

The Future of the Flat Oyster: restoration of flat oyster communities in the North Sea

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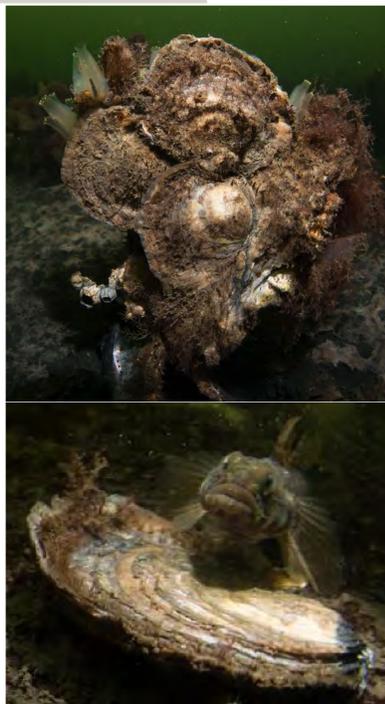
Background

Flat oyster communities have existed in the North Sea, Wadden Sea and the Channel: see Olsen, 1883; Polley (anon, 1876); Gilson, 1900 and Hoek, 1910.

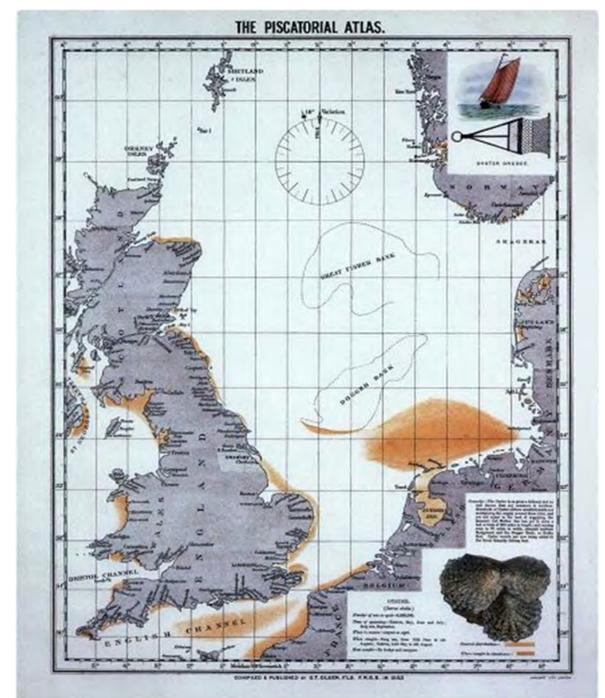
Large scale fisheries on oysters and subsequent bottom trawling decimated the North Sea stocks (van Ginkel, 1996)

Flat oysters have formed dominant communities in the past, but at present they are hard to find. Oyster reefs provide habitat, food and shelter for many associated species and may enhance biodiversity. They provide various ecosystem services including sustainable provision of valuable products.

In the action plan "Shellfish reefs at risk" (Beck et al, 2011) the flat oyster is an important target species for restoration in European marine waters.



Flat oysters and associated fauna, lake Grevelingen, courtesy Yoeeri van Es, 2014

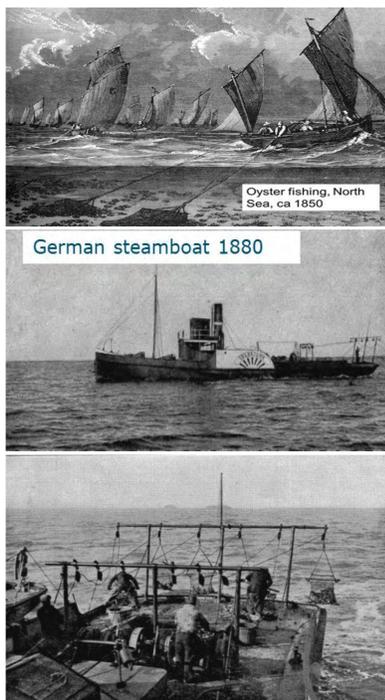


Olsen map 1880 of flat oyster beds

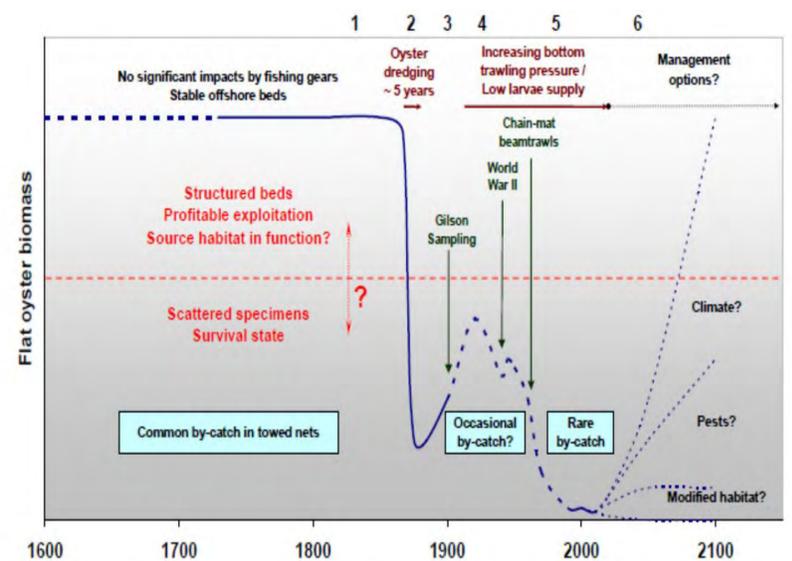
Objective

Governmental policy aims at restoring shellfish beds, including flat oysters, in the North Sea (Uitvoeringsprogramma Natuurlijk Kapitaal).

The objective of our feasibility study is to identify the conditions that are required for reintroduction of the flat oyster, and to develop a program for field tests at different North Sea sites, as a step towards real scale restoration on selected locations.



North Sea flat oyster fishing 1850 - 1880

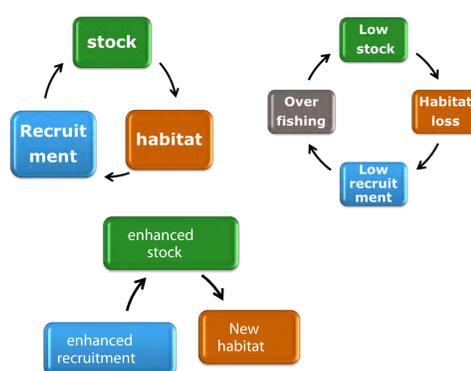


Reconstruction of flat oyster development Flemish banks (Houzieaux, et al 2008)

Approach

On the basis of literature, historic data, expert knowledge and input from stakeholders a feasibility plan will be developed, focussing on environmental conditions for reintroduction, selection of test sites, identification of Bonamia-free oyster resources and test methods.

Conceptual scheme



Oyster beds are self-reinforcing, supply of non-disturbed oyster habitat should catalyse restoration

New habitats without bottom disturbance



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