the western shoreline of Tllga Kun Gwaay.yaay (Lyell Island) at 52°40.466’N and 131°41.105’W, thence southerly following the western shoreline of Tllga Kun Gwaay.yaay (Lyell Island) to 52°37.301’N and 131°38.800’W, thence northwesterly to a point on land of Gwaay DaaGaaw (Shuttle Island) at 52°38.522’N and 131°41.409’W, and thence following the eastern shoreline of Shuttle Island to the beginning point. [Didxwahxyangs (Darwin Sound)]

15. Klue Passage to Lost Islands: Those waters of Subareas of 2-7 and 2-8 inside a line commencing on a point of the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°48.606’N and 131°39.403’W northeasterly to a point in water at 52°49.405’N and 131° 29.042’W, thence southeasterly to a point in water at 52°48.148’N and 131°28.849’W, thence southwesterly to a point in water at 52°44.898’N and 131°34.035’W, thence northwesterly to 52°45.113’N and 131°34.125’W, thence following the northern shoreline of K’ang.Guu Gwaay.yaay (Kunga Island) to 52°45.220’N and 131°35.574’W, thence southwesterly to a point on T’aanuu Gwaay (Tanu Island) at 52°45.002’N and 131°36.770’W, thence northerly following the eastern shoreline of T’aanuu Gwaay (Tanu Island) to 52°46.725’N and 131°38.878’W, thence northwesterly across to a point on T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°47.837’N and 131°39.371’W, and thence northerly following the eastern shoreline to the beginning point. [T’aanuu K’aadxwah Xyangs sda Gwaay Xaa’ans (Klue Passage to Lost Islands)]

4.1. Harvesting on Aquaculture Tenures

Under the *Fisheries Act*, fishing within an aquaculture facility already under federal licence (PAR aquaculture licence) is prohibited. The Department recommends that commercial harvesters familiarize themselves with the location of aquaculture tenures in fishing areas.

The recreational harvest of shellfish is regulated via the *British Columbia Sport Fishing Regulations, 1996* made under the *Fisheries Act*. The regulations are summarized on the DFO website (link below) showing the British Columbia Tidal Waters Sport Fishing Guide which lists

closed times, daily and possession limits and closed areas. http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/index-eng.html

Please also refer to your Tidal Water Sport Fishing licence which lists important Conditions of Licence restrictions for many species/areas.

4.2. Gear

Urchin may only be harvested by handpicking.

4.3. Daily Limits

The daily limit for all urchin species combined is twelve (12) per day.

4.4. Possession Limits

The possession limit for urchin species combined is two times the daily limit, twenty- four (24).

4.5. Size Limits

There is no size limit for the recreational sea urchin fishery.

APPENDIX 4: URCHIN AQUACULTURE

1. AQUACULTURE MANAGEMENT

1.1. Regulatory Regime:

The *Pacific Aquaculture Regulations* (PAR) give DFO the authority to govern the management and regulation of aquaculture activities at marine finfish, shellfish, freshwater/land-based and enhancement facilities. The Province of B.C. continues to have authority over the use of crown land in B.C. New applications, amendments and related referrals are coordinated through Front Counter B.C. More information is available on the B.C. government's website: http://www.frontcounterbc.gov.bc.ca/. DFO approves and issues aquaculture licences.

DFO requires comprehensive environmental monitoring to be undertaken by industry, and the Department also conducts additional monitoring, audits, and investigations (where warranted). Public reporting is undertaken to ensure the transparency and accountability of the management of aquaculture in B.C. Associated reporting can be found on the DFO web pages: http://www.pac.dfo-mpo.gc.ca/aquaculture/reporting-rapports/index-eng.html.

There are multiple units within the B.C. Aquaculture Regulatory Program, including those dedicated to aquaculture compliance and monitoring the activities of industry on an on-going basis. The Program provides oversight and works to ensure the orderly management of the industry, including planning and licensing, linkages with national and regional policy, and consultation and communications requirements. Contact information for staff with responsibilities related to Aquaculture Management within DFO can be found in the Departmental Contacts section of this plan.

1.2. Integrated Management of Aquaculture Plans:

Integrated Management of Aquaculture Plans (IMAPs) provide an overview of each aquaculture sector and associated management and regulation. IMAPs are available on the DFO website: Aquaculture regulations and compliance | Pacific Region | Fisheries and Oceans Canada (dfo-mpo.gc.ca).

1.3. Aquaculture Management Advisory Committees:

Aquaculture Management Advisory Committee (AMAC) meetings engage the aquaculture industry, First Nations, and other stakeholders in development of IMAPs and provide on-going feedback relevant to the management of aquaculture. Information relating to AMAC meetings is posted on the DFO website: http://www.pac.dfo-mpo.gc.ca/consultation/aquaculture/index-eng.html.

For more information on IMAPs and AMACs, please contact DFO.PACAquacultureEngagement-EngagementdelaquaculturePAC.MPO@dfo-mpo.gc.ca..

2. URCHIN AQUACULTURE

2.1. Objective

In May 2004 Fisheries and Oceans Canada released the "National Policy on Access to Wild Aquatic Resources As it Applies to Aquaculture" to facilitate access to wild fish and aquatic plant resources for aquaculture purposes to support sustainable development of the industry. The policy is available from the following website:

http://www.dfo-mpo.gc.ca/aquaculture/ref/AWAR-ARAS-eng.htm

Requests to access the wild Urchin resource for the purpose of aquaculture must be addressed to Fisheries and Oceans Canada and supported by a project proposal. For more information on aquaculture or access to brood or seed stock, please contact the Aquaculture Management Division (see Appendix 11).

DFO is developing a Policy Framework on the Management of Echinoderm Aquaculture in the Marine Environment. This framework is intended to guide echinoderm (i.e., sea urchin and sea cucumber) aquaculture at marine shellfish facilities and ensure that culture activities align with DFO's conservation objectives, regulatory mandates, and reconciliation commitments. Until the framework is completed, DFO will only consider applications for sea urchin culture with specific infrastructure conditions in the marine environment under the *Pacific Aquaculture Regulations.*

2.2. Access and Allocation

The first priority in managing fish stocks is conservation followed by First Nations obligations. Beyond that, the needs of aquaculturists will be given equitable consideration to those of other users in the commercial and recreational sectors.

DFO will aim to facilitate access for relatively low numbers of wild juvenile or adult fish for limited time periods (e.g., for broodstock development), where populations would face insignificant to low risk from the additional harvest pressure.

3. LICENSING

3.1. Broodstock Collection

The collection of broodstock for enhancement and aquaculture purposes is facilitated through a collection licence from DFO Fisheries Management and a licence from the Introductions and Transfers Committee (ITC). Requests for access are reviewed according to the DFO policy, *Access to Wild Aquatic Resources As It Applies to Aquaculture, (2004)*. Under this policy, it is estimated that up to 0.1% of the commercial total allowable catch, may be allocated for aquaculture purposes such as broodstock collection.

Contact the Introductions and Transfers Committee at DFO.BCITC-CITCB.MPO@dfo-mpo.gc.ca.

4. CLOSURES

4.1. Harvesting on Aquaculture Tenures

Under the *Fisheries Act*, fishing within an aquaculture facility already under federal licence (PAR aquaculture licence) is prohibited. The Department recommends that commercial harvesters familiarize themselves with the location of aquaculture tenures in fishing areas.

Human Waste Containment Regulation

Disposal of human waste into waters where shellfish are harvested or adjacent to shellfish harvest areas creates unnecessary and potentially serious health risks for shellfish consumers. In accordance with the Canadian Shellfish Sanitation Program (CSSP) and Regulations administered by Transport Canada, raw sewage (human wastes, sewage or refuse) shall not be discharged from vessels while in or adjacent to shellfish areas. Vessels operating at a distance which does not allow for timely access to on-shore washroom facilities are expected to have a designated human waste receptacle on board. Receptacles could include a portable toilet, a fixed toilet, or other containment device as appropriate. Such devices must be made of impervious, cleanable materials and have a tight-fitting lid. (Refer to Division 4 of the *Vessel Pollution and Dangerous Chemicals Regulations* under the Canada Shipping Act):

1. Portable toilets or other designated human waste receptacles shall be used only for the purpose intended, and shall be so secured and located as to prevent contamination of the shellfish area or any harvested shellfish on board by spillage or leakage.

2. The contents of toilets or other designated human waste receptacles shall be emptied only into an approved sewage disposal system.

3. Every person onboard a shellfish harvest vessel must wash and sanitize their hands after using or cleaning a waste receptacle, or after using an onshore washroom facility.

Information on Human Waste Containment Receptacle Requirements under the CSSP can be found at the following Canadian Food Inspection Agency internet site:

https://www.inspection.gc.ca/preventive-controls/fish/cssp/questions-and-answers/eng/1563470479199/1563470589053

Aquaculture Resource Management Senior Shellfish Coordinator Melinda Scott (250) 754-0399 General Shellfish Aquaculture Mailbox email address: E-mail DFO.AQSF-AQMC.MPO@dfo-mpo.gc.ca

APPENDIX 5: MANAGEMENT MEASURES AND STOCK ASSESSMENT FOR THE RED AND GREEN URCHIN COMMERCIAL FISHERIES 2026/2027

The purpose of this section is to bring all the management measures currently in use for the Red and Green Sea Urchin commercial fisheries into one document. More information on many of the topics below can be found throughout the IFMP and the Commercial Harvest Plan (Appendix 1).

1. SCIENTIFIC BASIS OF THE CURRENT MANAGEMENT REGIME

1.1 Red Sea Urchins

The current management regime is based on recommendations from the following peer-reviewed scientific papers:

Identification of Provisional Reference Points and Harvest Rate Options for the Commercial Red Sea Urchin (*Mesocentrotus franciscanus*) Fishery in British Columbia (Lochead et al. 2019).

https://waves-vagues.dfo-mpo.gc.ca/Library/40857104.pdf

Framework for Estimating Quota Options for the Red Sea Urchin (*Strongylocentrotus franciscanus*) Fishery in British Columbia Using Shoreline Length and Linear Density Estimates (Leus et al. 2014)

https://waves-vagues.dfo-mpo.gc.ca/Library/361328.pdf

Discussion on a Precautionary Approach for Management of the Red Sea Urchin Fishery in British Columbia (Campbell et al. 1999)

https://waves-vagues.dfo-mpo.gc.ca/Library/246961.pdf

There are a number of other important scientific papers that have contributed to our knowledge of Red Sea Urchins and to the current management regime. Please see the IFMP for a full list of references.

1.2 Green Sea Urchins

The current management regime is based on recommendations from the following peer-reviewed scientific papers:

Perry, R.I., Zhang, Z., and Harbo, R. 2002. Development of the Green Sea Urchin (*Strongylocentrotus droebachiensis)* fishery in British Columbia, Canada – back from the brink using a precautionary framework. Fish. Res. 55: 253–266.

Stock status update and harvest options for the Green Sea Urchin (*Strongylocentrotus droebachiensis*) fishery in British Columbia, 2024-2027 / Canadian Science Advisory Secretariat.

https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/41279906.pdf

There are a number of other important scientific papers that have contributed to our knowledge of Sea Urchins and to the current management regime. Please see the IFMP for a full list of references.

2. MANAGEMENT MEASURES TO CONTROL HARVEST EFFORT

2.1 Limited Entry Licensing

Licence limitation was implemented in January 1991 in order to control fishing effort. There are currently 110 licence eligibilities for the Red Sea Urchin commercial fishery and are commercially harvested under the authority of a commercial licence (ZC) or a communal commercial licence (FZC). Green Sea Urchins are commercially harvested under the authority of a commercial licence (ZA or FZA). Currently there are 49 total (ZA and FZA) licences eligible for this fishery.

2.2 Area Licensing

Area licensing is in place for only the Red Sea Urchin Fishery. A measure put in place to spread harvest effort over a wide geographic area. Every year each of the 110 licence eligibilities is assigned to one of two licence areas: North Coast and South Coast of British Columbia, and occurs in four geographic locations within those licence areas: (West Coast Vancouver Island (Areas 20 to 27, 111, 121 and 123 to 127), East Coast Vancouver Island (Areas 11 to 19, 28 and 29), North Coast (Areas 3 to 10, 103 to 110) and Haida Gwaii (Areas 1 and 2, 101, 102 and 142). When the Individual Quota (IQ) program was first implemented in 1994, the IQs were equal for each licence. The number of allowable licences assigned to the licence areas was based on biomass estimates and the annual TAC set for each licence area. For the 2007/2008 season the PUHA recommended to the Department that the limits placed on the number of licences in each licence area (North and South) be removed. There are currently no limits placed on the number of licences that may apply to fish in each of the licence areas.

The Department (as recommended by the PUHA) runs a two-staged licence selection process to allow licence holders to choose a licence area. These processes are run every two or three years. The next process will be held in early 2028.

2.3 Quota Areas

The Red and Green Sea Urchin commercial fisheries are managed in units called Quota Areas (QA). QAs are comprised of entire Pacific Fishery Management Subareas, or in combination with portions of Subareas. QAs are much smaller than licence areas and are used to further spread fishing effort within each licence area. Each QA has a name, e.g. RU02a Langara Island, and is assigned a quota. For a complete list of QAs please see Appendix 1 and 13.

3. MANAGEMENT MEASURES TO CONTROL HARVEST

3.1 Total Available Quota (Red Sea Urchin Only) - NEW

The amount of Red Sea Urchins available to be harvested in BC is limited by a coastwide Total Available Quota (TAQ). This is the maximum amount of quota that can be harvested and is based upon biomass estimates provided by DFO Science (see Section 4 for details).

Two percent of the Total Available Quota (TAQ) is reserved, for planning purposes, for First Nations use for food, social and ceremonial purposes.

3.2 Commercial Total Allowable Catch – Red Sea Urchin – NEW

The commercial Total Allowable Catch (TAC) is set based upon a recommendation from the PUHA on what amount of quota can be feasibly harvested given logistical challenges such as gonad quality, participation in the fishery and market conditions. This method of setting a TAC is similar to how the TAC is set in the Sea Cucumber and Geoduck and Horse Clam fisheries. Currently there is more quota available in the North coast of BC than can be feasibly harvested given the current amount of participation in the fishery. If market conditions and logistical challenges were to improve in the future, the TAC could be increased until it reaches the level of the TAQ. This will provide the Red Sea Urchin industry flexibility to change their TAC recommendation if conditions improve in the future. This change will also give harvesters flexibility to choose where to harvest since they will not lose access to harvest areas as part of the TAC decrease. They will be able to access up to the maximum available quota in each quota area up until the overall north coast TAC is reached.

3.3 Total Allowable Catch – Green Sea Urchin

The Green Sea Urchin fishery in BC is limited by a Total Allowable Catch (TAC). Two percent of the coast-wide TAC is reserved, for planning purposes, for First Nations use for food, social and ceremonial purposes. This two percent is removed from the coast-wide TAC (or CTAC) prior to calculating the commercial TAC. See section 4 for information on how the commercial TAC is calculated.

3.4 Individual Quota Program

Each of the licence eligibilities is assigned a portion of the commercial TAC as an Individual Quota (IQ). The IQ in the Red Urchin Fishery is based on which licence area it is assigned to. IQs for the Red Urchin fishery are calculated by dividing the commercial TAC in each licence area by the number of licences that applied to fish in that area.

IQs are equal for all Green Sea Urchin commercial licences.

The use of IQs in the commercial Urchin fisheries has resulted in a more orderly fishery, a safer fishery, has given the industry more flexibility in opening times and locations, and allows the Department to better meet conservation goals and sustainability objectives.

3.5 Area Quotas – Red Sea Urchin (NEW)

For the commercial Red Sea Urchin fishery the coast-wide commercial TAQ is divided into licence area quotas (north and south) and then is further divided into Quota Area quotas which are based on biomass estimates provided by DFO Science.

Each Quota Area will be assigned a maximum amount of quota. Since there is more quota available in the north coast than the TAC that has been allocated, harvesters will be able to complete their IQs in Quota Areas up until the maximum quota amount is reached for each Quota Area. This will provide harvesters with greater flexibility to choose where they harvest their individual quotas than the previous way the TAC was calculated for the Red Sea Urchin fishery.

3.6 Area Quotas – Green Urchin

For the Green Sea Urchin fishery the commercial TAC is divided into QA quotas which are based upon harvest options from DFO science.

3.7 Minimum Size Limit

Starting in the 2025/26 season the minimum size limit for both species of urchins was lowered by 5 millimeters (mm) test diameter. The reduced size limits will remain in place for the 2026/27 season.

While quota advice is based on the previous size limits (see section 4), this change will allow a greater size range of urchins to be harvested from urchin barren areas in which focused kelp restoration activities are occurring and supports DFOs ecosystem approach to Fisheries Management. There is no concern for conservation of urchin stocks and the use of the lower size limit in this fishery is still considered precautionary. Further, urchins at this new size limit are still expected to contribute several years of spawning before becoming available for commercial harvest. Reduced size limits are a pilot initiative that will be reviewed annually.

The minimum size limit will be 85 mm test diameter for Red Sea Urchins and 50 mm for Green Sea Urchins, between the spines, measured through the greatest diameter of the Urchin test (shell) until further notice.

4. CALCULATION OF TOTAL ALLOWABLE QUOTA (RED SEA URCHIN) AND TOTAL ALLOWABLE CATCH (GREEN SEA URCHIN)

4.1 Red Sea Urchin

Transect surveys were conducted from 1994 through 2016, following the Red Sea Urchin density 'broadbrush' survey protocol, to estimate the density and size distribution of Red Sea Urchin populations. The survey results were combined with other sources of information to calculate the annual commercial Total Available Quota (TAQ). Quota was calculated for each PFM Subarea as follows:

A modified surplus production model was used to estimate maximum sustainable yield (MSY) for Red Sea Urchins (Leus et al. 2014). The total current biomass of Red Sea Urchins was calculated annually, based on density estimates for Red Sea Urchins in the 90 to 140 mm test diameter range, and changes to estimated urchin habitat along the coast taken from harvest log charts and fish harvesters' knowledge. Biomass estimates were provided to resource managers as a mean estimate with upper and lower 90 percent confidence intervals (CI). Where surveys and density estimates were not completed for an area, they were extrapolated from survey information from adjacent or nearby areas. Generally, biomass recommendations were not provided for Subareas that were impacted by Sea Otter predation. Note that Red Sea Urchin transect surveys have not been conducted since 2016, so any subsequent updates to biomass estimates result from changes to estimated urchin habitat by harvesters.

In 2019, DFO Science updated science advice on harvest rates for the three main regions of the coast that are commercially harvested (Haida Gwaii, mainland North Coast, South Coast inside waters) (Lochead et al. 2019). This science advice consists of a table with a number of harvest rate options coupled with the probability that a particular harvest rate will breach the recommended limit reference in 100 years. The harvest rate options suggest that the harvest rate could be increased without harm to the stock, particularly

in Haida Gwaii and the mainland North Coast. Given the current rate of Sea Otter recolonization in BC and the resulting impact to the Red Sea Urchin, it is unlikely the commercial fishery will still be operating in 100 years and if it is, it will be much smaller in scale. The harvest rate recommendations suggest that the harvest rate could be increased without any harm to the stock, particularly in Haida Gwaii and the mainland North Coast.

Managers have been using a harvest rate between 1 and 2% of the mean biomass estimate since quotas were introduced in the fishery in the late 1990s. Starting in 2018, the harvest rate was increased to 5% in portions of the coast known to be impacted by Red Sea Urchin barrens – mainly in portions of Management Areas 3 to 6 and 13. The recent harvest rate advice suggests that this has been a low risk approach and that the harvest rate could be increased further in some areas with a low probability of harm to the stock. Given the coastwide TAC has not been landed in this fishery in well over a decade, there is no reason at this time to move forward with a blanket increase to the harvest rate by region. Instead DFO will work with Industry, First Nations, and other interested parties over the next few years to look at specific areas in which to consider a higher harvest rate.

Considering a higher harvest rate in some areas could have the dual benefit of providing increased commercial harvest opportunities while potentially reducing sea urchin numbers in areas that have urchin barrens due to high abundance. There is currently no conservation concern for British Columbia's Red Sea Urchin stock for the following reasons:

- A minimum size limit of 85 mm test diameter (TD) is in place coastwide. Red Sea Urchins first reproduce at around 50 mm TD and can grow to sizes of 190 mm TD or larger. Only Red Sea Urchins ranging from 90 to 140 mm TD are included in the biomass estimates used to calculate the commercial TAC. Following the reduction in minimum size limitMSL to 85 mm, the proportion of 85-90 mm size range that will be targeted and part of the catch is unknown. Furthermore, commercial harvesters mostly harvest urchins between 90 mm and 120 mm TD due to market preferences. This leaves reproductive individuals behind that are outside that range (i.e., 50 mm - 85 mm, > 120 mm). Gamete production in Red Sea Urchins increases with size, so the urchins with the highest reproductive potential are left behind by the commercial fishery (i.e., > 120 mm TD).
- Red Sea Urchin quotas are calculated using only shoreline identified either through harvest events (from harvest charts filled out by harvesters) or by Red Sea Urchin harvesters. It is unlikely that all Red Sea Urchin habitat along the coast is being harvested. As such, Red Sea Urchin biomass is being underestimated in some areas.
- Red Sea Urchin populations with high abundances (urchin barrens) exist in portions of the BC coast and are believed to be impacting ecosystem function (see section 5.5). Managers will consider using a higher harvest rate in areas with Red Sea Urchin barrens. Urchin barrens continue to persist in areas that have been commercially harvested for over 20 years at the current harvest rate, making this a low-risk approach.
- Historically, Red Sea Urchin populations in BC were limited by Sea Otter (*Enhydra lutris*) predation. Following the extirpation of Sea Otters from BC, the abundance of prey species increased substantially, and current Red Sea Urchin populations are very high in

density and biomass. Evidence suggests that natural mortality through predation was historically much higher than current fishing mortality and that historical populations may have been low. The re-establishment of Sea Otters in BC, and their expansion to the west coast of Vancouver Island, coincided with a decrease in Red Sea Urchin density and biomass to near zero values around Tofino, BC (Curtis and Leus, 2022). In contrast, commercial harvesting at close to 100% of the TAC over ten years has led to no significant decrease to urchin populations in the two areas of BC where time-series of survey data exist.

- Sunflower Star (*Pycnopodia helianthodes*) populations in BC dropped drastically starting in 2014 due to a 'sea star wasting disease' event. Sunflower Stars are a major predator on Red Sea Urchins and their decreased abundance may contribute to higher numbers of Red Sea Urchins in areas not yet impacted by Sea Otter predation (Burt et al. 2018).
- There are natural population reserves of Red Sea Urchins not accessible to the fishery. The sea urchin fishery is a gonad (roe) fishery. Population levels in most areas are higher than can be supported by the available food (kelp) and, as a result, many of the urchins have poor or no gonad development. Since only those individuals with the highest quality gonads are targeted by the fishery, there is a natural reserve of animals that remain after commercial harvest, those that are < 85mm TD, > 120mm TD and those of commercial size with poor quality gonads. Additionally, there is also a natural reserve of urchins that are inaccessible to harvesters due to their location in cracks and crevices, and at a deeper than safe diving depths (> 60ft; Lowe and Galloway 2020). A large proportion of commercial harvest occurs in shallower 'feed lines'.

Under the IQ program for the Red Sea Urchin fishery, two percent of the coast-wide TAQ for Red Sea Urchins is reserved, for planning purposes, for First Nations for food, social and ceremonial (FSC) purposes. See Appendix 1, for detailed quota area quotas.

4.2 Green Sea Urchin

Stock assessments of Green Sea Urchins are generally performed every three years. They involve analyzing data collected from both fishery-dependent and fishery-independent sources. The stock assessments include harvest options for the fishery and an evaluation of stock status. The stock status is assessed using fishery-independent data from biological dive surveys (index site density) and harvest options are derived from a Bayesian Biomass Dynamics Model. The model incorporates data from the commercial fishery (fishery-dependent data: catch per unit effort and catch) and fishery-independent data (density surveys), and is run separately for each of the two assessment regions: Northern Vancouver Island (NEVI; PFMAs 11, 12, and 13) and Southern Vancouver Island (SEVI; PFMAs 14, 18, 19, and 20) (Waddell et al. 2010; DFO 2010; DFO 2014; DFO 2016; DFO 2018; DFO 2021; DFO 2025). Median catch per unit effort (CPUE) from each fishing season is calculated using the fishery-dependent data from log books and used in the model. The model also uses Green Sea Urchin biomass estimates calculated from biological dive surveys. All of this information is run through the Bayesian model to estimate probability distributions for Maximum Sustainable Yield (MSY). Stock status is evaluated against the limit reference (LRP) and upper stock reference (USR) points developed in 2018 (DFO 2018). Note that

the LRP and USR are defined as 0.45 and 0.9 legal-size urchins/m^2 on sea urchin habitat, where legal-size was set at 55 mm TD.

The Science Branch of Fisheries and Oceans Canada and the Pacific Urchin Harvesters Association (PUHA) continue to conduct joint stock assessment surveys at selected study sites (since 1995) to obtain fishery-independent information on Green Sea Urchins. Fisheries and Oceans Canada developed the survey protocol, conducts the lab and data analyses, and prepares a report of the survey results. Then together, the Department and the PUHA, co-ordinate vessel and diver participation in the surveys. The main objectives of the surveys are to assess variability in Green Sea Urchin populations, calculate density estimates, and monitor impacts of commercial harvesting. Fishery-independent surveys also provide information about the sublegal portion of the population and thus insight regarding recruitment into the fishery. See Waddell and Perry (2007) and DFO (2014) for survey methodology details.

A table of harvest options is produced for each of the two main harvest areas. The harvest options include the median MSY estimates, a range of reductions from the median MSY estimates, and the probability that the reductions may be greater than or equal to the true MSY (i.e. the risk). The harvest option for each PFMA or possible allocations of quota to each PFMA are provided based on the proportion that PFMA contributed to aggregate landings from past fishing seasons. The managers decide the risk level from the table and set the quota limit for the fishery. Quotas assigned during previous years have had a low probability (low risk) that they were equal to or greater than the true MSY. Refer to DFO (2025) for the most recent assessment results.

The TAC is set using the harvest options table provided by DFO Science. The table includes harvest options and the risk of thoses options exceeding the Maximum Sustainable Yield. Note that the harvest options table provided by DFO Science is based on minimum size limits of 55 mm TD. Quotas are allocated to quota areas, considering risk level, advice from industry, and proportions of landings by Pacific Fisheries Management Areas (PFMA).

5. OTHER MANAGEMENT MEASURES

5.1 Catch Monitoring and Reporting Requirements

The Dockside Monitoring Program (DMP) is a catch verification (validation) program designed to monitor, record, and verify all Urchins harvested for commercial purposes. A DMP is required to ensure proper management and control of the IQ program. Third party validation of all catch is required at the first point of landing.

Commercial harvesters are responsible for keeping an accurate record of their daily harvest operations in a harvest logbook and a record of each location fished by each diver on a harvest chart. Additional harvest information is collected from fish slips. Harvest data are submitted to DFO for use in the proper assessment, management, and control of the Urchin fisheries. For more details see Appendix 1.

5.2 Vessel Monitoring System Pilot Program – Red Urchin only

The PUHA and the Department are working together to increase monitoring for the north coast fishery. Due to the large coastal area and the frequency of movement of the north coast Red Urchin fleet, vessels can be difficult to find by fishery officers. Prior to the adoption of the VMS pilot program, fishery officers wasted time and money in attempts to locate vessels in the fleet. The PUHA has piloted a Vessel

Monitoring Systems (VMS) on vessels in the north coast licence area since the start of the 2011/12 fishery. The VMS sends near real-time location information to fishery managers and fishery officers, making enforcement patrols more efficient.

In the north coast, harvesters work in groups to make fishing in remote areas more efficient and cost effective. For the pilot program, each fishing group must have at least one vessel equipped with a VMS or fishing activity will have to be ceased. This allows fishery officers to keep track of the location of north coast fishing groups. In 2026, 5 of the approximately 30 vessels fishing in the north coast licence area will be equipped with VMS units.

5.3 North Coast Fishing Protocol – Red Urchin only

The Red Urchin north coast fishing protocol was put into place after the On-Grounds Monitoring (OGM) requirement was waived by the Department in 2007. Traditionally the OGM's role was to guide the north coast fishery by facilitating communication from the fishing grounds between the harvesters and the service provider in order to keep track of remaining quotas and the number of vessels fishing. When the OGM requirement was waived, the Department and the PUHA replaced it with an On-Grounds communicator program (OGCs). OGCs are harvesters who volunteer to communicate multiple times a day with the service provider in order to relay remaining quotas and fishing plans to the rest of the fishing group.

The North Coast Fishing Protocol outlines requirements for the VMS pilot program, the OGC program and specific rules for fishing in the north coast licence area. The North Coast fishing Protocol is available from the service provider (D&D Pacific Fisheries) or a resource manager. See Appendix 14 for contact information.

5.4 Managing the Urchin Fisheries around Expansion of Sea Otters

5.4.1 Red Sea Urchin

Historically, Urchin populations in parts of BC would have been limited by Sea Otter (*Enhydra lutris*) predation. Following the extirpation of Sea Otters, the abundance of urchins, particulary Red Sea Urchins increased substantially in BC, and the current population is high in both density and biomass. The recolonization of Sea Otters in portions of the BC coast has led to a significant decrease in the Red Sea Urchin population in those areas to the point where Red Sea Urchin densities are insufficient to support commercial harvest. It is expected that Sea Otters will continue to expand their range in BC and impact Urchin populations further over time. It is therefore important to manage around the Sea Otter range expansion. Historically the Department closed Sea Otter impacted areas of the coast to commercial harvest since quotas could no longer be achieved in those areas. Other management options are being considered such as increasing quota in areas not yet impacted by Sea Otters, such as Haida Gwaii and the mainland North Coast. Other options could include applying different harvest rates in areas in which Sea Otters are starting to impact urchins or areas directly adjacent to Sea Otter inhabited areas. Special Management Areas have been set up in Sea Otter impacted areas in the mainland Central Coast and Northern Vancouver Island. See Appendix 1 for more information.

5.4.2 Green Sea Urchin

The commercial Green Sea Urchin fishery currently takes place solely in the south coast of BC and predominately in the Queen Charlotte Strait and the Strait of Georgia. The Strait of Georgia is currently not inhabited by Sea Otters, but they have recently expanded their range into the Queen Charlotte Strait. So far Sea Otter predation has not impacted the fishery footprint or resulted in quota decreases.

5.5 Urchin Barrens

High densities of Red Sea Urchins occur in many parts of the BC coast, especially around Haida Gwaii and the mainland North Coast. High densities of Green Sea Urchins have been reported in portions of the south coast of BC, particularly the Strait of Georgia. Very high urchin densities are often referred to as 'urchin barrens'. The combined feeding activity of large numbers of urchins can remove and/or inhibit the growth of kelp forests and other macroalgae. Sea urchin overgrazing can also cause physical disturbances to the seafloor by affecting the distribution of many sessile invertebrates (e.g., sponges and anemones) that rely on attaching directly to rocky substrates (Graham 2004). A study of Californian giant kelp forests found that areas deforested by sea urchin grazing showed a more than 40% reduction in the diversity of sessile invertebrates and a 25% decrease in secondary consumers such as, carnivorous sea stars and fishes (Graham 2004). It is likely that similar trends apply to BC's urchin barrens.

The current harvest rate, for Red Sea Urchin, used for the commercial fishery is intended for use on sparsely investigated and lightly exploited stocks. The conservative harvest rate currently in use is meant to ensure a sustainable fishery in which Urchin populations remain stable. An ecosystem based management approach would be to consider reducing the number of Urchins in areas impacted by urchin barrens through increased harvest. Since there is no conservation concern for Urchin stocks (outside of Sea Otter inhabited areas), fishery managers will consider increasing the harvest rate in areas with known urchin barrens.

Red and Green Sea Urchins are native to BC and high abundances are a natural part of a dynamic, changing ecosystem, especially in the absence of key predators like the Sea Otter and the Sunflower Star. Factors that are expected to increasingly influence Urchin abundance include Sea Otter range expansion, increasing sea surface temperatures, and ocean acidification. Kelp loss due to similar environmental factors (i.e., increasing ocean temperatures and siltation) and its subsequent restoration have been proposed as an ecosystem based solution for this loss. However, some of the proposed methods are not supported by current DFO policy. The practice of killing large numbers of urchins by squishing or cracking in situ (culling) in order to support kelp restoration (or kelp growth) is one of those methods that is not supported by current DFO policy. Urchin harvesting is subject to the Fish Stocks Provisions of the *Fisheries Act*, and is managed in accordance with the Precautionary Approach. Culling of urchins can also lead to collateral damage in other species such as the Northern Abalone (Eger et al. 2022).

Increased commercial harvest of Urchins under these policies within areas of high abundance could be used as a tool to decrease the number of urchins over time if carefully managed in a way that supports healthy ecosystems and a sustainable fishery.

5.6 Limit and Upper Stock Reference Points

5.6.1 Red Urchin

A main aspect of the Precautionary Approach is the use of reference points and stock status zones. In order to assess stocks against reference points and determine whether stock status changes over time, the stock needs to be monitored and a time series established. Red Sea Urchin (RSU) in BC are currently defined as a coast-wide stock with coast-wide reference points. Recent development of the Multispecies Benthic Invertebrate Dive Survey (MSBIDS) will facilitate monitoring RSU and assessing coast-wide stock status. In 2019, DFO Science recommended an upper stock reference (0.6 mature (≥ 50mm TD) RSU/m^2 on RSU habitat) and a limit reference point (0.3 mature (≥ 50mm TD) RSU/m^2 on RSU habitat) for Red Sea Urchin (Lochead et al. 2019). Preliminary results from the MSBIDS pilot years suggest that the coast-wide Red Sea Urchin stock is above the limit reference point and upper stock reference (Lochead et al. 2023), and that the stock is in the healthy zone. The MSBIDS was designed to support efficient stock monitoring for multiple invertebrate fisheries and will be used to collect the data necessary to properly implement coast-wide reference points. In the meantime, continuing to manage the Red Sea Urchin commercial fishery without implementing the recommended reference points is a low-risk approach as is explained in the following paragraph. Furthermore, there is presently no conservation concern for the Red Sea Urchin stock (see Section 4).

The Red Sea Urchin fishery is a gonad (roe) fishery. Population levels in most areas are higher than can be supported by the available food (kelp) and, as a result, many of the urchins have poor or no gonad development. Since only those individuals with the highest quality gonads are targeted by harvesters, there is a natural reserve of animals that remain after commercial harvest that consists of urchins smaller than the minimum size limit, urchins greater than 140 mm in test diameter and urchins with poor quality gonads. Red Sea Urchins larger than 140 mm test diameter are generally not harvested since they are considered unmarketable due to their large gonad size. These large urchins (called ‘pumpkins’ by harvesters) have large reproductive potential.

5.6.2 Green Urchin

An empirical approach was used to establish biological reference points (LRP and USR) based on the lowest observed historical estimates of population density for legal-sized urchins at index sites (on urchin habitat; DFO 2018) from which stocks recovered. From time series data at index sites, the minimum estimated mean density of legal-sized urchins (defined as >55 mm Test Diameter; TD) from which stocks recovered was 0.9 urchins/m^2. This value was used to set reference points: a USR of 0.9 legal-sized urchins/m^2 and an LRP = 0.45 legal-sized urchins/m^2 on sea urchin habitat.

Biological dive surveys were conducted in the fall of 2021 in PFMA 12 and in March 2023 in PFMA 19. Results from the most recent biological surveys suggest that the Green Sea Urchin stocks within both NEVI (PFMA 12; 4.2 legal-sized urchins/m^2) and SEVI (PMFA 19; 5.7 legal-sized urchins/m^2) are in the healthy zone (DFO 2025).

DFO Science has developed a multispecies benthic invertebrate dive survey (MSBIDS), which is designed specifically to generate the time-series data required for coastwide marine invertebrate stock status monitoring and assessment. The design of this new monitoring program was vetted through the Canadian Science Advice Secretariat Regional Peer Review process in July 2022 (Lochead et al. 2023).

This new monitoring program is intended to provide an efficient way to monitor multiple benthic invertebrate stocks, including Green Sea Urchins, and support the implementation of coastwide reference points. Green Sea Urchins are currently considered a coastwide stock based on their distribution in BC and on inferences from other benthic broadcast spawners. However, the LRP and USR were developed for two historically high density areas (North East Vancouver Island and South East Vancouver Island) and it is uncertain whether these reference points are appropriate for coastwide use. Future work will include investigating alternative ways to assess the stock, stock assessment program outputs, and reference points to determine if adjustments are necessary to determine coastwide stock status of Green Sea Urchins. Research into population connectivity also commenced in 2024 to assess the coastwide stock definition of the Green Sea Urchin stock, using both genomic and biophysical modelling approaches.

The most recent multispecies benthic marine invertebrate dive survey (MSBIDS) was conducted in northern BC in the fall of 2025 (Haida Gwaii, north and central coasts of BC). Full implementation of the MSBIDS survey program began in the fall of 2023, following peer review of the survey design in 2022 (Lochead et al. 2023). The next MSBIDS is scheduled for September 2026 and will take place in southern BC (east and west coasts of Vancouver Island, mainland inlets, and parts of the Salish Sea).

http://www.meds-sdmm.dfo-mpo.gc.ca/csas-sccs/applications/publications/index-eng.asp#RES

The latest stock assessment advisory report is available at:

https://www.dfo-mpo.gc.ca/csas-sccs/Publications/ScR-RS/2025/2025_004-eng.html

5.7 Enforcement

DFO's Conservation and Protection (C&P) program is informed of any enforcement issues that may arise in the Red and Green Sea Urchin commercial fisheries. For more information on the compliance plan for the Urchin fisheries please see section 10 in the IFMP.

6. OTHER IMPORTANT INFORMATION

6.1 Gear

Urchins are collected by hand by SCUBA divers. Gear impacts on the benthic environment are believed to be negligible since Urchins are picked by hand and there is no gear contact with the bottom. Handpicking also eliminates any by-catch concerns since Urchins are individually selected by harvesters.

APPENDIX 6: POST-SEASON REVIEW FOR THE 2025/2026 SEASON

Overall, the in-season management of the fisheries for the 2025/26 season was successful. No major issues were documented and in general, compliance with licence conditions and the catch validation program was very good.

1. STOCK ASSESSMENT AND RESEARCH

1.1. Red Sea Urchin

There were no Red Sea Urchin single-species stock assessment surveys completed in 2025. In 2017, fishery managers submitted a Centre for Science Advice Pacific (CSAP) request for DFO Science to recommend a range of sustainable harvest rates based upon the research information collected in B.C. over the last few decades. The paper used length-based population models and projection simulations to study the impacts of a range of harvest rates and also recommended a Limit Reference point and an Upper Stock Reference point, thereby aligning the fishery with the DFO's Sustainable Fisheries Framework and the Precautionary Approach. The requested paper was presented at a CSAP meeting in February 2019 and was accepted by the committee. The paper can be found online at: https://waves-vagues.dfo-mpo.gc.ca/Library/40857104.pdf

DFO Science has developed a coastwide multispecies benthic invertebrate monitoring program based on a pilot study conducted from 2016 to 2022. This survey collects size and abundance data on Red Sea Urchin, Green Sea Urchin, Purple Sea Urchin, Giant Red Sea Cucumber, Northern Abalone, *Pycnopodia* sea stars, and their habitats. The objective of the program is to collect the data necessary to assess coastwide stock status against reference points for selected invertebrates. A multispecies benthic invertebrate dive survey was conducted in the south coast of B.C. in September 2024 and in the north coast of B.C. in September 2025.

Please contact Christine Hansen for more information (see contacts in Appendix 11).

1.2. Green Sea Urchin

Density surveys were completed in the following areas:

- 2026: Portions of Management Area 19
- 2024: Portions of Management Area 12
- 2023: Portions of Management Area 19.
- 2021: Portions of Management Area 12.
- 2020: Portions of Management Area 19

A summary of the stock assessment and results are provided in the document link below.

Stock Status Update and Harvest Options for the Green Sea Urchin (Strongylocentrotus droebachiensis) Fishery in British Columbia, 2024-2027

For more information on any of these surveys please contact DFO Science(see contacts in Appendix 12).

2. FIRST NATIONS FISHERY

Catch information is collected by some First Nations, by fisheries program personnel or by Band administration offices. Fisheries and Oceans Canada (DFO) is working on initiatives to receive, store and manage food, social and ceremonial (FSC) harvest information. Some catch data have been collected under Aboriginal Fisheries Strategy (AFS) agreements. Sea urchins (any species) historically have constituted roughly 3% of the reported catch by weight of any shellfish species. No concerns were voiced from First Nations about access to Urchins for food, social and ceremonial purposes however there were concerns about increasing urchin populations and reductions in kelp.

3. RECREATIONAL FISHERY

There were a few comments from the recreational sector highlighting concerns around urchin barrens. The amount of urchins harvested by the recreational sector is minimal.

4. COMMERCIAL FISHERY

The Red and Green Sea Urchin Sectoral Committee meeting was held on April 24, 2025 via the Microsoft Teams online chat platform. Representatives from the Pacific Urchin Harvesters Association, DFO Fisheries Management, DFO Science, Beecher Bay First Nation, Gitxaala First Nation, Kitasoo/Xai'xais First Nation, Tla'amin Nation, Q'ul-lhanumutsun Aquatic Resources Society and D&D Pacific Fisheries attended.

4.1. Red Urchin

Coast wide landings as of June 7, 2026 (season not complete at the time of publication) are approximately 3.21 million pounds, which is lower than what was landed at this point last season. The decrease in landings over the last few seasons has been due to poor weather conditions in the north coast throughout the season and low harvester participation as well as poor gonad quality encountered around the coast. Impacts of sea otter predation around the Port McNeil area have contributed to a decline in landings in the south coast area. The live market program in Steveston continues to be successful.

A Central Vancouver Island Urchin Barren Management Area was piloted for a ninth season as part of an ecosystem management approach in Management Area 13. Red Sea Urchin barrens exist around Management Area 13 and may be negatively impacting the growth of kelp and sessile invertebrates. In an attempt to reduce the numbers of urchins in this area, the harvest rate was increased from 2% to 5% and a long term closure in Discovery Passage was temporarily reopened for commercial harvest.

The 2025/26 TAC was decreased slightly by 132,000 pounds due to impacts from Sea Otter predation in the northern Vancouver Island area. Harvest occurred in Juan Perez Sound in March 2026 as part of a kelp restoration research project within Gwaii Haanas National

Marine Conservation Area. This project is led by Parks Canada with the assistance of the Haida Fisheries Program and the Pacific Urchin Harvesters Association.

4.2. Green Urchin

The fishery opened on August 1, 2025. The majority of landings occurred between October and January. There were landings in all QMAs with the exception of the exploratory areas 11 and 16. Overall, at the time of finalizing this IFMP the harvest for 2025/26 was 99% of the TAC. The landings are the highest landings on record since the 1993 season prior to quotas.

Minimal amounts of Green Sea Urchin are processed each year; the majority is marketed live. Industry has continued to develop new markets including live local dock sales.

5. COMPLIANCE

In general, compliance with the catch validation program and other management programs was considered good for the 2025/26 season, with the majority of the issues being minor infractions such as missing logbook data or insufficient hail notification. The Red Sea Urchin Vessel Monitoring System pilot in the north coast licence area is considered a success and has received positive feedback from fishery officers and resource managers.

6. HISTORIC INFORMATION

Table 1. Red Urchin History of Management Actions, 1971 to 2025/26.

Year	**Management Actions**
1971-1977	First reported landings. Participation very low. All landings in South Coast.
1971-1977	C Licences (prior to 1982)
1971-1977	Minimum size limit 100 mm
1982-1985	Steady increase in effort and landings.
1982-1985	Schedule II plus ZC Licences; 64 (1983), 85 (1984), 86 (1985)
1986	Steady increase in effort and landings. Minor landings in North Coast.
1987	Harvest logs and fish slips required. North Coast fishery open year-round, no quotas; focused in Central Coast due to proximity to South Coast plants. South Coast: quotas set for many areas, based on 1981 and 1984 surveys; harvesting period reduced to highest market demand (October 15 to February 15, Sunday through Thursday).
1987	Voluntary compliance closures for First Nations use.
1988	Harvest logs and fish slips required. North Coast: experimental management with minimum and maximum size limits; fishery open year-round. South Coast areas open 4 d/week (Sunday through Wednesday), with the exception of WCVI, open 7 d/week from September 11 to October 15.
1988	SA 2-13 closed to set boundaries for rotational areas.
1988	Minimum size limit 100 mm (Maximum 140 mm in NC)
1989	Fishing notification and catch reporting required. North Coast: experimental management continues; rotational fisheries. South Coast openings Sunday through Wednesday at varying periods throughout the year.
1990	Fishing notification and catch reporting required. 1990 Harvest Logbooks. North Coast fishery open year-round; area restrictions and rotational fishery. South Coast quotas mostly arbitrary; area quotas set to limit expansion until stock and biological information is collected and evaluated; fishery limited to traditional peak market demand, October to February; openings 4 to 7 d/week at periods throughout the year.

1991	Fishing notification and catch reporting required. 1991 Harvest Logbooks. North Coast effort and landings increased significantly; research requested in support of lowering the size limit; rotational fishery January 7 to December 31. South Coast openings varied throughout year.
1991	Licence limitation (October 21/91).
1992	Notification, catch reporting and fishing data requirements. North Coast: rotational areas. South Coast openings built around markets; most openings for 4 d/week; additional exploratory areas implemented for WCVI.
1992	North Coast closures considered for First Nation allocation. New closures in Areas 14, 15, 16.
1993	Landings monitored at first point of landing. Pacific Urchin Harvesters Association (PUHA) steering committee established. Maximum size limit removed. North Coast: reductions in NC Quota anticipated; rotational areas; three fishing periods: January to May, June to August, October to December. South Coast: quota lowered due to overages in 1992; area, opening and quota changes; all openings Monday through Thursday.
1994	Voluntary Individual Quota (IQ) program instituted by Industry. Landings validated by independent company hired by PUHA. Management plan more detailed. New logbook requirements. Export requirements. North Coast: new timing and allocation of quota to areas.
1994	New South Coast closures and study area.
1994	Area licensing – North and South Coast, divided at Cape Caution. Annual area selection.
1995	Voluntary IQ program continues. Notification and catch reporting program established. PUHA research fund established. North Coast: schedule of openings established to disperse fishery throughout year; On Grounds Monitor on the grounds January to April and October to December. South Coast: quota reduced to compensate for overage in 1994.
1995	New closures in North Coast.
1996	Two year IQ pilot program. Vessel length restrictions waived. Industry funded catch monitoring and validation program. Catch validation at first point of landing required. Designated landing ports. Fishing notification requirements. Quota overage, transfer and relinquishment requirements. North Coast: schedule of openings; On Grounds Monitor on grounds for 8 months. South Coast: minimum 3 vessels hailed before area opens.
1996	Licence stacking to maximum of three per vessel. All but Native Band licences transferable. Catch must be weighed and validated by a D&D Pacific Fisheries Ltd. Observer at the time of offloading.
1996	Up to 150 lb. Quota overage permitted
1997/98	IQ pilot continues. Catch validation. 18-month fishery to facilitate a change to licensing year. Harvest log and Validation log amalgamated. Chart records required. New container marking requirements. North Coast: two licences reassigned to the North Coast – total 91. South Coast: two licences reassigned from the South Coast – total 19; decrease in TAC.
1997/98	Four new closures: Sas 17-4 to 17-9, Sas 18-7 and 18-8, ptn. SA 5-10, ptn. Sas 24-9 and 24-11.
1997/98	Up to 200 lb. Quota overage permitted
1998/99	IQ pilot continues. Management plan August, 1 1998 through June 30, 1999. Product must be offloaded (at a designated port) before moving to new area. North Coast: “Block System” used to manage area openings.
1998/99	Licence year July 1 to June 30. New licence re-designation and stacking procedures. All holding and transport containers shall be marked in a highly visible manner showing the fishing vessel’s name and CFV#.
1998/99	Up to 500 lb. Quota overage permitted
1998/99	Six new area closures in effect (in Subareas 1-2 and 101-2) for First Nations access for FSC purposes
2000/01	IQ pilot continues. Reduction in size limit to 90 mm and reduction in TAC by 12%. Plant sampling to assess the size reduction. North Coast: new fishing protocol continues.
2001/02	Licence stacking increase to a maximum of 5 active licences per vessel. IQ pilot continues. Plant sampling continues. North Coast: new fishing protocol continues. Protocol to address loss/wastage of product at sea implemented

2007/08	A two-staged process conducted to allow fishers to select the area they would like to fish. No limits were placed on the number of licences in either area. This resulted in unequal Iqs between the north and south coast. On Grounds Monitor program suspended. TAC decreased due to a move from a spatial bed area model to a linear model for estimating biomass.
2008/09	A new North Coast Fishing protocol was developed that includes no set opening schedule in the IFMP, all openings are TBA and designated members of the urchin fleet act as On-Grounds Coordinators. (continued through 2009). Unequal Iqs for north coast and south coast licence areas. For the 2008/09 season 68 licences were designated to the north coast with an IQ of 125,309 pounds and 42 licences were designated to the south coast with and IQ of 36,738 pounds. Supsension of OGM program continued.
2009/10	Unequal quotas for the north coast and south coast licence areas. For the 2009/10 season 61 licences were designated to the north coast with an IQ of 139,688 pounds and 49 licences were designated to the south coast with an IQ of 32,306 pounds. Supsension of OGM program continued. Hail-in report requirement changed in the conditions of red sea urchin licence.
2010/11	Unequal quotas for the north coast and south coast licence areas. A ballot was held and as a result 58 licences were designated to the north coast with an IQ of 145,052 pounds and 52 licences were designated to the south coast with an IQ of 30,769 pounds. Suspension of OGM program continued. Quota area boundary change: RU26 and RU27a were combined into RU27c and RU27b and RU29 were combined into RU27d.
2011/12	The Vessel Monitoring System (VMS) pilot program began. For the pilot program each fleet fishing in the north coast licence area had to have at least one vessel equipped with a VMS or fishing activity would be ceased. Unequal quotas for the north coast and south coast licence areas. A ballot was held and as a result 58 licences were designated to the north coast with an IQ of 145,052 pounds and 52 licences were designated to the south coast with an IQ of 30,769 pounds. There were no boundary changes, however the quotas for several quota areas were combined.
2012/13	Year 2 of the VMS pilot program. Unequal quotas for the north coast and south coast licence areas. A ballot was held and as a result 61 licences were designated to the north coast with an IQ of 137,918 pounds and 49 licences were designated to the south coast with an IQ of 32,714 pounds. The licence stacking limit was waived as a pilot program for 2012/13. The commercial coastwide TAC increased slightly from 10,013,000 pounds to 10,016,000 pounds as the result of new survey information. A volumetric validation method was piloted for harvesters landing for a live-market – limited to Steveston landing port.
2013/14	Year 3 of the VMS pilot program. Year 1 of a three year (2013 to 2016) IFMP. An area selection ballot was held and as a result 63 licences were designated to the north coast with an IQ of 133,539 pounds and 47 licences were designated to the south coast with an IQ of 34,106 pounds. Area selections will be in effect for 3 years. Licence stacking limit waived. Commercial TAC remained at 10,016,000 lb. Volumetric validation method continued to be used at the Steveston landing port for the Fresh/Live market. Northern Vancouver Island Special Management Area developed for portions of Management Area 12 in response to sea otter expansion in the area. Quota area boundary change: RU27c split into RU26 and RU27a and RU27d split into RU27b and RU29. These quota areas were instead combined.
2014/15	Year 4 of the VMS pilot program. Year 2 of a three year (2013 to 2016) IFMP. Seasonal closures previously put in place during the herring fishery were discontinued.
2015/16	Year 5 of the VMS pilot program. Year 3 of a three year (2013 to 2016) IFMP. Changes made to the harvest logs and chart data section of the Conditions of Red Sea Urchin licence.
2016/17	Year 6 pf the VMS pilot program. IFMP returned to an annual schedule to allow for greater flexibility. Several Quota Areas were split into smaller quota areas at the request of the PUHA. The north coast TAC was reduced by 1 million pounds due to impacts from sea otter predation on the mainland central coast. A planned in-season increase of 1 million pounds in Haida Gwaii did not occur so the coast wide TAC dropped by 1 million pounds to 9,016,000 pounds.
2017/18	Year 7 of the VMS pilot program. The harvest rate was increased from 2% to up to 5% in portions Management Areas 3 to 6 impacted by Red Sea Urchin barrens. This change mitigated the quota lost to Sea Otter predation in 2016, so the TAC returned to its previous level of 10,016,000 pounds. A Special Management Area was created in the Central Coast to manage around Sea Otter range expansion in Management Areas 7 to 10 and adjacent offshore areas.
2018/19	Year 8 of the VMS pilot program. The harvest rate was increased from 2% to up to 5% in the Central Vancouver Island area (Management Area 13) that are being negatively impacted by Red Sea Urchin barrens. As a result, the coastwide TAC increased by approximately 500 thousand pounds to 10,535,000 pounds. A long term closure in Discovery Passage was also temporarily reopened to commercial harvest over concerns about urchin barrens and their negative impact to the ecosystem. These actions are part of the Central Vancouver Island Urchin Barren Management Area pilot program.

2019/20	Year 9 of the VMS pilot program. Second year of the Central Vancouver Island Urchin Barren Management Area pilot program. The coastwide TAC decreased by 152,000 lbs. due to the implementation of the Gwaii Haanas National Marine Conservation Area closures. A new Quota Area (RU04c) was created in a long term closure in Juan Perez sound to support a kelp restoration research project in Gwaii Haanas NMCA.
2020/21	Year 10 of the VMS pilot program. Central Vancouver Island Urchin Barren Management Area pilot program continued. The coastwide TAC increased by 80,000 lbs due an addition of quota to the RU04c quota area to support the on-going research in the kelp restoration project in the Gwaii Haanas NMCA.
2021/22	Year 11 of the VMS pilot program. The coastwide TAC increased by 44,000 lbs due to a quota increase within the Central Vancouver Island Urchin Barren Management Area. Exploratory areas added to several Quota Areas 38d and 13G. Boundaries changed in several north coast QMAs at the request of the PUHA.
2022/23	Year 12 of the VMS pilot program. Quota increased in portions of the north coast and south coast with urchin barrens. The 3 quota areas in the Barkley Sound area were combined into one quota area. Overall, the coastwide TAC increased slightly.
2023/24	Year 13 of the VMS pilot program. Quota was lowered in portions of the Central Coast of B.C. due to impacts of sea otter predation and were increased in portions of the north coast and south coast with urchin barrens. Overall, the TAC decreased slightly.
2024/25	Year 14 of the VMS pilot program. TAC increased slightly around the Port McNeill area and in portions of Southern Vancouver Island.
2025/26	Year 15 of the VMS pilot program. TAC decreased slightly around the Port McNeill area due to sea otter predation and several Quota Areas in the northern Vancouver Island were combined into one Quota Area.

Table 2. Green Sea Urchin History of Management, 1987 to 2023/24.

Timeline	
1987	Dive fishery began. Scientific permits were issued, July 22 to December 31, to fishing vessels for harvest by diving. Logbooks were issued with permits to collect data on stock abundance and distribution. Permits were limited to the inside waters of Vancouver Island, Areas 12 to 19, 28 and 29. Some minor area closures for parks or study areas were in effect as for most dive fisheries. A precautionary minimum size limit of 40 mm was set as a condition of the permit. Sales slip data did not have a separate species code, so green and red sea urchin landings are mixed. As a result, landings have been estimated from logbook returns and hails from processors. Effort was restricted by limiting the season to the months of traditional peak market demand for sea urchins, Oct.-Dec. and Jan.-Feb
1988	Sales data for green sea urchins was recorded with a separate species code. Conservative closure set Jan. 16 to Feb. 28 in subareas 13-1 to 13-3 due to the intensive fishery in a small area. A Z category (Z-A) licence for green sea urchins was introduced for the fall fishery which opened Oct. 1. Minimum size limit increased to 55 mm test diameter and set as a condition of licence. The season was limited again, Jan. 1-Feb. 28 and Oct. 1-Dec. 31.
1989	A conservation closure was set for subareas 12-1 and 13-29 to 13-40, north of Campbell River, Jan. 31-Feb. 28/89 due to heavy fishing pressure and a high incidence of undersized urchins landed. A consultative process was initiated (the Green Sea Urchin Sectoral Committee)
1990	Licence limitation for 1991 was announced with the eligibility criteria of landings of 9,072 kg (20,000 lb.) over the two year period 1988 and 1989. At least 33 vessels were expected to qualify before appeals were held.
1991	Licence limitation - 47 vessels qualified and 47 vessels reported landings.
1992	South Coast: A conservation closure was set in the Kelsey Bay area, subareas 12-1, 13-32, 13-33 and 13-35, Feb. 25-Feb. 28. These subareas did not reopen for fall fishing until Dec. 7.

	North Coast: Fishery open year round, no quotas.
1993	Licences increased to 49. Notification of fishing required. No suction devices. Additional permanently closed areas for parks and reserves. South Coast: Reduced fishing times; Inside waters: season Jan. 4 to Jan. 28, 7 days/wk; Feb. 1 to Feb. 25, 4 days/wk, Mon.-Thurs. Fall fishery Nov. 1 to Dec. 16, 4 days/wk, Mon.-Thurs.; Dec. 6 to Dec. 30, 7 days/wk. Kelsey Bay limited to 7 days, Jan. 4 to 10. W.C.V.I.: season reduced to Oct. 4 to 28, 1992, 7 days/wk. North Coast: 7 days/wk, season reduced to Jan. 1 to Feb. 28 and Oct. 1 to Dec. 31.
1994	South Coast: A ceiling catch of 990,000 lbs (449 t) was set along with area quotas. Fishers requested to harvest 25% in Jan.-Feb. and the balance in Nov.-Dec. The days fishing were limited to four days/week (M-R) for some periods and others at 7 days/week. North Coast: No quota set; season reduced to periods Jan. 1 to Feb. 28 and Nov. 1 to Dec. 31. Consideration will be given for spring/summer fisheries depending on roe quality and landings.
Prior to 1995	Maximum of 100 lbs. quota overage allowed for transfer
1995/96	Fishing licences changed to expire on May 31, 1996. No fishing occurred prior to Nov. Licence stacking allowed up to 3 licences per vessel. Landings must be weighed and validated by a Service Provider at the time of offloading. South Coast: Pilot individual licence quota (IQ) system implemented with port validation (49 licences with IVQ 3.539 t). Area quotas also established, with total of 382,276 lbs (173.4 t). Only Areas 12, 13, 17 to 20, and 28 open; other areas available under an exploratory protocol. Fishing season was Nov. 20, 1995 to May 31, 1996. North Coast: No individual quotas. Areas 3 and 4 only open from Nov. 20, 1995 to Jan. 31, 1996, with quota of 20,000 lbs (90.72 t). Other areas open to fishing only under an exploratory protocol.
1996/97	Harvest logs and validation forms combined onto one sheet. Biosamples (sample test measurements) collected by validators. Commercial fishery restricted to areas with a known catch history. South Coast: IQ system still in effect (quota divided between 49 licence holders), with port validation. Area quotas established, with a total of 359,435 lbs (163.0 t). Only Areas 11, 12, 13, 17 to 20 and 28 open; other areas available under an exploratory protocol. Fishing season was Nov. 12, 1996 to Jan. 31, 1997 North Coast: North Coast closed, except under an exploratory protocol.
1997/98	Two year Management Plan (October 15, 1997 to May 31, 1999). Biological sampling of commercial catch. South Coast: Areas 11, 12, 13, 17 to 20 and 28 open from Nov. 10, 1997 to Mar. 15, 1998. Area quotas, with total of 366,079 lbs (166.1 t) (IQ 7,471 lbs). North Coast: North Coast closed, except under an exploratory protocol. Survey undertaken in Area 4.
1998	The West Coast Green Urchin Association conducted a stock assessment survey of a portion of Area 4 in the North; a commercial quota was set for the 1999/00 fishery based on the survey results
1998/99	Biological sampling of commercial catch. South Coast: Areas 11, 12, 13, 17, 18, 19, 20, and 28 open from Nov. 10, 1998 to Mar. 15, 1999. Area quotas, with total of 366,079lb (individual quotas 7,471 lbs), other areas available under an exploratory protocol. North Coast: Total quota of 13,000 lbs allotted to Area 4 from Nov. 10, 1998 to Mar. 15, 1999, other areas available under an exploratory protocol.
1999/00	Biological sampling of commercial catch. South Coast: Areas 11, 12, 13, 18, 19, and 20 open from Nov. 10, 1999 to Mar. 15, 2000. Area quotas, with total of 414,393 lbs (individual quotas 8,457 lbs), other areas available under an exploratory protocol.

	North Coast: Total quota of 13,000 lbs allotted to Area 4 from Nov. 10, 1999 to Mar. 15, 2000, other areas available under an exploratory protocol.
2000/01	Biological sampling of commercial catch. South Coast: Areas 11, 12, 13, 18, 19, and 20 open from Nov. 10, 2000 to Mar. 15, 2001. Area quotas, with total of 414,393 lbs (individual quotas 8,457 lbs), other areas available under an exploratory protocol. North Coast: Total quota of 13,000 lbs allotted to Area 4 from Nov. 10, 2000 to Mar. 15, 2001, other areas available under an exploratory protocol.
2001/02	Biological sampling of commercial catch. South Coast: Areas 11, 12, 13, 18, 19, and 20 open from Nov. 20, 2002 to Apr. 19, 2002. Due to unstable market conditions the season closing date of March 15, 2002 was extended until Apr. 19, 2002. Area quotas, with total of 394,646 lbs (individual quotas 8,054 lbs), other areas available under an exploratory protocol. North Coast: Available under an exploratory protocol.
2002/03	Biological sampling of commercial catch. South Coast: Areas 11, 12, 13, 18, 19, and 20 open from Oct. 15, 2002 to Mar. 15, 2003. Area quotas, with total of 394,646 lbs (individual quotas 8,054 lbs), other areas available under an exploratory protocol. North Coast: Available under an exploratory protocol.
2003/04	South Coast fishing areas included Areas 11, 12, 13, 18, 19, 20 with a TAC of 410,055 lb. Fishery ran from Nov 1, 2003 to March 1, 2004. No north coast activity
2004/05	South Coast fishing areas included Areas 11, 12, 13, 18, 19, 20 with a TAC of 410,055 lb. Fishery ran from Nov 1, 2004 to March 1, 2005. No north coast activity
2005/06	South Coast fishing areas included Areas 11, 12, 13, 18, 19, 20 with a TAC of 410,055 lb. Fishery ran from Nov 1, 2005 to March 1, 2006. No north coast activity
2006/07	South Coast fishing areas included Areas 12, 13, 18, 19 with a TAC of 447,174 lb. Fishery ran from Nov 1, 2005 to March 1, 2006. Areas 11 and 20 were removed from IFMP due to limited effort. Biological Sampling program suspended. Fisher Identification Number (FIN) required on harvest logs
2007/08	South Coast fishing areas included Areas 12, 13, 18, 19 with a TAC of 447,174 lb. Fishery ran from Nov 1, 2005 to March 21, 2006. An extension was approved past March 1.
2008/09	South Coast fishing areas included Areas 12, 13, 18, 19 with a TAC of 447,174 lb. The Fishery opened September 3, 2008 and closed March 31, 2009.
2009/10	South Coast fishing areas included Areas 12, 13, 18, 19 with a TAC of 447,174 lb. The Fishery opened September 11, 2009 and closed March 31, 2010. Last recorded landing was March 11, 2010.
2010/11	South Coast fishing areas included Areas 12, 13, 18, 19 with a TAC of 447,174 lb. The Fishery opened September 13, 2010 and closed August 31, 2011. Last recorded landing was April 8, 2011.
2011/12	South Coast fishing areas included Areas 12, 13, 18, 19 with a TAC of 447,174 lb. The Fishery opened September 1, 2011 and closed August 31, 2012. Last recorded landing was August 31, 2012. Developing live local dock sales.

2012/13	South Coast fishing areas included Areas 12, 13, 18, 19 with a TAC of 447,174 lb. The Fishery opened September 1, 2012 and closed August 31, 2013. Last recorded landing was August 30, 2013. Licence stacking limit waived.
2013/14	South Coast fishing areas included Areas 12, 13, 18, 19 with a TAC of 447,174 lb. The Fishery opened September 5, 2013 and closed August 31, 2014. Last recorded landing was August 22, 2014.
2014/15	South Coast fishing areas included Areas 12, 13, 18, 19 with a TAC of 447,174 lb. The Fishery opened September 1, 2014 and closed April 22, 2014. Last recorded landing was February 3, 2015.
2015/16	South Coast fishing areas included Areas 12, 13, 18, 19 with a TAC of 447,174 lb. The Fishery opened September 1, 2015.
2016/18	Two year IFMP: South Coast fishing areas included Areas 11, 12, 13, 18, 19 and 20 with a TAC of 491,764 lb.
2018/21	Three year IFMP. South Coast fishing areas included Areas 11, 12, 13, 18, 19 and 20 with a commercial TAC of 578,200 lb. Areas 13 and 20 were split to help distribute effort.
2021/22	Annual IFMP to better address changes in biomass and Markets. Areas 12 and 19 were split to better distribute effort. Exploratory fishing was permitted in new Areas 14, 16 and 28 as well as Area 11 becoming an exploratory area. The commercial TAC was increased to 646,800 lbs.
2022/23	Quota added to exploratory area 14, others remain exploratory. The commercial TAC was increased to 681,100 lbs.
2023/24	Area 17 added as an exploratory option. The commercial TAC was increased to 705,900 lbs.
2024/25	The commercial TAC was increased to 738,425 lbs
2025/26	The commercial TAC was increased to 799,000 lbs

Table 3. Green Sea Urchin. Since 2002, logs have provided the best estimate of catch and fish slips are no longer used. Average landed value is determined from a subsample of fish slips or an estimation of average price is provided by Industry.

Year	Type and Number of Licences Available	Number of Vessels with Landings	Quota (t)	Landings (lbs)	Landings (t)	Landed Value ($·10³)	Whole Landed Value [1] ($/t)
1987	Permit 38[2]	29			207.0	127	614
1988	Z 89	63			378.0	584	1,545
1989	Z 191	93			484.0	1,020	2,107
1990	Z 155	51			353.0	939	2,660
1991	Z 47	45			753.0	1,795	2,384
1992	Z 49	53			954.0	4,424	4,637
1993	Z 49	52			533.0	3,777	7,086
1994	Z 49	42	449*		221.0	2,122	9,602
1995/96	Z 45	39	173.4* (90.7**)		157.0	946	6,027
1996/97	Z 49	32	166.1		150.0	942	6,282
1997/98	Z 49	27	166.1		160.0	1,004	6,277
1998/99	Z 49	26	166.1		156.0	967	6,200
1999/00	Z 49	27	193.9		186.4	1,157	6,210
2000/01	Z 49	28	193.9		181.3	1,020	5,626
2001/02	Z 49	15	179.0		122.6	614	5,006
2002/03	Z 49	17	179.0		143.9	622	4,324
2003/04	Z 49	17	186.0	370,929	168.3	725	4,311
2004/05	Z 49	16	186.0	182,164	82.6	331	4,001
2005/06	Z 49	11	186.0	83,995	38.1	136	3,576
2006/07	Z 49	6	202.8	28,756	13.0	46	3,502
2007/08	Z 49	7	202.8	142,553	64.7	199	3,075
2008/09	Z 49	12	202.8	161,901	73.4	245	3,341
2009/10	Z 49	11	202.8	223,425	101.3	324	3,197
2010/11	Z 49	12	202.8	222,684	101.0	334	3,307
2011/12	Z 49	13	202.8	136,312	61.8	209	3,373
2012/13	Z 49	11	202.8	286,349	129.9	438	3,373
2013/14	Z 49	14	202.8	366,971	166.5	561	3,373
2014/15	Z 49	13	202.8	300,061	136.1	459	3,373
2015/16	Z 49	12	202.8	406,541	184.4	813	4,409
2016/17	Z 49	12	223.1	486,487	220.7	973	4,409
2017/18	Z 49	14	223.1	445,529	204.8	1,106	5,401
2018/19	Z 49	12	262.3	549,321	249.2	1,346	5,401
2019/20	Z 49	13	262.3	480,094	217.8	1,440	6,614
2020/21	Z 49	16	262.3	544,052	248.2	1,778	7,165
2021/22	Z 49	16	293.4	643,984	292.1	2,093	7,165
2022/23	Z 49	19	308.9	645,199	292.7	2,097	7,165
2023/24	Z 49	18	320.1	663,071	300.8	2,155	7,165
2024/25	Z 49	19	334.9	736,058	333.9	2,392	7,165
2025/26	Z 49		362.4	796,786	361.4	2,590	7,165

[1] from sales slip data
[2] scientific permits were issued to 38 vessels for fall 1987 to spring 1988 fishery.
Z licences were issued for the fall 1988 fishery.
* south coast quota only
** north coast quota only
Note: 2023-2026 data preliminary

Figure 1: Green Sea Urchin landings (tonnes), quotas (tonnes) and dollar value for 1987 to 2025/26 fishing seasons. (Note: 2025-26 values preliminary)

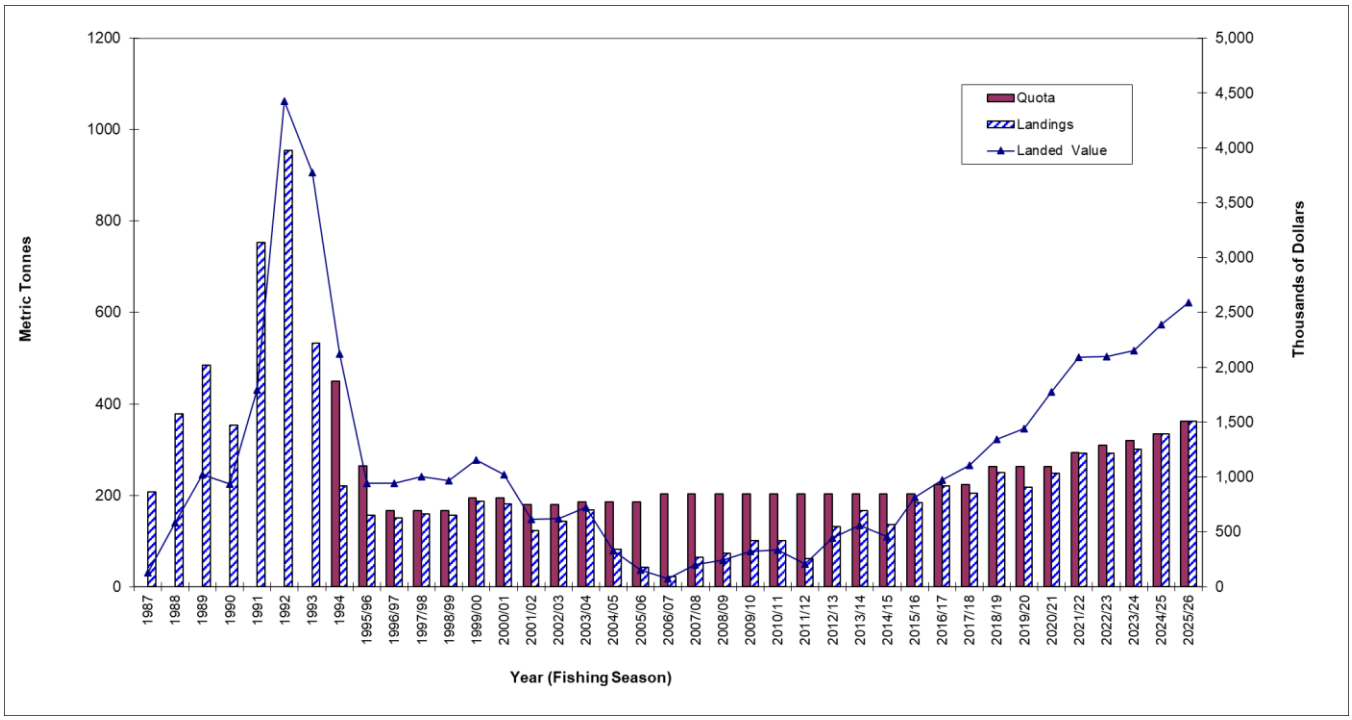


Table 4. Overview of annual Red Sea Urchin quota, landings, value and effort, **1978 to 2023**, as reported on Validation and Harvest logs. Since 2002, harvest logs have provided the best estimate of catch as fish slips are no longer used. Average landed value is determined from a subsample of fish slips or an estimation of average price is provided by Industry (Mike Featherstone – pers comm).

Year (Fishing Season)		Licences Issued	Vessels with Landings	North Coast Quota (lb)	South Coast Quota (lb)	Total Quota (lb.)	Total Landings (lb.)	Calculated Landed Value ($000)	Total Diver Hours	Whole Landed Value from fish slips ($/lb)	Effort (lb/diver hr)[3]
1982		C	4				100,031	15.9	75.6	0.16	1,323.45
1983		Z 64	26				1,587,811	262.4	1,428.4	0.17	1,111.63
1984		Z 85	32				3,035,661	555.8	3,781.6	0.18	802.76
1985		Z 86	31		3,975,000	3,975,000	2,655,172	506.5	2,881.6	0.19	921.43
1986		Z 103	49		3,307,000	3,307,000	3,487,707	773.7	3,397.0	0.22	1,026.69
1987		Z 184	72		3,600,000	3,600,000	3,165,007	823.6	3,429.4	0.26	922.91
1988		Z 184	81		3,600,000	3,600,000	3,888,377	1,032.4	5,056.7	0.27	768.96
1989		Z 240	98		3,625,000	3,625,000	4,419,692	1,230.5	5,409.4	0.28	817.03
1990		Z 188	86		3,675,000	3,675,000	5,378,467	1,508.7	7,478.7	0.28	719.17
1991		Z 102	76		3,400,000	3,400,000	14,215,282	3,887.3	16,402.5	0.27	866.65
1992		Z 108	102		3,425,000	3,425,000	27,513,282	8,326.6	31,170.0	0.30	882.68
1993	[1]	Z 107	95	12,000,000	3,089,000	15,089,000	13,462,133	5,135.8	17,201.5	0.38	782.61
1994		Z 110	95	13,000,000	3,401,000	16,401,000	13,138,897	8,247.7	18,942.0	0.63	693.64
1995		Z 108	88	12,000,000	3,051,000	15,051,000	15,006,570	11,732.8	21,397.7	0.78	701.32
1996		Z 109	77	11,815,907	2,788,023	13,900,180	14,255,832	12,607.4	18,180.3	0.88	784.14
1997/98	[2]	Z 110	82	17,966,949	3,751,341	21,718,290	19,264,286	14,465.2	30,227.4	0.75	637.31
1998/99		Z 110	64	10,216,115	2,133,035	12,349,150	11,426,155	8,194.1	16,554.4	0.72	690.22
1999/00		Z 110	58	10,216,115	2,133,035	12,349,150	11,645,998	8,464.4	16,664.8	0.73	698.84
2000/01		Z 110	53	8,911,000	1,860,533	10,771,533	10,615,916	8,504.0	14,063.2	0.80	754.87
2001/02		Z 110	48	8,911,000	1,860,533	10,771,533	10,543,412	8,079.9	13,010.9	0.77	810.35
2002/03		Z 110	46	9,106,839	1,664,691	10,771,530	10,410,140	7,883.4	12,860.6	0.76	809.46
2003/04		Z 110	44	9,106,839	1,664,691	10,771,530	10,126,765	7,423.4	13,288.7	0.73	762.06
2004/05		Z 110	44	9,106,839	1,664,691	10,771,530	9,602,335	6,854.9	12,642.8	0.71	759.51
2005/06		Z 110	46	9,106,839	1,664,691	10,771,530	8,539,044	6,233.5	11,450.5	0.73	745.74
2006/07		Z 110	38	8,993,658	1,644,000	10,637,658	5,624,660	4,123.2	7,079.3	0.73	794.52
2007/08		Z 110	36	8,195,000	1,490,000	9,685,000	4,229,733	3,100.6	5,740.6	0.73	736.81
2008/09		Z 110	30	8,521,000	1,543,000	10,064,000	4,645,989	3,405.7	5,757.7	0.73	806.92
2009/10		Z 110	26	8,521,000	1,583,000	10,104,000	4,430,875	2,614.2	5,373.9	0.59	824.52
2010/11		Z 110	32	8,413,000	1,600,000	10,013,000	5,286,672	3,013.4	6,414.0	0.57	824.24
2011/12		Z 110	31	8,413,000	1,603,000	10,016,000	5,847,353	3,449.9	7,124.0	0.59	820.80
2012/13		Z 110	38	8,413,000	1,603,000	10,016,000	7,007,742	4,134.6	8,043.0	0.59	871.28
2013/14		Z 110	42	8,413,000	1,603,000	10,016,000	8,023,520	4,814.1	10,102.0	0.60	794.25
2014/15	[4]	Z 110	40	8,413,000	1,603,000	10,016,000	7,941,705	6,750.4	10,276.8	0.85	772.78
2015/16	[4]	Z 110	41	8,413,000	1,603,000	10,016,000	7,830,021	6,655.5	11,022.7	0.85	710.35
2016/17	[4]	Z 110	41	7,413,000	1,603,000	9,016,000	7,177,327	7,177.3	10,915.8	1.00	657.52
2017/18	[4]	Z 110	43	8,413,000	2,122,000	10,535,000	6,190,323	6,190.3	9,709.8	1.00	637.53
2018/19	[4]	Z 110	42	8,261,000	2,122,000	10,383,000	5,991,768	5,991.8	8,840.3	1.00	677.78
2019/20	[4]	Z 110	42	8,261,000	2,122,000	10,383,000	5,467,696	5,467.7	8,561.6	1.00	638.63
2020/21	[3,4]	Z 110	39	8,341,000	2,166,000	10,463,000	4,990,748	4,990.7	8,044.2	1.00	620.42
2021/22	[3,4,5]	Z 110	34	8,341,000	2,186,000	10,527,000	4,934,289	5,427.7	7,703.9	1.10	640.49
2022/23	[3,4,5]	Z 110	35	8,341,000	2,186,000	10,527,000	4,609,675	5,070.6	7,404.6	1.10	622.54
2023/24	[3,4,5]	Z 110	39	7,958,000	2,322,000	10,527,000	4,506,427	4,957.1	7,492.7	1.10	601.44

[1] South coast quota includes exploratory areas; North Coast quota new in 1993.

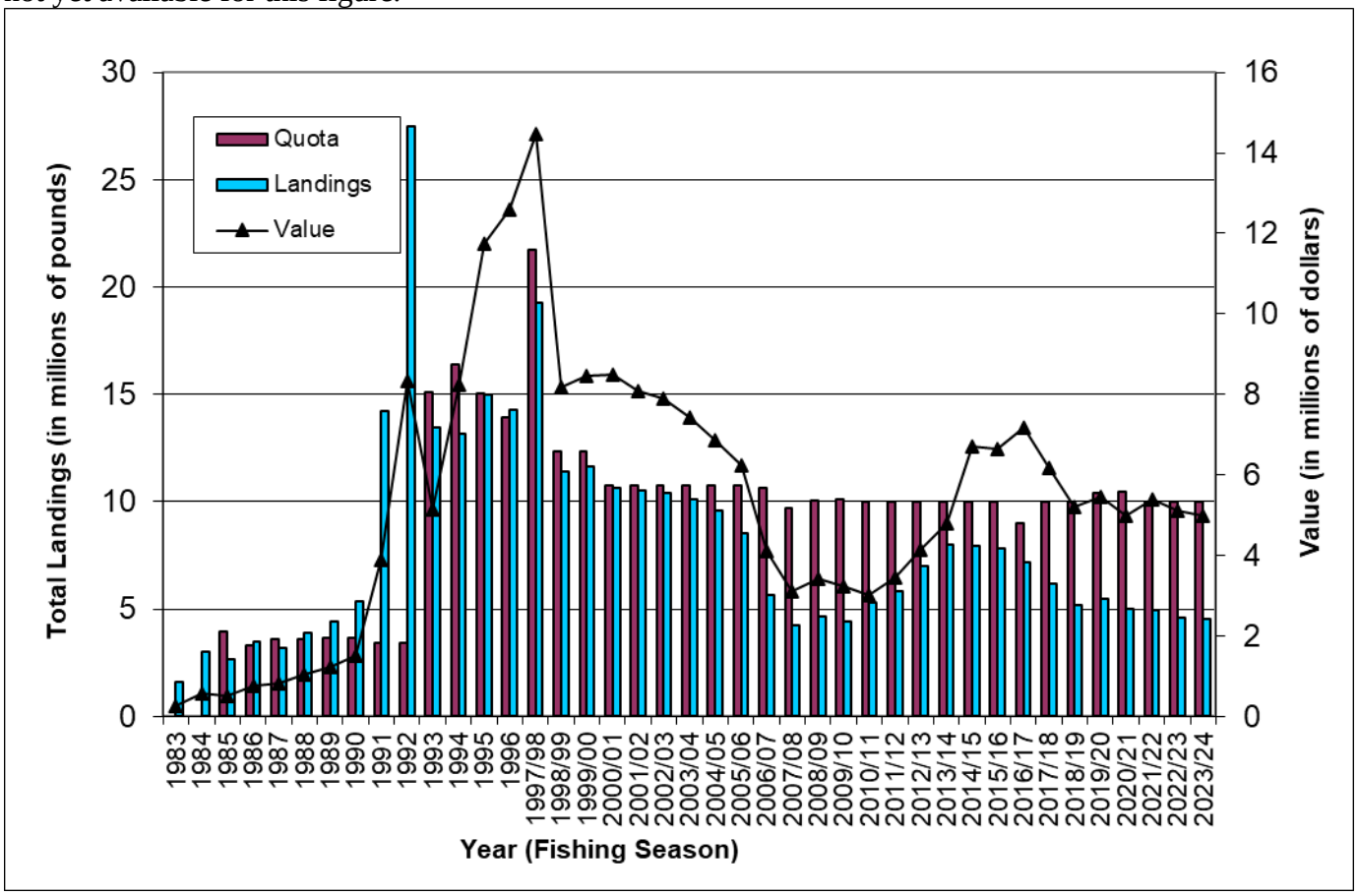
[2] Change in licensing from calender year to market-driven year. 1997/98 season ran January 1/97 to June 30/98; 1998/99 through 2001/02 seasons ran July 1 to June 30; 2002/03 through 2008/09 seasons ran August 1 to July 31

[3] Recent information should be considered preliminary

[4] Price information estimated by Industry (Mike Featherstone - pers comm)

[5] Not all information may be available due to a delay in logbook data availability in our database.

Figure 1. Annual Red Sea Urchin quota, landings (lb.) and value for British Columbia, 1982 to 2022. Note: As the 2024/25 season was still on-going at the time of publication, harvest data is not yet available for this figure.



APPENDIX 7. COMMERCIAL URCHIN FISHERY MONITORING AND CATCH REPORTING PROGRAM STANDARDS

Pacific Region Fishery Monitoring and Catch Reporting Program Standards for the Commercial Red and Green Sea Urchin Fisheries

1. Purpose of this Document

This document describes the Fisheries and Oceans Canada standards for fishery monitoring and catch reporting in the commercial Red and Green Sea Urchin fisheries, including data collection, data submission, and reporting.

2. Background

Both the commercial Red and Green Sea Urchin fisheries operate under a Total Allowable Catch (TAC) with Individual Quotas (IQ). All commercial landings are tracked using a coast-wide Dockside Monitoring Program (DMP). Other management measures include limited entry licensing, area quotas and area licensing (Red Sea Urchin only).

Commercial urchin fisheries occur throughout the year starting in August or September each year. Harvest is by handpicking while diving. Urchin harvest in the south coast of BC generally takes place close to landing ports and urchins are generally landed and validated on the same day they were harvested.

Due to the remoteness of the north coast of BC and the large distances between landing ports, the Red Sea Urchin fishery utilizes packer vessels to transport Red Sea Urchins to landing ports. Catch validation can be up to a few days after the harvest occurs due to travel time between the fishing grounds and the landing ports. Vessels licensed to fish in the north coast licence area generally fish in groups and can move through harvest areas quickly as area quotas are completed. In-season management and proper communication are extremely important to track harvest activity to ensure that quotas are not exceeded.

3. Catch Monitoring and Reporting Objectives for the Commercial Urchin Fisheries

- To collect accurate harvest and effort data which is an essential part of the Urchin quota management system. Quotas are set in a manner to support conservation objectives and to ensure a long-term sustainable fishery. Data are also used for other purposes such as stock assessment, research, socio-economic reporting, etc.
- To track harvest activity to manage area quotas and individual quotas (IQ) for in-season management purposes.
- To collect accurate and timely data on vessel activity in order to manage harvest effort to ensure area quotas and IQs are not exceeded.
- To collect data to support compliance with conditions of licence.

4. Summary of the Components of the Catch Monitoring and Reporting Program for the Commercial Red and Green Sea Urchin Fisheries.

The Pacific Urchin Harvesters Association (PUHA) funds all catch reporting and monitoring requirements for the commercial fishery. These requirements include:

1. 100% validation of commercial landings via a Dockside Monitoring Program
2. Hail monitoring Program to track vessel activity
3. Harvest logbooks to track harvest
4. Harvest charts to track harvest location
5. Keypunching of harvest logbook data and digitization of harvest chart data
6. Weekly in-season reports to DFO
7. Annual post-season report

Details about each of these components can be found in the sections below.

5. Commercial Urchin Fisheries Dockside Monitoring Program - Requirements

- 100% of all commercial Urchin landings are validated by a third-party dockside monitoring company. D&D Pacific Fisheries Ltd. is contracted by the PUHA to deliver the catch monitoring and reporting requirements for the commercial Urchin fisheries.
- Third party Dockside Monitoring companies must be licensed by DFO. They must meet certain standards and have DFO approved system manuals/training. They are subjected to auditing to ensure they are meeting standards.
- Dockside Observers must meet arms length criteria and a criminal record check. DFO certifies Dockside Observers.
- All commercial Urchins landed must be weighed on a certified scale. Scales must be verified annually.

6. Urchin Enforcement Program

Dockside validation is a key component of the management of the Urchin fisheries. The DFO Conservation and Protection Unit support dockside validation by inspecting offloads and monitoring offloading practices.

Air surveillance resources are utilized to patrol boundaries and conduct gear and vessel counts. Charter aircraft as well as DFO aircraft may be utilized for these activities.

Underwater harvest activity is observed by fishery officers trained in the use of SCUBA. On dive patrols fishery officers check for the harvest of prohibited species and for incidences of dumped product.

7. National Fishery Monitoring Policy and Catch Reporting

Robust fishery monitoring information is essential for stock assessment and to effectively implement management measures such as target and bycatch limits, quotas and closed areas. Fishery monitoring information is also needed to support the long-term sustainable use of fish resources for Food, Social, and Ceremonial and other Indigenous fisheries, commercial fisheries, recreational fisheries, and to support market access for Canadian fish products.

Following multi-sectoral consultations, DFO released the national Fishery Monitoring Policy in 2019, replacing the regional "Strategic Framework for Fisheries Monitoring and Catch Reporting in the Pacific Fisheries" (2012). The national Fishery Monitoring Policy seeks to provide dependable, timely and accessible fishery information through application of a common set of procedural steps used to establish fishery monitoring requirements across fisheries. Policy principles include respecting Indigenous and Treaty rights, linkage of monitoring requirements to the degree of risk and complexity of fisheries, linkage of monitoring programs to fishery and policy objectives while accounting for cost-effectiveness and practicality of implementation, and shared accountability and responsibility between DFO, Indigenous groups and stakeholders.

To ensure consistent national application of the Fishery Monitoring Policy, further guidance is provided through the "Introduction to the Procedural Steps of Implementing the Fishery Monitoring Policy". Fish Stocks are first prioritized for assessment through collaboration with Indigenous groups and Stakeholders. Risk and data quality assessments are then conducted on priority stocks and associated fisheries and monitoring programs. Next, monitoring objectives are set in alignment with the Fishery Monitoring Policy, followed by specifying monitoring requirements and then monitoring programs are operationalized. Finally, a review and evaluation of the fishery monitoring programs against the monitoring objectives will be conducted and reported on.

The Fishery Monitoring Policy is part of DFO's Sustainable Fisheries Framework and is available at:

https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/fishery-monitoring-surveillance-des-peches-eng.htm

The "Introduction to the Procedural Steps of Implementing the Fishery Monitoring Policy" is available at:

https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/fmp-implementation-psp-mise-en-oeuvre-eng.htm

In cases where assessment of monitoring programs identifies a gap between the current and target level of monitoring, discussions will be held between DFO Indigenous groups and stakeholders to identify options to address the monitoring gap, and the feasibility of these options (e.g. cost, technical considerations, etc.).To support Fishery Monitoring Policy principles, a collaborative approach is required.

Where monitoring options are determined to be feasible, the monitoring and reporting regime will be revised to incorporate these options, providing resource managers with sufficient information to meet Fishery Monitoring Policy objectives. Where monitoring options are not feasible, alternative management approaches are required to reduce the risk posed by the fishery. If there is no gap between the current and target level of monitoring, the management approach will not require any change.

8. Data Requirements for the Catch Reporting Program

8.1 Ongoing Data Collection Requirements

a. Combined Validation & Harvest Log - A combined Validation & Harvest log is used for recording the daily activities in the Red and Green Sea Urchin Fisheries. Fish harvesters are required to fill out parts of the 'Landing Information' section and all of the 'Harvest Information' section of these combined logs, and the logs must be validated by an Observer at each time of landing of product. The log will be designed and printed by the Association or its agent, and may have any design or format, provided it contains space for recording the specified information listed below in each section. A new page of the log must be used each time a new Subarea is fished (i.e., a new validation identification number for each Subarea fished each day). The total number of Validation & Harvest log forms used for each landing must also be indicated.

b. Landing Information Section (Summary of each day's fishing) - This section of the form is to be filled out by the Observer and the vessel master. The following information must be obtained:

i) Validation Identification #
ii) Landing date
iii) "ZC/ZA" or "FZC/FZA" Licence Tab #
iv) Vessel Name
v) Vessel registration number (VRN #)
vi) Vessel Master's Fisher Identification Number (FIN)
vii) Vessel Master's Name (first and last name printed)
viii) Landing location
ix) Observer's Name
x) Area
xi) Subarea
xii) Quota Area
xiii) Number of Days Fished
xiv) Product Form
xv) Buyer Company Delivered to (written name) 1
xvi) Packer Name (written name)
xvii) Packer Vessel Registration Number (VRN)
xviii) Total Number of Containers 1, 2
xix) Gross Weight

xx) Container Weight
xxi) Container Type (i.e., cages, pails, totes, bags, brailer bag, or other container type)
xxii) Previous Remaining Quota
xxiii) Total Net Validated Dock Weight (in pounds) 1, 2
xxiv) The Vessel's Remaining Quota After Landing (in pounds)
xxv) Split Load Indicator (number of splits, 0=no splits) 1
xxvi) Total Number of Validation Identification Numbers (pages) used for Landing 2, 3
xxvii) Other Validation Identification Numbers used for this Landing [3]
xxviii) Comments 1, 3

Notes:

[1] If there is more than one buyer for the validation, indicate the number of splits (under 'Split Load Indicator' field), and write in the 'Comments' field the name of the other buyer(s), the number of containers they bought, and the validated dock weight they bought. In this situation, the 'Total Number of Containers' field and the 'Total Net Validated Dock Weight' should be the totals for the two (or more) companies combined.

[2] If there is more than one Validation Identification number (page) used for one landing, the data written for the total number of containers and total net validated dock weight must be for the data represented on each page only, not the combined totals for the whole day.

[3] If there is more than one Validation Identification number (page) used for one landing, indicate in the 'Comments' field the other Validation Identification numbers.

c. Harvest Information Section (Details of each day of fishing) - This section is to be completed by the vessel master prior to landing. The form requires the following information with separate entries for each diver at each location on each day:

i) Line number
ii) Fishing Date (year, month, day)
iii) Location (written description of where fishing)
iv) Diver Name (printed first and last name)
v) Minimum Fishing Depth (in feet)
vi) Maximum Fishing Depth (in feet)
vii) Dive Time (in minutes)
viii) Number of Pick Bags
ix) Harvest Chart Marked (yes/no)

d. A chart record (map) of the locations fished each day must be submitted by the fish harvester to the Association or its designate along with each Validation & Harvest log. The fish harvester may provide the chart records in a sealed envelope, but both the map and the outside of the envelope must detail the following information:

i) vessel name;
ii) vessel registration number (CFV #);
iii) "ZC/ZA" or "FZC/FZA" licence tab #;
iv) dates of fishing; and
v) Validation Identification #.

Also, beside each fishing location drawn on the chart, there should be an indication of the record(s) in the Harvest Information Section to which the location applies. This can be accomplished by noting the dive (or line) number and dive reference code, or the harvest date and the Validation Identification number beside each bed marked on the chart.

The Validation Identification numbers and harvest information line numbers must be pre-printed on the forms.

The combined log form should have a minimum of 3 copies of different colours for each Validation Identification number to be distributed as follows: (1) original for the Observer to be forwarded to the Department at the end of the fishing season; (2) copy for the vessel master; and (3) copy for transport and the buyer. The transport copy should have the confidential harvest information section blacked out. If the Observer keeps a copy for their own records, the confidential harvest information section should also be blacked out.

9.1 Weekly In-season Summaries of the Fishery

The Association will ensure that the Department receives a weekly fishery summary by facsimile or email transmission. The summary will include the following information in tabular form:

a) Table of landings by Area showing, **for each area**: landings for the period (week); cumulative landings; number of vessels fishing.

b) Table of landings by Red or Green Sea Urchin Quota Management Area showing, **for each area**: landings for the period (week); cumulative landings; remaining area quota; number of vessels fishing.

c) Table of landings by "ZA/ZC" and "FZA/FZC" Licence Tab Number, showing, **for each tab**: name of the vessel; VRN of the vessel; Areas and Subareas fished; landings for the period (week); cumulative landings; remaining quota.

d) Table of purchases by company, showing, **for each purchaser**: number of vessels purchased from; number of validations; pounds purchased for the period (week); cumulative pounds purchased.

e) Summary of All Incident Reports - showing the vessel name, "ZA/ZC" and "FZA/FZC" licence tab, quota management area, and the nature of the incident.

These weekly summaries are to be sent to Urchin managers and to the Shellfish Data Unit.

10.1 End of Season Requirements

a) Electronic Data Requirements - As a condition of licence, harvesters must submit both a hard copy (paper) and an electronic version of all data records (validation/landing information and harvest information as two separate tables) to the Department. The electronic versions of the data must be submitted as database tables of specific design, as described in Schedule F, created in the following database management tool: ACCESS XP (or earlier version). If a service provider or fish harvester wishes to submit data in

another format, they must contact the Shellfish Data Unit for permission and specifications.

The electronic version must be a true and accurate transcription of the hardcopy data. Incomplete, inaccurate or incorrect data will not be accepted. The Association may arrange with Observers to collate data and create the aforementioned electronic versions of the data records, but it is the responsibility of the Association to ensure that the Department receives the information required in an acceptable format.

b) Acceptable Electronic Formats - refer to Schedule F.
    i) Database Files - The Department will accept electronic copies of data created in MSACCESS XP (or earlier version). The database files submitted must consist of one table for each of the data types (i.e. harvest information, validation/landing data, and biological sampling data) with the fields and field characteristics as specified for each data type (see Schedule F).

c) Harvest Information - Harvest information is to be submitted to the Department not later than March 31, 20XX, on a Shellfish Data Unit approved storage medium, with the filename following the convention of YYMMZDHR, where YY is the Year, MM is the Month, and ZA is the licence Tab Type for Green Sea Urchins/ZC is the licence Tab Type for Red Sea Urchins, and HR means it is harvest information. The storage medium must be clearly labelled with the name of the service provider and the names of the files contained on it. In addition, the storage medium must be accompanied by a hardcopy list of the VRNs contained in each file, and the number of records for each VRN. Data submitted will remain the property of the Department.

    Each data record will represent, at a minimum, one day of diving by one diver at one location. If the diver moves to a new location, a new record must be entered. These data will be submitted to:

    Shellfish Data Unit
    Fisheries and Oceans Canada
    Pacific Biological Station
    3190 Hammond Bay Road
    Nanaimo, B.C. V9T 6N7

d) Fishing Location Information - The Association must arrange for the electronic capture of fishing location information, from the chart records supplied by the fish harvesters, to the Shellfish Data Unit Geographic Information System (GIS). This activity is to be performed by a bonded individual. The task consists of reviewing the chart record showing the location of fishing activity, digitizing the area using the Shellfish Data Unit basemap information for reference and making a database entry into the corresponding attribute table. The fishing location information is to be delivered to the Shellfish Data Unit at the same time as the harvest information.

e) Validation/Landing Information - The Association shall ensure that validation/landing information data for the entire fishing season is submitted to the Department following the termination of the Urchin fisheries in the following database format: ACCESS XP (or earlier version). Data submitted will remain the property of the Department.

Each data record will represent the information for each validation ID number. The landing data must be submitted in the format outlined in Schedule F. These data will be submitted to:

Shellfish Data Unit
Fisheries and Oceans Canada
Pacific Biological Station
3190 Hammond Bay Road
Nanaimo, B.C. V9T 6N7

1. Post Season Report - Following the end of the Urchin fisheries, an End of Year Report is submitted to the Department, outlining the following:

a) Review of the Red and Green Sea Urchin Fisheries
- sequence of openings and closures
- in-season changes
- compliance with fishery management system
- effect of individual quotas
- other issues

b) Fish Harvesters' Comments

c) Observers' Comments

d) Processors' Comments

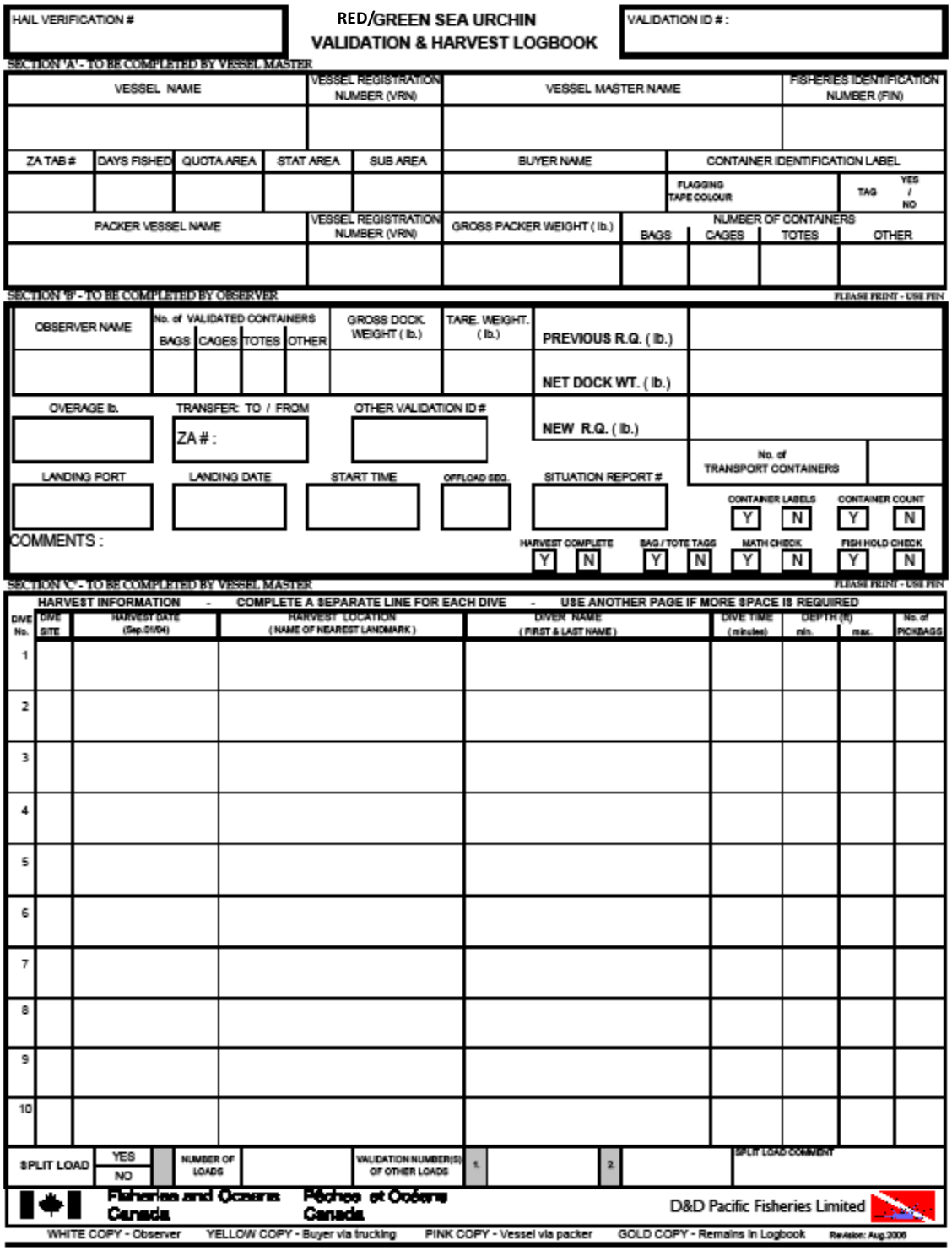
e) Recommendations
- Management Plan/Conditions of Licence
- Verification Program
- Studies/Exploratory Fisheries

f) Appendices

A: Complete record of all urchins landings by "ZA/ZC" or "FZA/FZC" Tab number, by date (Confidential, Fisheries and Oceans Canada only);
B: Summary of Landings by "ZA/ZC" or "FZA/FZC" Tab number (Confidential, Fisheries and Oceans Canada only);
C: Landings by Red or Green Sea Urchin management area;
D: Landings by buyer;
E: Landings by Area by date (figure).

The Report will be completed and distributed to the Association and the Department of Fisheries and Oceans Canada.

APPENDIX 8: EXAMPLE OF SEA URCHIN VALIDATION & HARVEST LOGBOOK



HAIL VERIFICATION #

RED/GREEN SEA URCHIN
VALIDATION & HARVEST LOGBOOK

VALIDATION ID # :

SECTION 'A' - TO BE COMPLETED BY VESSEL MASTER

VESSEL NAME	VESSEL REGISTRATION NUMBER (VRN)	VESSEL MASTER NAME	FISHERIES IDENTIFICATION NUMBER (FIN)

ZA TAB #	DAYS FISHED	QUOTA AREA	STAT AREA	SUB AREA	BUYER NAME	CONTAINER IDENTIFICATION LABEL		
						FLAGGING TAPE COLOUR	TAG	YES / NO

PACKER VESSEL NAME	VESSEL REGISTRATION NUMBER (VRN)	GROSS PACKER WEIGHT (lb.)	NUMBER OF CONTAINERS			
			BAGS	CAGES	TOTES	OTHER

SECTION 'B' - TO BE COMPLETED BY OBSERVER — PLEASE PRINT - USE PEN

OBSERVER NAME	No. of VALIDATED CONTAINERS				GROSS DOCK WEIGHT (lb.)	TARE. WEIGHT. (lb.)	
	BAGS	CAGES	TOTES	OTHER			
							PREVIOUS R.Q. (lb.)
							NET DOCK WT. (lb.)
							NEW R.Q. (lb.)

OVERAGE lb.	TRANSFER: TO / FROM	OTHER VALIDATION ID #	No. of TRANSPORT CONTAINERS
	ZA # :		

LANDING PORT	LANDING DATE	START TIME	OFFLOAD SEQ.	SITUATION REPORT #	CONTAINER LABELS		CONTAINER COUNT	
					Y	N	Y	N

COMMENTS :

HARVEST COMPLETE		BAG / TOTE TAGS		MATH CHECK		FISH HOLD CHECK	
Y	N	Y	N	Y	N	Y	N

SECTION 'C' - TO BE COMPLETED BY VESSEL MASTER — PLEASE PRINT - USE PEN

HARVEST INFORMATION - COMPLETE A SEPARATE LINE FOR EACH DIVE - USE ANOTHER PAGE IF MORE SPACE IS REQUIRED

DIVE No.	DIVE SITE	HARVEST DATE (Sep.01/04)	HARVEST LOCATION (NAME OF NEAREST LANDMARK)	DIVER NAME (FIRST & LAST NAME)	DIVE TIME (minutes)	DEPTH (ft) min.	DEPTH (ft) max.	No. of PICKBAGS
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

SPLIT LOAD	YES / NO	NUMBER OF LOADS	VALIDATION NUMBER(S) OF OTHER LOADS	1.	2.	SPLIT LOAD COMMENT

Fisheries and Oceans Canada / Pêches et Océans Canada — D&D Pacific Fisheries Limited

WHITE COPY - Observer YELLOW COPY - Buyer via trucking PINK COPY - Vessel via packer GOLD COPY - Remains in Logbook Revision: Aug.2006

APPENDIX 9: EXAMPLE OF URCHIN COMMERCIAL CONDITIONS OF LICENCE

This example of conditions of licence is provided for your information only. These conditions of licence are generic and may not be the same as those provided when a licence is issued. The actual conditions of licence will be attached to the licence issued by a Pacific Fishery Licensing Unit.

CONDITIONS OF URCHIN LICENCE
Licence Period: August 1 to July 31.

Authority

The Department of Fisheries and Oceans has authority to set licence conditions under subsection 22(1) of the *Fishery (General) Regulations* for the proper management and control of fisheries and the conservation and protection of fish.

Persons fishing under authority of this licence may only do so in accordance with the conditions stated below.

Also, it is the responsibility of individual fish harvesters to be informed of, and comply with, the *Fisheries Act* and the regulations made thereunder, in addition to these conditions.

The Management Plan is intended for general information purposes only. Where there is a discrepancy between the Plan and the *Fisheries Act* and regulations or these conditions, the *Fisheries Act* and regulations and these conditions prevail.

Definitions

"Area" and "Subarea" have the same meaning as in the *Pacific Fishery Management Area Regulations, 2007*.

"container" means a mesh pick bag, a mesh transport bag, a plastic tote, or a cage used for the gathering, handling or transportation of Green Sea Urchin.

"Department" means the Department of Fisheries and Oceans.

"Designated service provider" means D&D Pacific Fisheries Ltd., the private sector company authorized by the Department for the purpose of assisting licence holders and vessel masters in meeting these conditions of licence with regards to reporting of information.

“discarded” means not placing the Green Sea Urchin in a container or removing a Green Sea Urchin from a container and not validating that Green Sea Urchin.

“fishing trip” means the time between leaving port to commence fishing and the return to a port or offloading of catch that results in a discontinuation of fishing for 24 hours or longer.

“Hail-out Report” means the report made to a designated service provider prior to embarking on a fishing trip.

“Hail-in Report” means the report made to a designated service provider prior to landing Red Sea Urchin or after a fishing trip.

“harvested” means removing, by any means, Urchin from the substrate of the ocean floor.

“harvest log” means a log of all harvest operations that meets the requirements of the Department’s Stock Assessment and Research Division Shellfish Data Unit and available from the designated service provider who provides logbook and data keypunch services.

“landed” or “landing” means the transfer of Green Sea Urchin from a vessel in water to land.

“observer” means an individual who has been designated as an observer by the Regional Director General for Pacific Region pursuant to section 39 of the *Fishery (General) Regulations*.

“Quota Area” means those areas enumerated and described in the current Integrated Fisheries Management Plan.

“tranship” means the transfer of Green Sea Urchin from a vessel to another vessel.

“validated” means Urchin that have been weighed by an observer and the weight entered into the Urchin Validation & Harvest Log or an alternative log approved by the Department.

“vessel master” means the individual embarked on the vessel and responsible for the operation of the vessel and the fishing activities carried out under authority of this licence.

“vessel registration number” or “VRN” means the number assigned to a vessel by the Department at the time the vessel is registered as a fishing vessel.

1. Species of fish permitted to be taken:
Green Sea Urchin (Strongylocentrotus droebachiensis)
OR Red Sea Urchin (*Mesocentrotus franciscanus*)

2. Licence Expiry Date:
This licence expires on July 31.

3. Quantities permitted to be taken:
The maximum quantity of Urchin authorized to be taken under this licence is ### kg (### lb.) of Urchin harvested from within the area set out in this licence subject to all applicable regulations.

4. Minimum size limit:
The minimum size of Green Sea Urchin that may be taken is 50 mm in shell diameter, measured between the spines, through the greatest diameter of the shell. The minimum size of Red Sea Urchin that may be taken is 85 mm in shell diameter, measured between the spines, through the greatest diameter of the shell.

5. Disposition of fish:
Fish caught under authority of this licence may be sold, traded or bartered.

6. Designated fishers:
Individuals fishing under authority of this licence shall carry proof of designation and shall provide proof of designation on request by any fishery officer or fishery guardian.

Designations are personal and non-transferable.

7. Waters in which fishing is permitted:
Area of fishing is as set out in this licence.

8. Identification of fishing vessel and gear:
(1) The designated vessel shall be identified in accordance with section 26 of the *Fishery (General) Regulations*.
(2) Fishing gear shall be identified in accordance with sections 27 and 29 of the *Fishery (General) Regulations*.

9. Fishing gear permitted to be used:
Hand picking by divers only. Suction devices are not permitted to be used.

10. Fishing multiple Quota Areas:

All Urchin caught in a Quota Area shall be landed or transhipped prior to the commencement of fishing in a new Quota Area.

11. The type, size and condition of containers to hold or transport Urchin and the marking of such containers:
(1) All Urchin delivered to designated landing ports or transhipped to another vessel licensed for the transportation of fish shall be placed in containers which are labelled. The label shall be waterproof and contain the vessel name and vessel registration number.
(2) All "pick bags" or any other type of container containing harvested Urchin left unattended in the water shall be labelled. The label shall be waterproof and marked with the vessel name and the vessel registration number of the vessel used to harvest that product. Floats attached to containers left unattended in the water shall also be marked with the vessel registration number.

12. Transhipment:
Urchin may be transhipped from the licensed vessel to another vessel licensed for the transportation of fish provided the vessel master complies with the following conditions:
1) all Urchin are in containers and tagged as per section 10;
(2) the number of containers are recorded in the log;
(3) the "packer weight" (determined by subtracting the weight of the containers from the weight of the product) is recorded in the log; and
(4) a copy of the log accompanies the transhipped Urchin.
(5) the product is landed at a designated port and validated by an observer.

13. Locations permitted for the landing of Green Sea Urchin:
Green Sea Urchin shall be landed at one of the following ports:
(1) South Coast: Port Hardy, Port McNeill, Kelsey Bay, Quadra Island, Campbell River, Brown's Bay, Sidney, Sooke, Victoria or Vancouver.
(2) North Coast: Prince Rupert or Port Edward.

Red sea urchin shall be landed at one of the following ports:
(1) North Coast: Queen Charlotte City, Masset, Prince Rupert, Port Edward, Klemtu, Bella Bella, or Port Hardy.
(2) South Coast: Port Hardy, Port McNeill, Kelsey Bay, Nanaimo, Quadra Island, Comox, Campbell River, Sidney, Sooke, Victoria, Ucluelet, Steveston, or Vancouver.

This condition applies to both the licensed vessel and, if the vessel master chooses to tranship his catch to another vessel, to the vessel receiving the Urchin.

14. Validation:
(See Explanatory Note after section 17)
(1) All Urchin harvested or removed from the sea bed floor under the authority of this licence shall be validated at the point and time the fish is landed.

(2) Prior to validation of Urchin no person shall:
(a) smash the shells or slit the membranes of the Urchin to drain the waters; or
(b) dump, throw overboard, or otherwise discard Green Sea Urchin which have been harvested and retained in accordance with the *Fisheries Act* and the regulations made thereunder.

(3) All weights shall be determined using a scale approved by Industry Canada.
(a) Registered participants in the Red Sea Urchin live-market validation pilot program shall validate their catch by undrained weight or by volume in the manner set out in the Alternate Validation Pilot Protocol sheet available to registrants from the resource manager.

(4) The vessel master of the licensed vessel or, if the catch is transhipped to another vessel, the vessel master of that vessel, shall provide the observer with a hard copy of the Validation & Harvest Log upon completion of each validation.

(5) The vessel master of the licensed vessel or, if the catch is transhipped to another vessel, the vessel master of that vessel, shall provide to the observer at the point of landing, access to the vessel's fish holds, freezers and other fish storage areas at any time during the landing.

15. Oral Reports:

(1) The vessel master shall, under the circumstances set out in subsections 14(2) to 14(6), report the information set out therein by notifying in person an observer or by telephoning (800) 775-5505.

(2) At least 24 hours before a fishing trip:
(a) vessel name, vessel master's name and vessel registration number;
(b) species to be fished (i.e. Red or Green Sea Urchin);
(c) Subarea(s) to be fished;
(d) anticipated time of arrival at the fishing location; and
(e) anticipated time that fishing will begin.

(3) Upon failure to arrive at fishing location within 24 hours of time stated in subsection 14(2):
(a) vessel name and vessel registration number; and
(b) details of change in fishing plans.

(4) At least 24 hours prior to moving to a new Quota Area:
(a) vessel name, vessel master's name and vessel registration number;
(b) species to be fished;
(c) Subarea(s) to be fished;
(d) anticipated time of arrival at the fishing location; and
(e) anticipated time that fishing will begin.

(5) After a fishing trip:
(a) vessel name, vessel master's name and vessel registration number;
(b) species fished;
(c) Subarea(s) fished; and
(d) time that fishing stopped.

(6) Cancellation of fishing trip:
Should the vessel master decide not to fish after having made a Hail-out Report, the vessel master shall make a Hail-in Report by contacting the Red Sea Urchin service provider to indicate that no fishing occurred within 24 hours of the time stated in subsection 11(1).

(7) At least 24 hours prior to landing Urchin:
(a) vessel name, vessel master's name and vessel registration number;
(b) species to be landed;
(c) name of the designated port and location therein where the catch shall be landed;
(d) anticipated time of landing;
(e) name of fish processor or buyer that is buying or transporting the catch; and
(f) if applicable, the method of transporting the catch to a fish processor.

16. Harvest Logs and Chart Data:
(See Explanatory Note after Section 17)

(1) The vessel master shall maintain a log of all harvest operations and provide this information in both hard (paper) copy and electronic copy to the Department in accordance with the timing set out in subsection 16(8). The content and format of

this log (paper and electronic) shall meet the requirements as defined by the Shellfish Data Unit for the current licence year.

(2) The harvest and fishing location information recorded in the log shall be complete and accurate.

(3) The information for each day's harvest operations shall be recorded in the log no later than midnight of that day.

(4) The log shall be kept on board the licensed vessel.

(5) The log shall be produced for examination on demand of a fishery officer, a fishery guardian or an observer.

(6) The vessel master shall provide a chart record of the locations fished to the Department.
(a) The chart shall be marked with:
(i) the vessel registration number;
(ii) the licence tab number; and
(iii) the validation I.D. numbers.

The validation I.D. number is the unique page number assigned to each validation page of the Urchin Validation & Harvest Log. If an alternative log is used, the validation I.D. number is the unique page number assigned by the Shellfish Data Unit when the licence holder contacts the Unit to obtain the information necessary to fulfil the log requirements.

(b) Each harvest site shall be clearly marked on the chart with dive number, validation I.D. number and the dates that fishing activity occurred at each site. The dive numbers on the chart record must correspond to the dive numbers in the log.

(c) The information for each day's harvest operations shall be recorded on the chart record no later than midnight of that day and provided to the service provider within one month of that day's harvest operations.

(7) The vessel master shall make provisions to have chart information referred to in subsection 15(6) electronically captured into Geographic Information System (GIS) software that meets the requirements as defined by the Shellfish Data Unit for the current licence year. and forwarded to the Pacific Biological Station, Nanaimo.

(8) The licence holder shall ensure that the completed log pages (white original copy) and electronic copy of the log are forwarded

not later than 28 days following the end of each month in which fishing occurred, to:

Fisheries and Oceans Canada
Shellfish Data Unit
Pacific Biological Station
3190 Hammond Bay Road
Nanaimo BC V9T 6N7

Tel: (250) 756-7022 or PACSDU@dfo-mpo.gc.ca

(9) In the event that a licence holder does not fish during the current fishing season, the licence holder is responsible for submitting a nil report. One page from the harvest logbook identifying the vessel, licence tab number and the year with 'nil' entered in the body of the log and signed by the licence holder constitutes a nil report.

17. Fish Slips:
(1) A complete and accurate written report shall be provided on a fish slip of all fish caught and retained under the authority of this licence.

(2) The record shall contain the following information:
(a) buyer's name, address and telephone number;
(b) harvester's name and address;
(c) processing plant name;
(d) landing date;
(e) vessel name and VRN;
(f) gear used to harvest the fish;
(g) Area(s) where fishing occurred and days spent fishing in each Area;
(h) the individual species of each fish sold or offloaded;
(i) the description of the product or landed form of each species sold or offloaded;
(j) the weight of each species sold or offloaded;
(k) the price paid for each species sold; and
(l) the total value of each species sold or offloaded.

(2) A report shall be made even if the fish are used for bait, personal consumption or disposed of otherwise.

(3) The report shall be mailed not later than seven days after the offloading and sent to:

Fisheries and Oceans Canada
Fisheries and Aquaculture Management Branch, FM Data Unit
Suite 200 - 401 Burrard Street

Vancouver B.C. V6C 3S4

Fish slips may be downloaded and printed at http://www.pac.dfo-mpo.gc.ca/stats/fishslips-carnets/index-eng.html. Phone (604) 666-2716 for more information.

18. Marine Mammal Reporting Requirements:

(1) The vessel master shall provide information regarding all interactions with marine mammals during fishing trips;
(2) For the purpose of subsection 18(1), interactions refer to cases of incidental mortality and serious injury to marine mammals. This includes accidental drowning, bycatch, entanglements, collisions, and fatalities.
(3) The vessel master shall immediately phone the Marine Mammal Incident Hotline at 1-800-465-4336 to report cases of mortality and serious harm.
(4) The vessel master shall complete the DFO reporting form "MARINE MAMMAL INTERACTION FORM."
(5) The Marine Mammal Interaction Form shall be submitted as per the instructions provided on the form.

Note: The Marine Mammal Interaction Form is available from: http://www.dfo-mpo.gc.ca/species-especes/mammals-mammiferes/report-rapport/fish-harvester-pecheur-eng.asp

19. Workers' Compensation Board Requirements
All Green Sea Urchin divers shall be in possession of a Workers' Compensation Board Seafood Harvesting Diving Certificate.

20. Workers' Compensation Board Requirements

All red sea urchin divers shall be in possession of a valid commercial dive certification or a Workers' Compensation Board Seafood Harvesting Diving Certificate.

Explanatory Note - Harvest Log, Chart Data and Validation: The Urchin Validation & Harvest Log issued by the service provider contracted by the Pacific Urchin Harvesters Association is approved for both form and content by the Shellfish Data Unit. This service provider will provide, for a fee, the logbook, and coding, keypunching, electronic chart data capture and validation services.

Appendix 10: Fishing Vessel Safety

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1. OVERVIEW – FISHING VESSEL SAFETY

Vessel owners and masters have a duty to ensure the safety of their crew and vessel. Adherence to safety regulations and good practices by owners, masters and crew of fishing vessels will help save lives, prevent vessel damage and protect the environment. All fishing vessels must be in a seaworthy condition, registered and maintained as required by Transport Canada (TC), WorkSafeBC, and other applicable agencies. Vessels subject to inspection should ensure that the certificate of inspection is valid for the area of intended operation.

In the federal government, responsibility for shipping, navigation, and vessel safety regulations and inspections lies with TC; emergency response with the Canadian Coast Guard (CCG) and DFO has responsibility for management of the fisheries resources. The Transportation Safety Board is an independent agency that advances transportation safety by investigating selected occurrences in the air, marine, pipeline and rail modes of transportation including fishing vessel occurrences. In B.C., WorkSafeBC exercises jurisdiction over workplace health and safety and conducts inspections on commercial fishing vessels in order to ascertain compliance with the *Workers Compensation Act* (WCA) and the *Occupational Health and Safety Regulation* (OHSR).

Before departing on a voyage the owner, master, or operator must ensure that the fishing vessel is capable of and safe for the intended voyage and fishing operations. Critical factors for a safe voyage include the seaworthiness of the vessel, having the required personal protective and life-saving equipment in good working order, adequate number of properly trained crew , and knowledge of current and forecasted weather conditions. As safety requirements and guidelines may change, the vessel owner, crew, and other workers must be aware of the latest legislation, policies and guidelines prior to each trip.

There are many useful tools available for ensuring a safe voyage. These include:

- Education and training programs
- Marine emergency duties training
- Fish Safe – Stability Education Program & 1 Day Stability Workshop
- Fish Safe – SVOP (Subsidized rate for B.C. commercial fishers provided)
- Fish Safe – *Safest Catch* program – **FREE** for B.C. commercial fishers
- Fish Safe *Safe At Sea* DVD Series – Fish Safe
- Fish Safe Stability Handbook – *Safe at Sea* and *Safest Catch* – DVD Series
- Fish Safe *Safest Catch* Log Book
- Fish Safe *Safety Quiz*
- First Aid training
- Radio Operators Course (Subsidized rate for B.C. commercial fishers provided)
- Fishing Masters Certificate training
- Small Vessel Operators Certificate training

Publications:

- Gearing Up for Safety - WorkSafeBC
- https://tc.canada.ca/en/marine-transportation/marine-safety/tp-15393e-adequate-stability-safety-guidelines-fishing-vessels TP 15393E - Adequate stability and safety guidelines for fishing vessels
- TP 15392E - Guidelines for fishing vessel major modification or a change in activity. https://tc.canada.ca/en/marine-transportation/marine-safety/tp-15392e-guidelines-fishing-vessel-major-modification-change-activity
- Transport Canada Publication TP 10038 Small Fishing Vessel Safety Manual (can be obtained at Transport Canada Offices from their website at: http://www.tc.gc.ca/eng/marinesafety/tp-tp10038-menu-548.htm
- Amendments to the *Small Fishing Vessel Inspection Regulations* (can be obtained from: http://www.gazette.gc.ca/rp-pr/p2/2016/2016-07-13/html/sor-dors163-eng.php)
- Safety Issues Investigation into Fishing Safety in Canada report can be accessed: https://www.tsb.gc.ca/eng/rapports-reports/marine/etudes-studies/M09Z0001/M09Z0001.html

For further information see: https://tc.canada.ca/en/marine-transportation
www.fishsafebc.com
www.worksafebc.com
www.tsb.gc.ca/eng/rapports-reports/marine/index.html

2. IMPORTANT PRIORITIES FOR VESSEL SAFETY

There are three areas of fishing vessel safety that should be considered a priority. These are: vessel stability, emergency preparedness, and cold water immersion.

2.1. Fishing Vessel Stability

Vessel stability is paramount for safety. Care must be given to the stowage and securing of all cargo, skiffs, equipment, fuel containers and supplies, and to correct ballasting. Fish harvesters must be familiar with their vessel's centre of gravity, the effect of liquid free surfaces on stability (e.g. loose water or fish on deck), loading and unloading operations, watertight integrity and the vessel's freeboard. Know the limitations of your vessel; if you are unsure contact aa naval architect, marine surveyor or the local Transport Canada Marine Safety Office.

Fishing vessel owners are required to develop detailed instructions addressing the limits of stability for each of their vessels. These instructions must include detailed safe operation documentation kept on board the vessel.

In 2017, Transport Canada Marine Safety (TC) issued Ship Safety Bulletin (SSB) No. 03/2017 announcing the coming into force of the New *Fishing Vessel Safety Regulations*. The initial regulations were published in the Canada Gazette Part II on July 13, 2016 and

came into force on July 13, 2017. The bulletin includes important information on changes to requirements for Written Safety Procedures, Safety Equipment and Vessel Stability.

As of July 13, 2017, new regulations pertaining to stability assessments to be performed by a competent person came into effect, as follows:

- A new fishing vessel that has a hull length of more than 9 m where the vessel construction was started or that a contract was signed for the construction after July 13, 2018;
- A fishing vessel more than 9 m and that has undergone a major modification or a change in activity that is likely to adversely affect its stability;
- A fishing vessel that is fitted with an anti-roll tank at any time;
- A fishing vessel more than 15 gross tonnage and used for catching herring or capelin during the period beginning on July 6, 1977 and ending on July 13, 2017
- For an existing fishing vessel that is not required to undergo a stability assessment, the owner shall be capable of demonstrating that their vessel has adequate stability to safely carry out the vessel's intended operations. Guidelines have been developed and are available online to help small fishing vessel owners and operators meet their regulatory requirements
- Two good resources can be found here: TP 15393 - Adequate stability and safety guidelines for fishing vessels (2018) and TP 15392 – Guidelines for fishing vessel major modification or a change in activity (2018)

Further, the new Regulation requires a "Stability Notice" to be developed after a stability assessment. This notice includes a simple diagrammatic of the vessel, its tanks and fish holds, or deck storage as the case may be. It is intended to assist fishing vessel crews in quickly determining the safe carriage limits of the vessel without having to reference a complicated Trim and Stability Book.

Additionally, Transport Canada published a Stability Questionnaire (SSB No. 04/2006) and Fishing Vessel Modifications Form (SSB No. 01/2008) which enable operators to identify the criteria which will trigger a stability assessment. Please contact the nearest Transport Canada office if you need to determine whether your vessel requires a stability assessment, or to receive guidance on obtaining a competent assessor.

In 2019, TC provided an updated SSB 03/2019, which sets out a voluntary record of modifications for the benefit of owners/masters of any fishing vessels. For vessels of more than 15 gross tons, the record of modifications was to be reviewed by TC inspectors during regular inspections and entered on the vessel's inspection record. However, information gathered during the Transportation Safety Board's (TSB) Safety Issues Investigation into the fishing industry showed minimal recording of vessel modifications prior to this date.

The TSB has investigated several fishing vessel accidents since 2005 and found a variety of factors that effected the vessel's stability were identified as contributing factors in vessels capsizing, such as with: M05W0110 - *Morning Sunrise*, M07M0088 - *Big Sisters*, M08W0189 - *Love and Anarchy*, M09L0074 – *Le Marsouin I*, M10M0014 - *Craig and Justin*, M12W0054 – *Jessie G*, M12W0062 - *Pacific Siren*, M14P0121 – *Five Star*,

M15P0286 – *Caledonian*, M16A0140 – *C19496NB*, M17C0061 – *Emma Joan*, *M*17P0052 – *Miss Cory*, M18P0073 – *Western Commander*,M18A0425 – *Charlene A* and M18A0454 – *Atlantic Sapphire*, M20P0229 – *Arctic Fox II*, M20A0434 – *Chief William Saulis*, M20A0160 – *Sarah Anne* and the *Tyhawk* – M21A0065

Vessel masters are advised to carefully consider stability when transporting gear. Care must be given to the stowage and securing of all traps, cargo, skiffs, equipment, fuel containers and supplies and also to correct ballasting. Know the limitations of your vessel; if you are unsure contact a reputable marine surveyor, naval architect or the local Transport Canada Marine Safety office.

WorkSafeBC's *Occupational Health and Safety Regulations* (OHSR) require owners of fishing vessels to provide documentation on board, readily accessible to crew members, which describes vessel characteristics, including stability.

Fish Safe has developed a code of best practices for the food and bait/roe herring fisheries, dive fisheries and the prawn fishery.These Best Practices are available on Fish Safe's website for convenient download here: https://www.fishsafebc.com/best-practices Please contact Fish Safe for a copy of the program materials they developed to address safety and vessel stability in these fisheries. Office: (604) 261-9700 - Email: fishsafe@fishsafebc.com.

2.2. Emergency Drill Requirements

The *Canada Shipping Act, 2001* requires that the Authorized Representative of a Canadian Vessel shall develop procedures for the safe operation of the vessel and for dealing with emergencies. The Act also requires that crew and passengers receive safety training. The *Marine Personnel Regulations* require that all personnel on board required to meet the minimum safe manning levels have received MED (Marine Emergency Duties) training to an A1 or A3 level, depending on the vessel's voyage limits, within 6 months of serving aboard. MED A3 training is 8 hours in duration and is applicable to seafarers on fishing vessels less than 150 GRT that are within 25 miles from shore (NC2). MED A1 training is 19.5 hours duration and is applicable to all other fishing vessels.

To assist fishers in meeting their crew training requirements, Fish Safe has created a downloadable '*New Crew Orientation Form and How To Guide'* available on Fish Safe's website here: https://www.fishsafebc.com/downloadable-tools

MED provides a basic understanding of the hazards associated with the marine environment; the prevention of shipboard incidents; raising and reacting to alarms; fire and abandonment situations; and the skills necessary for survival and rescue.

WorkSafeBC's *Occupational Health and Safety Regulation* (OHSR) requires written rescue and evacuation procedures for work on or over water. Additionally, fishing vessel masters must establish procedures and assign responsibilities to each crew member to cover all emergencies, including the following: crew member overboard, fire on board, flooding of the vessel, abandoning ship, and calling for help. Fishing vessel masters are also required

to conduct emergency drills at the start of each fishing season, when there is a change of crew, and at periodic intervals to ensure that crewmembers are familiar with emergency procedures.

Between 2011 and 2015 the TSB investigated 17 fishing vessel accidents which resulted in 17 fatalities. The report's findings highlighted the lack of safety drills and safety procedures and practices. The Safest Catch program, delivered by Fish Safe and free to B.C. commercial fishers, includes comprehensive practice of drills such as abandon ship, man overboard and firefighting drills.

2.3. Cold Water Immersion

Drowning is the number one cause of death in B.C.'s fishing industry. Cold water is defined as water below 25 degrees Celsius, but the greatest effects occur below 15 degrees C. B.C. waters are usually below 15 degrees C. Normal body temperature is around 37 degrees Celsius; cold water rapidly draws heat away from the body. The effects of cold water on the body occur in four stages: cold shock, swimming failure, hypothermia and post-rescue collapse. Know what to do to prevent you or your crew from falling into the water and what to do if that occurs. More information is available in the WorkSafeBC Bulletin Cold Water Immersion (available from the WorkSafeBC website at www.worksafebc.com).

Under the recently amended (June 2019) *OHS Regulation*, section 24.96.1, a crewmember must wear a PFD or lifejacket when on board a fishing vessel that has no deck or deck structure or when on the deck of a fishing vessel that has a deck or deck structure. The use of a PFD will prepare a crewmember to remain afloat, to survive the effects of cold shock, reduce the need to swim and give rescuers time to respond.

Section 8.26, which requires workers to wear a PFD or lifejacket when working "under conditions which involve a risk of drowning", would continue to apply to fishing crewmembers and other workers (e.g. when they are working on shore, docks and other vessels). The specific requirements can be found on WorkSafeBC's PFD Primer provided on Fish Safe's website here: https://www.fishsafebc.com/cold-water-survival.

It has been demonstrated time and again that, when worn, PFD's save lives - and the chance of surviving a mishap increases significantly when these devices are worn while working on deck.

Resulting from the TSB investigations into the *Diane Louise* - M14P0110 and the *Caledonian* –M15P0286 fishing vessel accidents the Board recommended that both TC and WorkSafeBC require that persons wear a suitable personal flotation devices (PFDs) at all times when: on the deck of a commercial fishing vessel; or, when on board a commercial fishing vessel without a deck or deck structure, and ensure that programs are developed to confirm compliance.

2.4. Other Issues

2.4.1. Weather

Vessel owners and masters are reminded of the importance of paying close attention to current weather trends and forecasts during the voyage. Marine weather information and forecasts can be obtained on VHF channels 21B, Wx1, Wx2, Wx3, or Wx4. Weather information is also available from Environment Canada website at:
https://weather.gc.ca/mainmenu/marine_menu_e.html

2.4.2. Emergency Radio Procedures, EPIRBs, PLBs and AIS

Vessel owners and masters should ensure that all crew are able to activate the Search and Rescue (SAR) system early rather than later by contacting the Canadian Coast Guard (CCG). All fishing vessels greater than 20m in length must carry a Class A AIS, as well as a float free 406 MHz Emergency Position Indicating Radio Beacon (EPIRB). These beacons must be registered with the Canadian Beacon Registry. When activated, an EPIRB transmits a distress call that is picked up or relayed by satellites and transmitted via land earth stations to the Joint Rescue Co-ordination Centre (JRCC), which will task and co-ordinate rescue resources. The TSB notes in the *Island Lady* – M21A0315 that there have been 15 similar occurrences reported to the TSB, resulting in the loss of life of 34 fish harvesters. In all 15 occurrences, distress alerting devices (e.g., emergency position-indicating radio beacons [EPIRBs] and personal locator beacons [PLBs] were not used. (M15A0189, M16A0140, M16A0327, M18A0076, M18A0303, M18A0078, M18P0184, M18P0394, M19A0082, M19A0090, M19P0242, M20A0258, M20A0160, M21A0412, and M21A0161). The carriage of both AIS, PLB and EPIRB is strongly encouraged for all fishing vessels who do not fall under the mandatory threshold. PLBs require manual activation, so fish harvesters are encouraged to carry them while working on deck. You may not have time to go locate your PLB in an emergency.

Fish harvesters should monitor VHF channel 16 or MF 2182 KHz and make themselves and their crews familiar with other radio frequencies. All crew should know how to make a distress call and should obtain their restricted operator certificate from Industry Canada. However, whenever possible, masters should contact the nearest Canadian Coast Guard (CCG) Marine Communications and Traffic Services (MCTS) station (on VHF channel 16 or MF 2182 kHz) prior to a distress situation developing. Correct radio procedures are important for communications in an emergency. Incorrect or misunderstood communications may hinder a rescue response. Further information is available at Radio Aids to Marine Navigation General

Since August 1, 2003 all commercial vessels greater than 8 metres in length are required to carry a Class D VHF Digital Selective Calling (DSC) radio. A registered DSC VHF radio has the capability to alert other DSC equipped vessels in your immediate area and MCTS that your vessel is in distress. Masters should be aware that they should register their DSC radios with Industry Canada to obtain a Marine Mobile Services Identity (MMSI) number or the automatic distress calling feature of the radio may not work. For further information see the Coast Guard website at:

https://www.coast-guard.gc.ca/index-eng.html or go directly to the Industry Canada web page: www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01032.html

A DSC radio that is connected to a GPS unit will also automatically include your vessel's current position in the distress message. More detailed information on DSC can be found here: TC DSC Safety Bulletin. Questions regarding Coast Guard DSC capabilities can be obtained by contacting your local MCTS centre (Prince Rupert MCTS (250)627-3070 or Victoria MCTS (250)363-6333).

2.4.3. Collision Regulations

Fish harvesters must be knowledgeable of the *Collision Regulations* and the responsibilities between vessels where risk of collision exists. Navigation lights must be kept in good working order and must be displayed from sunset to sunrise and during all times of restricted visibility. To help reduce the potential for collision or close quarters situations which may also result in the loss of fishing gear, fish harvesters are encouraged to monitor the appropriate local Vessel Traffic Services (VTS) VHF channel when travelling or fishing near shipping lanes or other areas frequented by large commercial vessels. Vessels required to participate in VTS include:

a) every ship twenty metres or more in length,
b) every ship engaged in towing or pushing any vessel or object, other than fishing gear,
c) where the combined length of the ship and any vessel or object towed or pushed by the ship is forty five metres or more in length; or
d) where the length of the vessel or object being towed or pushed by the ship is twenty metres or more in length.

Exceptions include:

a) a ship towing or pushing inside a log booming ground,
b) a pleasure yacht **less than** 30 metres in length, and
c) a fishing vessel that is **less than** 24 metres in length and not **more than** 150 tons gross.

More detailed information on VTS can be obtained by calling either Prince Rupert MCTS (250)627-3070 or Victoria MCTS (250)363-6333 or from the Coast Guard website: https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/part3-eng.html

2.4.4. Buddy System

Fish harvesters are encouraged to use the buddy system when transiting and fishing as this allows for the ability to provide mutual aid. An important trip consideration is the use of a sail/voyage plan which includes the particulars of the vessel, crew and voyage. The sail plan should be left with a responsible person on shore or filed with the local MCTS. After leaving port the fish harvester should contact the holder of the sail plan daily or as per another schedule. The sail plan should ensure notification to JRCC when communication

is not maintained which might indicate your vessel is in distress. Be sure to cancel the sail plan upon completion of the voyage.

3. WORKSAFEBC

WorkSafeBC exercises jurisdiction over workplace health and safety, including the activities of crews of fishing vessels. Commercial fishing, diving and other marine operations are subject to the provisions of the *Workers Compensation Act* (WCA) and requirements in Part 24 of the *Occupational Health and Safety Regulation* (OHSR). Examples of Part 24 regulatory requirements related to fishing include, but are not limited to, the requirement to establish emergency procedures, to conduct emergency drills, to provide immersion suits for the crew, to provide stability documentation for the vessel, safe work procedures, injury reporting, correction of unsafe working conditions, the requirement to wear personal floatation devices (PFDs), etc.

Other sections of the OHSR also apply to commercial fishing operations. For example, Part 3 addresses training of young and new workers, first aid, and employer incident/accident investigations. Part 4 addresses general conditions such as maintenance of equipment, workplace conduct and impairment. Part 8 addresses issues related to safety headgear, safety footwear, eye and face protection, limb and body protection and personal flotation devices (PFDs) when working on the dock. Part 12 addresses issues related to tools, machinery and equipment, including safeguarding. Part 15 addresses issues related to rigging.

Both owners and masters of fishing vessels are considered to be employers. Under the *Workers Compensation Act* and the *OHS Regulation* (OHSR) they have varying and overlapping duties and responsibilities. Masters, because they have the most control during fishing and related activities, are considered to be the employer with primary responsibility for the health and safety of the crew.

The OHSR and the WCA are available from the Provincial Crown Printers or by visiting the WorkSafeBC website: www.worksafebc.com

NOTE: Regarding the OHSR requirement to wear PFD's, WorkSafeBC has produced a video entitled "Turning the Tide – PFD's in the Fishing Industry". For more information on PFD use, including a link to the video, please access the following site:

https://www.worksafebc.com/en/about-us/news-events/news-releases/2018/November/new-fishing-industry-safety-video?origin=s&returnurl=https%3A%2F%2Fwww.worksafebc.com%2Fen%2Fsearch%23q%3DTurning%2520the%2520Tide%26sort%3Drelevancy%26f%3Alanguage-facet%3D%5BEnglish%5D

For further information, contact an Occupational Safety Officer:

Bruce Logan Field Services Vancouver/Richmond/Delta (604) 244-6477

Cody King Field Services Courtenay (250) 334-8733
Paul Matthews Field Services Courtenay (250) 334-8741
Wayne Tracey Field Services Central (604) 232-1939
or the Manager of Interest for Marine and Fishing, Pat Olsen (250) 334-8777

For information on projects and initiatives related to commercial fishing health and safety please contact Tom Pawlowski, Manager, OHS Consultation and Education Services, at (604) 233-4062 or by email: tom.pawlowski@worksafebc.com or Helen Chandler, OHS Consultant at (604) 276-3174 or by email: helen.chandler@worksafebc.com.

4. FISH SAFE BC

Fish Safe encourages vessel masters and crew to take ownership of fishing vessel safety. Through this industry driven and funded program Fish Safe provides fishing relevant tools and programs to assist fishers in this goal. The Fish Safe Stability Education Program and 1 Day Stability Workshop are available to all fishers who want to improve their understanding of stability and find practical application to their vessel's operation. The SVOP (Small Vessel Operator Proficiency) Course is designed to equip crew with the skills they need to safely navigate during their wheel watch. The *Safest Catch* Program, along with fisher-trained Safety Advisors, is designed to give fishers the tools they need to create a vessel specific safety management system.

As referenced throughout the above documentation, Fish Safe provides a broad range of courses, programs and services that are either free for B.C. commercial fishers or highly subsidized.

Fish Safe is managed by Program Manager and support staff including John Krgovich, Program Coordinator, Stephanie Nguyen, Program Assistant, Rhoda Huey, Bookkeeper/Administrative Assistant, and an experienced team of fisher Safety Advisors. All activities and program development is directed by the Fish Safe Advisory Committee (membership is open to all interested in improving safety on board fishing vessels). The Advisory Committee meets two to three times annually to discuss safety issues and give direction to Fish Safe in the development of education and tools for fish harvesters.

Fish Safe also works closely with WorkSafeBC to improve the fishing injury claims process. For further information contact:

Program Manager
Fish Safe
#100, 12051 Horseshoe Way
Richmond, BC V7A 4V4

Cell: (604) 739-0540
Office: (604) 261-9700
Email: ryan@fishsafebc.com
www.fishsafebc.com

5. TRANSPORTATION SAFETY BOARD

The Transportation Safety Board (TSB) is not a regulatory board. The TSB is an independent agency that investigates marine, pipeline, railway and aviation transportation occurrences to determine the underlying risks and contributing factors. Its sole aim is the advancement of transportation safety by reporting publicly through Accident Investigation Reports or Marine Safety Information Letters or Advisors. It is not the function of the Board to assign fault or determine civil or criminal liability.

In 2014 the TSB pacific region released three fishing vessel investigation reports:

- the collision between trawl fishing vessel *Viking Storm* and US long line fishing vessel *Maverick* and the subsequent fatality,
- the person over board off the prawn fishing vessel *Diane Louise* and the subsequent fatality, and
- the capsizing of the crab fishing vessel *Five Star* and subsequent fatality.

In 2016 the TSB pacific region released one investigation report:

- the capsizing of the trawl *Caledonian* and subsequent fatalities.

In 2018 the TSB pacific region released two investigation reports:

- the capsizing and sinking of the *Miss Cory* and subsequent fatality
- the sinking of the *Western Commander* and loss of life

In 2022 the TSB Pacific Region released an investigation report:

- the sinking of the *Arctic Fox II* and subsequent fatalities.
- The report found that if TC's regulatory oversight continues to be reactive and reliant on the vessel's authorized representative to understand regulations and ensure compliance with them, there is a risk that vessels and crews will continue to operate without the minimum defences provided by meeting regulatory requirements, leading to unsafe conditions and potentially fatal accidents.

In 2023, the TSB pacific region released one investigation report:

- the sinking of the Tug Ingenika and barge Miller 204 and subsequent fatalities.

The TSB issued five recommendations following the *Caledonian* report. Three recommendations issued are aimed at ensuring all crews have access to adequate stability information that meets their needs. That means:

- All commercial fishing vessels should have a stability assessment appropriate for their size and operation.
- The information from that assessment must then be kept current, and it must be used to determine safe operating limits.

Moreover, these operating limits must be easily measurable, and relevant to the vessel's operation. For example, that could mean marking the sides of a vessel's hull to indicate the maximum operating waterline, or maximum permitted loads can be specified in the most relevant unit of measure—total catch weight for instance, or the safe number of traps.

Regardless, for it to be of real, practical use, the information must be presented in a format that is clearly understood and easily accessible to crew.

The other two recommendations address the most basic step that harvesters can take: wearing a personal flotation device. Here in British Columbia, roughly 70 percent of all fishing-related fatalities in the past decade came while not wearing a PFD. Yet many harvesters still do not wear them. TC regulations currently require that PFDs be worn only if harvesters identify a risk, however; you never know when you could end up in the water. Therefore, the TSB is recommending to TC to require persons to wear suitable personal flotation devices at all times when on the deck of a commercial fishing vessel or when on board a commercial fishing vessel without a deck or deck structure and that programs are developed to confirm compliance. In June 2019, WorksafeBC amended its fishing regulation related to the use of PFDs. Under the amendments, crewmembers must wear a PFD or lifejacket when on board a fishing vessel that has no deck or deck structure, or when on the deck of a fishing vessel that has a deck or deck structure. Crewmembers are not required to wear lifejackets or PFDs below deck or when inside a deck structure where there is risk of entrapment. This amendment removes the need for a risk of drowning to be present before a PFD must be worn.

For more information about the TSB, visit the website at www.tsb.gc.ca
For information about the TSB's safety issues investigation into fishing safety visit: https://www.tsb.gc.ca/eng/rapports-reports/marine/etudes-studies/m09z0001/m09z0001.html

To view information on the TSB's recent safety Watchlist, visit: https://www.bst-tsb.gc.ca/eng/surveillance-watchlist/marine/2022/marine-01.html

The TSB has also produced a Safe at Sea: Activity book on fishing safety intended for the next generation of fish harvesters (ages 4-7). Download a copy.
https://www.tsb.gc.ca/sites/default/files/eng/medias-media/prudence-safe/safe-at-sea.pdf

Reporting an Occurrence

https://www.tsb.gc.ca/eng/incidents-occurrence/index.html
After a reportable occurrence happens you can fill out the reporting form or contact the TSB using the contact information below.

Transportation Safety Board of Canada
4 - 3071 No. 5 Road
Richmond, BC, V6X 2T4

Email: marinenotifications.pacific@bst-tsb.gc.ca

Phone: 604-219-2414

APPENDIX 11: CONTACTS

Observe, Record and Report (Enforcement Line)		**(800) 465-4336**
Fisheries Information and Shellfish Contamination Closure Update (24 Hours)		(866) 431-3474
	or (for Greater Vancouver)	(604) 666-2828

Invertebrate Internet Page
https://www.pac.dfo-mpo.gc.ca/fm-gp/shellfish-mollusques/index-eng.html

Fisheries Management

Regional Resource Manager - Invertebrates	Lisa Mijacika	(604) 666-3869
Lead Green Sea Urchin Manager	Erin Wylie	(250) 713-1569
Lead Red Sea Urchin Manager	Pauline Ridings	(250) 618-8699
Regional Recreational Fisheries Co-ordinator	Greg Hornby	(604) 666-3271
North Coast, Areas 1 through 10	General inquiries	(250) 627-3499
Resource Management Biologist	Pauline Ridings	(250) 618-8699
Aboriginal Affairs Advisor – First Nations Fisheries	Melanie Anthony	(250) 643-0345
South Coast, Areas 11 to 27	General Inquiries	(250) 754-0499
Resource Management Biologist	Erin Wylie	(250) 713-1569
Resource Manager – First Nations Fisheries (NEVI)	Andrea Goruk	(250) 713-4054
Resource Manager – First Nations Fisheries (SEVI)	Jorn Meier	(250) 616-4885
Resource Manager – First Nations Fisheries (WCVI)	Kevin Conley	(250) 756-7196
Lower Fraser Area, Areas 28 and 29	General Inquiries	(604) 666-8266
Resource Manager		(236) 330-3240
Resource Manager – First Nations Fisheries	Matthew Parslow	(604) 666-6608

Fisheries Protection	1-866-845-6776
Negotiations and Implementation Division	(604) 666-0197
Indigenous Programs Division	(604) 666-6757

Science Branch

Pacific Biological Station		
Echinoderms Program Head	Christine Hansen	(778) 268-2079
Sea Urchin Biologist	Lyanne Curtis	(778) 268-3374
Program Head, Shellfish Data Unit	Rob Flemming	PACSDU@dfo-mpo.gc.ca

Commercial Licensing

Pacific Fishery Licence Unit (By appointment only)
200-401 Burrard Street Vancouver, B.C. V6C 3S4 Toll-Free: 1-877-535-7307
Email fishing-peche@dfo-mpo.gc.ca

Aquaculture Resource Management

Senior Shellfish Coordinator	Melinda Scott	(250) 754-0399

General Shellfish Aquaculture Mailbox email address:
E-mail DFO.AQSF-AQMC.MPO@dfo-mpo.gc.ca

Canadian Food Inspection Agency
Molluscan Shellfish Operations PacificShellfish@inspection.gc.ca

WorkSafe BC

Occupational Safety Officer, Courtenay	Cody King	(250) 334-8733
Occupational Safety Officer, Victoria	Jessie Kunce	(250) 881-3461
Manager of Interest for Marine and Fishing	Pat Olsen	(250) 334 8777
	toll free	1 888 621 7233 (ext. 8777)
Projects related to commercial fishing	Tom Pawlowski	(604)233-4062
	toll free	1 888 621 7233 (ext. 6922)

Pacific Urchin Harvesters Association (PUHA) **www.puha.org**
President Mike Featherstone (604) 230-1686

Urchin Service Provider www.d-dpacificfisheries.com

D&D Pacific Fisheries Ltd.	Darin Macey	(604) 886-4819
Box 1445		
Gibsons, BC V0N 1V0	Hail-line	(800) 775-5505

Sighting Networks

BC Cetacean and Sea Turtle Sighting Network (866) 472 9663
Email: sightings@vanaqua.org or turtles@vanaqua.org
On the internet at:
www.wildwhales.org/sightings/ or www.bcreptiles.ca/reportsightings.htm#1

Basking Shark Sighting Network 1 (877) 50 SHARK
Email: BaskingShark@dfo-mpo.gc.ca
On the internet at:
www.pac.dfo-mpo.gc.ca/science/species-especes/elasmobranch/sightings-signalez-eng.html

Appendix 12: 2026-27 Red Sea Urchin Quota Area Descriptions and Green Sea Urchin Maps

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An asterisk (*) indicates a change in Quota Area boundaries.

Descriptions of closures that fall within these Quota Areas are shown in Appendix 1, Section 6.

Harvesters are reminded that these area descriptions are to be used for reference only. The final authority of these descriptions of Areas, Subareas and portions thereof is as set out in the *Pacific Fishery Management Area Regulations.*

RED SEA URCHIN AREA DESCRIPTIONS

Haida gwaii

Quota Area	Name	Description
RU01a	Lepas Bay	That portion of Subarea 1-1 north of a line running due west from White Point.
RU01b	Frederick Island	That portion of Subarea 1-1 south of a line running due west from White Point.
RU02a	Langara Island	1. That portion of Subareas 1-2, 1-7 and 101-7 west of a line running due north from Seath Point on Graham Island except closures. 2. Those portions of Subareas 101-2, 101-3 and 101-6 inside a line commencing at Seath Point on Graham Island, thence due north to a point in water at 54°17.457'N/132°53.49'W, thence due west to a point in water at 54°17.457'N/133°06.08'W, thence due south to a point in water at 54°10.547'N/133°06.08'W, thence due east to a point on Cape Knox at 54°10.583'N/133°05.242'W, thence easterly along the shoreline of Graham Island to the beginning point at Seath Point. Area 1 closures listed in section 6 of Appendix 1 in the Integrated Fisheries Management Plan.
RU02b	Virago Sound	1. Subarea 1-3. 2. Those portions of Subareas 1-2, 1-7, 101-6 and 101-7 east of a line running due north from Seath Point on Graham Island and west of a line running due north from Wiah Point. Area 1 closures listed in section 6 of Appendix 1 in the Integrated Fisheries Management Plan.
RU03a	Cumshewa Inlet	Subareas 2-2 and 2-3.

Quota Area	Name	Description
RU03b	Kunga Island	a)That portion of Subarea 2-8 outside of a line commencing on a point of the eastern shoreline of Moresby Island at 52°48.606'N/131°39.403'W northeasterly to a point in water at 52°49.405'N/131° 29.042'W, thence southeasterly to a point in water at 52°48.148'N/131°28.849'W, thence southwesterly to a point in water at 52°44.898'N/131°34.035'W, thence northwesterly to 52°45.113'N/131°34.125'W, thence following the northern shoreline of Kunga Island to 52°45.220'N/131°35.574'W, thence southwesterly to a point on Tanu Island at 52°45.002'N/131°36.770'W, thence northerly following the eastern shoreline of Tanu Island to 52°46.725'N/131°38.878'W, thence northwesterly across to a point on Moresby Island at 52°47.837'N/131°39.371'W, and thence northerly following the eastern shoreline to the beginning point. [Klue Passage to Lost Islands closure] and excluding the southerly shore of Richardson Island within Richardson Passage (closure for FSC purposes). b) That portion of Subarea 2-10 outside a line commencing at a point on land on Shuttle Island at 52°40.053'N and 131°42.328'W northeasterly to a point on the western shoreline of Lyell Island at 52°40.466'N and 131°41.105'W, thence southerly following the western shoreline of Lyell Island to 52°37.301'N and 131°38.800'W, thence northwesterly to a point on land of Shuttle Island at 52°38.522'N and 131°41.409'W, and thence following the eastern shoreline of Shuttle Island to the beginning point. [Darwin Sound closure] Closure descriptions are listed in Appendix 1, Section 6 of the Integrated Fisheries Management Plan.
RU04a	Juan Perez Sound	Subarea 2-11. Closed for abalone research

Quota Area	Name	Description
RU04b	Section Cove	a)Those waters of outside of a line commencing on the eastern shoreline of Moresby Island at 52°30.038'N/131°28.071'W southeasterly to a point on land on All Alone Stone Island at 52°29.081'N/131°24.042'W, thence southeasterly to a point on the northern shoreline of Huxley Island at 52°28.066'N/131°21.772'W, thence southerly following the western shoreline of Huxley Island to 52°25.934'N/131°21.927'W, thence southwesterly to the northern shoreline of Section Island at 52°25.435'N/131°22.425'W, thence westerly following the northern shoreline of Section Island to 52°25.460'N/131°22.513'W, thence northwesterly to a point on the eastern shoreline of Moresby Island at 52°26.039'N/131°25.343'W, thence northerly following the eastern shoreline of Moresby Island to 52°28.460'N/131°27.972'W, and thence northerly to the beginning point. b)That portion of Subarea 2-13 south of a line commencing at a point on the eastern shoreline of Moresby Island at 52°26.039'N /131°25.343'W, thence southeasterly to the northern shoreline of Section Island at 52°25.435'N/131°22.425'W and northeasterly to a point on Huxley Island at 52°25.934'N/131°21.927'W and north of a line commencing at a point on Moreseby Island at 52°23.055'N/131°23.441'W, thence northeasterly to the western shoreline of Kat Island at 52°23.082'N/131°22.916'W, thence easterly following the southern shoreline of Kat Island to 52°23.147'N/131°22.260'W, thence northeasterly to the western shoreline of Burnaby Island at 52°23.276'N/131°21.333'W. Closure descriptions are listed in Appendix 1, Section 6 of the Integrated Fisheries Management Plan.
RU04c	Murchison/ Gogit	Those waters of Subarea 2-11 inside a line commencing at Gogit Point on Lyell Island, east to a point at 52°41.131'N/131°26.383'W, then south to a point at 52°41.116'N/131°22.687'W, then southwest to a point at 52°34.296'N/131°280.92'W, then northwest to a point at 52°34.913'N/131°29.656'W, then north 52°35.633'N/131°29.322'W, then northeast to a point at 52°36.151'N/131°27.651'W, then north to a point at 52°37.084'N/131°27.567'W, then northwest to a point 52°37.423'N/131°27.985'W, then north following the eastern shoreline of Lyell Island back to the point of commencement.

Quota Area	Name	Description
RU05a	Skincuttle Inlet	a)That portion of Subarea 2-14 east of Subarea 2-14 north of a line drawn from a point on the shoreline of Burnaby Island in Poole Inlet at 52°22.764'N/131°18.249'W southeasterly across the inlet to a point on the opposite shore at 52°22.505'N/131°17.665'W and west of a line drawn from a point on Burnaby Island at 52°24.494'N/131°15.832'W southeasterly to a point on Burnaby Island at 52°22.377'N/131°14.683'W and south of a line running from a point in water at 52°20.971'N/131°07.777'W southwesterly to a point in water at 52°20.056'N/131°11.175'W. b) That portion of Subarea 2-15 northwest of a line running from a point on Burnaby Island at 52°20.949'N/131°15.569'W, northeasterly to the easternmost point of Burnaby Island at 52°22.315'N/131°14.689'W and south of a line running from point on the eastern shoreline of Moresby Island at 52°18.124'N/131°18.347'W northeasterly to a point in water at 52°20.056'N/131°11.174'W and north of a line drawn from a point on the western shoreline of Huston Inlet at 52°15.732'N/131°15.643'W northeasterly across the inlet to a point on the opposite shore at 52°16.111'N/131°14.231'W. Closure descriptions are listed in Appendix 1, Section 6 of the Integrated Fisheries Management Plan.
RU05b	Carpenter Bay	That portion of Subarea 2-17 north of a line running from a point on the shoreline of Moresby Island 52°13.232'N/131°00.777'W thence northeasterly to a point in water at 52°14.026'N/130°59.766'W. Closure descriptions are listed in Appendix 1, Section 6 of the Integrated Fisheries Management Plan.
RU06	Lower 2E	a)That portion of Subarea 2-18 south of a line running from of a line drawn from the western shoreline of Rose Inlet on Moresby Island at 52°11.327'N/131°08.370'W northeasterly across the inlet to a point on the opposite shore at 52°11.328'N/131°07.115'W and south of a line running from a point on the eastern shoreline of Moresby Island at 52°10.262'N/131°01.993'W northeasterly to a point in water at 52°11.01'N/130°57.641'W. b)That portion of Subarea 2-19 north of a line running from a point on the shoreline of South Kunghit Island at 52°00.343'N/130°59.788'W to a point in water at 51°59.422'N/130°59.193'W. Closure descriptions are listed in Appendix 1, Section 6 of the Integrated Fisheries Management Plan.

Quota Area	Name	Description
RU07	Lower 2W	1. Subareas 2-31 except the SGang Gwaay (Wailing Island) closure. 2. Subareas 2-32 and 2-33. 3. Subarea 2-34 except closures 4. Subarea 142-1 inside a line commencing from a point on the western shoreline of Kunghit Island at 52° 04.366'N/131° 07.72'W to a point in water at 52° 03.175'N/131° 14.399'W, thence southerly to a point in water at 51° 56.941'N/131° 04.676'W thence to a point on the western shoreline of Kunghit Island at 51° 57.669'N/131° 03.315'W thence along the shoreline of Kunghit Island to the starting point. Closure descriptions are listed in Appendix 1, Section 6 of the Integrated Fisheries Management Plan.
RU08a	Flamingo	1. That portion of Subarea 2-31 north of a line running from a point on the western shoreline of Moresby Island at 52° 07.210'N/131° 15.838'W to a point in water at 52° 05.826'N/131° 17.913'W except closures. 2. Subareas 2-35 and 2-36 3. That portion of Subarea 2-38 south of a line commencing from a point on the western shoreline of Moresby Island at 52°23.489'N/131°36.092'W thence southwesterly to a point in water at 52°19.074'N/131°43.794'W. 4. That portion of Subarea 142-1 inside a line commencing from a point on the western shoreline of Moresby Island at 52° 07.210'N/131° 15.838'W to a point in water at 52° 05.826'N/131° 17.913'W, thence northerly to a point in water at 52°21.700'N/131°39.218'W and east to a point on Moresby at 52°23.489'N/131°36.092'W. Closure descriptions listed in Appendix 1, Section 6 of the Integrated Fisheries Management Plan.

Quota Area	Name	Description
RU08b	Englefield	a) That portion of Subarea 2-38 north of a line running from a point in water at 52°38.115'N/132°09.939'W, thence southeasterly to point on land on Moresby Island at 52°38.177'N/131°56.374'W. b) Subareas 2-42 to 2-62. c) That portion of Subarea 141-1 north of a line running from a point on land on Moresby Island at 52°38.177'N/131°56.374'W thence westerly to a point in water at 52°38.152'N/132°02.01'W, thence northwesterly to a point in water at the Subarea boundary at 52°48.78'N/132°15.707'W. d) That portion of Subarea 142-2 inside a line commencing at the southeastern Subarea boundary with 142-1, thence westerly to a point in water at 52°48.78'N/132°15.707'W, thence northwesterly to a point in water at 53°02.625'N/132°33.539'W, then easterly to Hunter Point on Moresby Island at 53°02.738'N/132°31.993'W.
RU09	Van Inlet	Subarea 2-68.
RU10	Rennel Sound	Subareas 2-69 to 2-84. Note Shields Bay closure listed in Integrated Fisheries Management Plan.
RU11	Hippa Island	1. Subareas 2-85 to 2-87. 2. That portion of Subarea 2-88 south of a line running true west from Selveston Point.
RU12	Port Louis	1. That portion of Subarea 2-88 north of a line running true west from Selveston Point. 2. Subareas 2-89 to 2-100.

NORTH AND CENTRAL COAST

Quota Area	Name	Description
RU13a	Dundas Island North	Subareas 3-1, 3-2, 3-3, 3-7 and 3-11.

Quota Area	Name	Description
RU13b	Dundas Island South	1. That portion of Subarea 4-1 north of a line running 222 degrees true from Farwest Point on Dunira Island (using Canadian Hydrographic chart # 3959), excluding the Nares Islets Quota Area described as: that portion of Subarea 4-1 northeast of a line running from Gore-Langton Point on Dundas Island to a point at 54°28.55'N/130°50.70'W, and then running northeasterly to a point at 54°30.45N/130°47.65'W. 2. That portion of Subarea 4-5 west of the meridian passing through 130°37.0'W and north of a line from the northernmost point of Dunira Island, thence true east to the meridian passing through 130 degrees 37.0 minutes west longitude.
RU13c	Melville Island	1. That portion of Subarea 4-1 south of a line running 222 degrees true from Farwest Point on Dunira Island (using Canadian Hydrographic chart # 3959) and north of the parallel passing through 54 degrees 20.30 minutes north latitude. 2. That portion of Subarea 4-5 south of a line from the northernmost point of Dunira Island, thence true east to the meridian passing through 130 degrees 37.0 minutes west longitude, and west of the meridian passing through 130 degrees 37.0 minutes west longitude. 3. Those portions of Subareas 4-9 and 4-13 north of the parallel passing through 54 degrees 20.30 minutes north latitude.
RU13d	Nares Islets	That portion of Subarea 4-1 northeast of a line running from Gore-Langton Point on Dundas Island to a point at 54 degrees 28.55 minutes north latitude, 130 degrees 50.70 minutes west longitude, and then running north-easterly to a point at 54 degrees 30.45 minutes north latitude, 130 degrees 47.65 minutes west longitude
RU14	Tree Nobs	1. That portion of Subarea 4-1 south of a parallel passing through 54 degrees 20.30 minutes north latitude. 2. That portion of Subarea 4-2 north of the parallel passing through 54 degrees 13.5 minutes north latitude. 3. That portion of Subarea 4-13 north of the parallel passing through 54 degrees 13.5 minutes north latitude and south of a parallel passing through 54 degrees 20.30 minutes north latitude.
RU15	Outside Stephens Island	That portion of Subarea 4-2 south of the parallel passing through 54 degrees 13.5 minutes north latitude and north of a line running true west from a point on Prescott Island [54 degrees 5.093 minutes north latitude /130 degrees 38.87 minutes west longitude] to the surfline.

Quota Area	Name	Description
RU16	Inside Stephens Island	1. That portion of Subarea 4-9 south of the parallel passing through 54 degrees 20.30 minutes north latitude. 2. That portion of Subarea 4-13 south of the parallel passing through 54 degrees 13.50 minutes north latitude.
RU17	Kelp Pass	Subarea 4-12.
RU18a	Edye Pass	1. That portion of Subarea 4-2 south of a line running true west from a point on Prescott Island [54 degrees 5.093 minutes north latitude /130 degrees 38.87 minutes west longitude] to the surfline and north of a line running true west from a point on Henry Island [54 degrees 1.90 north latitude/130 degrees 41.122 minutes west to the surfline and east of a line running from a point on southern Henry Island at [54 degrees 0.338 minutes north latitude/ 130 degrees 40.100 minutes west longitude] then south to a point on Porcher Island at 54 degrees 0.280 minutes latitude/130 degrees 39.956 minutes west longitude. 2. Subarea 4-4.
RU18b	Oval Bay	1. That portion of Subarea 4-2 south of a line running true west from a point on Henry Island [54 degrees 1.90 north latitude/130 degrees 41.122 minutes west to the surfline and west of a line running from a point on southern Henry Island at [54 degrees 0.338 minutes north latitude/ 130 degrees 40.100 minutes west longitude] then south to a point on Porcher Island at 54 degrees 0.290 minutes latitude/130 degrees 39.956 minutes west longitude. 2. That portion of Subarea 4-3 north of a line running due west from Fan Point.
RU19	Porcher Inlet	Subarea 5-9.
RU20a	Cape George	That portion of Subarea 4-3 south of a line running due west from Fan Point.
RU20b	Freeman Passage	1. That portion of Subarea 5-11 north of the parallel passing through 53 degrees 48.0 minutes north latitude. (Refer to Canadian Hydrographic Service Chart #3761) 2. Subarea 5-12 except that portion south of a line running from Joachim Spit at 53 degrees 49.506 minutes north latitude, 130 degrees 38.813 minutes west longitude easterly to Goschen Island at 53 degrees 49.566 minutes north latitude, 130 degrees 37.416 minutes west longitude.

Quota Area	Name	Description
RU21	Willis Bay	1. That portion of Subarea 5-10 south and west of a line running from the northern tip of the entrance to Dolphin Lagoon located at 53 degrees 46.7 minutes north latitude, 130 degrees 28.1 minutes west longitude on Dolphin Island, thence west to a point on the Prager Islands located at 53 degrees 46.85 minutes north latitude, 130 degrees 29.8 minutes west longitude, thence northerly to a point on the Shakes Islands located at 53 degrees 47.5 minutes north latitude, 130 degrees 29.0 minutes west longitude, thence true north to the Subarea 5-10 boundary line; west of the line running from Boys Point on Dolphin Island due south to the parallel passing through 53 degrees 42.7 minutes north latitude; and north of the parallel passing through 53 degrees 42.7 minutes north latitude. (Refer to Canadian Hydrographic Service Chart #3947) 2. That portion of Subarea 5-11 south of the parallel passing through 53 degrees 48.0 minutes north latitude and north of the parallel passing through 53 degrees 42.7 minutes north latitude. Note Kitkatla closures listed in Integrated Fisheries Management Plan.
RU22a	Hankin Rock	That portion of Subarea 5-10 south of the parallel passing through 53 degrees 42.7 minutes north latitude. (Refer to Canadian Hydrographic Service Chart #3927)
RU22b	Beaver Pass	That portion of Subarea 5-10 south of a line running from the north-western tip of McCauley Island to a boundary sign on the northwest tip of Spicer Island; south of a line running from a boundary sign located on the south-westernmost tip of Spicer Island to Boys Point on Dolphin Island, then due south to the parallel passing through 53 degrees 42.7 minutes north latitude; and north of the parallel passing through 53 degrees 42.7 minutes north latitude. (Refer to Canadian Hydrographic Service Chart #3927) Note Kitkatla closures listed in Integrated Fisheries Management Plan.
RU23	Upper Principe Channel	Subarea 5-13
RU24a	Mid Principe Channel	1. That portion of Subarea 5-17 north of a line running due east from Oar Point. 2. Subarea 5-18
RU24b	Lower Principe Channel	1. That portion of Subarea 5-17 south of a line running due east from Oar Point. 2. Subarea 5-19. 3. That portion of Subarea 6-9 north of a parallel running through the Sisters Islands from 53 degrees 10.686 minutes north latitude, 129 degrees 46.803 minutes west longitude.
RU25	Petrel Channel	Subareas 5-14, 5-15 and 5-16

Quota Area	Name	Description
RU26	Larsen Harbour	1. That portion of Subarea 5-11 south of a line running true west from Baird Point on McCauley Island. 2. That portion of Subarea 5-20 north of the parallel passing through 53 degrees 35 minutes north latitude. (Refer to Canadian Hydrographic Service Chart #3927)
RU27a	Upper Banks Island	That portion of Subarea 5-20 south of the parallel passing through 53 degrees 35 minutes north latitude, east of a line running 140 degrees true from 53 degrees 35 minutes north latitude and 130 degrees 38.8 minutes west longitude, north of a parallel running east and west through Cliff Point, except that portion of Subarea 5-20 adjacent to the western shore of the Antle Islands described as: east of a line running from the boundary marker at Laverock Point (53 degrees 30.97 minutes north latitude, 130 degrees 29.13 minutes west longitude), then to a point west of the Antle Islands at 53 degrees 28.12 minutes north latitude, 130 degrees 28 minutes west longitude, then to a marker on Banks Island at 53 degrees 27.82 minutes north latitude, 130 degrees 24.4 minutes west longitude. (Refer to Canadian Hydrographic Service Chart #3927)
RU27b	Mid Banks Island	That portion of Subarea 5-20 east of a line running 140 degrees true from 53 degrees 35 minutes north latitude, 130 degrees 38.8 minutes west longitude, south of a parallel running east and west through Cliff Point, except that portion of Subarea 5-20 adjacent to the western shore of the Antle Islands described as: east of a line running from Laverock Point (53 degrees 30.97 minutes north latitude, 130 degrees 29.13 minutes west longitude), then to a point west of the Antle Islands at 53 degrees 28.12 minutes north latitude, 130 degrees 28 minutes west longitude, then to a marker on Banks Island at 53 degrees 27.82 minutes north latitude, 130 degrees 24.4 minutes west longitude. (Refer to Canadian Hydrographic Service Chart #3927)
RU28	Bonilla Island	1. That portion of Subarea 5-20 south of the parallel passing through 53 degrees 35 minutes north latitude; west of line running 140 degrees true from 53 degrees 35 minutes north latitude, 130 degrees 38.8 minutes west longitude; north of a line running from Kelp Point on Banks Island true west to the surf line. (Refer to Canadian Hydrographic Service Chart #3927) 2. Subarea 105-1. 3. That portion of Subarea 105-2 north of a line running from Kelp Point on Banks Island true west to the surf line. (Refer to Canadian Hydrographic Service Chart #3741)

Quota Area	Name	Description
RU29	Kingkown Inlet	1. That portion of Subarea 5-20 east of a line running from Laverock Point (53 degrees 30.97 minutes north latitude, 130 degrees 29.13 minutes west longitude), to a point west of the Antle Islands at 53 degrees 28.12 minutes north latitude, 130 degrees 28 minutes west longitude, then to a marker on Banks Island at 53 degrees 27.82 minutes north latitude, 130 degrees 24.4 minutes west longitude (Refer to Canadian Hydrographic Service Chart #3927). 2. Subarea 5-21.
RU30	Lower Banks Island	1. Subarea 5-22. 2. That portion of Subarea 105-2 south of a line running from Kelp Point on Banks Island true west to the surf line (Refer to Canadian Hydrographic Service Chart #3741). 3. That portion of Subarea 106-1 north of a parallel passing through Finnerty Point on Nichol Island.
RU31a	Moore Islands	That portion of Subarea 106-2 west of a line running 144 degrees true from the northern boundary of Subarea 106-2 at 129 degrees 30.12 minutes west longitude, and north of a parallel passing through 52 degrees 36.40 minutes north latitude. (Refer to Canadian Hydrographic Service Chart #3726)
RU31b	Harvey Islands	That portion of Subarea 106-2 west of a line running 144 degrees true from the northern boundary of Subarea 106-2 at 129 degrees 30.12 minutes west longitude, and south of a parallel passing through 52 degrees 36.40 minutes north latitude. (Refer to Canadian Hydrographic Service Chart #3726)
RU32	Calamity Bay	That portion of Subarea 6-9 north of the parallel passing through 53 degrees 08.0 minutes north latitude and west of the meridian passing through 129 degrees 49.78 minutes west longitude. (Refer to Canadian Hydrographic Service Chart #3741)
RU33	Otter Pass	That portion of Subarea 6-9 south of a parallel running through the Sisters Islands from 53 degrees 10.686 minutes north latitude, 129 degrees 46.803 minutes west longitude, and north of a parallel passing through Flynn Point on Trutch Island, excluding the Calamity Bay Quota Area described as: that portion of Subarea 6-9 north of the parallel passing through 53 degrees 08.0 minutes north latitude and west of the meridian passing through 129 degrees 49.78 minutes west longitude. (Refer to Canadian Hydrographic Service Charts #3741 and #3724)
RU34a	Langley Pass	That portion of Subarea 6-9 west of a meridian running through 129 degrees 38.420 minutes west longitude; south of a parallel passing through Flynn Point on Trutch Island; and north of a parallel passing through Finnerty Point on Nichol Island. (Refer to Canadian Hydrographic Service Chart #3795)

Quota Area	Name	Description
RU34b	Develin Bay	That portion of Subarea 6-9 east of a meridian running through 129 degrees 38.420 minutes west longitude and south of a parallel passing through Flynn Point on Trutch Island. (Refer to Canadian Hydrographic Service Chart #3795)
RU35	Oswald Bay	1. That portion Subarea 6-9 south of a parallel passing through Finnerty Point on Nichol Island, and northwest of a parallel running true west from a point on Dewdney Island at 52 degrees 57.41 minutes north latitude, 129 degrees 38.16 minutes west longitude south-westerly to the subarea boundary. (Refer to Canadian Hydrographic Service Chart #3724) 2. That portion of Subarea 106-1 south of a parallel passing through Finnerty Point on Nichol Island and north of a parallel running true west from a point on Dewdney Island at 52 degrees 57.41 minutes north latitude , 129 degrees 38.16 minutes longitude.
RU36a	Estevan Group East	Those portions of Subareas 6-9 and 6-10 west of a line running 132 degrees true from Humphreys Point on Lotbiniere Island southerly to the parallel running true west from McPhee Point on Princess Royal Island, north of the parallel running true west from McPhee Point on Princess Royal Island, and east of a line running 130 degrees true from Goodacre Point. (Refer to Canadian Hydrographic Service Chart #3724)
RU36b	Estevan Group South	1. That portion of Subarea 6-9 west of a line running 130 degrees true from Goodacre Point, north of a parallel running true west from McPhee Point on Princess Royal Island, and south of a parallel running true west from a point on Dewdney Island at 52 degrees 57.41 minutes north latitude, 129 degrees 38.16 minutes west longitude. (Refer to Canadian Hydrographic Service Chart #3724) 2. That portion of Subarea 106-1 south of a parallel running true west from a point on Dewdney Island at 52 degrees 57.41 minutes north latitude, 129 degrees 38.16 minutes west longitude and north of a parallel running true west from McPhee point on Princess Royal Island.
RU37	Rennison Island	1. Those portions of Subareas 6-9 and 6-10 south of a line running true west from McPhee Point on Princess Royal Island. 2. That portion of Subarea 6-11 north of a line running from McPhee Point on Princess Royal Island to Ulric Point on Aristazabal Island. 3. That portion of Subarea 6-13 north of line running from Ulric Point on Aristazabal Island to the southern tip of Rennison Island, then true west to the surf line. (Refer to Canadian Hydrographic Service Chart #3724)
RU38a	Campania Island	That portion of Subarea 6-10 west of a line running due south from the southernmost point of Campania Island at 52 degrees 57.579 minutes north latitude, 129 degrees 19.464 minutes west longitude.

Quota Area	Name	Description
RU38c	Surf Inlet	1. That portion of Subarea 6-10 north of the parallel running true west from McPhee Point on Princess Royal Island and east of the line running from Ulric Point on Aristazabal Island to the entrance to Clarke Cove on Princess Royal Island at 52 degrees 58.30 minutes north latitude, 129 degrees 11.59 minutes west longitude. 2. Subarea 6-12.
RU38d	Gil Island West	Subareas 5-24, 6-5, 6-27 and 6-28.
RU38e	McKay Reach	Subarea 6-7.
RU38f	Whale Channel	1. Subareas 6-6, 6-8 and 6-26. 2. That portion of Subarea 6-10 north of the parallel running true west from McPhee Point on Princess Royal Island, east of a line running due south from the southernmost point of Campania Island at 52 degrees 57.579 minutes north latitude, 129 degrees 19.464 minutes west longitude, and west of the line running from Ulric Point on Aristazabal Island to the entrance to Clarke Cove on Princess Royal Island at 52 degrees 58.30 minutes north latitude, 129 degrees 11.59 minutes west longitude.
RU39	Upper West Aristazabal	1. That portion of Subarea 6-13 south of a line running from Ulric Point on Aristazabal Island to the southern tip of Rennison Island, thence true west to the surf line and north of the parallel passing through 52 degrees 40.0 minutes north latitude (Refer to Canadian Hydrographic Service Chart #3724); 2. That portion of Subarea 106-2 east of a line running 144 degrees true from the northern boundary of Subarea 106-2 at 129 degrees 30.12 minutes west longitude, south of a line running from Ulric Point on Aristazabal Island to the southern tip of Rennison Island, thence true west, and north of the parallel passing through 52 degrees 40.0 minutes north latitude.
RU40	Woodcock Islands	1. That portion of Subarea 6-13 south of the parallel passing through 52 degrees 40.0 minutes north latitude, and north of the parallel passing through 52 degrees 35.6 minutes north latitude (through Howse Island). 2. That portion of Subarea 106-2 east of a line running 144 degrees true from the northern boundary of Subarea 106-2 at 129 degrees 30.12 minutes west longitude, south of the parallel passing through 52 degrees 40.0 minutes north latitude, and north of the parallel passing through 52 degrees 35.6 minutes north latitude (through Howse Island).

Quota Area	Name	Description
RU41	Normansell Islands	1. That portion of Subarea 6-13 south of the parallel passing through 52 degrees 35.6 minutes north latitude (through Howse Island); and north of the parallel passing through 52 degrees 32.0 minutes north latitude (Refer to Canadian Hydrographic Service Chart #3726. 2. That portion of Subarea 106-2 east of a line running 144 degrees true from the northern boundary of Subarea 106-2 at 129 degrees 30.12 minutes west longitude; south of the parallel passing through 52 degrees 35.6 minutes north latitude (through Howse Island), and north of the parallel passing through 52 degrees 32.0 minutes north latitude.
RU42	Lower West Aristazabal	1. That portion of Subarea 6-13 south of the parallel passing through 52 degrees 32.0 minutes north latitude, and north of the parallel passing through 52 degrees 27.62 minutes north latitude (refer to Canadian Hydrographic Service Chart #3726). 2. That portion of Subarea 106-2 east of a line running 144 degrees true from the northern boundary of Subarea 106-2 at 129 degrees 30.12 minutes west longitude; south of the parallel passing through 52 degrees 32.0 minutes north latitude; and north of the parallel passing through 52 degrees 27.62 minutes north latitude.
RU43	Upper Laredo	1. That portion of Subarea 6-11 south of a line running from McPhee Point on Princess Royal Island to Ulric Point on Aristazabal Island. 2. Subarea 6-14.
RU44	Lower Laredo	1. Subarea 6-15. 2. That portion of Subarea 6-16 north of a line running true west from Wilby Point on Swindle Island, and west of a line running from Wilby Point on Swindle Island to Dallain Point on Princess Royal Island. (Refer to Canadian Hydrographic Service Chart #3737)
RU45	Laredo Inlet	1. That portion of Subarea 6-16 east of a line running from Wilby Point on Swindle Island to Dallain Point on Princess Royal Island (Refer to Canadian Hydrographic Service Chart #3737). 2. Subarea 6-19.
RU46a	Laredo Sound	1. That portion of Subarea 6-16 south of a line running true west from Wilby Point on Swindle Island. 2. That portion of Subarea 6-17 east of a meridian passing through 128 degrees 56.0 minutes west longitude.

Quota Area	Name	Description
RU46b	Prior Pass	1. That portion of Subarea 6-13 south of a parallel running through 52 degrees 27.62 minutes north latitude (Refer to Canadian Hydrographic Service Chart #3726). 2. That portion of Subarea 6-17 west of a meridian passing through 128 degrees 56.0 minutes west longitude.
RU47a	Thompson Bay	1. Those portions of Subareas 7-1 and 7-2 east of a meridian running due south from Aldrich Point on Price Island. 2. Subareas 7-19 and 7-20. 3. That portion of Subarea 7-21 south of a line running through the tidal rapids in Gale Passage at 52 degrees 12.5 minutes north latitude. 4. Subarea 7-32.
RU47b	Day Point	1. Those portions of Subareas 7-1, 7-2 and 7-3 west of a meridian running due south from Aldrich Point on Price Island; 2. That portion of Subarea 7-31 south of a parallel passing through 52 degrees 16.3 minutes north latitude. Note Price Island closure listed in the Integrated Fisheries Management Plan.
RU48	Milbanke Sound	That portion of Subarea 7-3 east of a meridian running due south from Aldrich Point on Price Island.
RU49	Finlayson Channel	1. Subareas 7-4, 7-5, and 7-6. 2. That portion of Subarea 7-9 north of a parallel passing through Jermaine Point on Dowager Island.
RU50	Mathieson Channel	That portion of Subarea 7-9 north of a line running from Cross Point on Lady Douglas Island southerly along the Subarea boundary to a point west of Rankin Point on Cecelia Island, then to Rankin Point on Cecilia Island; north of a line from Rankin Point on Cecilia Island to Knarled Point on the Don Peninsula; and south of a parallel passing through Jermaine Point on Dowager Island.
RU51	Seaforth Channel	1. Subareas 7-8. 2. That portion of Subarea 7-9 south of a line running from Cross Point on Lady Douglas Island southerly along the Subarea boundary to a point west of Rankin Point on Cecelia Island, then to Rankin Point on Cecilia Island, then to Knarled Point on the Don Peninsula; 3. Subareas 7-12 and 7-15. 4. That portion of Subarea 7-21 north of a line running through the tidal rapids in Gale Passage at 52 degrees 12.5 minutes north latitude.

Quota Area	Name	Description
RU52	Tribal / McMullin Group	1. Subarea 7-18. 2. Those portions of Subareas 7-23 and 7-24 south of a parallel passing through 52 degrees 10.0 minutes north latitude near Poole Islet in Raymond Channel and Quinoot Point in Joassa Channel. (Refer to Canadian Hydrographic Service Chart #3787)
RU53	Spider / Kilditdt	Subareas 7-26, 7-27 and 7-28
RU54	McNaughton Group	1. That portion of Subarea 7-17 southwest of a line running from Beak Point on Hunter Island to German Point on Campbell Island (Refer to Canadian Hydrographic Service Chart #3787). 2. Subarea 7-25.
RU55	Hakai Pass	Subareas 8-1 and 8-2
RU56a	Nalau Pass	That portion of Subarea 8-4 west of a line running from Daedalus Point on Nalau Island to Hergest Point on Hunter Island
RU56b	Fitz Hugh Sound	1. Subarea 8-3. 2. That portion of Subarea 8-4 east of a line running from Daedalus Point on Nalau Island to Hergest Point on Hunter Island. 3. Subarea 8-16. 4. That portion of Subarea 9-12 north of a parallel running through Truman Point on Calvert Island.
RU57a	Rivers Inlet	1. Subareas 9-1 to 9-4, 9-10 to 9-11. 2. That portion of Subarea 9-12 south of a parallel running through Truman Point on Calvert Island. 3. Those portions of Subareas 10-1 and 10-2 east of a meridian running through 127 degrees 54.12 minutes west longitude and north of a parallel running true west from the Dugout Rocks light.
RU57b	West Calvert Island	1. Area 109. 2. That portion of Subarea 10-1 west of a meridian passing through 127 degrees 56.7 minutes west longitude, and north of a line running due west from the Dugout Rocks light.
RU57c	Grief Bay	That portion of Subarea 10-1 west of a meridian running through 127 degrees 54.12 minutes west longitude, east of a meridian passing through 127 degrees 56.7 minutes west longitude, and north of a line running due west from the Dugout Rocks light

Quota Area	Name	Description
RU58	Smiths Inlet	1. That portion of Subarea 10-2 south of a line running true west from the Dugout Rocks light. 2. Subareas 10-3, 10-4, 10-5, 10-7, 10-8 and 10-12.

INSIDE WATERS

Quota Area	Name	Description
11	Allison Harbour	Area 11, except that portion of Subarea 11-2 inside a line starting at Davey Rock then running to 51deg 04.430min north latitude, 127deg 54.762min west longitude, then to 51deg 04.430min north latitude, 127deg 38.084min west longitude and returning to Davey Rock.
12A	Bates Pass	That portion of Subarea 12-12 south of a line running from Pivot Point on Hope Island to a point on Vansittart Island at 50 degrees 54.633 minutes north latitude, 127 degrees 48.651 minutes west longitude, and south of a line running from Magicienne Point on Vansittart Island through Shade Island to Nigei Island.
12B	Christie / Browning Pass	1. Subarea 12-10; 2. That portion of Subarea 12-11 southwest of a line running from 51deg 04.43min north latitude, 127deg 54.762min west longitude and returning to Davey Rock.
12C	Port Hardy	Subareas 12-15 and 12-16.
12F	Deserter Island	That portion of Subarea 12-13 east of a line starting at Davey Rock then running to 51deg 04.43min north latitude, 127deg 38.084min west longitude
12H	Northern Johnstone Strait	Subareas 12-1 to 12-3, 12-21 to 12-24
12I	Buckle Group	Those portions of Subareas 11-2, 12-11, 12-12, 12-13 inside a line starting at Davey Rock then running to 51deg 04.43min north latitude, 127deg 54.762min west longitude, then to 51deg 04.43min north latitude, 127deg 38.084min west longitude and returning to Davey Rock
12J	Shadwell Pass	That portion of Subarea 12-12 north of a line running from Pivot Point on Hope Island to a point on Vansittart Island at 50deg 54.633min north latitude, 127deg 48.651min west longitude; north of a line running from Magicienne Point on Vansittart Island through Shade Island to Nigei Island; and southwest of a line running from 50deg 49.445min north latitude, 127deg 48.347min west longitude and returning to Davey Rock
12M	Southern Queen Charlotte Strait	Subareas 12-4 to 12-8, 12-17 to 20, 12-26, 12-38 to 42. Note Numas Island closure listed in the Integrated Fisheries Management Plan

Quota Area	Name	Description
13A	Kelsey Bay - Proper	Subareas 13-32 to 13-34
13C	Campbell River North	a) Portion of Subarea 13-6 north of a line drawn true west from North Bluff on Quadra Island [50 degrees 08.691 minutes north/125 degrees 21.072 minutes west] across Seymour Narrows to a fishing boundary sign on Vancouver Island [50 degrees 08.673 minutes north/125 degrees 21.696 minutes west]. b) Subareas 13-7 to 13-9, 13-11, 13-27, 13-28. Note Area 13 Study Area closure listed in the Integrated Fisheries Management Plan
13B	Campbell River South	a) Subareas 13-1 and 13-2. b) Portion of Subarea 13-3 south of a line drawn from the light at the end of the south government dock breakwater at Campbell River to Cape Mudge lighthouse. c) Portion of Subarea 14-13 north of a line running from Oyster River from 49 degrees 52.145 minutes north latitude, 125 degrees, 06.870 minutes west longitude.
13D	Campbell River East	Subareas 13-10, 13-12
13E	Cordero Channel	Subareas 13-25, 13-41 and 13-42
13F	Kelsey Bay - East	Subareas 13-29 to 13-31, 13-35 to 13-40
13G	Stuart Island	Subareas 13-13 to 13-24, 13-26 and **15-2 to 15-4**.
13J	Discovery Passage	a) Portion of Subarea 13-3 north of a line drawn from the light at the end of the south government dock breakwater at Campbell River to Cape Mudge lighthouse. b) Subareas 13-4 and 13-5. c) Portion of Subarea 13-6 south of a line drawn true west from North Bluff on Quadra Island [50 degrees 08.691 minutes north/125 degrees 21.072 minutes west] across Seymour Narrows to a fishing boundary sign on Vancouver Island [50 degrees 08.673 minutes north/125 degrees 21.696 minutes west].
14A	Comox	1. Subareas 14-5, 14-7, 14-8 and 14-10 2. Portions of Subareas 14-9, 14-11 and 14-12 south of a line running due east from Balmoral Beach at 49 degrees 40.034 minutes north latitude, 124 degrees 53.961 minutes west longitude.

Quota Area	Name	Description
14B	Cape Lazo	1. Portions of Subareas 14-9, 14-11 and 14-12 north of a line running due east from Balmoral Beach at 49 degrees 40.034 minutes north latitude, 124 degrees 53.961 minutes west longitude. 2. Portion of Subarea 14-13 south of a line running due east from Oyster River from 49 degrees 52.145 minutes north latitude, 125 degrees, 06.870 minutes west longitude.
EX (new)	**South Coast Exploratory Area**	**Subareas 14-1 to 14-4, 15-1, 15-5, 16-1 to 16-4, 16-9 to 16-12, 16-16 to 16-22, 29-1 and 29-3**
17	Nanaimo	Area 17 and Subarea 29-5. Note Stuart Channel closure listed in the Integrated Fisheries Management Plan
18A	Sidney	1. Subareas 18-3, 18-4, and 18-6. 2. That portion of Subarea 19-5 north of a line running due east from Cormorant Point. 3. Subarea 19-6.
18B (new split)	Mayne / Saturna Island	Subareas 18-1, 18-2, 18-5, 18-9, 18-11 and 29-4
18C (new split)	East Point/Tumbo Channel	18-11 and ptn of 18-5 north of a line running due east from Monarch Head
19	Victoria	1. Subareas 19-3, 19-4. 2. That portion of Subarea 19-5 south of a line running due east from Cormorant Point. Note Ogden Point, 10 Mile Point and Race Rocks closures listed in management plan.

WEST COAST VANCOUVER ISLAND

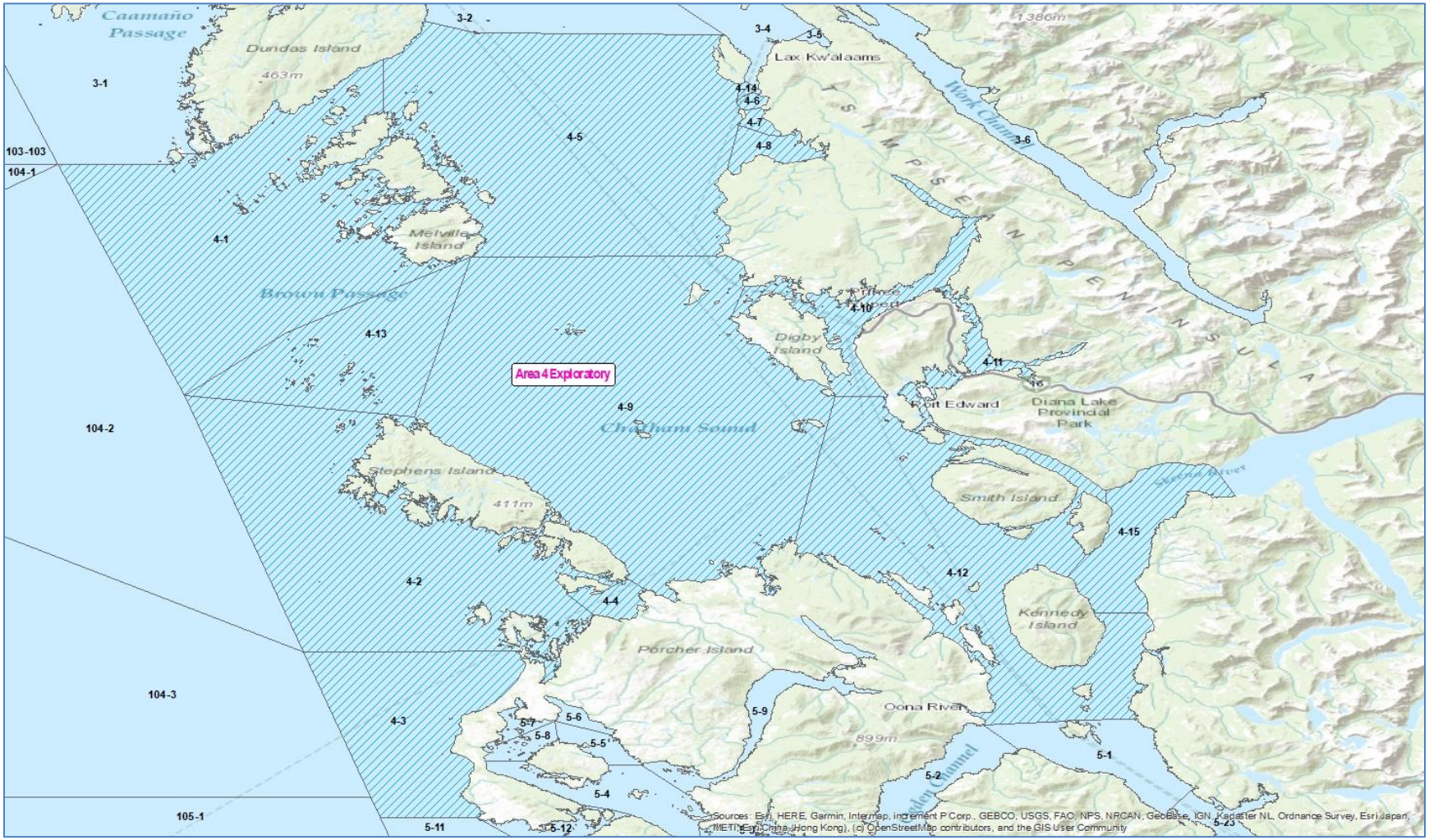
Quota Area	Name	Description
20	Sooke	Subareas 20-4 to 20-6 except for Becher Bay closure.
23C	Area 23	Subareas 23-5 to 23-7, 23-11, 123-3 and 123-5 except the Pacific Rim National Park and Bamfield closures listed in Appendix 1 of this IFMP.

GREEN SEA URCHIN AREA DESCRIPTIONS

Quota Area	Name	Description
4*	**Area 4**	**All of Area 4**
11*	Allison Harbour	All of area 11
12A	12 West	12-1 to 12-21, 12-24, 12-26, 12-39
12B	12 East	12-22, 12-23, 12-27 to 12-38, 12-40 to 12-48
13A	Cape Mudge	13-1, 13-14 and 13-15
13B	S. Johnstone St.	13-27 to 13-35
13C	Cordero Channel	13-23 to 13-26 & 13-36 to 13-43
13D	Discovery Pass North/Sonora Island	13-7 to 13-13 and 13-16 to 13-22
13E	Willow Point	13-2
13F	Discovery Pass South	13-3, 13-4, 13-5 and 13-6
14*	**Area 14**	Area 14 excluding 14-3
16*	**Sunshine Coast**	14-03, 15-01 to 15-05, 16-01 to 16-04, 16-09 to 16-12, 16-16 to 16-22, 28-1 to 28-8
17*	**Nanaimo**	Area 17 and Subarea 29-5
18A	Southern Gulf Islands	Area 18, excluding Quota Area 18B; Subareas 29-4, 19-6 and that portion of subarea 19-5 north of a line running due east from Cormorant Point
18B	Gulf Islands East	18-11 and ptn of 18-5 north of a line running due east from Monarch Head
19A	19 East	Area 19 except subareas 19-3, 19-6 and ptn of 19-5 north of a line running east from Cormorant Pt
19B	19 West	19-3
20A	Sooke East	Ptn of Area 20-5 East of Otter Pt. 20-6, 20-7
20B	Sooke West	Area 20-3, 20-4 and ptn of 20-5 West of Otter Pt.

***** **Exploratory**

GREEN SEA URCHIN MAPS



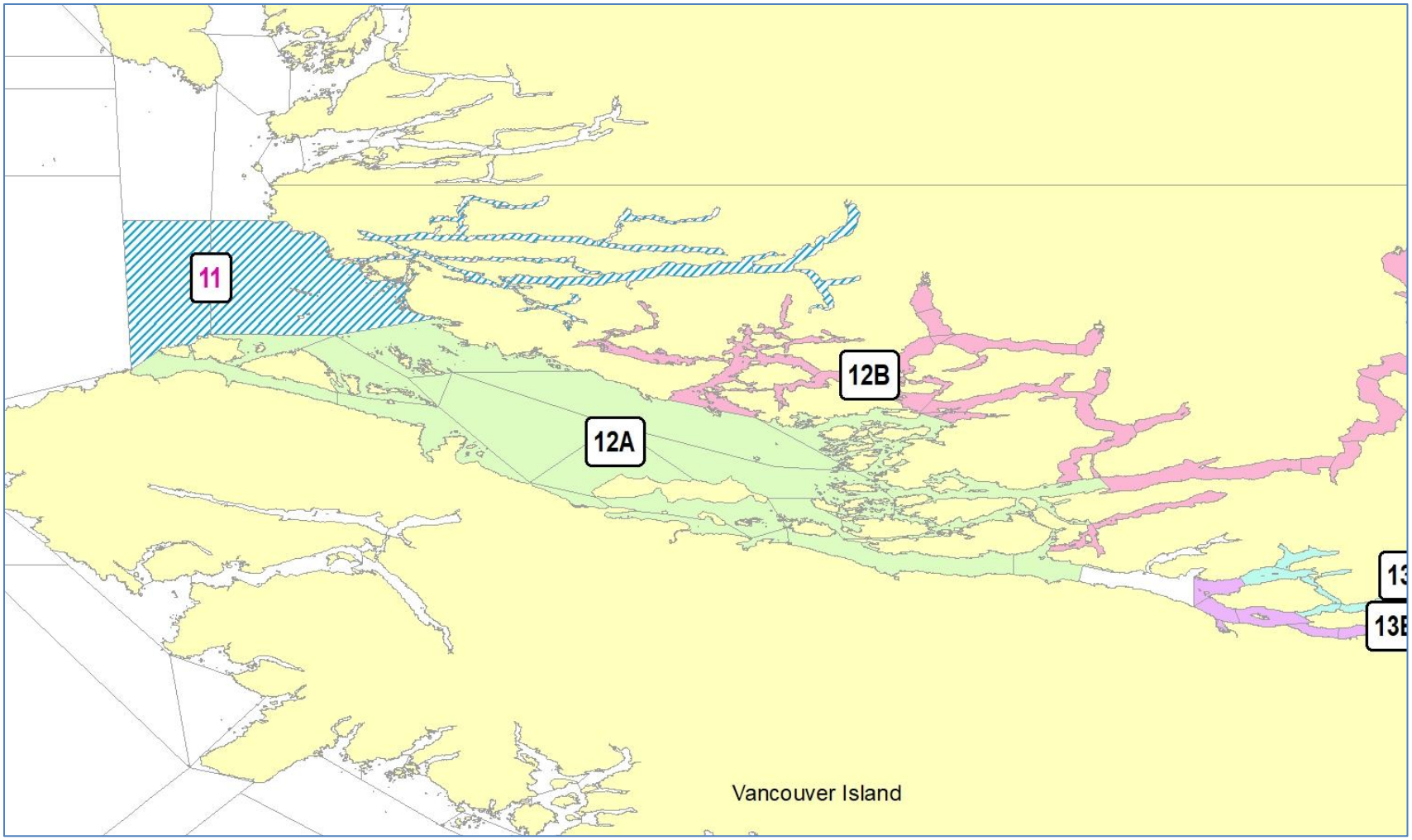


Figure 1: Green Sea Urchin Quota Area 12A and 12B. Exploratory Quota Area 11.

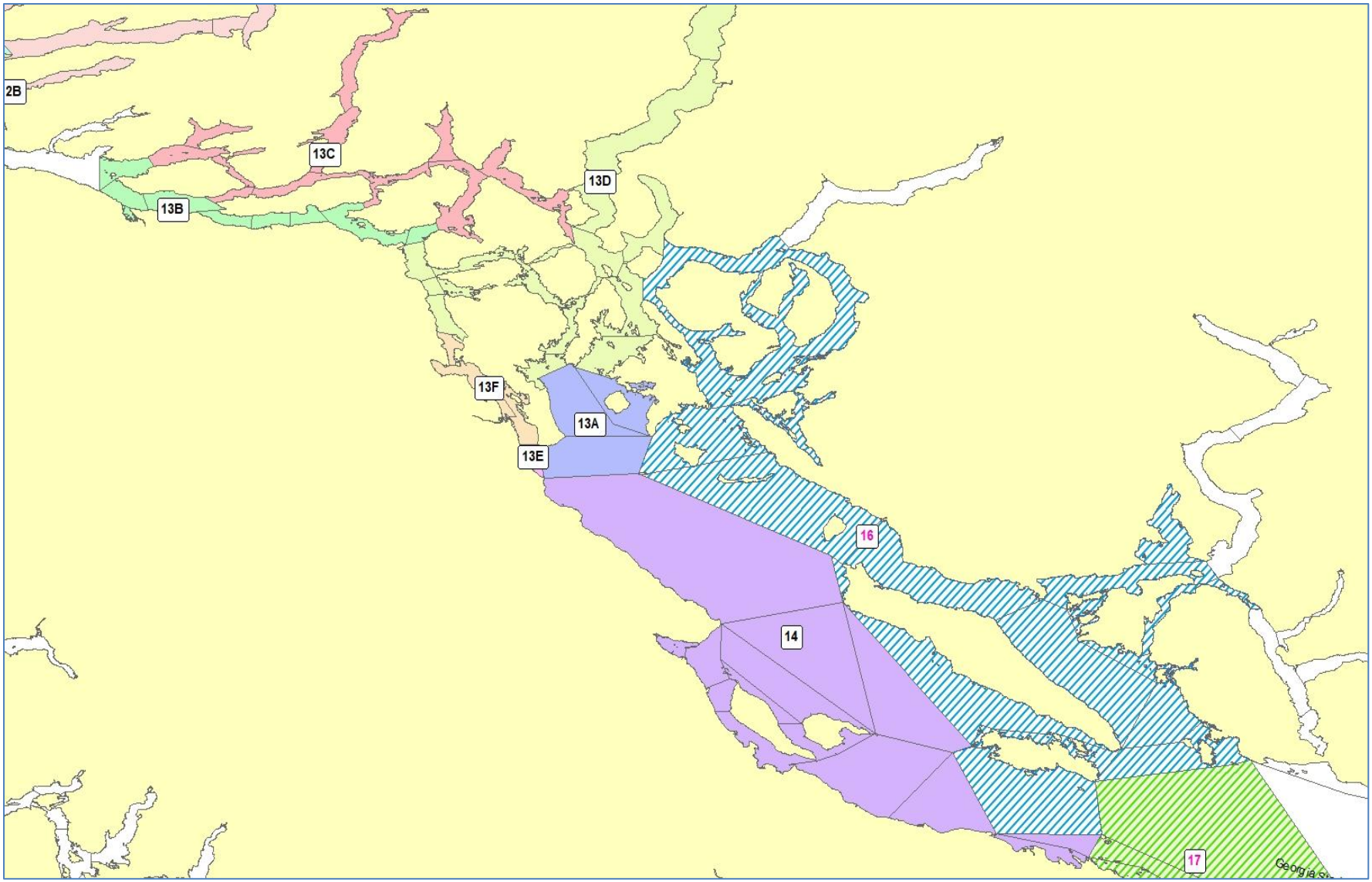


Figure 2: Green Sea Urchin Quota Areas 13A, 13B, 13C,13D, 13E, 13F, 14 and Exploratory Quota Area 16.

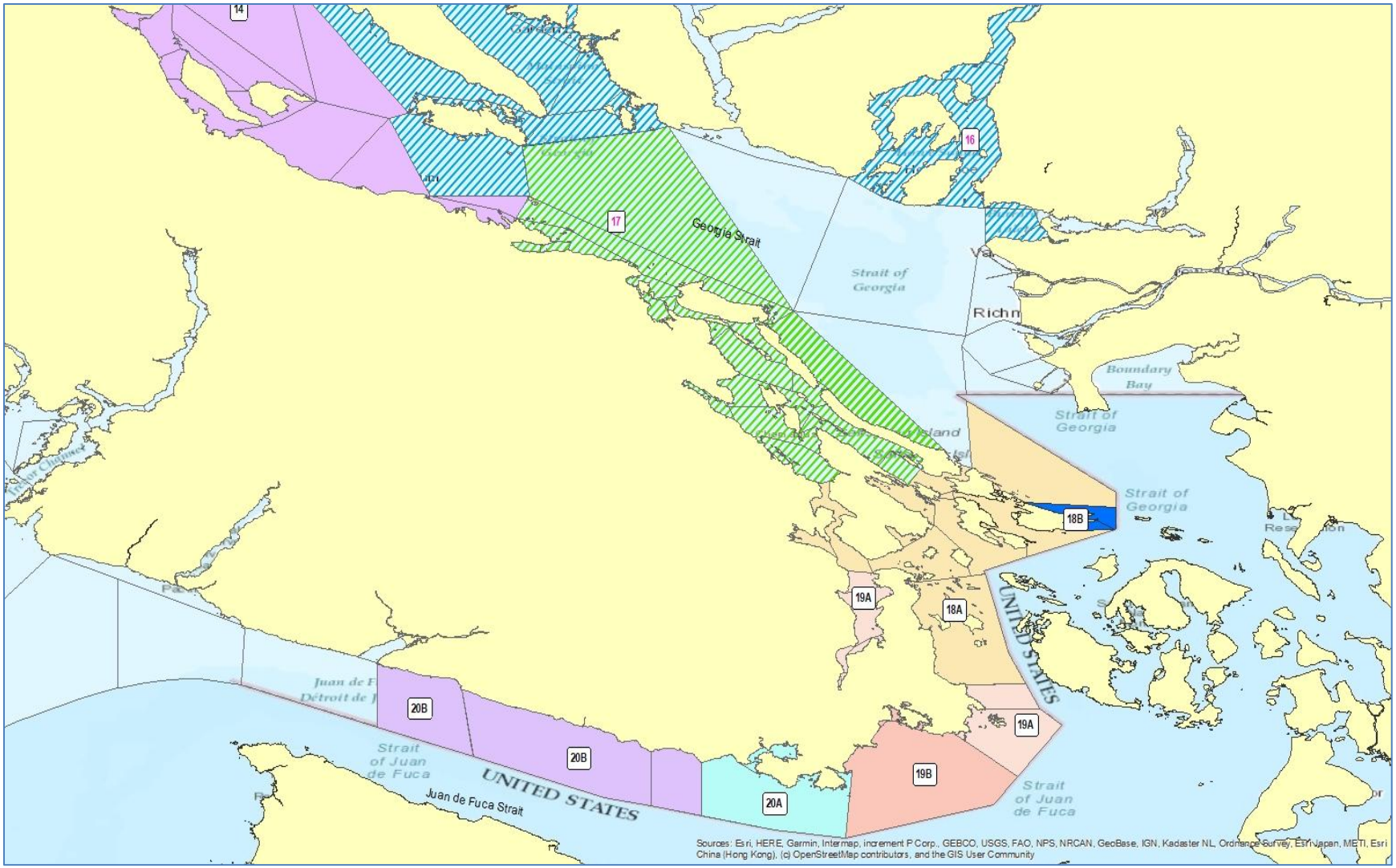


Figure 3: Green Sea Urchin Quota Areas exploratory quota areas 16, 17 and 23, 18, 19E, 19W, 20A and 20B.

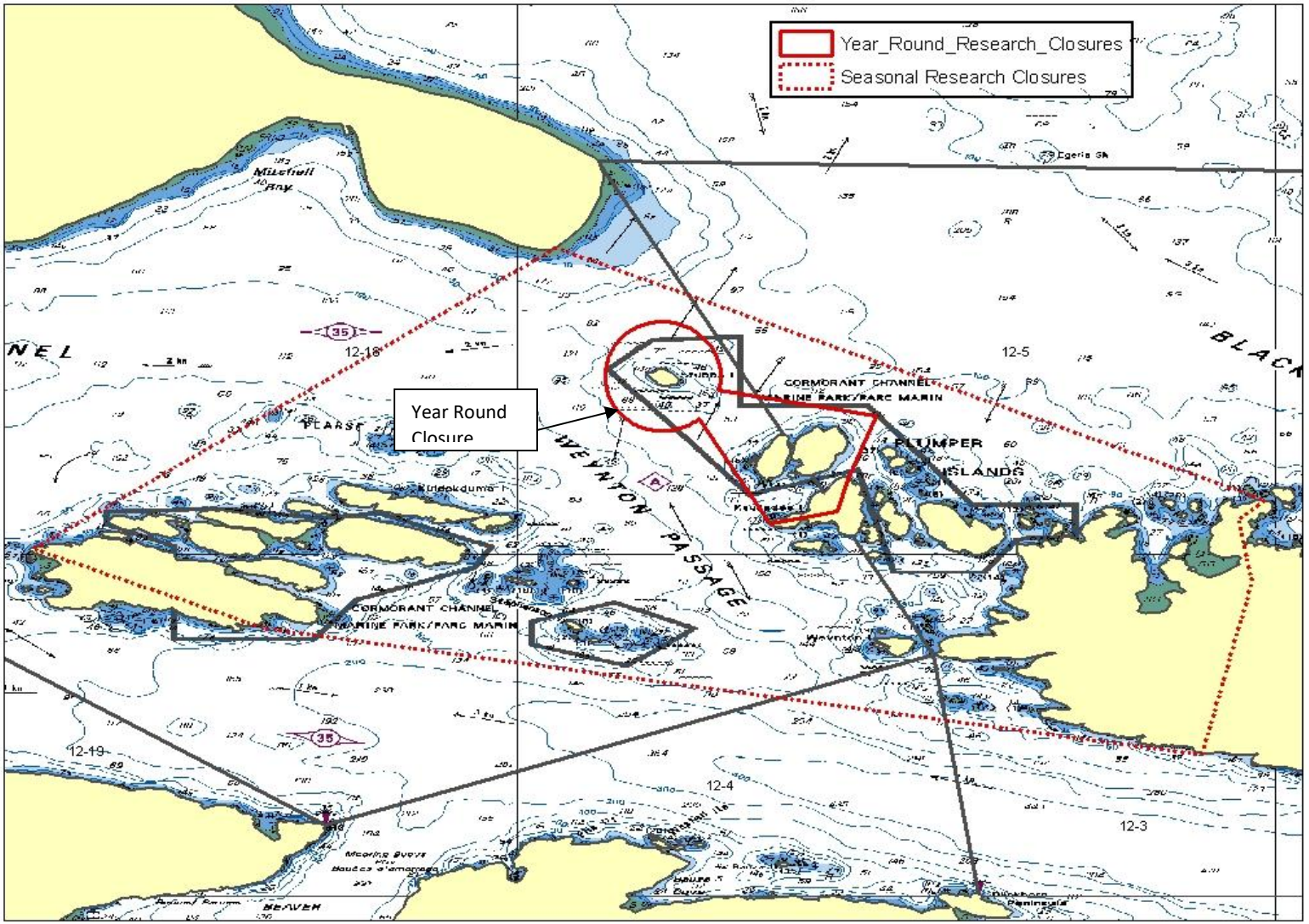


Figure 5: Area 12 Seasonal and Year Round Research Closures.

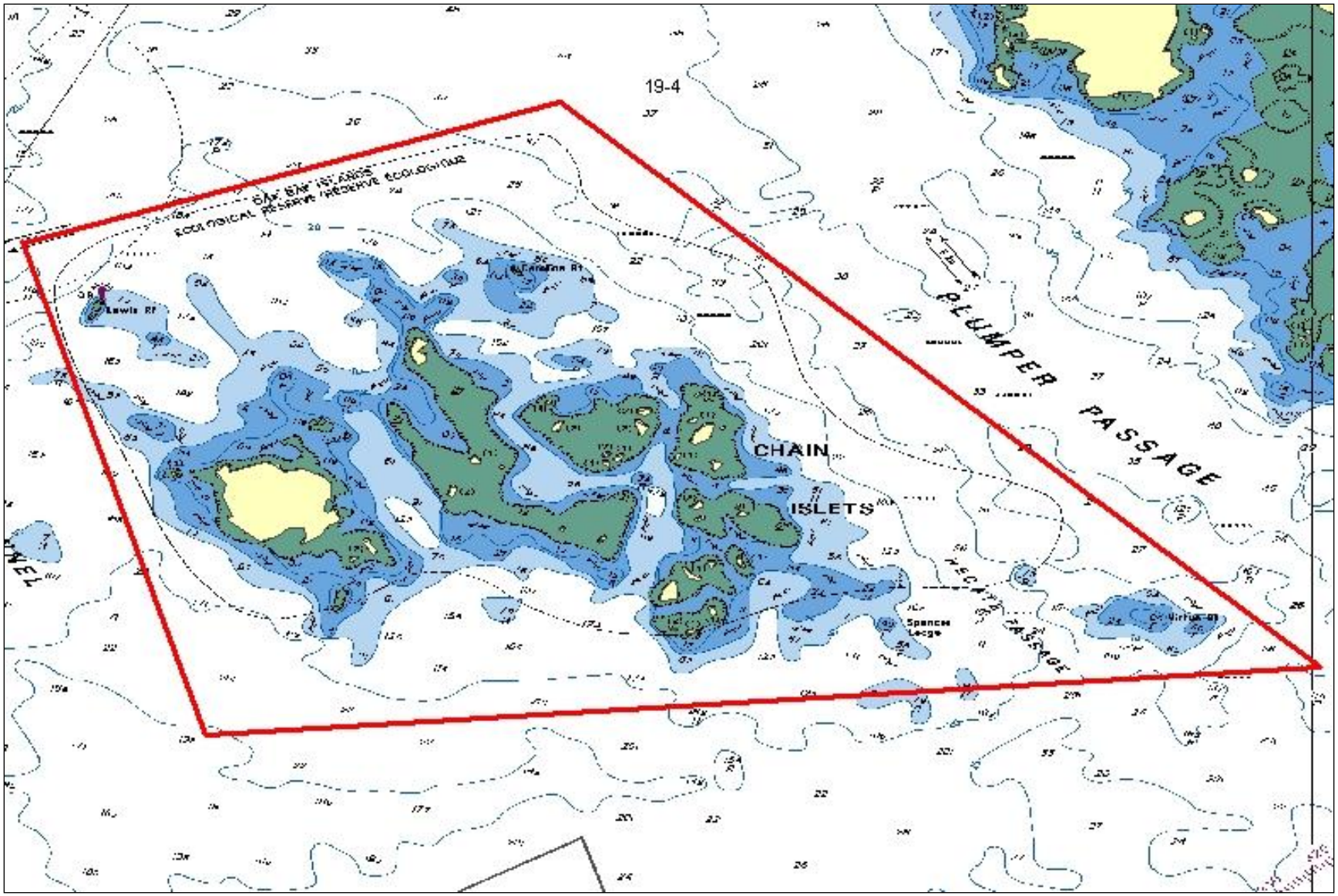


Figure 6: Area 19 Seasonal Research Closure Chain Islets.

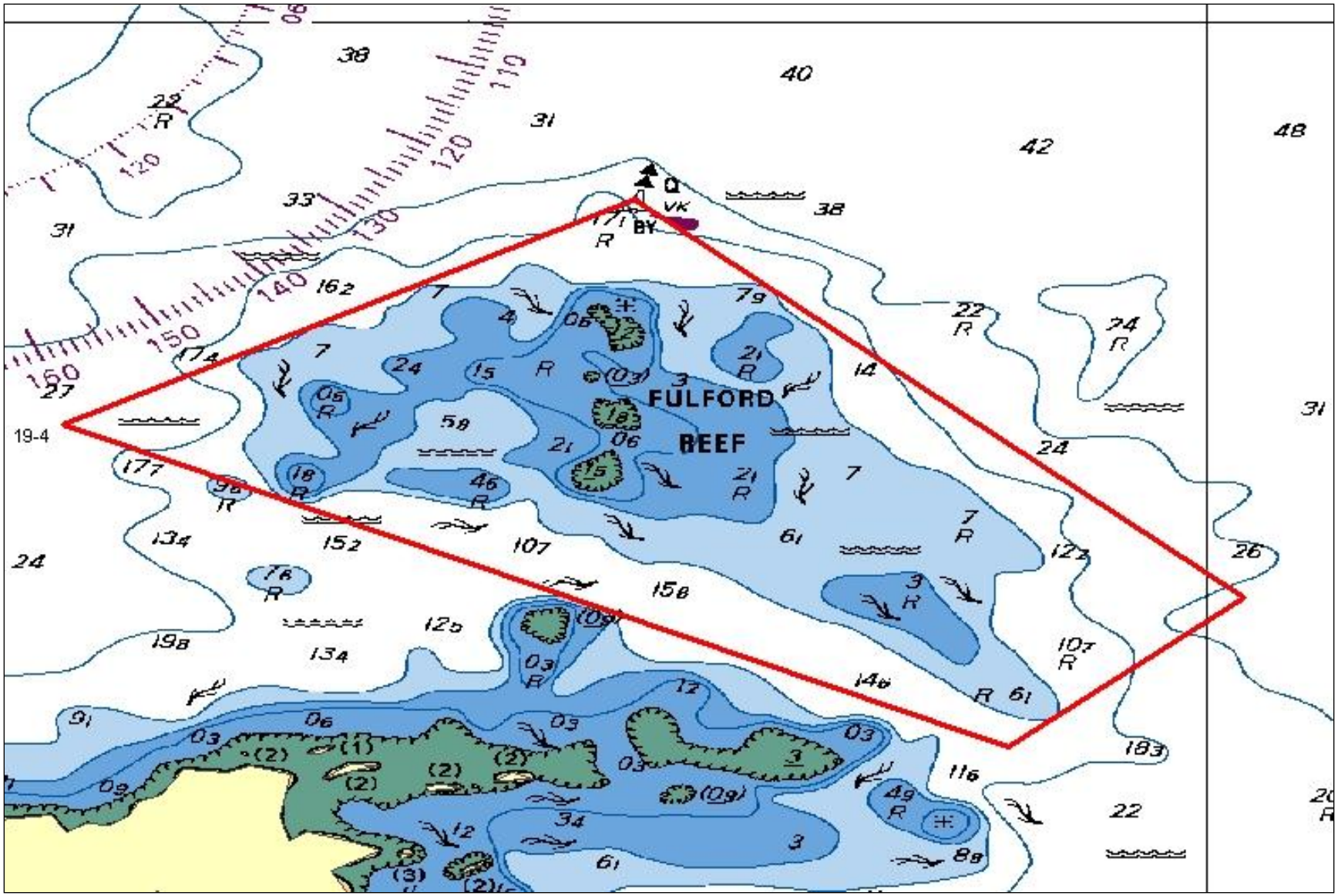


Figure 7: Area 19 Seasonal Research Closure Fulford Reef.