

Country report from Canada

Brian KINGZETT*¹

General remarks on the Manila clam fishery

Landings of Manila clams and mixed steamers (which are presumed to be primarily Manila clams) increased dramatically in the early 1980's, averaging 1,654 t between 1980 and 2000, as opposed to 189 t from 1951 to 1979. Manila clam landings decreased after 1988, primarily as a result of more restrictive management measures. In recent years, openings have been reduced in most areas to only a few days per year. Regardless of reduced opportunity, landings increased to 1,327 t in 1994, and have fluctuated between approximately 1,100 and 1,500 t since then. However, these statistics include depuration landings since 1994, representing the revival of operations on some beaches that had been lost to contamination.

Licensed commercial clam diggers are required to designate one of six clam areas they wish to fish each year and then compete for available clams during short intense openings. In 1998, the intertidal clam fishery underwent license limitations, resulting in a reduction from approximately 2,500 licensed diggers to current levels of 450 Z2 and 579 Z2ACL (Aboriginal Commercial License) license holders. Z2ACL licenses are held by various First Nations (aboriginal groups), which subsequently distribute them to members. Z2 and Z2ACL license holders are required to renew commercial clam licenses annually. In addition to the commercial clam licenses, the holder is required to be registered as a commercial fish harvester and have a Fisher's Registration Card (FRC).

A recreational fishery occurs coast-wide where areas are open for harvest. A British Columbia Tidal Waters Sport Fishing License is required for the recreational harvest of all species of fish including

shellfish. Daily limit is 75 clams/person.

First Nations' harvest for Food Social and Ceremonial (traditional) purposes may occur coast-wide where areas are open for harvest. The number of First Nation harvesters and quantity is unknown.

The depuration fishery is part of the commercial intertidal clam fishery, conducted under specific licenses at registered Depuration Plants. Access to beaches requires stock assessment, notification and reporting requirements that are different than the commercial competitive fishery and often occur during times when there are no clam harvest openings.

Basic information on fishery

Geography and geomorphological characteristics: Manila clam fishing is mainly operated in tidal flats in sand/mud and small gravel substrates.

Fishing method: Manual harvest with rakes, some implementation and testing of automatic harvesting machines

Fishery management: Shell size regulations 38 mm (wild Fishery only), Short Open periods within fishing zones. Growing water classification and management through the Canadian Shellfish Sanitation Program

Standing stock assessment: Statistical survey by local governments and fisherman's associations

Basic information on aquaculture

Environmental characteristics: Manila clams are found in mid intertidal mixes of sand/mud/"pea" gravel substrates.

Culture methods: Bottom culture by reseeding using hatchery produced seed and mix of wild

recruitment. Lightweight mesh netting is placed on clam beds to reduce predation by ducks, fish and invertebrates. Suspended cage culture has been tried in the past but abandoned due to persistence of poor shell shape and high mortalities.

Operational management: Intertidal clams are also accessed commercially through aquaculture operations. These are managed independent of the wild commercial fishery. Farming operations operated on intertidal lands leased from the Provincial government for terms of 10 – 30 years. Licensing of Aquaculture is conducted by the Federal Government.

Others: Obtaining new areas for aquaculture is very difficult at present. Aboriginal Groups (First Nations) have most significant access to new growing areas as part of treaty process. As a result, significant increases in production are not anticipated.

Major constraints and countermeasures

Habitat degradation: Many optimal beaches are closed to harvest due to sewage contamination.

Overfishing: Strict license limitations, increased production from aquaculture and fact that clams may only be sold to federally licensed processor with chain of custody have reduced overfishing. Poaching from contaminated areas is still a concern.

Diseases and parasites: Not seen as limiting.

Climate change: Increasing temperatures in culture region may have effect on wild recruitment.

Economic aspects: Prices have decreased in recent years but are relatively stable at present. Aging workforce will require mechanization for future development.

Others: The use of clam netting on beaches fronting residential areas has become controversial with public opposition in some areas. Use of mechanical harvesters has also been opposed for reasons of industrialization of the foreshore.

Proposed international collaborative studies in the future: Improvements in nursery culture.

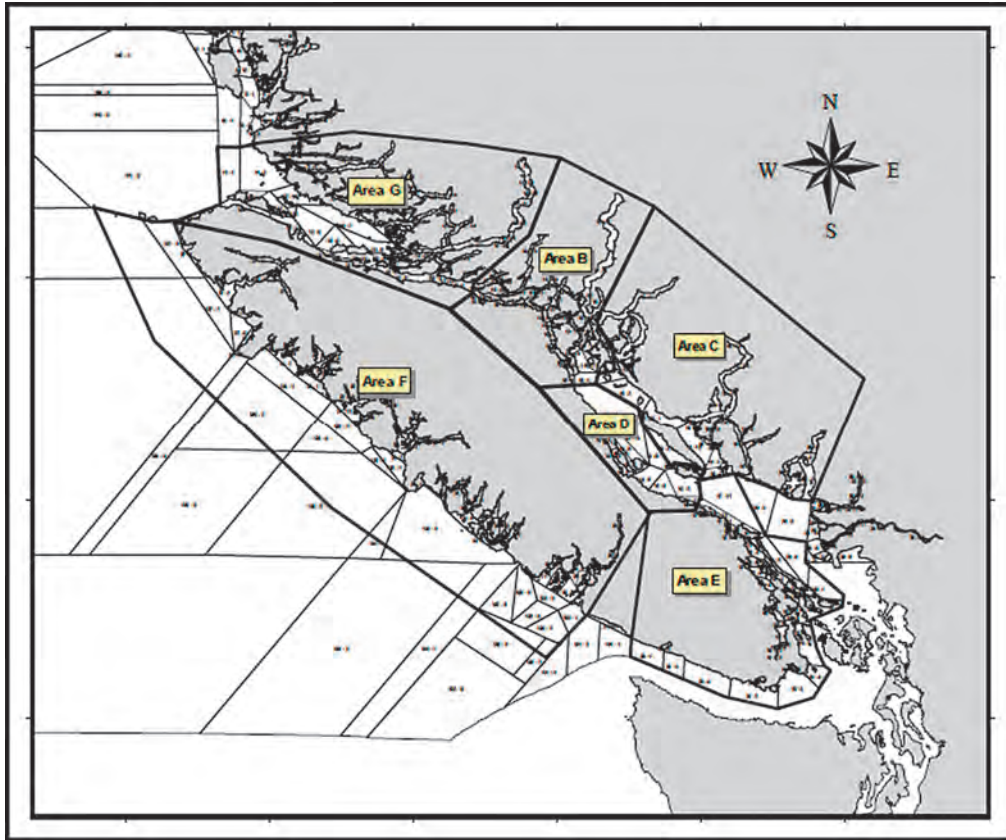


Fig. 1. Fishery management areas in Southern British Columbia, Canada

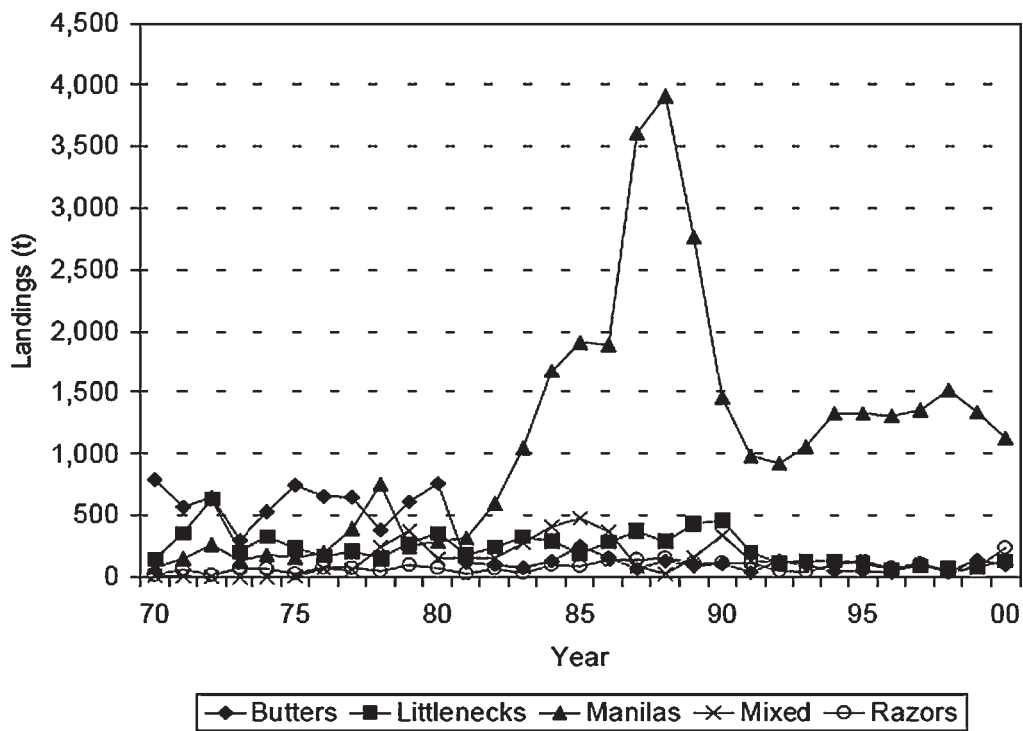


Fig. 2. Fisheries Landings for Intertidal Clams in British Columbia, Canada

