Situation of European mollusc production regarding diseases

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Abstract
The production of marine molluscs is an important part of the European aquaculture. Its growth has unfortunately been hindered over the recent years by mortality events, linked to pathogen organisms.

Surveillance of mollusc diseases in Europe includes active surveillance of regulated pathogens and non-regulated pathogens and passive surveillance based on mortality reports. However, mortality reporting relies on the good will of producers/fishermen and mostly concerns the Pacific cupped oyster *Crassostrea gigas*.

Since these last years, implemented surveillance programmes have allowed for better defining of the geographic distribution of some mollusc pathogens. This is the case of *Bonamia exitiosa,* a protozoan parasite previously considered exotic to Europe and which has been detected in different European countries since 2008. Moreover, these different active and passive surveillance programmes have contributed to characterising new pathogens including the protozoan parasite *Marteilia cochillia* in cockles in Spain and parasites of the genus *Mikrocytos* in France, Spain, The Netherlands and United Kingdom. Transfer of animals and depuration centers seem to contribute to the spread of mollusc pathogens. However, the source of these apparently new pathogens is often difficult to identify.

Introduction

The European shellfish industry enjoys a privileged position on the global scene. Its social dimension is essential, as it employs a high number of people in more than 8000 companies, mostly micro-companies.

Shellfish production in Europe mainly relies on the industrially produced mussels *Mytilus galloprovincialis* and *M. edulis* and in a lesser concern on oysters, *Crassostrea gigas*. Other species including clams *Ruditapes philippinarum*, cockles *Cerastoderma edule*, the flat oyster *Ostrea edulis* or scallops *Pecten maximus* are partly harvested from natural beds and represent a great potential for diversification. The frontier between wild and farmed animals is not easy to draw, some species being harvested from beds created by settlement of spat produced in hatcheries or spat collected from other geographic sites.

Behind this general picture, the European shellfish production displays diversity between European countries. Spain is the first producer of mussels *M. galloprovincialis*. France and Italy are the first producers of oysters *C. gigas* and manila clams *R. philippinarum*, respectively.

Although the production of flat oysters *O. edulis* is very low, less than 5000 t per year, it concerns

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