Planning of Sustainable Aquaculture Activities in the Coastal Zone of S. Spain and S. Portugal Using GIS Applications

Results of the Aqua&Ambi Project and other examples

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2- AGAPA, Jerez de la Frontera/Seville (Spain)

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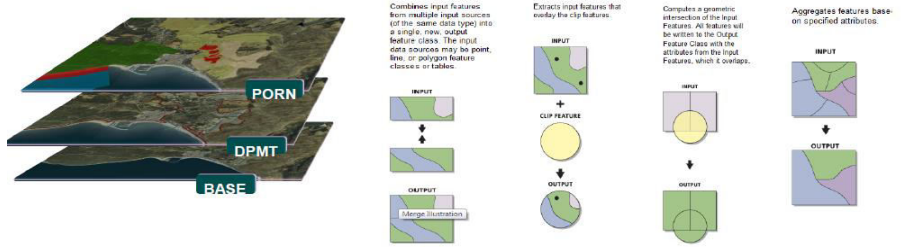


METADATOS + GeoDataBase

WHAT IS CTAQUA

CTAQUA: Andalusian Aquaculture Technology Center

Non-profit private foundation

Patronage: aquaculture farmers, feed companies and other industry, Universities, regional governmental institutions

AIMS

Develop applied research, technology, innovation, sustainability and training within the aquaculture sector, thus improving the competitiveness of Andalusian aquaculture companies.

CTAQUA gives support to aquaculture companies and creates a platform for collaboration between the research community and the private sector.

(1) Provide services to the aquaculture community (develop R&D projects)

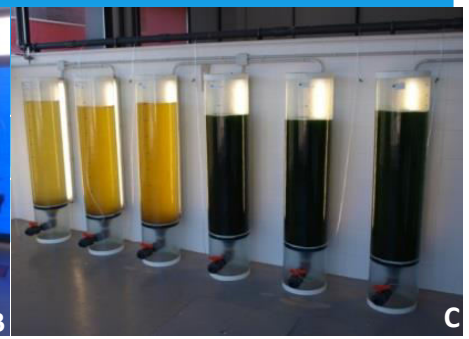
(2) Apply new technologies in aquaculture companies

(3) Knowledge transfer and dissemination of scientific results

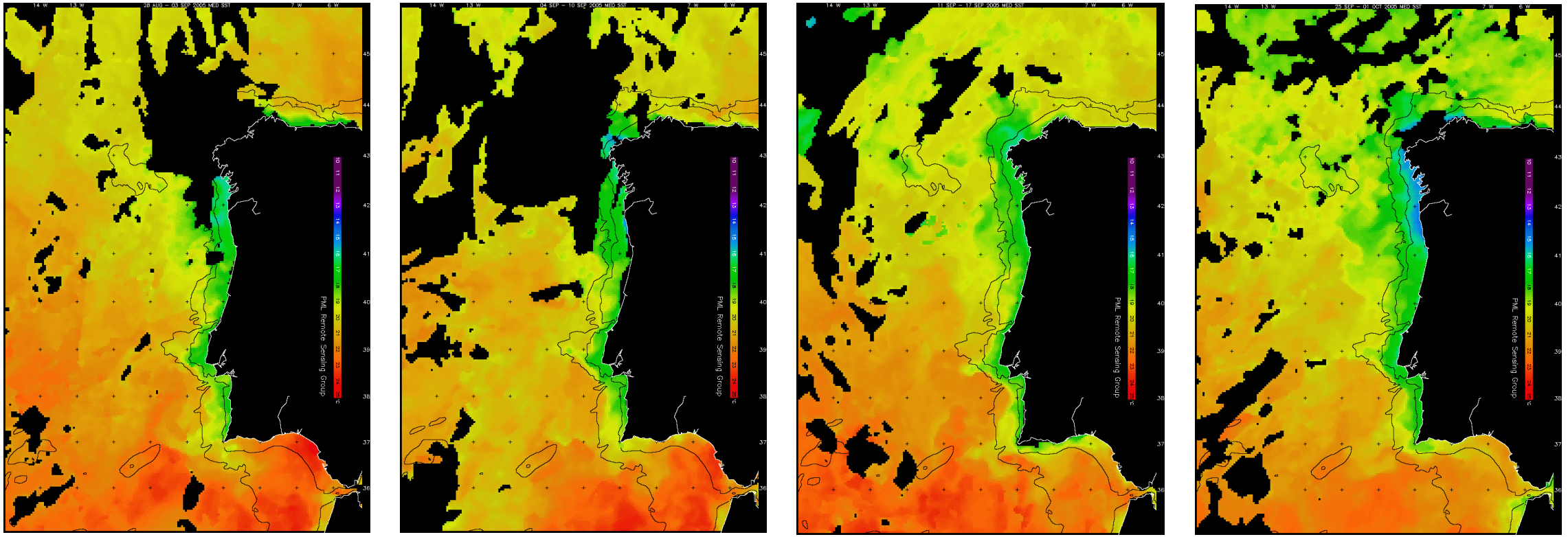
(4) Promoting application of new markets standards

TECHNICAL FACILITY

Labs:
Water analyses
Food/feed analyses
Transformation
Microbiology/pathology



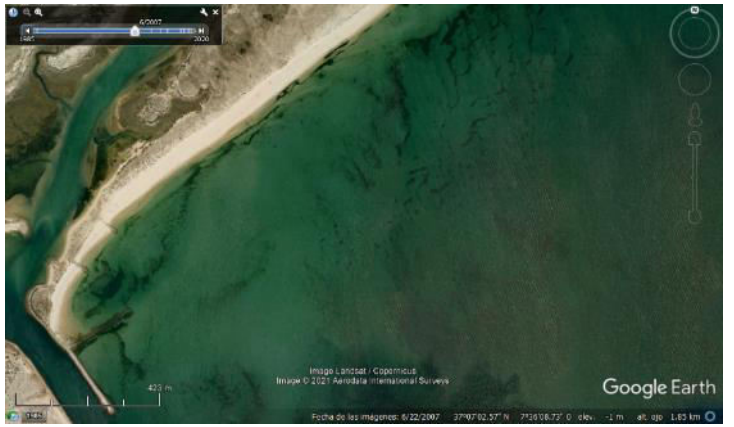
USING AVHRR FOR UPWELLING DECTECTION



Upwelling of cold water from the deep brings nutrients to the coastal zone – detection of the duration and extension using satelite data.

HISTORY OF SEAWEED BLOOMS IN THE ALGARVE, PORTUGAL

During Project studying macroalgal blooms: use satelite imaginery to detect extension of past blooms



EUROSEA: https://eurosea.eu/

CTAQUA is end user (not partner)

Interest aquaculture sector:

- Probability maps / timing extreme Events (extreme wave action, currents, temperatura, etc.)
- Identification of zone where information is lacking (25-50 m depth)
- Local prediction maps wave action
- Others,...

COASTAL ZONE PLANNING: AQUA&AMBI

AQUA&AMBI: Support for the management of wetlands on the Southwest Iberian coast: interactions between aquaculture and the environment in the Alentejo-Algarve-Andalusia cross-border region.

Start: 06/06/2017
End: 05/04/2022 (2nd phase)

Project coordination: IPMA Instituto Português do Mar e da Atmosfera

Partners phase 1:

ctaqua Centro Tecnológico de la Acuicultura
UCA Universidad de Cádiz
CSIC Consejo Superior de Investigaciones Científicas
Pistresa
Agencia de Gestión Agraria y Pesquera de Andalucía, Consejería de Agricultura, Ganadería, Pesca y Desarrollo Sostenible
Instituto de Investigación y Formación Agraria y Pesquera, Consejería de Agricultura, Ganadería, Pesca y Desarrollo Sostenible
apa agência portuguesa do ambiente

Website (Portuguese/Spanish): https://www.aquaambi-poctep.eu/

Interreg España - Portugal
Fondo Europeo de Desarrollo Regional
Fundo Europeu de Desenvolvimento Regional
UNIÓN EUROPEA
UNIÃO EUROPEIA

Work area

PROJECT OBJECTIVES

- Improving the conservation status of coastal areas, increasing restored areas and their profitability
- Maintaining and restoring biodiversity and ecosystem services in the Natura 2000 network
- Promotion and implementation of sustainable production methodologies and systems appropriate to these protected wetland areas
- Contribute to a more efficient management of these areas by increasing knowledge and technology transfer

Aqua&Ambi

Interreg
España - Portugal
Fondo Europeo de Desarrollo Regional
Fundo Europeu de Desenvolvimento Regional

UNIÓN EUROPEA
UNIÃO EUROPEIA

PROJECT ACTIVITIES

Activity 1 – Creation of a geographic information system (GIS) for the saline and aquaculture production areas in the coastal zone of Alentejo, Algarve and Andalusia to enable sustainable management of these areas

ctaqua CENTRO TECNOLÓGICO DE LA ACUICULTURA

AGENCIA DE GESTIÓN AGRARIA Y PESQUERA DE ANDALUCÍA
Consejería de Agricultura, Ganadería, Pesca y Desarrollo Sostenible

IPMA Instituto Português do Mar e da Atmosfera

apa agência portuguesa de ambiente

Activity 2 – Identification, analysis and validation of ecosystem services and Natural Capital of different environmentally sustainable aquaculture models

UCA Universidad de Cádiz

CSIC Consejo Superior de Investigaciones Científicas

INSTITUTO DE INVESTIGACIÓN Y FORMACIÓN AGRARIA Y PESQUERA
Consejería de Agricultura, Ganadería, Pesca y Desarrollo Sostenible

Pistresa

ACTIVITY 1

Objective: *to obtain a zoning and regulatory instrument that will serve both entrepreneurs and administrations in the planning of economic activities in the study area*

Action 1. Identification of administrative uses, activities and occupations

Result:

Cartographic study of administrative uses of the territory

Action 2. Technical study on the strategic options for the development of sustainable economic activities

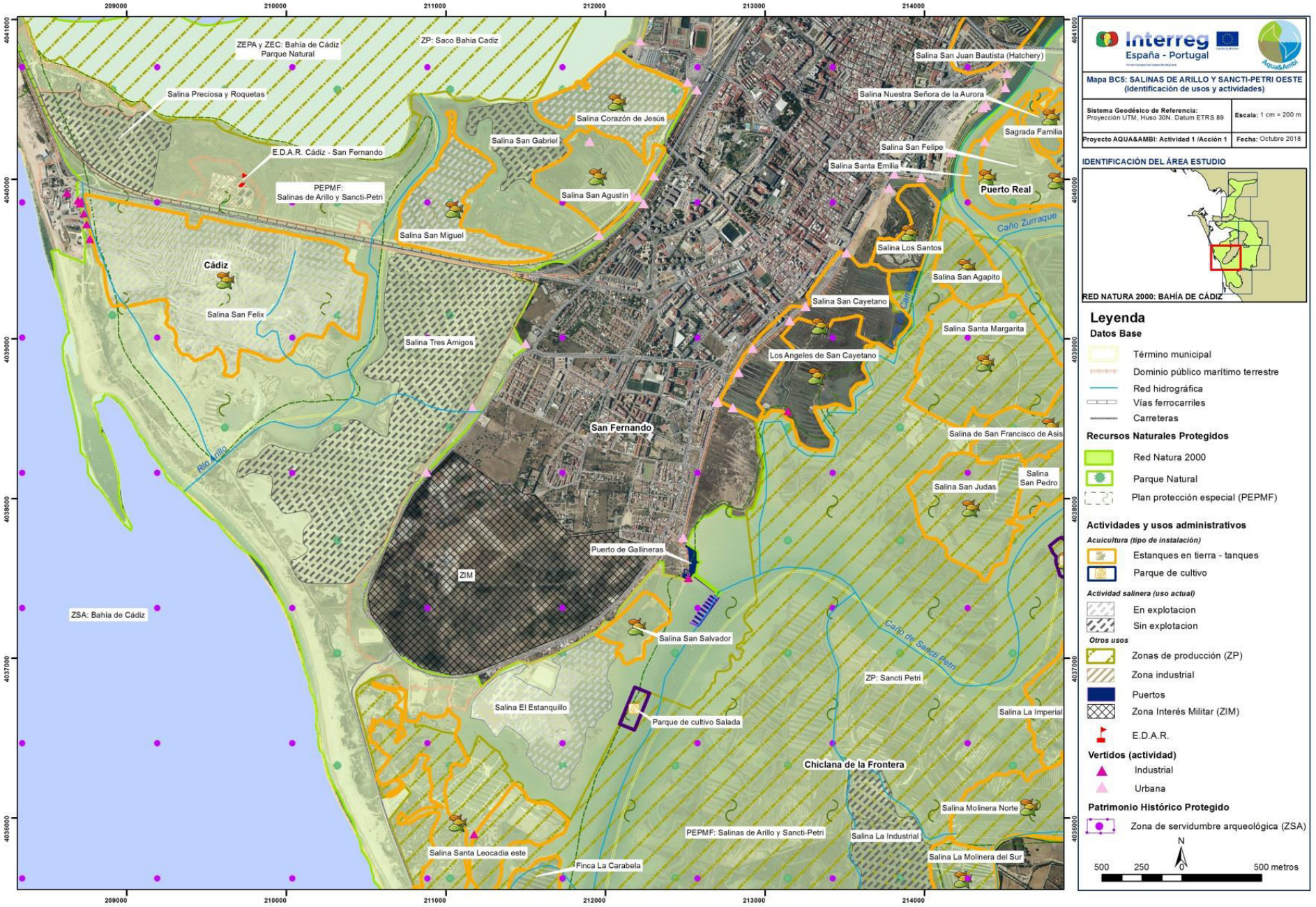
Results:

Cartographic study for activity planning

Report with technical criteria, action plan and proposals for adaptive measures

ACTIVITY 1: METHODOLOGY

PHASES


Interreg
España - Portugal
Mapa BC5: SALINAS DE ARILLO Y SANCTI-PETRI OESTE
(Identificación de usos y actividades)
Sistema Geodésico de Referencia:
Proyección UTM, Huso 30N. Datum ETRS 89
Escala: 1 cm = 200 m
Proyecto AQUA&AMBI: Actividad 1 /Acción 1
Fecha: Octubre 2018
IDENTIFICACIÓN DEL ÁREA ESTUDIO
RED NATURA 2000: BAHÍA DE CÁDIZ
Leyenda
Datos Base
Término municipal
Dominio público marítimo terrestre
Red hidrográfica
Vías ferrocarriles
Carreteras
Recursos Naturales Protegidos
Red Natura 2000
Parque Natural
Plan protección especial (PEPMF)
Actividades y usos administrativos
Acuicultura (tipo de instalación)
Estanques en tierra - tanques
Parque de cultivo
Actividad salinera (uso actual)
En explotacion
Sin explotacion
Otros usos
Zonas de producción (ZP)
Zona industrial
Puertos
Zona Interés Militar (ZIM)
E.D.A.R.
Vertidos (actividad)
Industrial
Urbana
Patrimonio Histórico Protegido
Zona de servidumbre arqueológica (ZSA)
N
500 250 0 500 metros
ZEPA y ZEC: Bahía de Cádiz
Parque Natural
ZP: Saco Bahía Cadiz
Salina Preciosa y Roquetas
E.D.A.R. Cádiz - San Fernando
PEPMF:
Salinas de Arillo y Sancti-Petri
Salina Corazón de Jesús
Salina San Gabriel
Salina San Agustín
Salina San Miguel
Salina San Juan Bautista (Hatchery)
Salina Nuestra Señora de la Aurora
Sagrada Familia
Salina San Felipe
Salina Santa Emilia
Puerto Real
Caño Zurraque
Salina Los Santos
Salina San Agapito
Salina San Cayetano
Salina Santa Margarita
Los Angeles de San Cayetano
Cádiz
Salina San Felix
Salina Tres Amigos
San Fernando
Río Arillo
Salina de San Francisco de Asis
Salina San Judas
Salina San Pedro
Puerto de Gallineras
ZIM
ZSA: Bahía de Cádiz
Salina San Salvador
Caño de Sancti Petri
ZP: Sancti Petri
Salina El Estanquillo
Parque de cultivo Salada
Salina La Imperial
Chiclana de la Frontera
Salina Molinera Norte
PEPMF: Salinas de Arillo y Sancti-Petri
Salina La Industrial
Salina La Molinera del Sur
Salina Santa Leocadia este
Finca La Carabela
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ACTIVITY 2: METHODOLOGY

Determine the methodology of productive models using criteria of compatibility/incompatibility of economic activities in wetlands

Thank you for your attention…

ctaqua CENTRO TECNOLÓGICO DE LA ACUICULTURA

Andalusian
Aquaculture
Technology Center

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