

FARNET TRANSNATIONAL SEMINAR FOR FLAGS
WEIDEN, GERMANY 20 – 22 NOVEMBER 2017

Integrating aquaculture within local communities



Detecting Toxic Marine Microalgae

PYRENÉES-MEDITERRANÉE FLAG

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Context

Socio-Economic & Environmental Issues

World population growth

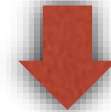


Chemical pollution

Microbiological pollution

- **Eutrophisation** of waters
- Water **quality** loss
- Increased **waterborne diseases** / microbiological contamination
- Poisoning in the food chain

Toxins
ASP / DSP / PSP



**Aquaculture products
poisoning & recreational
waters contamination**

**850M €
loss in EU**



NEED

“Effective **microbiological** monitoring of water quality”

FINDING

“Inadequate or **unsuitable tools** and approaches”

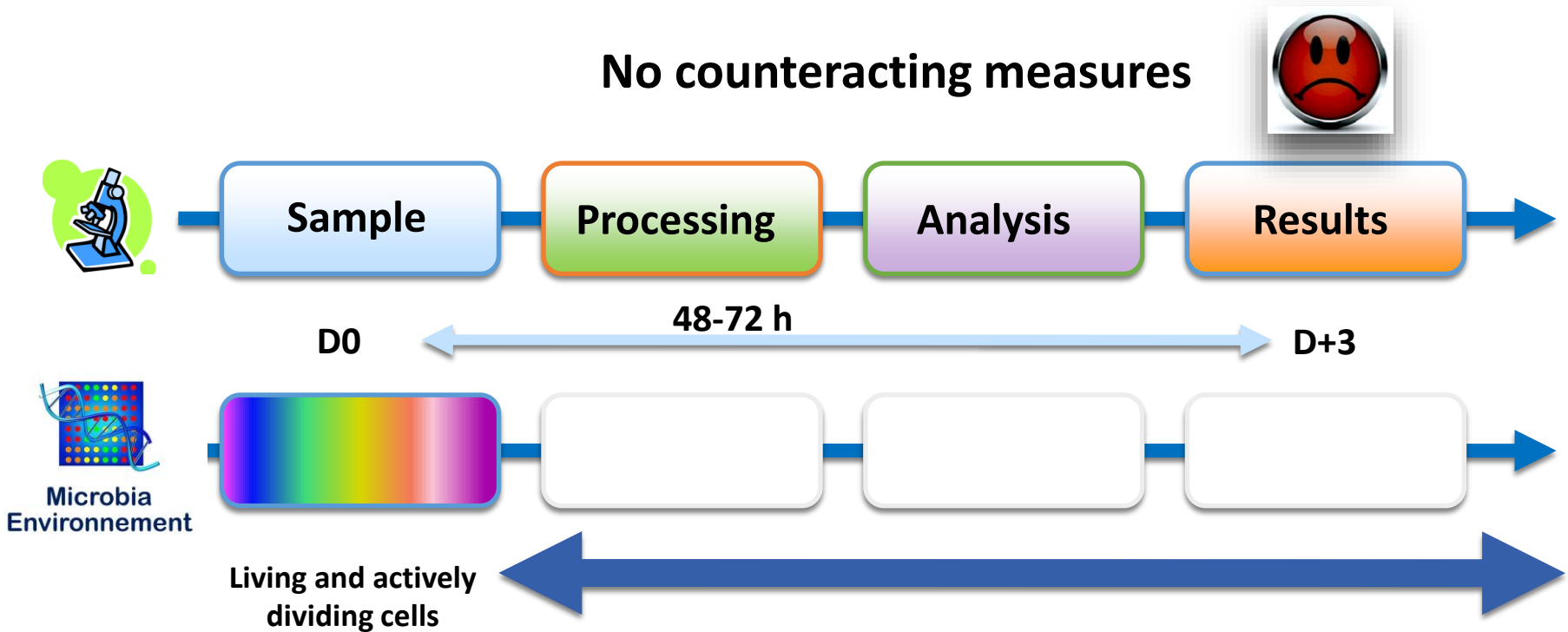
55K
tests/year
NOT
ENOUGH

Solution

“Identify and track harmful organisms **quickly** with a **simple and economical predictive tool**”



Our Solutions



Actions:



- Early harvest
- Isolation of clearance reservoirs
- Authorities alert

GOALS

- Field tests: rapid and easy to use tests to monitor toxic microalgae in environmental waters
- Pilot program in production sites
 - Contractual pilot program in recreational waters
 - Stakeholders feedback

Partners

1. Oyster producer (20 employees) in Mediterranean Leucate Lagoon (FR) - pilot test I - the producer was in charge of the sampling



2. Oyster producer (5 employees) in Mediterranean in Thau Lagoon (FR) - pilot test II - the producer was in charge of sampling + filtration + training for the analysis



3. Local Authorities: Banyuls sur Mer Town Hall recreational water quality control - 2 months survey summer 2017



Methodology

PILOT I : feasibility & logistics



Cost-effective, high frequency monitoring tool to help producers' decision taking

PILOT II : feasibility, logistics & implementation

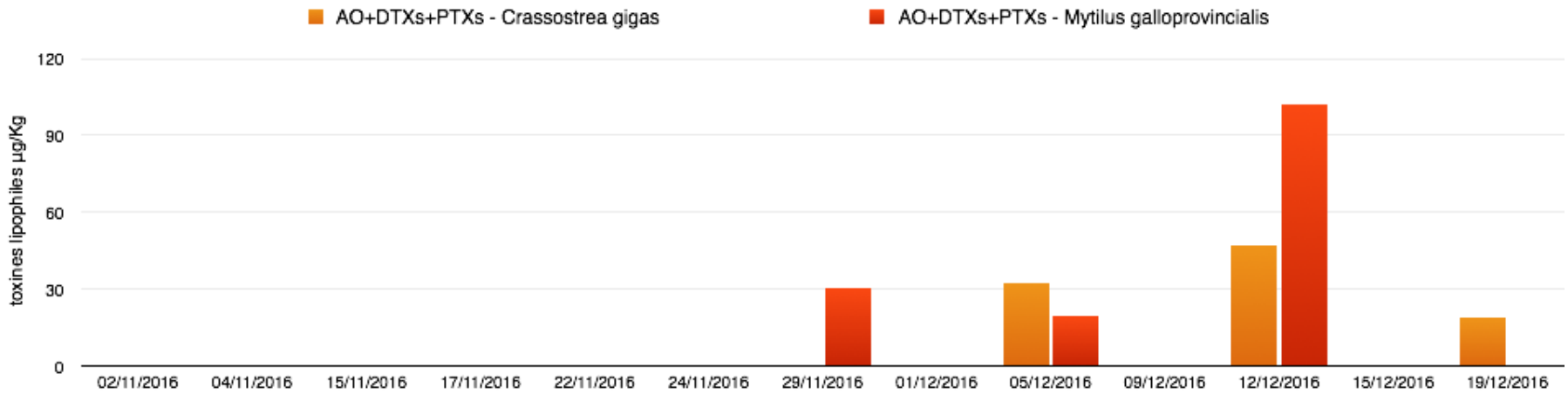
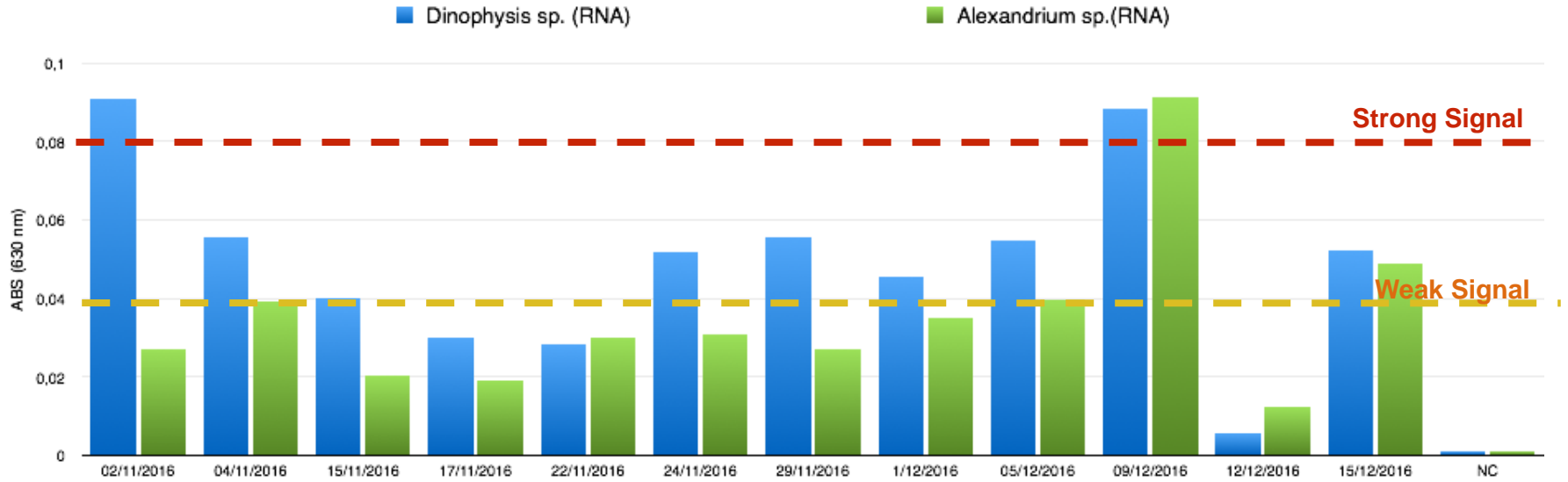


Bioindicator parameter for recreational water quality

PILOT III : feasibility & implementation



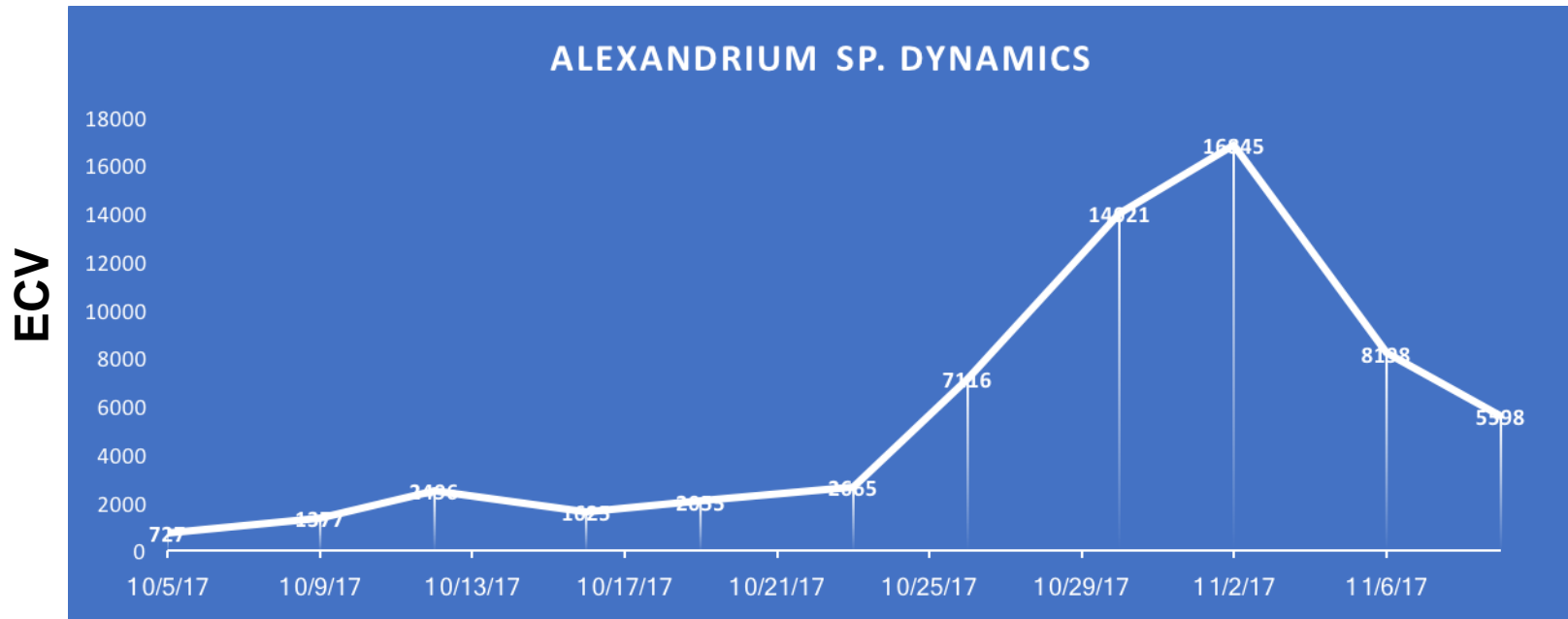
RESULTS Pilot I: Comparison of *Dinophysis* sp et *Alexandrium* sp. activities x Toxins



*Rephy info toxins – Alert & Information Bulletins

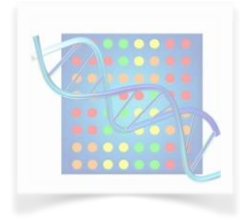
Methodology

- **Test x procedure : 3 step procedure**
- **Methodology simplification : new developments**
- **Timing that really matters**
- **Restitution of results**
- **Physical contact & communication skills**



Benefits

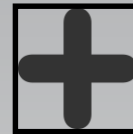
- **microbial risk anticipation**
- **water quality self-control**
- **resource safety**



Advantages



**prevention
of waterborne
diseases**



fast & easy to use



**autonomous
management**

Thank You

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FP7-Oceans
of Tomorrow
2013-2017



bpi**france**



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