

Canadian Shellfish Sanitation Program - Manual of Operations

CHAPTER 12

SHELLFISH AQUACULTURE

Shellfish aquaculture is a very important part of the shellfish fishing industry. The granting of shellfish aquaculture leases is the mandate of provincial governments; except in prince Edward Island; however, both Fisheries and Oceans Canada and/or Environment Canada and/or the Canadian Food Inspection Agency can provide advice to provincial authorities during the site approval, lease and licence granting processes.

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12.1 Aquaculture Sites

The aquaculture of shellfish may be conducted in areas where:

- a) the water quality complies with the approved area classification and is free from point and non-point pollution sources (see Chapter 2), and only when chemical or toxin levels do not reach or exceed the tolerances and/or action levels outlined in Appendix II;
- b) the water quality complies with the requirements of Chapter 2 for areas where shellfish depuration is needed, and the shellfish are subjected to a depuration protocol as outlined in Chapter 10.
- c) the site is not within any prohibited area as described in Chapter 2 and the shellfish are subjected to a natural or container relaying process in approved areas for sufficient time and under adequate environmental conditions to allow purification to occur; and
- d) all requirements of Annex 12A - Criteria for Shellfish Aquaculture Leases in Bacteriologically Contaminated Areas - are met.

12.2 Integrated Multi-Trophic Aquaculture

For the purposes of the CSSP, integrated multi-trophic aquaculture refers to the raising of shellfish and finfish within a 125 metre radius of one another in the marine environment.

Canadian Shellfish Sanitation Program - Manual of Operations

Special measures are required to ensure that the shellfish cultivated and harvested from such systems are not adversely affected by potential sources of pollution stemming from the culture operation and structures (see Chapter 2).

The aquaculture proponent who plans to cultivate and harvest shellfish within the 125 meter distance of a finfish net pen must:

- ▶ have a documented agreement with the authority responsible for land tenure and/or licensing aquaculture activities for the exploitation of the species grown on the site, as well as confirmation from Environment Canada that it has surveyed and classified the surrounding waters, and;
- ▶ submit an Integrated Multi-Trophic Aquaculture Management Plan (IMTAMP) to the Regional Interdepartmental Shellfish Committee (RISC).

The IMTAMP will be developed as described in Appendix XII, "Procedures for Development, Approval and Review of an Integrated Multi-Trophic Aquaculture Management Plan" and shall detail the operating measures which ensure that cultivation and harvesting takes place only where sanitary conditions can be maintained (see Chapter 2, Appendix II, and Appendix III).

Failure to meet the conditions of the IMTAMP must be immediately reported to the Chair of the RISC.

12.3 Other Aquaculture Activities

Although aquaculture-raised shellfish are destined for human consumption there are a number of activities that may be carried out in advance of final harvesting, processing and sale. These activities can include spat and seed collection. Shellstock spat and seed may be collected, for grow-out, and from bacteriologically contaminated areas by licence issued under Management of Contaminated Fisheries Regulations (DFO, 1990) providing that they are moved to approved shellfish areas for an acceptable period of time prior to their final harvest and sale for human consumption. This grow-out period must be a minimum of six months or longer.

Canadian Shellfish Sanitation Program - Manual of Operations

12.4 Aquaculture Methods

Consideration must be given to culture shellfish in a manner that will ensure it is safe for consumption prior to harvesting for sale. When, in the opinion of a shellfish control authority, the technology used to grow shellfish could potentially create or attract significant sources of contamination, failure to develop adequate control measures could lead to the closure of an aquaculture site. Any shellstock cultured using this type of technology must be subject to QMP controls in a federally registered establishment, or the leaseholder must submit a harvest plan with appropriate control measures acceptable to the regional shellfish control authority.

Canadian Shellfish Sanitation Program - Manual of Operations

ANNEX 12A

CRITERIA FOR SHELLFISH AQUACULTURE LEASES IN BACTERIOLOGICALLY CONTAMINATED AREAS

1. All bivalve molluscan shellfish raised in bacteriologically contaminated areas must be harvested under license issued under Management of Contaminated Fisheries Regulations (DFO, 1990), and must go through an approved depuration (controlled purification) or relay process before being marketed.

In the case of "conditionally approved" areas, shellfish may be harvested for direct marketing only when the area is in the open status and provided that a conditional management plan is in place.
2. It is recommended that no lease be issued within the boundaries of any prohibited area as described in Chapter 2.
3. All new lease holders in previously unused areas must go through a species-specific verification process that is acceptable to DFO, CFIA and EC, and for whichever purification process (depuration or relaying) that is intended.
4. All lease holders must, subject to EC, CFIA and/or DFO approval, have analyses of overlay waters and/or shellstock performed by third-party laboratories on an annual basis in order to demonstrate that the bacteriological quality of the lease site overlay water and shellstock have not deteriorated.
5. All activities related to the harvesting and transportation of bacteriologically contaminated shellstock destined for depuration and/or relaying must be supervised and verified and carried out under conditions of licence issued under Management of Contaminated Fisheries Regulations (DFO, 1990), and detailed in a management plan or Memorandum of Understanding (MOU).