BLUEFARM

Spin off dell'Università Ca' Foscari di Venezia

planetek italia

Dati satellitari per una molluschicoltura di precisione

Aquafarm 2019

16 Febbraio, Pordenone

A) Bluefarm Srl & Planetek Italia

B) Modelling growth of farmed species by using satellite derived data

C) The Rethicus-aquaculture® service

Founders:

Roberto Pastres, PhD
prof of Ecology
at DAIS-UNIVE

Daniele Brigolin, PhD
Environmental sciences/
aquaculture-environment
interactions, modelling

BLUEFARM

•Born in 2014 as a small spinoff of Ca'Foscari University of Venice

•Aquaculture support services provided
- Your Virtual Farm
- Environmental Impact Assessment of Aquafarms
- Design of Aquaponic systems

•Participation to EU Aquaculture and EO projects
- ESA Innovator SMART
- Aquaspace (H2020)
- COPERNICUS Accelerator Programme

People involved:

Andrea A Forchino,
PhD Biology/
Aquaculture
productions and Life
Cycle Assessment

Erika MD
Porporato, PhD
Marine ecology/
spatial data
processing and GIS

Edouard Royer –
engineer/
strong programming
knowledge

Francesca Borga
Engineer/
Administration

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planetek hellas

founded **1994**

founded **2006**

people **45**

people **11**

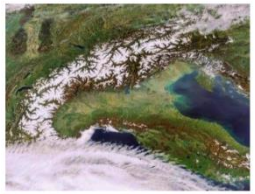
Turnover M€/y **4.5**

Turnover K€/y **0.6**

R&D investment % **15**

R&D investment % **15**

Key technologies

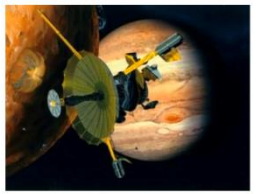


Earth observation

Satellite, aerial and drone imagery for cartography and geospatial indexes. Optical, multispectral and radar imagery.

Location Based Systems

Design and development of real time geolocation based solutions, through positioning systems such as GPS/Gallileo/GNSS and indoor location systems.



Space Software

Development of software compliant to space industry standards for the satellite on-board data and images processing and ground segment infrastructures development.

GIS & Spatial Data Infrastructure

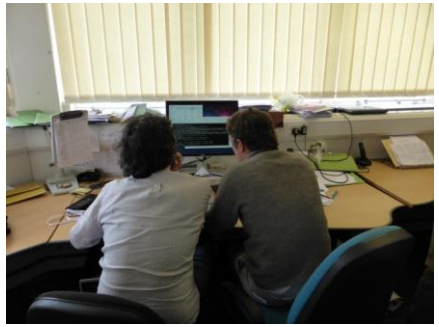
Design and development of Geographical Information System (GIS) and Spatial Data Infrastructures (SDI) compliant with INSPIRE guidelines for geospatial data archive, management and sharing. Linked open Data. Big Data.

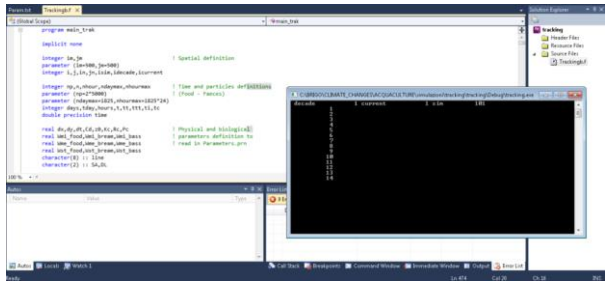
The context:

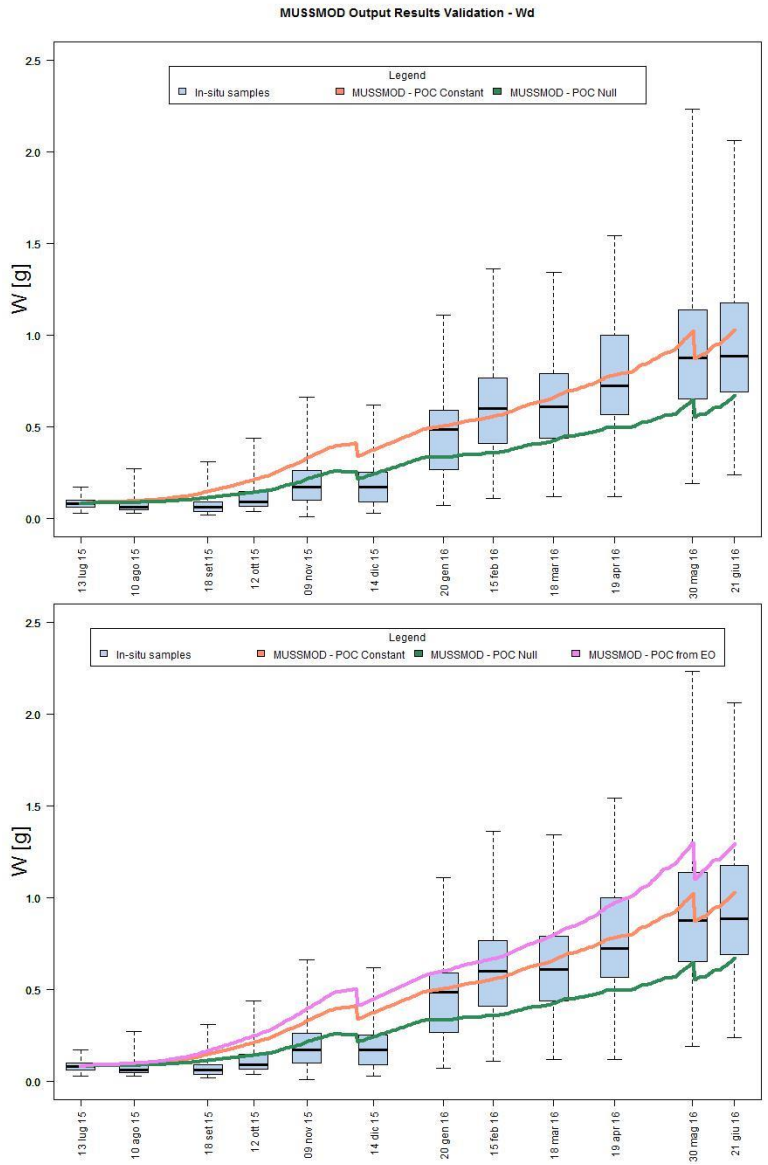
Disporre di informazioni ambientali utili alla conduzione ottimale degli impianti di acquacoltura e per la pianificazione temporale delle pratiche di allevamento, è un'esigenza fondamentale dei gestori che intendono massimizzare i profitti e ridurre i rischi connessi alla produzione

The availability of environmental information useful to manage aquaculture farms, aimed at supporting the planning of the farming cycle, is a key need for farm managers aiming at maximize revenues while minimizing production risks

Modelling growth of farmed species using satellite data



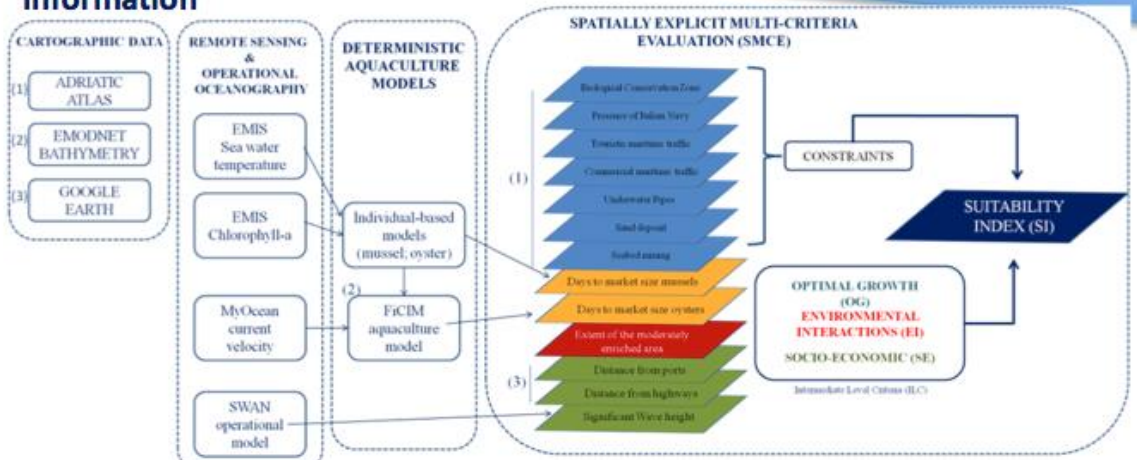




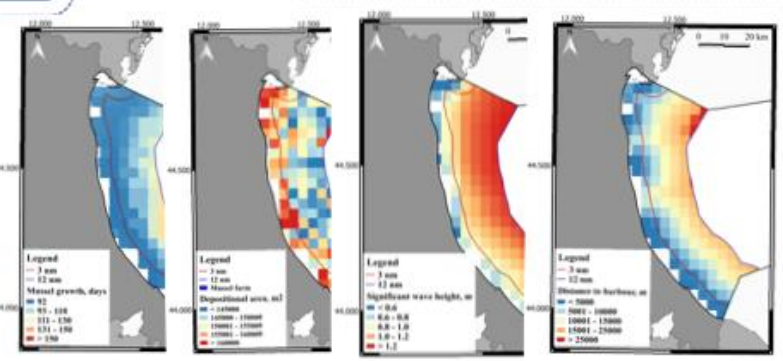
Downstream user applications (4/5):

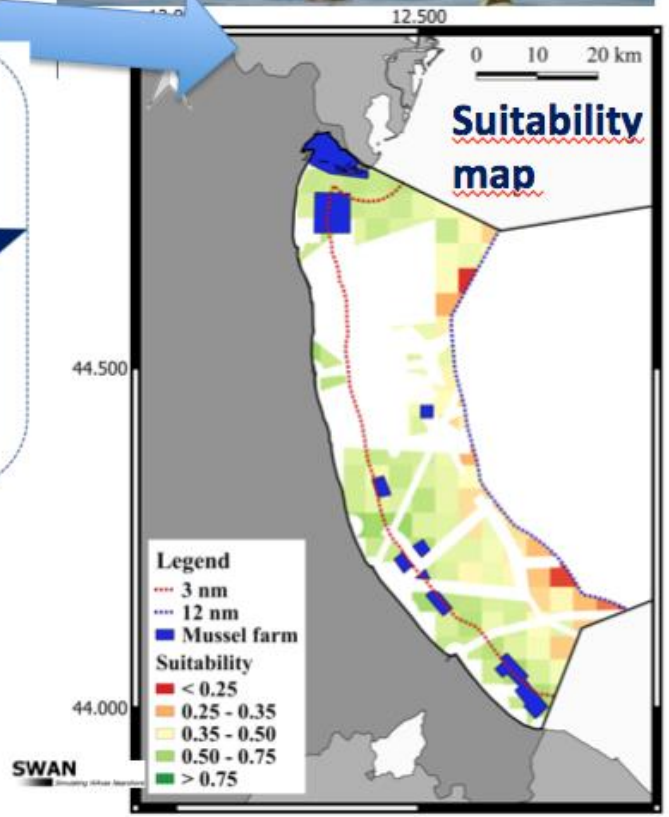
Allocating suitable zones for shellfish aquaculture in the Adriatic Sea

Operational oceanography & remote sensing information → Deterministic aquaculture models → Maps for criteria → GIS



Maps for criteria





Brigolin, D., Porporato, E.M.D., Prioli, G., Pastres, R., 2017. Making space for shellfish farming along the Adriatic coast. ICES-Journal of marine science. 10.1093/icesjms/fsx018

Rheticus® Aquaculture
è il servizio di monitoraggio progettato per supportare i gestori delle attività di acquacoltura nella organizzazione delle attività di produzione e di vendita
Is a monitoring service designed for supporting aquaculture managers in planning their production and sales

Rheticus® Aquaculture fornisce giornalmente:

- Parametri: clorofilla, temperatura, torbidità, salinità, ossigeno disciolto, altezza delle onde, velocità delle correnti;
- Tassi di crescita della specie allevata;
- Livello di rischio connesso alle condizioni meteo-marine e/o condizioni ambientali sfavorevoli;
- Stima del valore economico delle produzioni.

Il servizio **può essere attivato per impianti dislocati nell'intero bacino del mediterraneo attraverso la sottoscrizione di un abbonamento annuale** che consente di ricevere aggiornamenti giornalieri.

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Rheticus® AQUACULTURE

Rheticus | Aquaculture | Welcome SeaFarm & Co. Ltd

Daily Growth Rate vs Market Prices

as of 23/01/2018 at 10:00 UTM

Parameter	Acronym	Value	Units	State
Chlorophyll-a	Chl-a	0.14	mg/m^3	●
Water Transparency	WT	1.00	m	●
Turbidity	T	1.50	FNU	●
Sea Surface Temperature	SST	18	°C	●
Dissolved Oxygen	O_2	260.00	$mmol/m^3$	●
Salinity	S	34.00	PSU	●
Sea Surface Waves	SSW	2.25	H_{m0}	●
Significant Wave Height	SWH	0.20	m	●
Current Velocity	UV	8	cm/s	●
Product Growth Rate	GR	22	%	●
Days to Market Size		10	day(s)	●
Storm Surge Alert		--		●
Average Weekly Shellfish Market Price Source: ISMEA Mercati		0.58	€/kg	▲
Outlook for Risky Situations		Low		●

Storm

Biz

Survey

Antib.

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Satellite Support for Smart Aquaculture

Parameter	Acronym	Value	Units	State
1-year average Chlorophyll-a concentration	Chl-a	0.14	mg/m^3	●
1-year average Water Transparency	WT	1.00	m	●
1-year average Turbidity	T	1.50	FNU	●
1-year average Sea Surface Temperature	SST	20	°C	●
1-year average Dissolved Oxygen	O_2	5	mg/m^3	●
1-year average Salinity	S			
1-year average Significant Wave Height	SWH	0.20	m	●
1-year average Current Velocity				

Outlook for a Potential Aquaculture Farm: 

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Rheticus® AQUACULTURE

The Rheticus® Aquaculture service can be activated for farms located within the Mediterranean basin, by means of an yearly subscription allowing to receive daily updates.

Do you want to know more about Rethicus®aquaculture?

Come & visit us at stand 5.24!!

Thanks for your attention.

info@bluefarmenvironment.com