



Testing genetic tools for marine ecosystem health assessment: A pilot on non-indigenous species



Sander Delacauw, Klaas Deneudt, GEANS consortium & Pascal I. Hablützel

Introduction

GEANS (Genetic tools for Ecosystem health Assessment in the North Sea region), an Interreg North Sea region project aims to introduce DNA-based methods in biological monitoring. Within this project, seven North Sea countries collaborate to develop standard operating procedures (SOPs), test them by means of pilot studies and translate the results into a decision support framework to support stakeholders in biological monitoring. Among the pilot studies, one specifically aims for on the detection non-indigenous species (NIS), since accurate monitoring is a key prerequisite to limit the spread of NIS among harbours.

Pilot Studies → NIS Pilot Ostend





Validate genetic tools and methods



Improve standardization at international level

Metabarcoding  HELCOM/OSPAR Protocol

-  Phytoplankton
-  Zooplankton
-  Scrape samples
-  Fouling plates
-  eDNA



Malgula manhattensis



Magallana gigas



Caprella mutica



Austrominius modestus



DNA-based  Traditional 

High-throughput imaging



Costs
Time
Accuracy

