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## WHAT IS SEACASE

Project to develop effective tools for higher:

- Competitiveness
- Productivity
- Profitability

**SUSTAINABILITY** of extensive and semi-intensive coastal Aquaculture systems in Southern Europe

Minimizing environmental impacts  
Improving quality & public image of products

## SEACASE AIMS

### QUALITY

- . Development of environmentally-friendly farming protocols for certification opportunities;
- . Promotion of Codes of Good Practices in European Aquaculture;
- . Promotion of product safety and animal welfare.

### COMPETITIVENESS

- . Development technological improvements for optimizing existing production;
- . Better dissemination of knowledge on production processes in Southern Europe.
- . Diversification of fish products

### ENVIRONMENT AND SOCIETY

- . Preservation of wetlands and coastal areas of particular ecological interest;
- . Innovative diets to reduce waste output
- . Socio-economical assessment of the sector;
- . Employment opportunities.



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## PARTNERS :

**PORTUGAL** Centro de Ciências do Mar do Algarve CCMAR/LANUCE  
Instituto de Investigação das Pescas e do Mar IPIMAR

**FRANCE** Institut Français de Recherche pour l'Exploitation de la Mer IFREMER  
Centre Régional d'Expérimentation et d'Application Aquacole CREAA  
Syndicat mixte "Forum des Marais Atlantiques" FMA  
UMR AMURE Centre de Droit et d'Économie de la Mer UBO

**SPAIN** Instituto de Ciencias Marinas de Andalucía CSIC

**ITALY** Central Institute for Marine Research ICRAM  
Università degli Studi di Roma 'Tor Vergata' UTV

**GREECE** Hellenic Centre for Marine Research HCMR | University of Crete UoC





## Semi-extensive nurseries in lagoons/ponds – Greece, France, Italy and Portugal

Optimise the early stage of the rearing in marine fish species under extensive or semi-extensive conditions.

## Semi-intensive polyculture in earthen ponds – Portugal and Spain

Test the production of seabream, seabass and sole, at different densities and using eco-friendly feed.



## Integrated system: sole extensive production in a seabass intensive effluent pond – France

Value the integration of extensive fish culture in a land-based intensive fish farm, as treatment of effluent.

## Valliculture – Italy

Optimize farming protocols for gilthead sea bream, by genetic selection and diversifying seeding and harvesting strategies.



## Integrated management of marine extensive ponds for a sustainable eel fishery – France and Portugal

Promote the use of coastal wetlands as extensive systems to produce eel genitors for restocking natural populations.

## Semi-intensive shrimp culture in earthen ponds

Test different improved production protocols in the earthen ponds on growing tiger shrimps in the South of Spain.



# Socio-economics Analysis: to assess economic viability and accounting for patrimonial non-market costs and advantages

-1 Gathering socio-economic information and evaluation of case studies

-2 Focus Groups

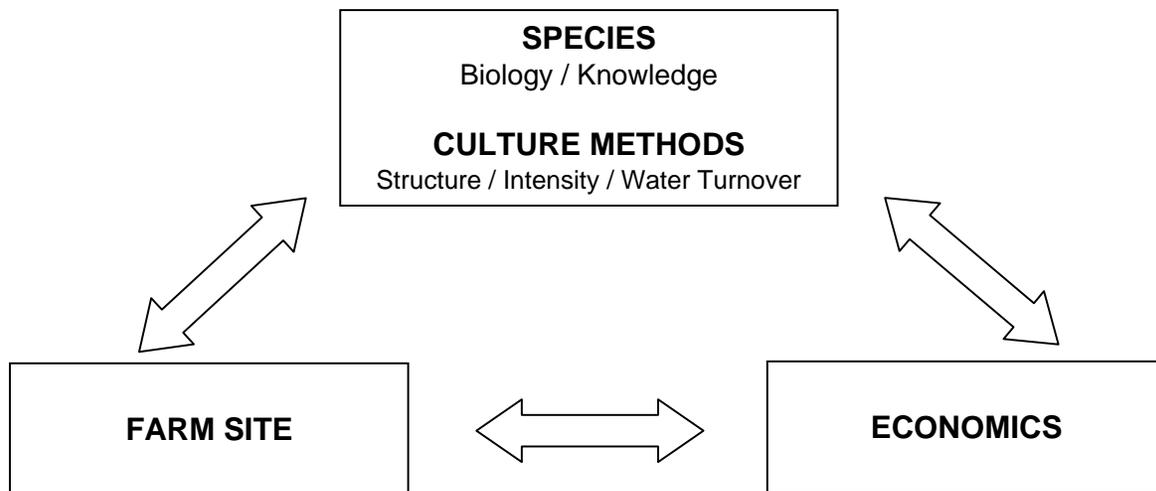
-3 Patrimonial economic assessment



-1 Evaluation of case studies (farms survey and analysis)

Aquaculture is illustrated by a range of technical, economic and social choices that can be translated into infrastructures, intensity, suitable species and farm sites. To a wide extent they are inter-related. Infrastructures, site and species will depend on economics. Despite suitable species, culture, site and technology, a farm will fail if the demand is not sufficient for the product. Each of these inter-related components is a cause of failure if they are not properly considered.

If technical ability is a precondition it will fail if it is commercially uneconomic. Economic failure may stem from production, technical or cost problems, or from marketing problem. If there's no expectation that economically viable aquaculture projects are possible, there are no environmental issues related to aquaculture that matter, nor social equity, income distribution or regulations issues.



adapted from Applefor, Lucas and Southgate (2003)

Based on technico-economic analysis results from a detailed survey over case studies, producers' perception about all technical options and innovations conducted by SEACASE will be tested.

# Socio-economics Analysis: to assess economic viability and accounting for patrimonial non-market costs and advantages

## -2 Focus Groups

Focus group discussions produce qualitative information and position the farms survey results in a wider frame where sustainability issue, commercial strategies are debated. Group interaction can bring out additional information as people tend to express views that they might be not express if interviewed as individuals.



## -3 Patrimonial economic assessment

Natural and cultural assets attached to extensive aquaculture and that might be valued beyond strict market values are referred here as patrimony. Different methods may be applied (Contingent Valuation, Transport Cost, Hedonistic Prices, Conservation or Defense expenses...). They all try to give a quantitative estimate in terms of market price equivalent values of what society is willing to pay or to receive to achieve sustainable, amongst other by preserving natural and cultural assets. The eel aquaculture in wetlands along the Atlantic coast in France is the support for this Patrimonial Analysis as non-market benefits associated to extensive aquaculture were highlighted (maintenance of biodiversity, increase in natural productivity, landscape related functionalities, multifunctionalities), or indirectly monetary impacts (tourists based opportunities, recreational activities).



***Anguilla anguilla***