



# The current status of extensive and semi-intensive aquaculture practices in Southern Europe

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International Workshop – Tavira, Portugal – 20 & 21 January 2010





# Natural and artificial infrastructures studied

- lagoon, natural and artificial bays and estuaries, semi closed or closed
- polders and marshes with water bodies and earthponds
- Excluded : tidal flats in the open sea, rearing in open sea, intensive rearing located in wetlands (except if a part of the production cycle is semi-intensive or extensive, or is an integrated aquaculture system)



Oysters ,Thau Lagoon, France



Oysters ,Venice Lagoon, Italy

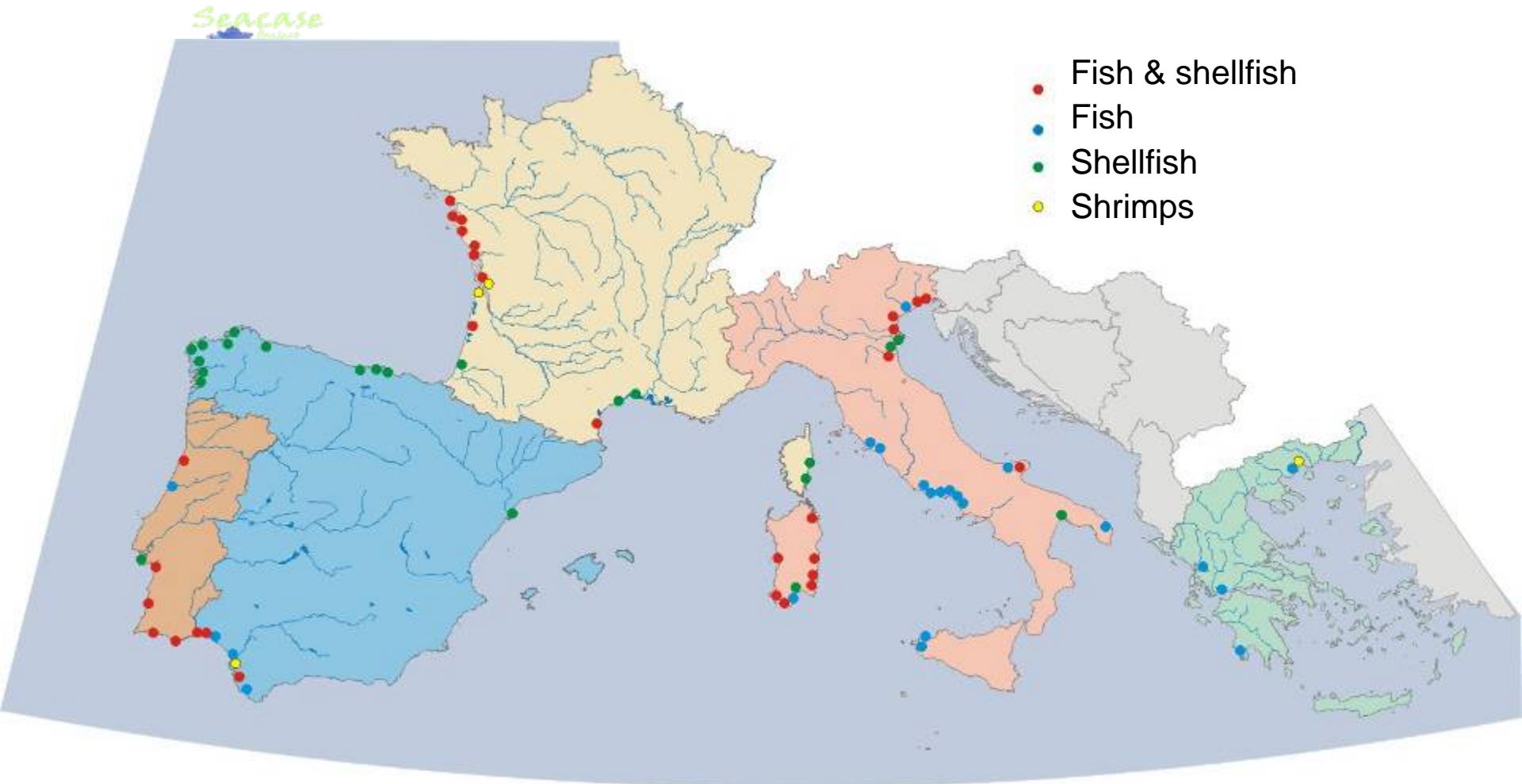
# Definition

- Extensive : the feeding of the animals is relying only on natural available resources.
- Semi intensive : the feeding of the animal is relying more or less on natural resources, with a direct extrafeeding with artificial food or stimulated natural food

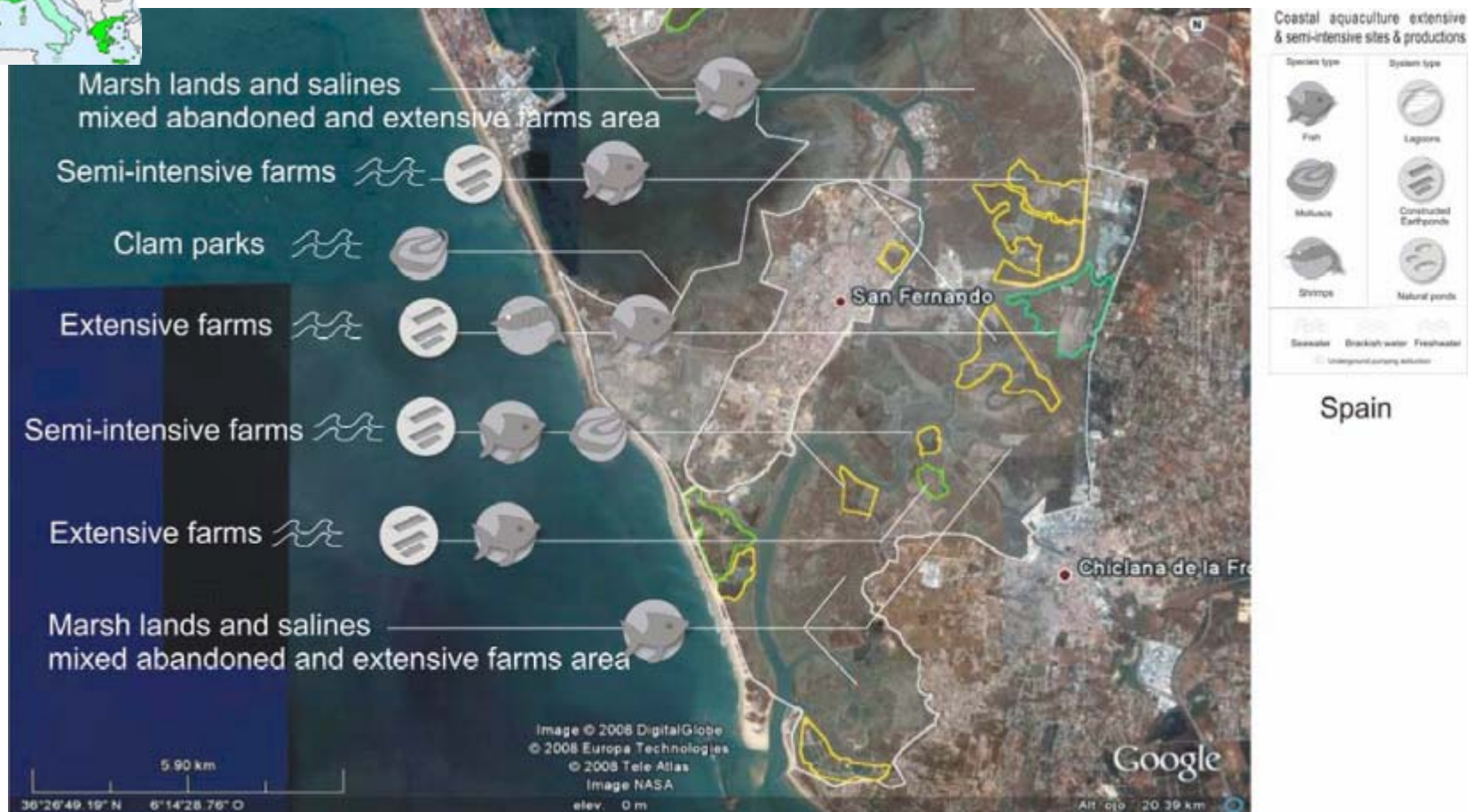
Aquaculture / fisherie of cultivated species

# Systems location

Produced from synthetic materials study conducted by each team nationally in the program SEACASE: Portugal, Spain, France, Italy, Greece.



# Geographic datas soon available on seacase.org





# Species grown in coastal wetlands in southern Europe



**Legend:** **C** – clams; **O** – oyster; **MU** – mussel; **SA** – seabream; **E** – eel; **M** – mullet; **SS** – sole; **DL** – seabass; **T** – trout; **SM** – Turbot; **SH** - Shrimp

System	Mode	Farming type	Portugal			Spain			France			Italy			Greece		
			species	%L	%P	species	%L	%P	species	%L	%P	species	%L	%P	species	%L	%P
Intertidal	Ext	Ground	C O	32	48.7	C	20-50		O	20-50	4.8						
		Table / float	O	1	9.2												
Lagoon	Ext	Natural (Ropes/cages)							O	1-20	95.1	C O					
		Managed /valli (Ropes/cages)										C					
Saline Earthpond	Ext	Ground / tables				C SH	1		O	5							
Saline reservoir				SA E M SS DL	21	2.6	E M SA SS DL	15-20	SA E M SS DL	5-30	n/a	DL, SA, DP	0.4	0.3			
Earthpond			SA E M SS DL	E M SA DL ME			20	SA E M SS DL	5-30	n/a							
Closed estuary	Ext													M DL SA E SS	20-50		
Lagoon			Natural / managed									DL, SA, M, E, MU	54	27.4	M SA DL E SH	10-70	
		Valli									DL, SA, M, E	39	52.6				
Saline reservoir	Semi-int											DL, SA	0.1	0.7			
Lagoons and ponds												DL, SA, DP	6.6	7.5	M SA	70-80	
Earthpond				SA DL	40	39.5	SA DL SS ME	10	SA DL	1	n/a	DL, SA, E	1.5	11.5	DL SA M SS	70-80	
Earthpond	Semi-int							SH	1	0.1							

*Species grown in coastal wetlands in southern Europe, percentage of land occupation in wetland systems (%L), and related contribution to national wetland aquaculture production (%P) when available.*

# Production



Bassin d'Arcachon, France

System		Portugal	Spain	France	Italy	Greece
<b>Molluscs (ext)</b>	<i>Surface (Ha)</i>	N/A	N/A	3860	N/A	N/A
	<i>Production (T)</i>	4 230	3000	> 16 800	87630	N/A
	<i>Nb farms</i>	1 381	N/A	N/A	244	N/A
<b>Fish (ext)</b>	<i>Surface (Ha)</i>	N/A	N/A	>4500	74442	N/A
	<i>Production (T)</i>	505	1000	N/A	2200	500
	<i>Nb farms</i>	49	N/A	N/A	147	N/A
<b>Fish (semi-int)</b>	<i>Surface (Ha)</i>	N/A	N/A	N/A	N/A	N/A
	<i>Production (T)</i>	2 020	1000	N/A	4700	N/A
	<i>Nb farms</i>	65	N/A	2	12	N/A
<b>Shrimp</b>	<i>Surface (Ha)</i>	N/A	N/A	300	N/A	N/A
	<i>Production (T)</i>	N/A	N/A	15	N/A	N/A
	<i>Nb farms</i>	N/A	N/A	15	N/A	N/A
<b>Tot surf (Ha)</b>		1 633	7500	8660	74442	N/A
<b>Tot prod (T)</b>		6 755	5000	16815	94 530	500
<b>Tot nb farms</b>		1 495	N/A	>15	>403	N/A





# Issues for Extensive and semi intensive aquaculture

- Engineering issue: improving natural productivity, security of livestock, training of farmers, maintenance of water infrastructure,
- Ecological issue: the preservation of functionality, system control, indicator of condition and management
- Socio Economic Issues: labelling, multifunctional activity