

*Photo credit: Fisheries and Oceans Canada, Council of the Haida Nation, Nuu-chah-nulth Tribal Council, Oceans Networks Canada, University of Victoria, and Pelagic Research Services*



# ANNUAL REPORT

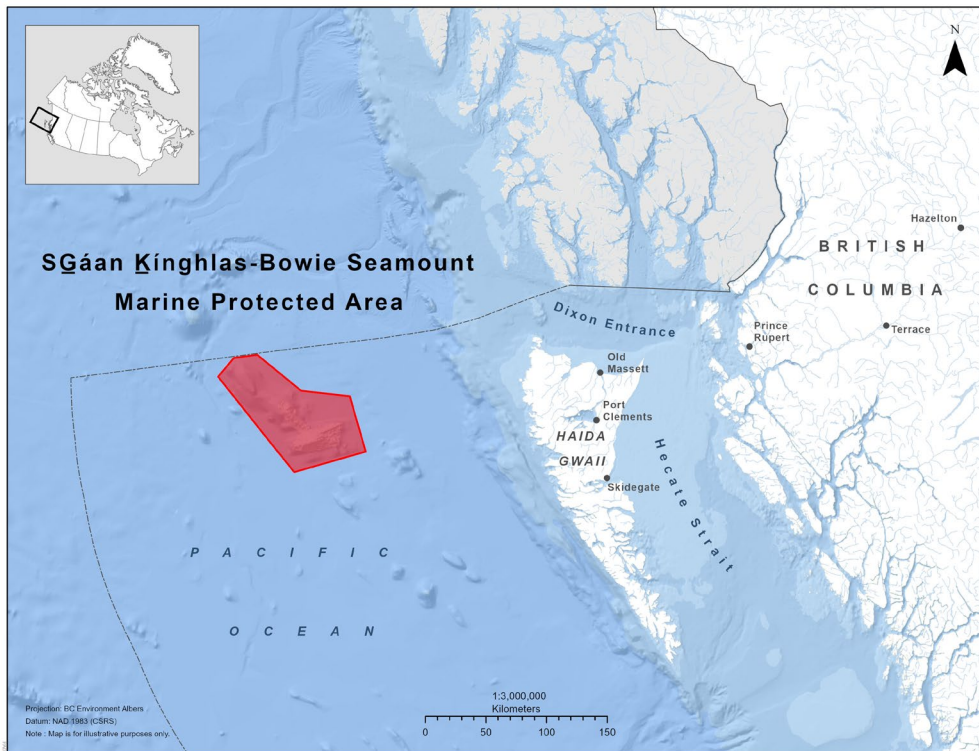
# 2023

SGáan Kínghlas-Bowie  
Seamount (SK-B)  
Marine Protected Area



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## At-a-glance

### Date of designation:

1997: Xaads Siigee tl'a damaan tl'a king giigangs *Haida Marine Protected Area*

2008: *Oceans Act MPA*

### Size:

6,103 km<sup>2</sup>

### Contribution towards the marine conservation targets:

0.11%

### Location:

This MPA is located 180 km west of Haida Gwaii in the Offshore Pacific Bioregion; Pacific Ocean.

### Co-managed by:

Fisheries and Oceans Canada (DFO) and Council of the Haida Nation (CHN)

### Acknowledgement:

This MPA is located within the territory of the Haida Nation.

### Zones:

This MPA does not have any zones within its boundaries.



A logo for the Management Board. Artist: Wayne Edenshaw



## Key highlights

The name of SGáan Kínghlas-Bowie Seamount was officially updated in the Geographical Names Board of Canada to reflect its cultural and ecological significance and connection to the Haida Nation.

CHN and DFO scientists produced [videos](#) and educational material promoting the 2022 Northeast Deep-Sea Diversity Expedition Project (NEPDEP).

In February 2023, CHN and DFO showcased SK-B MPA at the Fifth International Marine Protected Areas Congress ([IMPAC5](#)).

In March 2023, DFO's Canadian Science Advisory Secretariat (CSAS) published the [Science Advisory Report of the SK-B MPA Monitoring Framework](#). The SK-B MPA monitoring framework is a roadmap, providing a broad and high-level summary of options for monitoring the ecological conservation objectives.



Skil Black Cod: Iljuuwaas Tyson Brown.



## In the spotlight: benefits

Ecological	Socio-cultural	Economic
<p>The SK-B MPA is home to three seamounts, including the SK-B seamount, which rises 3,200 metres to within 24 metres of the sea surface. Sharp depth transitions on the seamount slopes provide habitat for different species. The MPA has unique oceanographic phenomena that result in well-mixed, nutrient-rich water.</p> <p>The SK-B MPA contains a unique community that brings together the species below, which do not exist in proximity elsewhere:</p> <ul style="list-style-type: none"> <li>• open ocean species (for example, migratory whales)</li> <li>• deep water species (for example, squat lobsters)</li> <li>• shallow water species (for examples, mussels and kelp)</li> </ul> <p>The relative shallowness of the SK-B MPA makes it susceptible to the impacts of fishing. To protect the sensitive ecosystems, the MPA is closed to all commercial and bottom-contact fishing.</p>	<p>The area holds historical, spiritual and cultural significance to the Haida Nation. The MPA’s namesake seamount is home to the supernatural being, SGáan Kínghlas. In Gaw Tlagée Xaad kíl, the Old Massett Haida dialect, SGáan Kínghlas means “supernatural being looking outwards” (CHN and DFO 2019).</p> <p>Haida oral history refers to Haida ancestors gin siígee t’la kaatl’aagangs (coming out of the ocean) at the beginning of time. Another oral history tells of 2 young siblings finding a puffin colony on SGáan Kínghlas at a time of lower sea levels and returning to their village to distribute puffin beaks and restoring their families’ status. Some also believe that the seamount is the 2 headed stone frontal pole referred to in a Haida story about “Chaan sGaanuwee” (the one in the sea) recorded by the anthropologist and linguist John Swanton in 1905.</p>	<p>In addition to Haida knowledge and use, the SK-B seamount and surrounding areas has been the site of other human activities such as whaling, fishing, and research over thousands of years. Currently, the main human activities in the SK-B MPA are:</p> <ul style="list-style-type: none"> <li>• scientific research</li> <li>• monitoring</li> <li>• vessel traffic</li> </ul> <p>Other activities like marine tourism and recreational fishing occur infrequently. The SK-B MPA is a highly biodiverse ecosystem that acts as a refuge and nursery for flora and fauna, which may provide economic benefits outside of the MPA.</p>



## Education and outreach

Education and outreach activities are guided by the communications protocol and strategy that was developed by the SK-B Management Board to increase MPA awareness in 2020.

At [IMPAC5](#), SK-B MPA was highlighted at the Indigenous Pavilion. CHN and DFO co-presented



Red Tree Coral: Iljuuwaas Tyson Brown.



on the co-management relationship and the development and implementation of the [SK-B MPA Management Plan](#). They presented on behalf of a collaborative scientific partnership on the lessons learned from monitoring the SK-B MPA. Overall, the MPA was featured in 4 presentations covering topics like research and monitoring, outreach, and co-management.

CHN is developing a curriculum incorporating *Xaad kíl* and *Xaayda Kil* (Gaw Tlagée Old Massett and HIGaagilda Skidegate dialects of the Haida language) for schools on Haida Gwaii to teach students about the cultural and ecological significance of SK-B and deep-sea ecosystems.

CHN and DFO scientists participated in an episode of [Live It Earth](#), an online educational series, where they shared their knowledge of SK-B, deep-sea ecosystems and expeditions with students from Haida Gwaii and around Canada.



## Research and monitoring

The CHN and DFO co-authored [SK-B MPA Monitoring Framework](#). It provides a high-level summary of options for monitoring the MPA's ecological conservation objectives and connects the conservation objectives outlined in the MPA management plan to monitoring indicators, protocols, and strategies. This allows DFO to select the most appropriate monitoring approach for a monitoring plan.



ROV being deployed during the 2022 NEPDEP Expedition.  
Photo credit: Shelton Dupreez



*Kil Hltaanuwaay Tayler Brown (CHN) and Clayton Manning (DFO) presenting at IMPAC5. Photo credit: Council of the Haida Nation*

DFO scientists are investigating the oceanography of the SK-B seamount and the delivery of nutrients and larval benthic organisms. This will describe conditions driving the high biomass and biodiversity found on the seamount.

DFO scientist, Dr. Cherisse Du Preez, is co-supervising graduate student projects related to the MPA. These include:

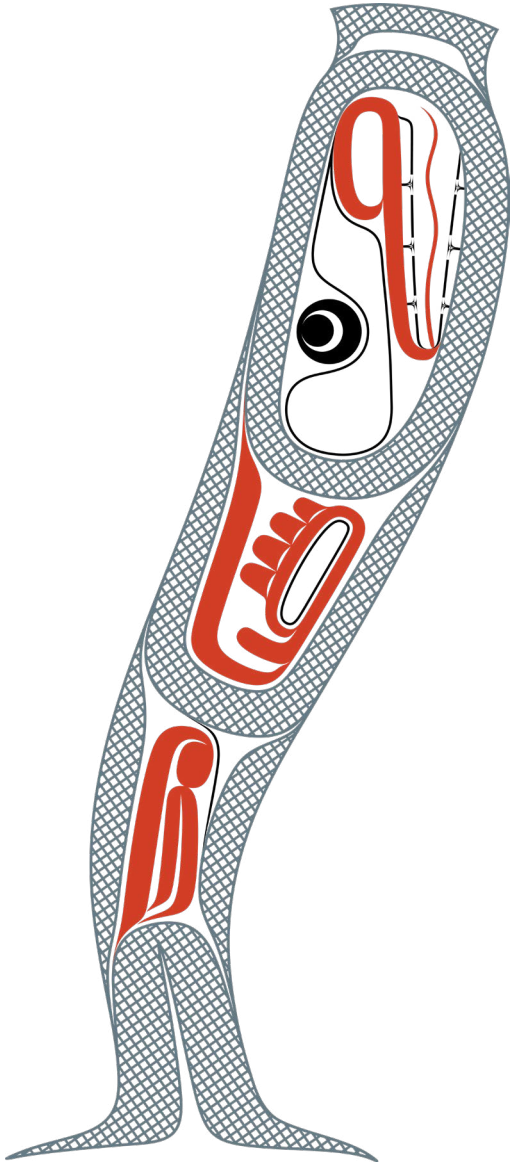
- investigating how climate change will affect the distribution of invertebrates (Megan Davies)
- looking at the relationship between water chemistry and animal abundance (Pandora Gibb)
- monitoring cold-water coral and sponge diversity over time (Lindsay Clark)

Dr. Cherisse Du Preez also co-supervised Daniel Labbé, who defended a thesis exploring the differences in zooplankton populations among isolated seamounts (including SK-B).



Science Team aboard the CCGS Tully during the 2022 NEPDEP Expedition.  
Photo credit: Shelton Dupreez





Gin gii hlk'uuwaansdlagangs Glass Sponge: Iljuuwaas Tyson Brown.

A team of DFO scientists, led by Dr. Josephine Iacarella and supported by Dr. Anya Dunham, published a [paper evaluating conservation area effectiveness across Canada's 3 oceans](#), which included the SK-B MPA. Another [paper was published that applied and compared automatic identification system and flyover vessel tracking methods](#) for estimating fishing in marine conservation areas in the Canadian Pacific, and a report was produced that examined [how vessel tracking can monitor marine conservation area effectiveness](#).



2022 NEPDEP Science Team members and ROV staff observing the live footage from the ROV submersible aboard the CCGS Tully. Photo credit: Shelton Dupreez



Sea star in a bed of brittle stars observed using ROV during 2022 NEPDEP Expedition. Photo credit: Fisheries and Oceans Canada, Council of the Haida Nation, Nuu-chah-nulth Tribal Council, Oceans Networks Canada, University of Victoria, and Pelagic Research Services





CHN Marine Planning Program staff, Kil Hltaanuwaay Tayler Brown and Skil Jáada Vanessa Zahner during the 2022 NEPDEP Expedition. Photo credit: Shelton Dupreez



Science Team members discussing the survey plan during 2022 NEPDEP Expedition. Photo credit: Shelton Dupreez



## Collaborations and partnerships

CHN and DFO scientists:

- co-developed a monitoring framework
- contributed to increased awareness of the SK-B by live-streaming work during an expedition and presenting on their findings at various talks/conferences (e.g. IMPAC5 and Live it Earth)
- designed and carried out long-term ecological monitoring expeditions to the SK-B MPA in 2018 and 2022

CHN and DFO scientists also produced 2 videos documenting the [2022 expedition](#), including [surveys of the SK-B](#) using remote operated vehicles. This expedition was also a [UN Decade of Ocean Science](#) and [Challenger 150](#) endorsed activity.

For the Northeast Pacific Deep-Sea Diversity Expedition to SK-B, CHN and DFO partnered with the:

- Nuuchahnulth Tribal Council
- Pacheedaht First Nation
- Quatsino First Nation
- Ocean Networks Canada



## Surveillance and enforcement

CHN has been a partner in the Oceans Protection Plan pilot project for the [Enhanced Maritime Situational Awareness System \(EMSA\)](#) since 2019. EMSA provides access to near real-time vessel Automatic Identification System (AIS) data, through the Department of National Defense's fused satellite and terrestrial feed. In 2022, the SK-B Management Board supported the technical team's use of EMSA to monitor vessel traffic within the SK-B MPA and within 50 nautical miles of the SK-B seamount pinnacle.

Fishery Officers from local Conservation and Protection detachments and the Marine Patrol Program are not able to patrol this MPA because it is located far offshore; however, the Fisheries Aerial Surveillance and Enforcement Program was able to conduct numerous aerial surveillance patrols over the MPA for a total of 1.1 hours, with 2 commercial vessels detected during those flights.

The Marine Security Operations Center monitors the MPA using Radar Satellite II and



K'ats Rockfish: Iljuuwaas Tyson Brown

analyzes acquisitions and detections with any AIS associations.

No fisheries violations were detected from audits to electronic monitoring data aboard fishing vessels. Future monitoring efforts will benefit from the approval to leverage the Dark Vessel Detection system in domestic waters as it will specifically target coverage of Pacific Region MPAs.



## Management and governance

### Foundational work

The management and governance of the MPA is based upon various foundational pieces of work. For example, a memorandum of understanding between the Haida Nation and Canada was signed in 2007 and established the structure of the SK-B Management Board.

The terms of reference were agreed to in 2012, and further refined the roles, responsibilities and procedures of the MPA Management Board. In 2019, the [SK-B Gin siigee tl'a damaan Kinggangs gin K'aalaagangs | Marine Protected Area Management Plan](#) was published, outlining the guiding principles, goals and objectives of the MPA.

### Recent progress

In 2023, the SK-B Management Board convened twice, in March and November.

DFO and the CHN are working to restructure the MPA Advisory Committee so that it is more efficient and can meet the consultative requirements of both parties.

Bi-weekly meetings occurred throughout 2023 with the SK-B Technical Team to support the governance and management of the MPA.

## Looking to the year ahead

The full version of the SK-B MPA Monitoring Framework that was co-developed by DFO and CHN scientists is expected to be published in 2024.

DFO and CHN scientists are planning the next deep-sea expedition to the MPA for the summer of 2024, to revisit the long-term monitoring sites that were visited in 2018 and 2022.



Rockfish sitting in a carpet of brittle stars and gorgonian coral; observed using ROV during 2022 NEPDEP Expedition. Photo credit: Fisheries and Oceans Canada, Council of the Haida Nation, Nuu-chah-nulth Tribal Council, Oceans Networks Canada, University of Victoria, and Pelagic Research Services





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