

ANNEX 3: NATIONAL REPORTS

NATIONAL REPORT FOR BELGIUM

1 LAWS AND REGULATIONS

The Belgian law of 20 January 1999 on the protection of the marine environment in the marine areas under Belgian jurisdiction (MMM wet) published in the Belgian Official Journal (BOJ) on 12 March 1999, forbids the intentional introduction of non-indigenous species in the marine environment (art. 11 § 1). This is a provision mirroring those included in international instruments such as the Biodiversity Convention.

The unintentional introduction of non-indigenous species via ballast water of ships can be penalised by royal decree (art. 11 § 2). Due to the specific and international character of the issue of non-indigenous species in ballast water of ships, however the new Belgian framework law did not specifically touch this issue, and this activity is to be regulated by an implementation decree.

For the protection of the marine biota, measures can be taken (by royal decree and after scientific consultation) for the extermination of non-indigenous nuisance species (art. 11 § 3). The new law also prohibits the intentional introduction of genetically modified organisms into marine areas (art. 11 § 4).

In the Flemish region, the introduction of non-indigenous species is prohibited, except with a licence, by the decree of 21 April 1993 of the Flemish Executive (published in the BOJ on 31 June 1993). The Flemish Regional Government is preparing a further regulation.

2 DELIBERATE INTRODUCTIONS AND TRANSFERS

2.1 Finfish

Reintroduction project of Atlantic salmon (*Salmo salar*) in the river Meuse: Salmon 2000 (Philippart, Ulg); restocking of turbot (*Scophthalmus rhombus*), offspring from fish from the French Atlantic coast, and sole (*Solea solea*). Apparently no other planned deliberate introductions.

3 ACCIDENTAL INTRODUCTIONS AND TRANSFERS

3.2 Invertebrates

Spreading and establishment of several new species in recent years. Several introductions are now very abundant.

Haliplanella lineata: Spuikom in Oostende 1998, first record for Belgium.

Nemopsis bachei: 1996 – 1997 abundant in the harbour of Zeebrugge (Dumoulin, 1997) still present, also recorded some years earlier from the Netherlands.

Ficopomatus enigmaticus: first recorded in 1952, this species is now again regularly recorded.

Crassostrea gigas: although present earlier, this species became very abundant after 1995; it has been spawning regularly since that time, and settling occurs by the end of September. The species now forms dense populations in the harbours of Zeebrugge, Oostende, Nieuwpoort and Blankenberge. It is present on the groins, living between the mussels, and on offshore buoys. It has been introduced frequently by oyster farmers in earlier years from Japan and Canada but also from France, Portugal, the Mediterranean, etc., in the Spuikom at Oostende. However until the 1990s this species was never able to establish self-sustaining populations.

Crepidula fornicata: present almost everywhere and very abundant, offshore as well as in littoral areas, in fully marine conditions as well as in brackish conditions, on groins, as fouling on buoys, ships, harbour installations, also benthic. A recent increase in the abundance has been observed along the Belgian coast.

Corbula gibba: introduced after 1983 in the harbour of Zeebrugge. First records from Belgium in 1998 (Kerckhof, 1998). Also recorded recently in 1996 from the harbour of Dunkerque (Pruvot *et al.* 2000).

Ensis directus: first record from Belgium in 1987 (settled 1986). Now the most common bivalve on Belgian beaches; also recently recorded from the Spuikom in Oostende.

Petricola pholadiformis: still common, but *Barnea candida* seems now to be the more abundant species. *B. candida* is also the more common species in Northern France, e.g., Boulonnais.

Mytilopsis leucophaeata (= *Congeria cochleata*): present in the harbour of Antwerp, causing nuisance by the obstruction of water intake pipes of some chemical plants.

Barnacles: several new species (Kerckhof and Cattrijsse, in print), e.g., *Balanus amphitrite*: established on places that are not artificially warmed, e.g., the harbours of Oostende and Nieuwpoort and on buoys off the Belgian coast. Several records on buoys off the Belgian coast from *Megabalanus coccopoma* and *M. tintinnabulum*, the former probably established in the southern North Sea. Also records on the buoys from *Balanus reticulatus* and *B. variegatus*. *Elminius modestus* is now by far the most common barnacle of the Belgian coast.

Caprella mutica: (= *C. macho* = *C. acanthogaster*): first record in 1998. Present on several buoys marking the entrance to the harbour of Zeebrugge. Also recorded from the Marina of Zeebrugge, but not yet from other places.

Hemimysis anomala: first record in Belgium in 1999 (Verslycke *et al.* 2000).

Several first records of some *Bugula* (Bryozoa) species, e.g., *Bugula stolonifera* (established), Oostende, whole harbour; *Bugula simplex*, new record in 2000, Oostende, Mercator Marina, extending its range?; also in the Netherlands; *Bugula neritina* recorded once in 1999, Oostende, Mercator Marina (Kerckhof 2000; Kerckhof 2001; De Blauwe & Faasse in prep.).

Tricellaria inopinata: range extension. First observations in Belgium in 2000 (Blankenberge, Marina and Oostende, Mercator Marina); also recorded from France and the Netherlands in 2000 (De Blauwe & Faasse in prep.).

Callinectes sapidus: since 1995, after a period of approximately 10 years of no records, each year several catches along the coast of northern France and Belgium (North Sea and also the Scheldt estuary), mature animals, even females carrying eggs. Possibly a population in the Scheldt (Antwerpen?).

Eriocheir sinensis: after a marked decline until the early 1990s, this species is again regularly recorded along the coast, in inland waters and the Scheldt.

Rhithropanopeus harrisi: established in the Scheldt estuary (J. Maes pers. comm.).

Hemigrapsus sp.: not yet recorded, although sought after.

3.3 Algae

Continuous spreading and establishment of some macroalgae.

Undaria pinnatifida: recent range extension. Recorded from Calais (Northern France) in 1998, (it was not present there in 1997) and now very common (Leliaert *et al.*, 2000); first record for Belgium in 2000 (Marina Zeebrugge) (Dumoulin & De Blauwe, 1999; De Blauwe, 2000), small population, still present in 2001. Not yet recorded elsewhere from the Belgian coast. Recorded from the Netherlands in 1999 (Stegenga, 1999).

Sargassum muticum: recent establishment in Belgium. Known washed ashore on Belgian beaches since 1977. First time *in situ* records for the Belgian coast, from the harbour of Zeebrugge in 1999 (De Blauwe, 2000), not recorded there anymore after that date. Also present in the Spuikom in Oostende since 1999, probably already present there in 1998. Relation with oyster imports?

Codium fragile subspecies *tomentosoides*: known washed ashore becoming more abundant the last years. *In situ*, forming dense populations during 1998–2000 in the Spuikom, Oostende. Some earlier records. Relation with oyster imports (Canada). Apparently not present any more in 2001 probably due to competition with *Sargassum*, growing on the same places.

Antithamnionella spirographidis: first accidental record in 1992, epiphytic on *Polysiphonia fucoides* on a groin in Oostende, not established then; established in the harbour of Zeebrugge (after 1983) and the Mercator Marina, Oostende; also present in northern France, e.g., the Marina at Calais.

4 LIVE IMPORTS AND TRANSFERS

In Belgium, there is a lot of (uncontrolled) import and export of a wide variety of marine and fresh water species, for research, human consumption, aquaculture and aquariums.

Since 1996 an oyster farmer restarted farming and importing oysters in the Spuikom at Oostende. Japanese oysters *Crassostrea gigas*, were imported from Canada (British Columbia), and France; Hard-shell clams, *Mercenaria mercenaria*, from France(?); Manila clam, *Tapes philippinarum*, from France(?); *Ostrea edulis* (UK, Canada). Apart from oysters and other well-known commercial species, he imported also several other species virtually without any control, e.g., *Spisula polynyma* and *Cyrtodaria siliqua* from Canada.

At the nuclear power plant of Tihange, there is some aquaculture of warmwater fish: rainbow trout from California; African Catfish, Tilapia.

A trader in Zeebrugge imports *Homarus americanus* from Canada. The species is also imported by the oyster farmer operating around the Spuikom at Oostende.

Prof. Dr Volckaert (KUL) is worried about the impact (gene-pool interactions) on existing populations of imports of the same species from elsewhere (e.g., for restocking).

7 MEETINGS, PROJECTS

A shipping study entitled "Study of the Potential Role of Transportation of Ships Ballast Water on the Geographical Extension of Blooms of Toxic Algae" was carried out at the Université Libre de Bruxelles. The main results of the study were that risks do exist concerning the introduction of non-indigenous toxin-producing phytoplankton species into European waters with ballast water or sediment discharges. It is recommended to implement ballast water management guidelines at an international level (Vanden Boeck 1995, G. Houvenaghel, Université Libre de Bruxelles, LOBA CP 160/19, Avenue F.D., Roosevelt 50, B-1050 Brussels, Belgium pers. comm.).

8 BIBLIOGRAPHY

See Annex 10.

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NATIONAL REPORT FOR CANADA

1 LAWS AND REGULATIONS

Canada is nearing completion on its National Code on Introductions and Transfers. The purpose of the code is to establish scientific criteria for the intentional introduction of live aquatic organisms while minimising the risks inherent in such transfers (i.e. undesirable ecological changes to native ecosystems, undesirable genetic alterations in native stocks, transfer of disease agents). The Code will apply to transfers of aquatic organisms into fish habitat and fish rearing facilities, but not to live food fish, baitfish or aquarium fish or plants. The enabling legislation is Section 55 & 56 of the *Fishery (General) Regulations* which applies in most provinces of Canada in both marine and fresh waters. We expect the Code to be sent to the Canadian Council of Fisheries and Aquaculture Ministers for signature in early 2001. There will then be an 18-month implementation period at the end of which there will be a review and recommendations for changes, if required.

In addition, Canada is proposing a new National Aquatic Animal Health Program for which a consultation document has been prepared.

Genetically Modified Organisms, including aquatic species, are currently regulated under the Canadian Environmental Protection Act. New regulation is being drafted under the Fisheries Act to regulate activities in relation to aquatic