

## Consider the Difficulties and Methods that Link the Security of Shellfish to Eating

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### Abstract

Seafood plays an important role in improving food security for the Inuit Nunangut. This scoping review therefore aims to examine issues and issues that have been extensively explored in the literature on barriers and pathways linking seafood to food security where research, policy and action gaps exist. How do fisheries contribute to food security today? A systematic search for peer-reviewed articles was conducted using six databases. Eligible studies included a major study investigating the role of seafood in food security conducted in Inuit Nunangut. 31 items were included in the review. Overall, we find that fisheries can affect food security through direct pathways (consumption of fish as food) and indirect pathways, such as increasing household purchasing power through employment. Research shows that strategies related to wildlife and fisheries management need to be integrated with food and health policies to address food insecurity among the Inuit of Nunangut. Future research is needed to better understand the different mechanisms by which seafood harvesting and participation in commercial fishing reduce household food insecurity.

**Keywords:** Seafood; fisheries; Arctic; Arctic Canada; wildlife management

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### Introduction

For thousands of years, the harvesting, sharing and consumption of terrestrial foods such as berries, marine and land mammals, seafood and fish have provided important health, psychosocial and cultural benefits to the Inuit people living in their homelands brought great profits in Canada [1]. However, colonial processes (e.g. environmental confiscation and loss of traditional knowledge) and current government policies (e.g. hunting restrictions and quotas) have reduced rural food consumption and high calorie content increased reliance on nutrient-poor market foods. Exacerbated by climatic and socioeconomic changes, this dietary shift has resulted in a persistently higher prevalence of food insecurity in Inuit communities compared to national averages, as well as diet-related illnesses [2].

In Canada, Inuit people over the age of 15 who live in Inuit report food insecurity, according to the 2017 Aboriginal Peoples Survey. The prevalence of food insecurity was highest in the Inuvialuit Settlement (ISR), followed by it. The estimated prevalence is 8-9 times the Canadian average of 8.8%. Rural foods are generally recognized as important sources of micro- and macronutrients

[3]. Marine seafood in particular (including Arctic char, Greenland cod, capelin, mussels, and other species) is an important source of protein, essential fatty acids, vitamins D, A, and B, and minerals such as calcium and phosphorus, iodine, zinc, iron, selenium). Additionally, activities related to preparing and sharing meals in the countryside are fundamental to the cultural identity of the Inuit community. For these nutritional, cultural and health reasons, rural nutrition is an important pillar of food security and sovereignty for Indigenous communities in Canada [4]. There is strong evidence in northern Canada and internationally that fisheries can play an important role in food security. Fisheries are interpreted differently depending on the context, but we define fishing as any business that captures migratory fish, crustaceans, and/or mollusks (non-marine mammals) for subsistence and/or commercial purposes [5]. Sustainable Inuit-managed commercial fisheries can be a means of promoting traditional food production, food sovereignty, and economic development of local communities. In northern Canada and parts of the Arctic, the annual supply of catchable fish is believed to exceed the actual catch. Therefore, given that fisheries can help

improve food security, this review aims to examine the volume, type and amount of literature examining the role of fish in Inuit food security [6]. By design, we begin with a contextual overview of Inuit fisheries by region before describing the methods and summarizing the literature identified through the review. For the purposes of this review, we will use the United Nations Food and Agriculture Organization definition of food security as adopted by the Nunavut Food Security Coalition [7].

“Food security means that all people have access to sufficient, safe and nutritious food at all times, both physically and economically, to meet their dietary needs and food preferences for an active and healthy life. It exists if it has access to.” Based on this definition, the Nunavut Food Security Coalition outlines the four elements of food security [8]. Availability (sufficient game on land and food in stores), availability (hunting gear or food purchased in stores and sufficient funds to acquire it), quality (culturally valuable healthy food), and use (knowledge of sourcing, food storage, preparation and consumption). In addition to food security, this review takes a food sovereignty approach that recognizes Inuit rights to uniquely define hunting, fishing, land and water policies, and governance. It also recognizes the right of the Inuit to determine the future of the food system [9].

### Summary of fishing by location

Before proceeding to a literature review, we provide an overview of the commercial fishing situation in various regions of Inuit Nunangut. Through major land claim agreements, the Inuit experienced changes in sovereignty and participation in decision-making compared to the original era of local settlement. These agencies, in collaboration with the Canadian Fisheries and Marine Service (DFO) and their respective provincial and territory governments, as well as regional and local organizations and stakeholders, are responsible for the management of fish stocks and their decisions and activities are you must comply with: Rules and provisions of the 2019 amendments to the Federal Fisheries Act [10]. For most of these fisheries, the joint management bodies ensure that the fisheries-related parts of the land claim agreement are implemented and provide opportunities for dialogue between all stakeholders, followed by the Minister for Fisheries and Oceans [11].

### Aware of relevant

Established commercial fishing in Nunavut began in the 1960s. Nunavut's quota is 11,500 tons of turbot, 10,995 tons of shrimp and 362,873 kg of Arctic char. The main species caught in the region are turbot, northern shrimp, lake trout, char and arctic grayling, with turbot, shrimp and char valued at approximately C\$86.3 million in 2015. The Kikitani region has two of the largest char fisheries in Arctic Canada [12]. The Kikitani region (covering a vast area and 13 communities from Gris Fjord in the Arctic to Sanikiluaq in the Belcher Islands) is also a leader in offshore harvesting of turbot and shrimp. Four major trading companies operate in the region [13].

Baffin Bay, Davis Strait, Hudson Strait. The area is also home to his five processing plants for Arctic char, flounder, shrimp and whitefish. In Nunavut, fisheries are jointly managed under the Nunavut Land Claims Agreement and its DFO Fisheries Act.

Various organizations are involved in co-management, including the Nunavut Wildlife Management Board [14]. The Nunavut Wildlife Management Board is the primary regulatory body for wildlife-related matters in the region and is responsible for communicating decisions with co-management partners, including his DFO who amends decisions. Or decline if you have conservation concerns. Local hunter and trapper organizations (HTOs) also play an important role in co-management, as do other stakeholders such as fish factories and commercial fishers [15].

### Discussion

This review characterizes and summarizes the public literature evidence on the food security contribution of seafood in Inuit Nunangut and identifies key themes related to these issues. So far, most of the literature has focused on the safety of consuming food from the sea and the impact of climate change on fisheries. It has been. Among Inuit Nunangut, however, the relative contribution and potential of seafood as a means of achieving food security has been clearly explored. This is especially true for ISR and Nunatsiavut. Based on the findings of this scoping review, we outline three actions that may lead to research and policy to support the role of seafood in food security for Inuit Nunangut.

Improved indicators, joint fisheries management and an integrated policy framework throughout this review, fish contributes to food security directly by providing access to subsistence fishing and fish consumption, and indirectly by increasing household purchasing power through the economic benefits of fishing and empowerment. However, few studies have explicitly investigated and elucidated how seafood contributes to food security in the Inuit Nunangut. There is currently a research gap to identify clear links between fish harvesting and/or consumption and household food security. Gaps also exist when examining the relationship between fishing employment and household food security. This is especially true for crustaceans and mollusks. Although many studies point to the importance of seafood for Inuit culture and the Inuit Nunangut diet as a good source of many macro- and micronutrients, diet-related health effects have been underestimated. Few studies have estimated that it helps reduce. Future studies should better document fish protein intake as a percentage of total protein intake. This is to provide important information regarding aspects of food safety use and quality. Annual harvestable biomass per household that provides information on food security availability. Income from caught fish and commercial fisheries contributes to reducing household food insecurity and informs the accessibility dimension of food security. As commercial fisheries develop, improved catch statistics and effective management tools are needed to ensure the sustainability of important agro food species such as Arctic char. Moreover, the links between subsistence and commercial fisheries, and rural foraging species (e.g., impact of commercial halibut harvesting on narwhals) remain largely unexplored. Ecosystem-based fisheries management is not yet commonplace in the Arctic. However, researchers and policy makers can benefit from a holistic understanding of the interplay between subsistence and commercial harvesting within marine systems using ecosystem-based fisheries management frameworks.

## Conclusions

This review confirms that fisheries play an important role in the food security of the Inuit Nunangut. Pathways linking fisheries and food security have been explored in the peer-reviewed literature, but we feel there is a need to better understand the distinct links between fisheries and household food security. The recent explosion of scientific literature on security has raised

awareness of the importance of fisheries in alleviating food insecurity for the Inuit Nunangut. In the future, there is a need to improve indicators of the contribution of seafood to seafood abundance related to food security, food security, harvesting and consumption. In addition, researchers must continue to seek ways to balance the needs and responsibilities of fishing with the needs of local communities in order to promote Inuit culture and social justice and improve food, nutrition and livelihood security.

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