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VIVALDI Consortium



Reducing the effects of shellfish disease

PREVENTING AND MITIGATING FARMED MOLLUSC DISEASES



SCIENTIFIC AND SOCIO-ECONOMIC CONTEXT

European shellfish farming enjoys a prominent position on a global scale. European production of shellfish relies mostly on mussels, oysters and clams. Approximately 8,500 companies employ more than 42,000 people.

In the last few years, the industry has been weakened by mortality events linked with various viruses (e.g. OsHV-1), bacteria (e.g. *Vibrio aestuarianus*) and parasites (e.g. *Marteilia cochillia*), which lead to significant economic losses.

It is in this context that the European **VIVALDI** project aims to improve **the sustainability and competitiveness of the European shellfish industry** by developing tools and approaches to prevent and mitigate the impact of bivalve diseases.

VIVALDI FOCUSES ON FOUR AREAS

EXCELLENCE AND SCIENTIFIC COOPERATION

VIVALDI aims to make a difference through scientific research, by contributing innovative knowledge on the diversity of pathogens, the immune response of shellfish and the relationship between animals and pathogens within their immediate environment.

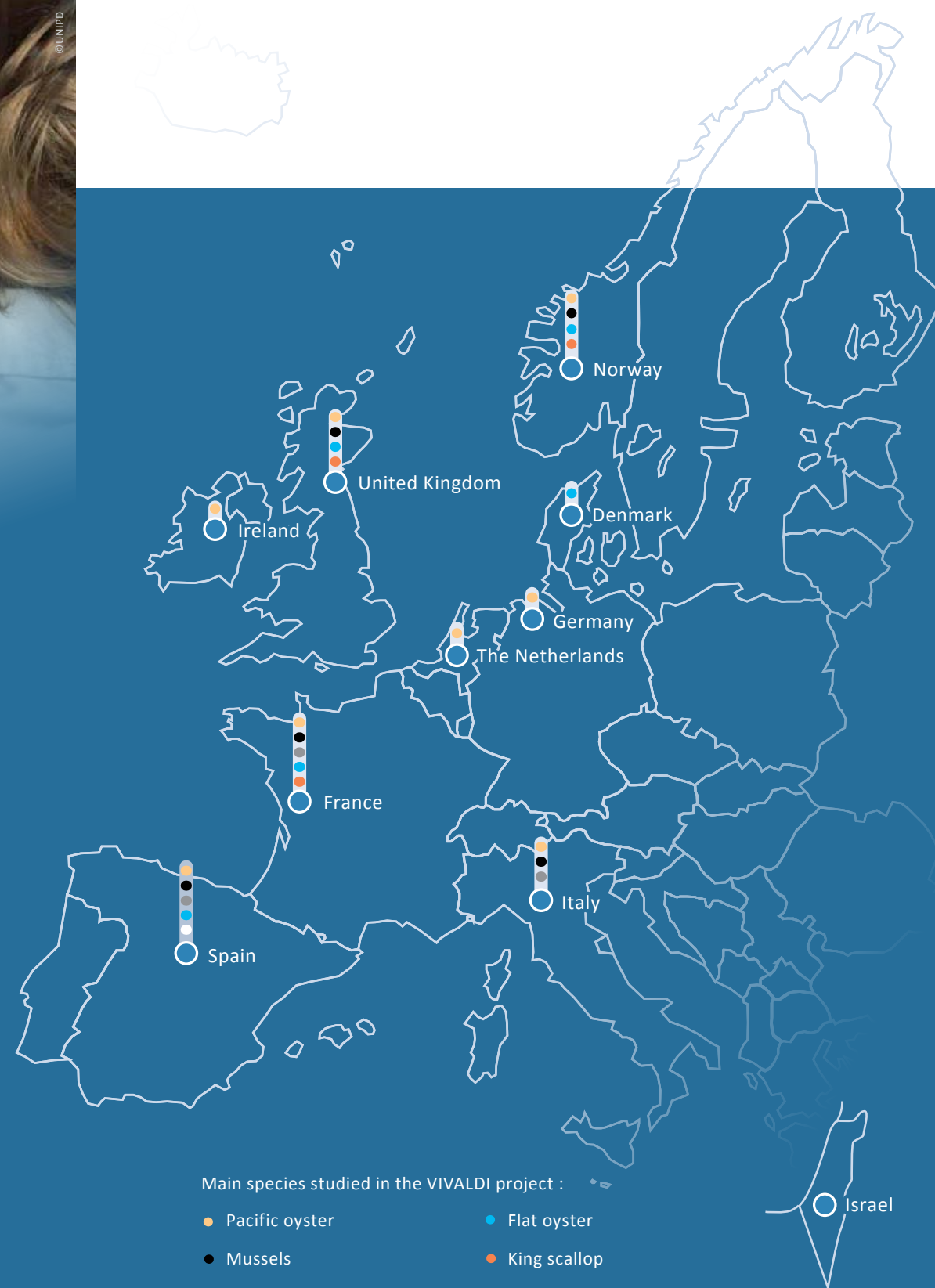
Our mission is also to contribute to European science without borders, through joint publications, exchange of materials and sharing expertise and information on shellfish diseases and preventative actions.

SUSTAINABILITY AND ECONOMIC COMPETITIVENESS

VIVALDI's long-term objective is to contribute to a sustainable increase in production in the European shellfish industry as a result of a decrease in mortalities in the growing cycle.

LONG-TERM, HIGH-QUALITY JOBS

Thanks to the innovations proposed and objectives set in VIVALDI, we hope to contribute to an increase in employment and wages in an industry that plays a major social role in often marginalised coastal areas.



Main species studied in the VIVALDI project :

- Pacific oyster
- Flat oyster
- Mussels
- King scallop
- Clams
- Cockles

IMPROVING KNOWLEDGE TO IMPROVE ADVICE

Facilitated by its knowledge from the shellfish stakeholders and the expertise provided by the researchers, VIVALDI aims to constantly support decision-makers in their role to regulate and support the industry.

VIVALDI IN NUMBERS

4 YEARS
from 01/03/2016 -
28/02/2020

4,5
million euros

21
partners

10 COUNTRIES
8 in the EU + Norway and Israel

6 SPECIES
of shellfish studied

100
researchers
and technicians

DID YOU KNOW ?

1 Throughout its life, a farmed oyster may be transported from one site to another up to 2, 5 or 9 times ?

2 Which country is the main producer of shellfish in the world ?
Japan, China, United States, France

3 Which country is the main producer of mussels in Europe ?
Portugal, France, Spain

4 Around how many tonnes of shellfish are produced by the European shellfish industry each year ?
270,000 tons,
660,000 tons,
1.5 million tons

5 True or false? There are several types of preventative treatments that can be administered to oysters to stop them contracting diseases.

ANSWERS :
1. 9 2. China 3. Spain
4. 660,000 tons 5. False

EXPECTED OUTCOMES FROM THE VIVALDI PROJECT

➔ **BETTER ANTICIPATION OF DISEASE EMERGENCE**
by development of early warning systems (biosensors) and mathematical models for the transmission of diseases to identify the key areas of risk in the production cycle.

➔ **LIMITING THE SPREAD OF A DISEASE**
by development of an effective stock management programme (recommendation manual for farming practices, selective breeding programmes)

➔ **MITIGATING THE EFFECTS OF DISEASES IN ENDEMIC AREAS**
through the introduction of biosecurity measures and various treatments (phyto-therapeutic treatment in controlled conditions, new water treatment methods)

➔ **BETTER COMMUNICATION BETWEEN STAKEHOLDERS,**
including surveys to assess the perceptions of the stakeholders involved, in order to improve the dialogue and information flow.

