

Les rencontres nationales de la **CONCHYLICULTURE & des cultures marines**

Vannes, 6 & 7 Septembre 2023

La Conchyliculture en Portugal



aquacultores.pt
Associação Portuguesa de Aquacultores



aquacultores. pt – Associação Portuguesa de Aquacultores

➤ Aquacultores.pt is the Portuguese aquaculture producers association.

➤ Founded in 2010 resulting from the merger of several national associations.

➤ Main interlocutor with all entities and government.

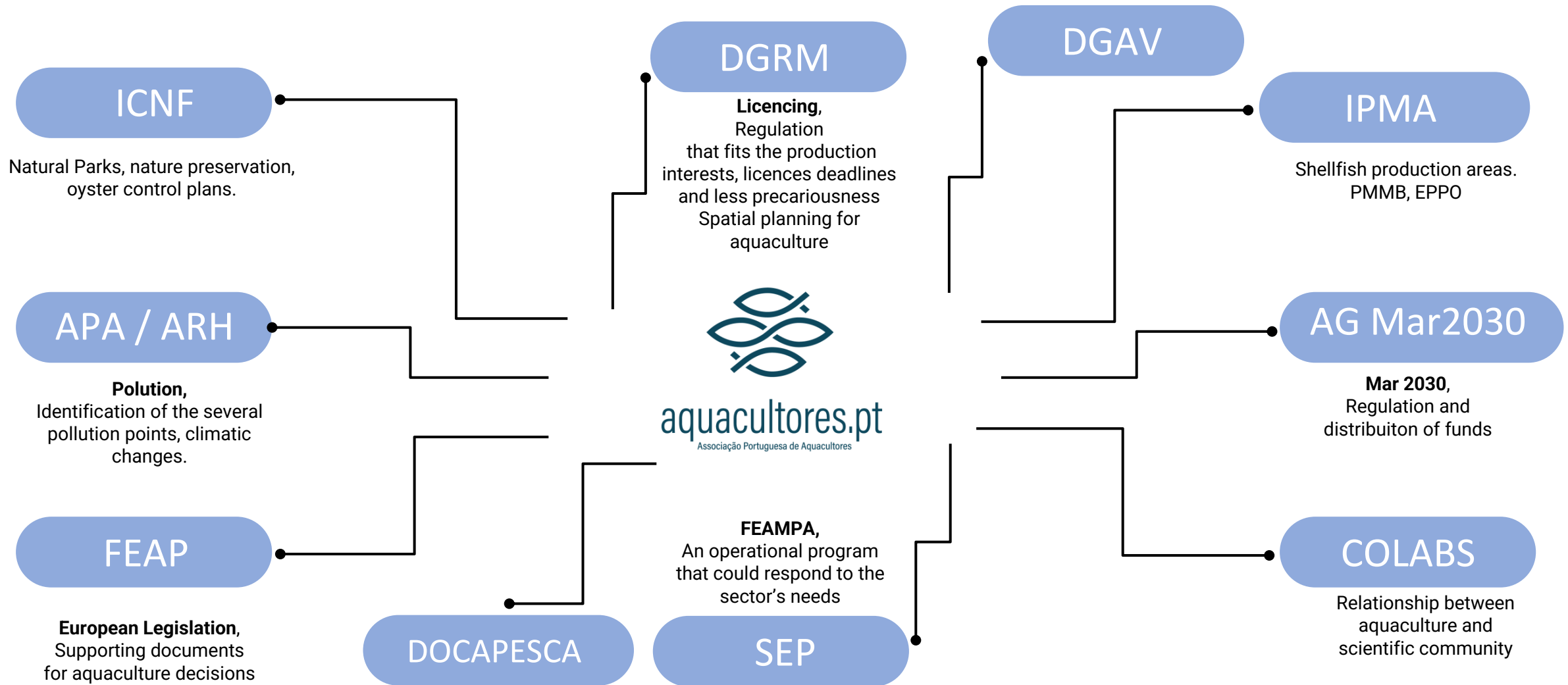
➤ Represents 90% of the national aquaculture production.

➤ The Association Board meets monthly to debate all matters related to the sector and internal affairs.

➤ The Association meets regularly with the government and state entities.

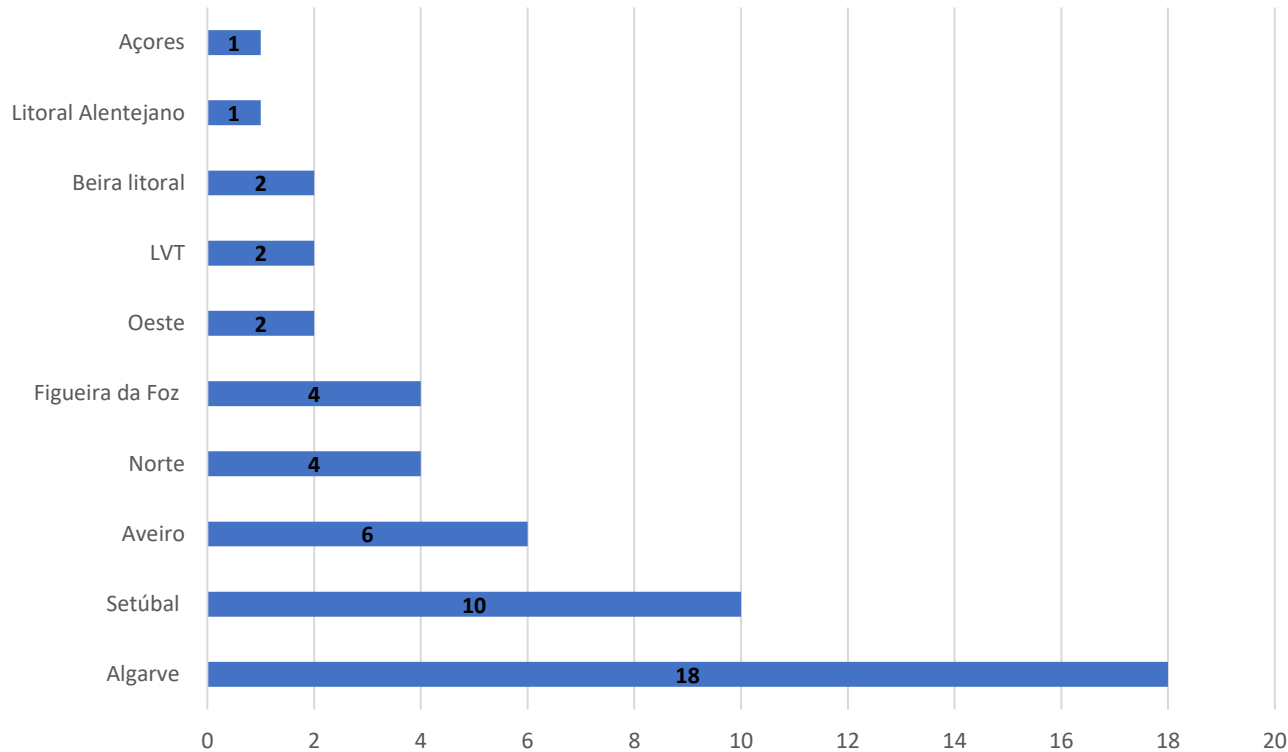
➤ Each year the Association holds two General Assemblies and two Aquaculture Seminars, with the aim of informing associates and aquaculture producers on several issues related to the sector.

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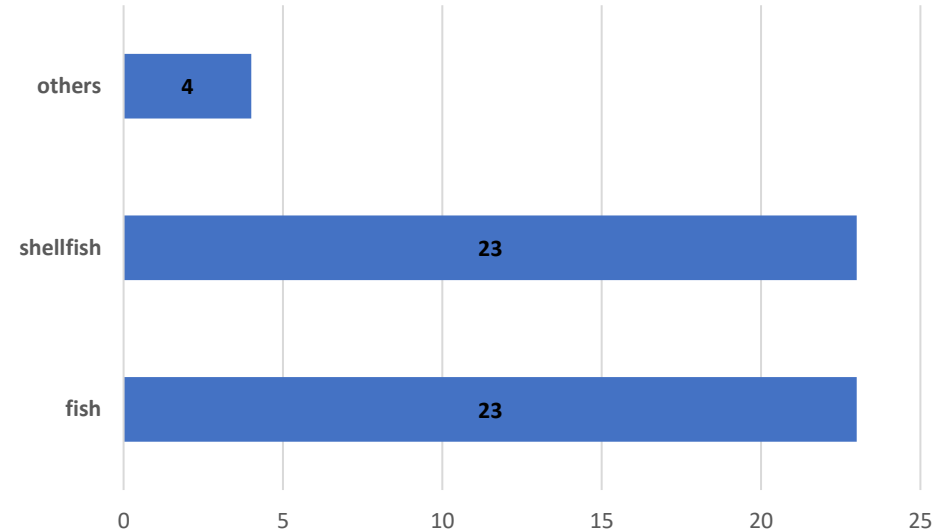
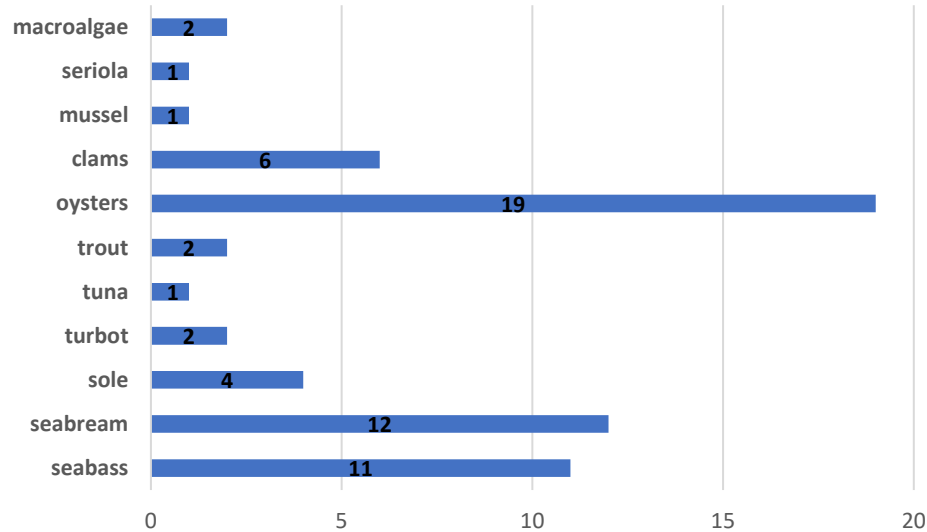
aquacultores.pt / Regiões



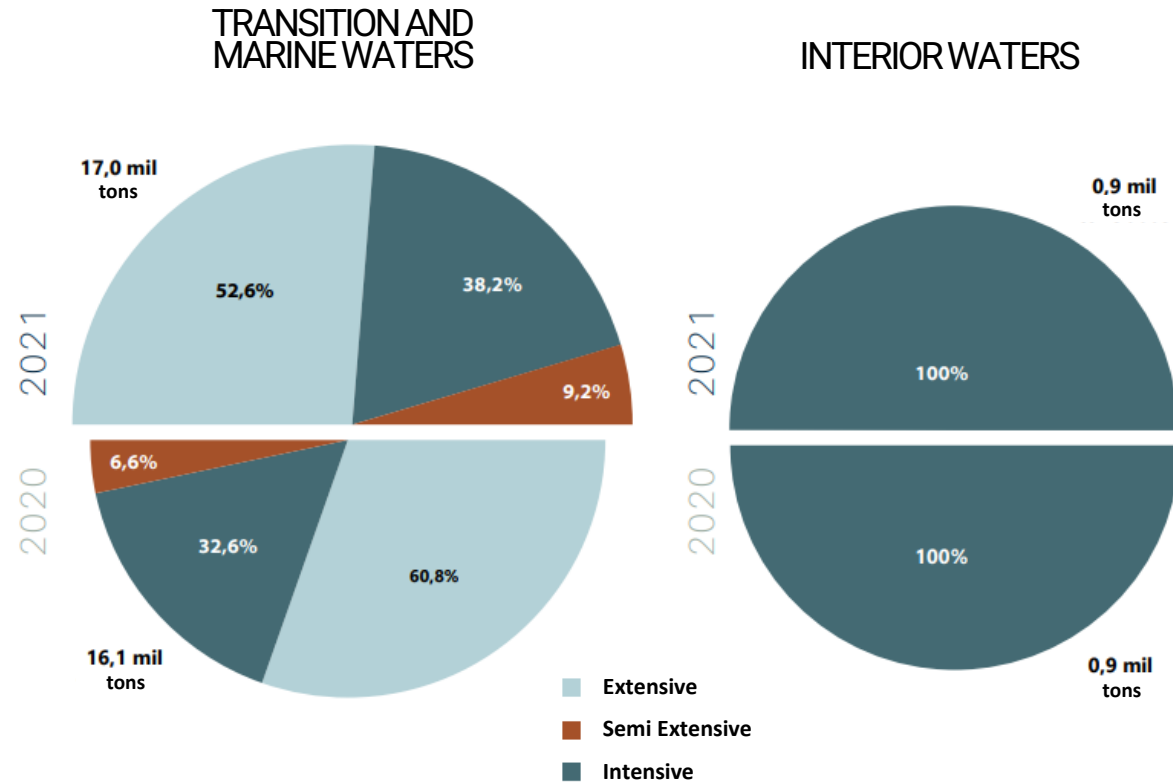
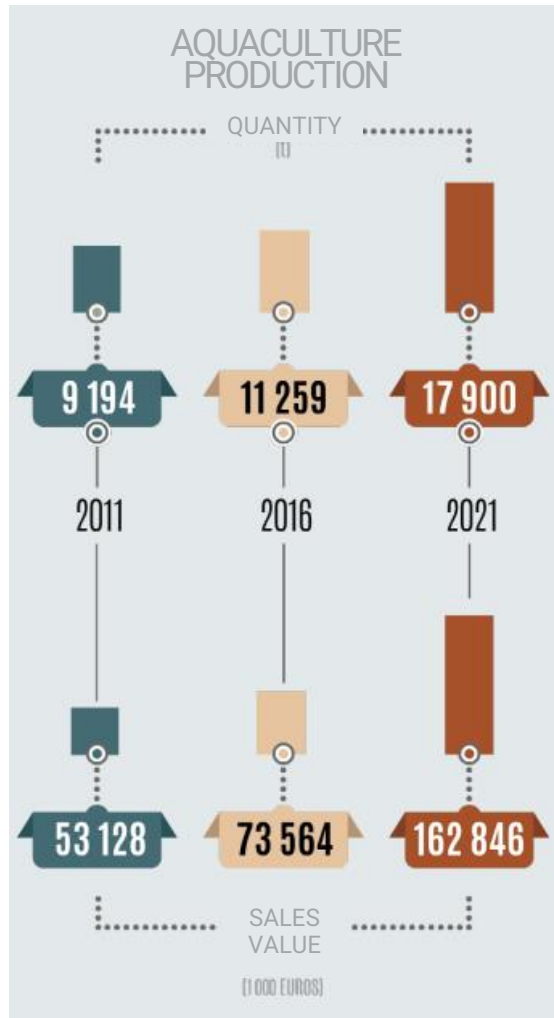
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50 associated companies

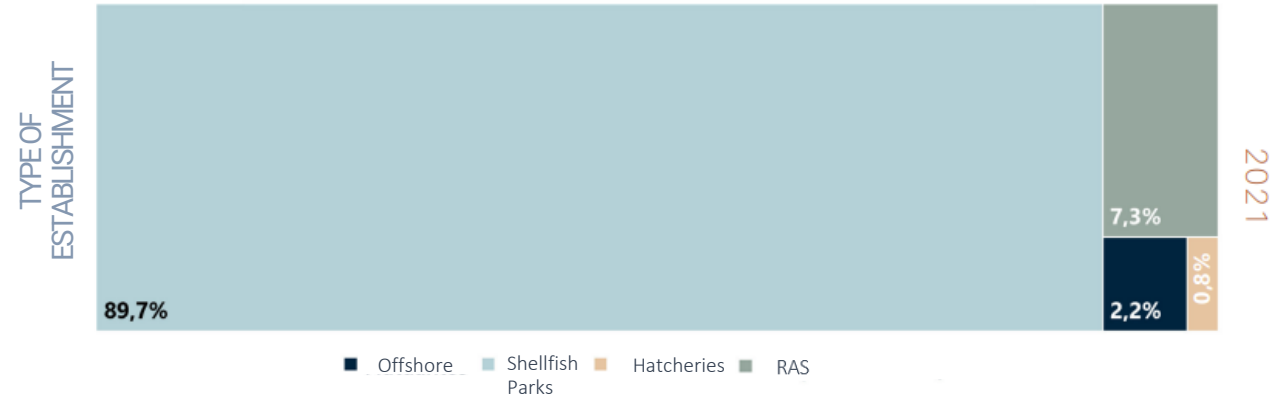
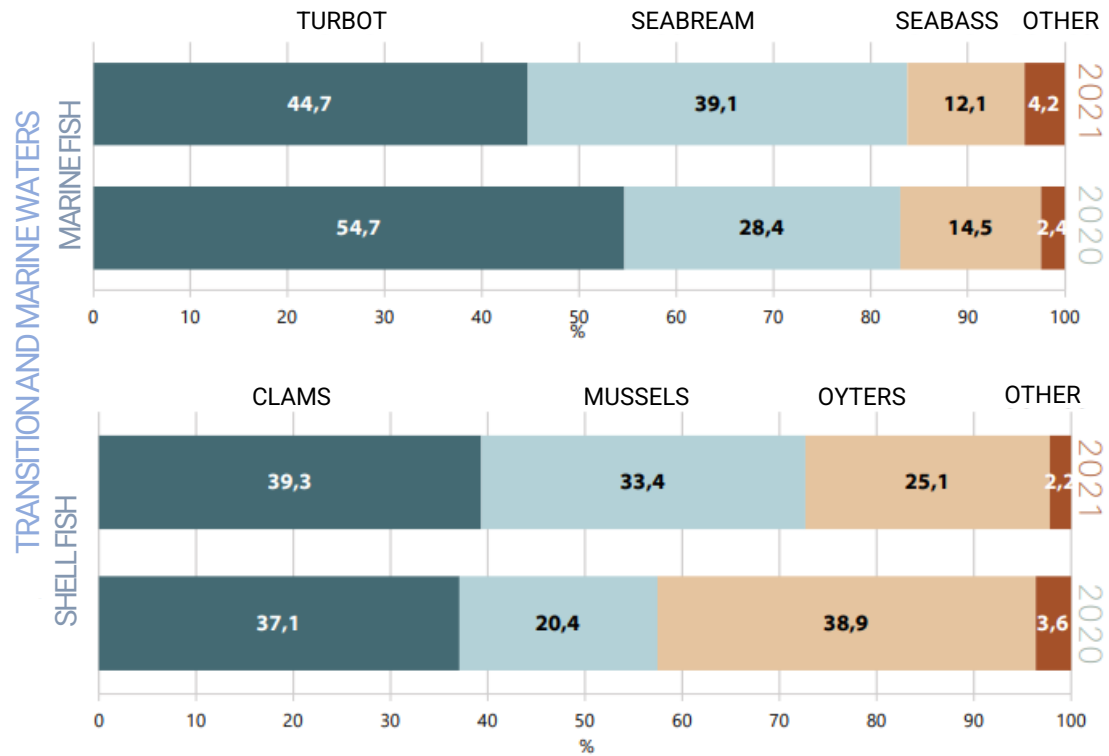
90% of the national aquaculture production



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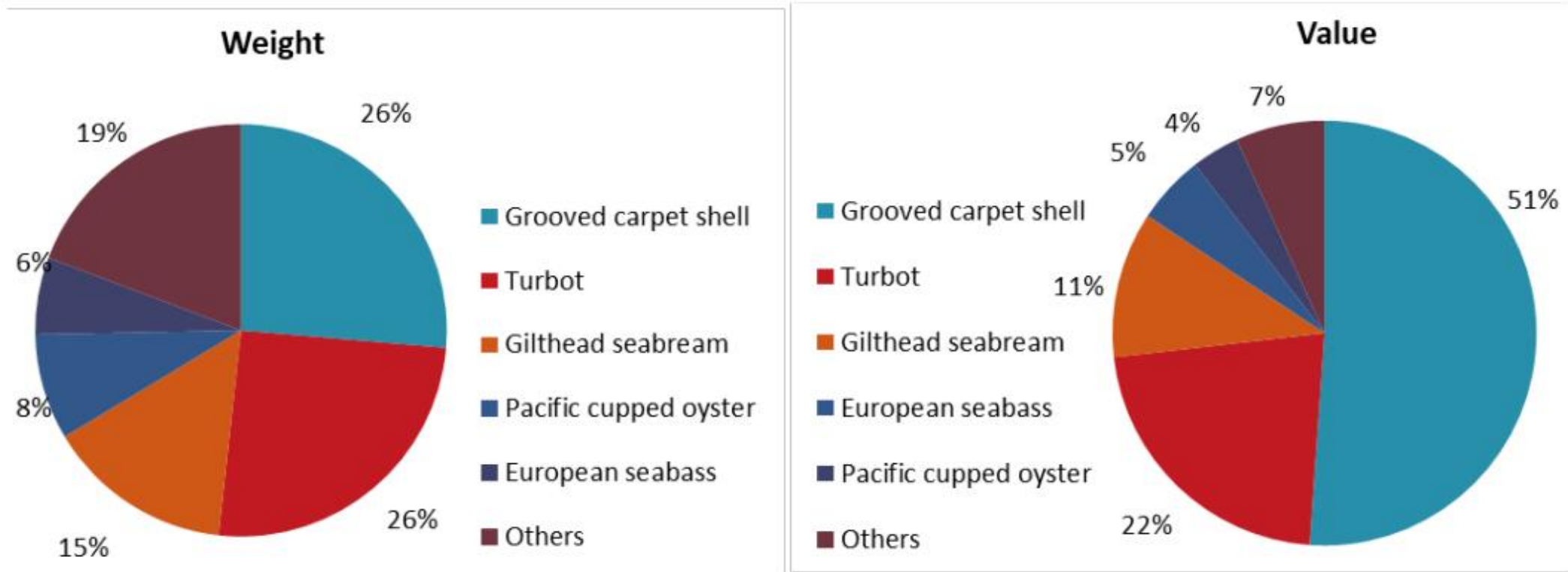
Aquaculture in Portugal

- Production
- Sales
- Industry structure
- Employment

Variable	2008	2010	2012	2014	2016	2017	2018	2019	2020	Change 2019-20	Develop. 2020/(08-19)
Sales weight (thousand tonnes)	6.9	6.5	10.4	8.8	10.2	10.9	11.8	12.9	13.6	▲ 6%	▲ 50%
Marine	3.0	2.5	5.6	4.5	3.8	3.8	3.9	6.4	6.6	▲ 3%	▲ 67%
Shellfish	3.2	3.3	4.1	3.8	5.7	6.4	7.2	5.8	6.5	▲ 11%	▲ 42%
Freshwater	0.7	0.7	0.7	0.5	0.7	0.7	0.7	0.7	0.6	▼ -10%	▼ -4%
Sales value (million €)	24.2	41.7	52.6	46.9	73.7	81.7	96.8	118.5	100.0	▼ -16%	▲ 64%
Marine	16.8	16.1	28.9	24.3	29.4	26.0	29.8	46.0	41.3	▼ -10%	▲ 66%
Shellfish	22.5	24.1	21.9	20.6	42.5	53.7	65.1	70.5	56.9	▼ -19%	▲ 59%
Freshwater	1.7	1.6	1.7	2.0	1.9	1.9	1.9	1.9	1.8	▼ -9%	■ -2%
Number of enterprises	1463	1459	1432	1405	1402	869	846	727	721	■ -1%	▼ -43%
Marine	84	79	42	40	34	15	18	50	46	▼ -8%	■ -1%
Shellfish	1368	1367	1373	1358	1362	846	820	639	654	■ 2%	▼ -46%
Freshwater	11	13	17	7	6	8	8	38	21	▼ -45%	▲ 69%
Employment	2347	2320	2362	2247	2651	1978	2381	1731	1837	▲ 6%	▼ -19%
Marine	296	317	303	357	257	72	279	287	501	▲ 74%	▲ 81%
Shellfish	2007	1955	1995	1859	2362	1862	2058	1363	1299	▼ -5%	▼ -33%
Freshwater	44	48	64	31	32	44	44	80	37	▼ -54%	▼ -16%
FTE		1,228	668	696	830	1167	1172	1470	1270	▼ -14%	▲ 34%
Marine		305	291	351	245	59	270	485	490	■ 1%	▲ 75%
Shellfish		875	325	318	557	1073	866	906	749	▼ -17%	▲ 19%
Freshwater		48	52	27	28	36	36	79	31	▼ -61%	▼ -22%

Source: EU Member States DCF data submission, 2022

Aquaculture in Portugal – Main species in terms of weight and value



Source: Economic Report on the EU Aquaculture 2023, with data provided by EU Member States, 2022

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Aquaculture in Portugal – Production evolution last years

Main species farmed	2015	2016	2017	2018	2019	2020	2021
Fresh water							
Trout	890	676	665	665	949	904	867
Salt water							
Sebream	1099	1196	1038	898	1953	1768	3091
Seabass	297	427	701	200	882	904	954
Turbot	2302	2388	2745	2582	3580	3407	3538
Sole	130	147	151	145	234	151	327
Carpet shell	2299	3714	3870	3966	3275	3652	3576
Cockle	106	125	288	201	250	352	181
Oysters	1035	1014	1185	3451	1690	3838	2293
Mussels	1315	1474	1722	1746	1457	2007	3044
Others	88	98	184	138	67	17	88
Total	9561	11259	12549	13992	14337	17000	17959

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Aquaculture in Portugal – Clams and oysters production

Variable	Clam On-bottom					Change 2019-20	Oyster					Change 2019-20
	2017	2018	2019	2020	2017		2018	2019	2020			
Number of enterprises	767	729	556	533	▼	-4%	60	71	57	109	▲	91%
FTE	864	641	598	467	▼	-22%	145	163	122	230	▲	89%
Average wage (thousand €)	3.4	5.5	6.4	4.7	▼	-25%	10.0	14.4	9.9	14.4	▲	46%
Labour productivity (thousand €)	42.0	64.8	89.0	73.8	▼	-17%	58.4	103.1	114.1	111.8	■	-2%
Total sales volume (thousand tonnes)	4.1	3.4	3.0	2.5	▼	-18%	1.9	3.1	1.8	3.0	▲	63%
Total income (million €)	41.0	44.0	57.4	36.7	▼	-36%	12.1	21.2	15.2	30.5	▲	100%
Total operating costs (million €)	7.6	5.7	7.0	3.3	▼	-52%	5.1	6.7	2.6	6.9	▲	171%
Gross Value Added (million €)	36.3	41.5	53.2	34.5	▼	-35%	8.5	16.8	13.9	25.8	▲	85%
Net profit (million €)	32.2	38.5	50.4	33.4	▼	-34%	6.7	14.1	12.3	21.0	▲	71%
Total value of assets (million €)	9.2	9.8	19.8	1.1	▼	-95%	7.1	15.6	6.9	25.3	▲	265%
Net investments (million €)	2.5	1.3	2.1	0.2	▼	-89%	0.6	3.6	0.7	1.8	▲	156%
Capital productivity (%)	394.3	424.5	269.5	3270.9			118.3	107.8	200.3	101.7		
Return on Investment (%)	349.0	393.3	255.3	3167.7			94.3	90.6	177.1	82.8		
Future Expectation Indicator (%)	21.9	9.7	8.5	16.3			6.2	20.9	4.1	2.4		

Source: EU Member States DCF data submission, 2022

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Suspended drums



Bags on tables



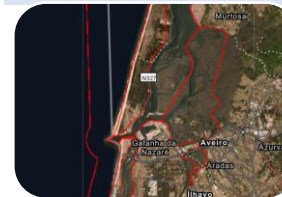
Tide cultivation



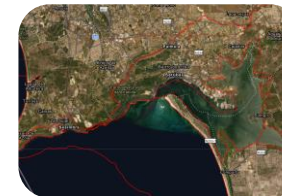
Floating structures



Estuário do Lima



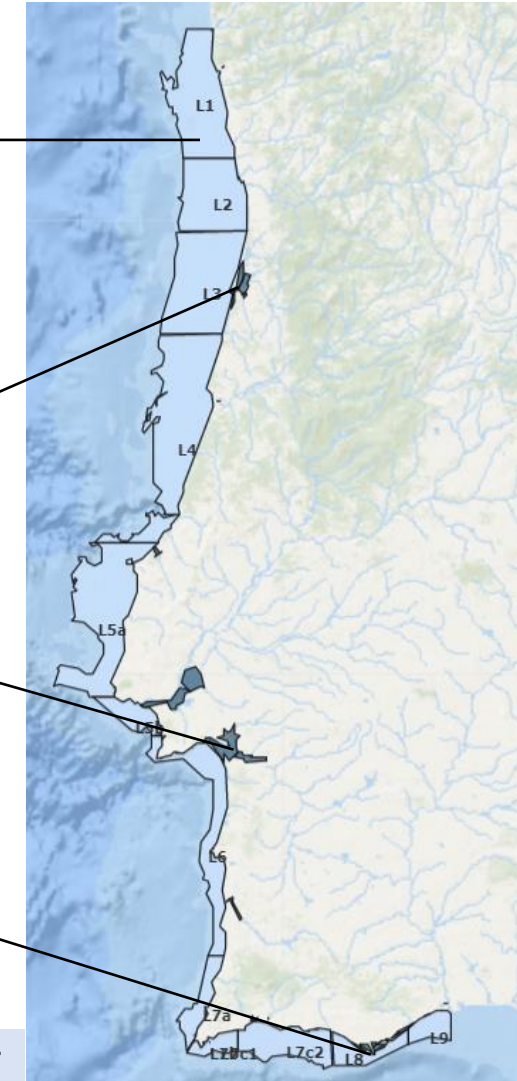
Ria de Aveiro



Estuário do Sado



Ria Formosa/Ria Alvor



Strengths and weaknesses of bivalve molluscs aquaculture

STRONG POINTS

- High quality products.
- Excelent natural conditions.
- Production during the winter (Oct-Feb).
- Portugal is part of EU (simplify sales).
- *R. decussatus* sales almost 100% in Portugal. Agregate production to sale directly to foreign markets.
- Increase production área.
- Clams and oyster offshore production.
- Healthy food valorization.
- Bioremediation value.

- Water quality declining and low monitorization.
- Precarity of licenses.
- Legislation instability.
- Tourism competition.
- Environmentalists increased pressure.
- No restrictions to give parks licenses to anyone.
- Reduced access to *R. decussatus* seed.
- Fragmented production with few mechanisation.
- Intertidal parks mechanisation not allowed in several regions.
- Transport costs (EU western limit).

WEAK POINTS

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Aquaculture in Portugal – offshore mussels production



Aquaculture in Portugal – offshore mussels production

STRONG POINTS

- Class A water quality
- As long as we have an adequate management system, it makes it much easier to obtain MPB certification
- Availability of food much higher than inshore spaces, such as those in Galicia, where the production density is enormous
- T&C produced 460 tons of mussels in 2022, which represents a production density per m³ in the order of 0.03kg (460,000kg/14,400,000m³)!
- The two previous advantages promote faster growth and better meat content.

- Like fishing, and any activity that involves the use of professional vessels, it is necessary to have a safety crew. It is increasingly difficult to find people to embark, with the aggravating factor that aquaculture crew members are not treated as fishermen, and as such do not have the incentive to retire earlier, at 55 years old!
- Activity much more subject to weather conditions, and therefore more conditioned;
- Depending on the location, it may be subject to predators, making it more difficult to control them.

WEAK POINTS

Aquaculture in Portugal – offshore clams production



Aquaculture in Portugal – offshore clams production

STRONG POINTS

- Available space
- Stability of environmental factors versus ria/estuary/lagoon (temperature, salinity, etc.);
 - Low or non-existent concentration of pathogens (Perkinsus);
- More difficult robberies (requires boat and crane).

- Impossibility of working part of the time due to weather conditions;
- Much larger investments than in ria/estuary/lagoon;
- Lack of equipment and protocols (they have to be invented or adapted);
- Risk of collisions with maritime traffic:

WEAK POINTS

Who are we?



Cooperativa Formosa is a cooperative that is part of the aquaculture sector and operates in the geographical area delimited by the Ria Formosa Natural Park in Algarve, where we produce and harvest bivalve molluscs.

Founded in 1998

220 partners

Part of Aquacultores.pt since the beginning

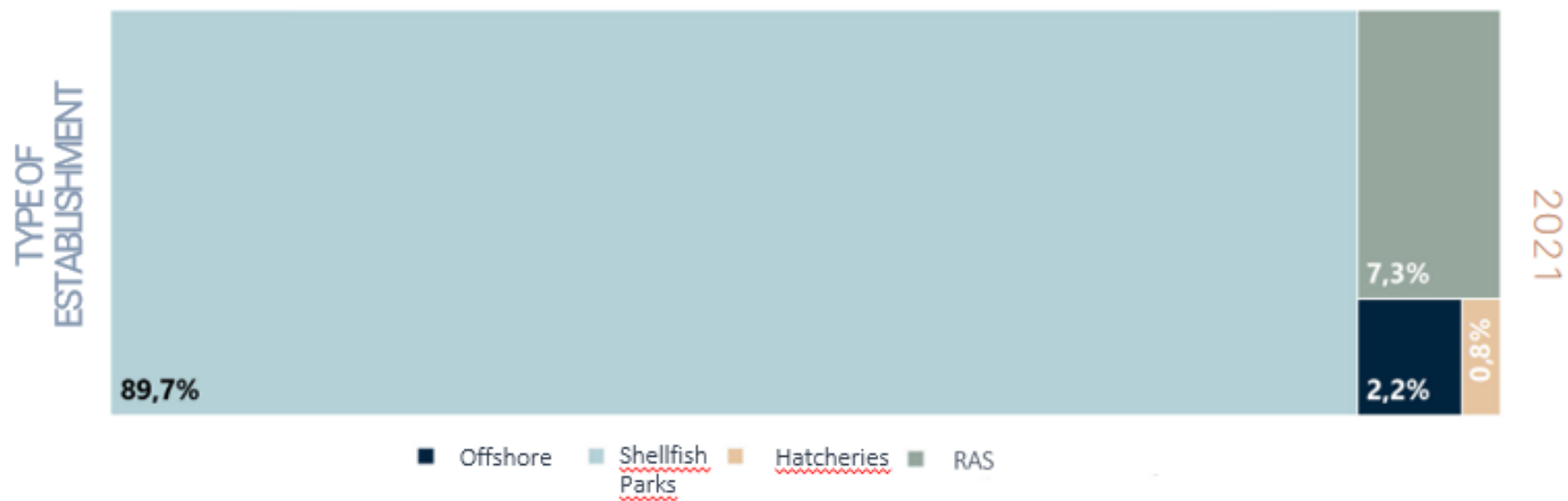
All Bivalve producers

(Clams/Oysters and mussels)



Who are we?

Establishments (2021) – Bivalves production



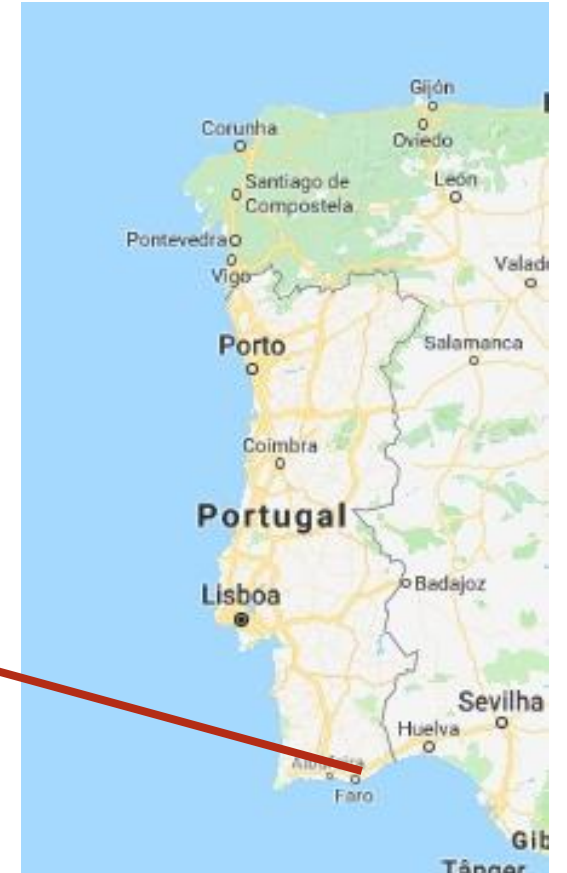
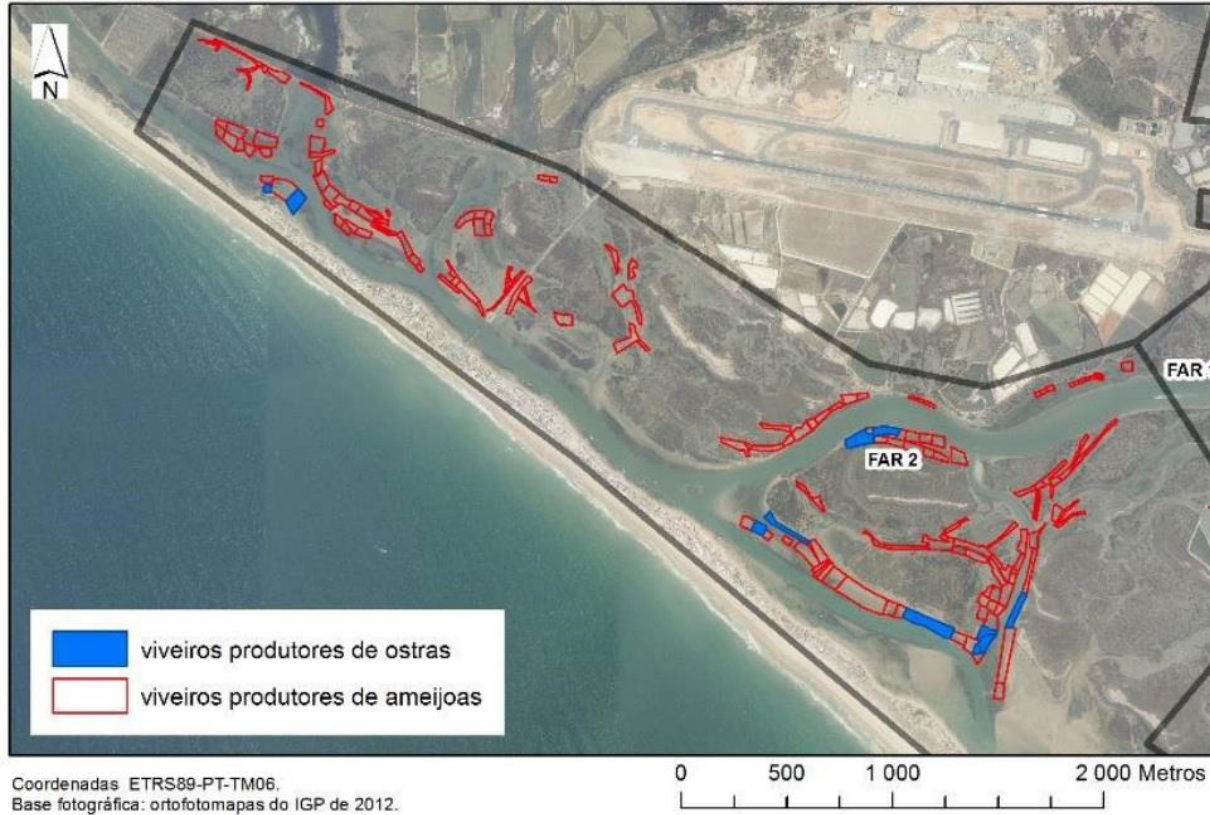
FONTE: DGRM, Estatísticas da aquicultura

Where are we?

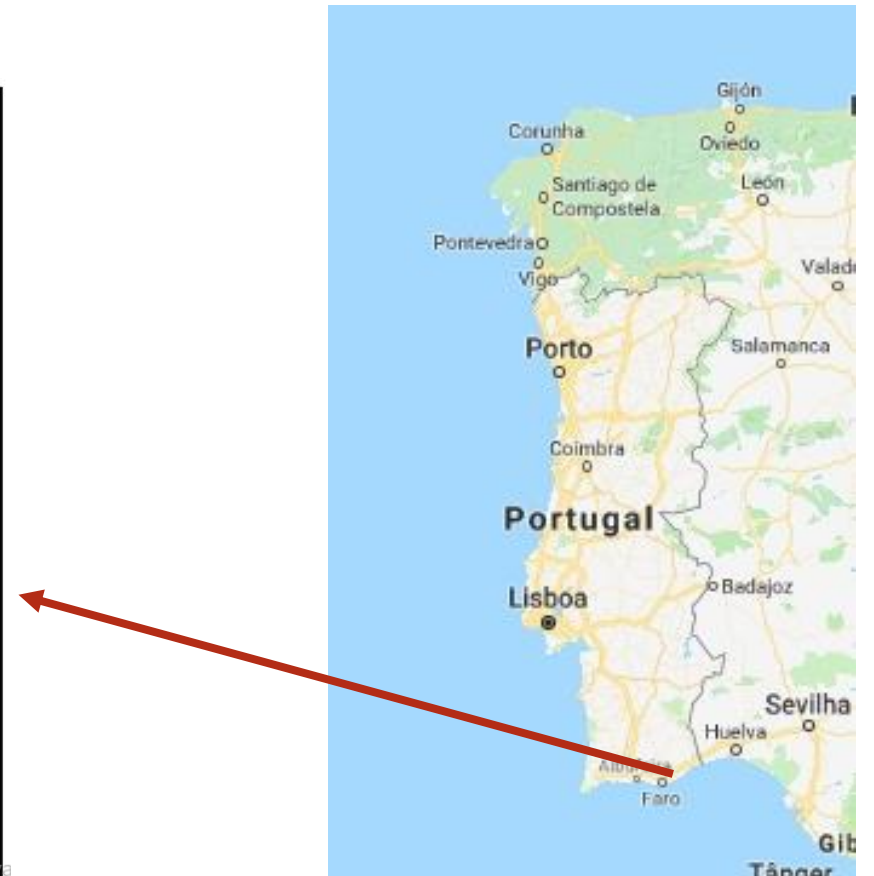
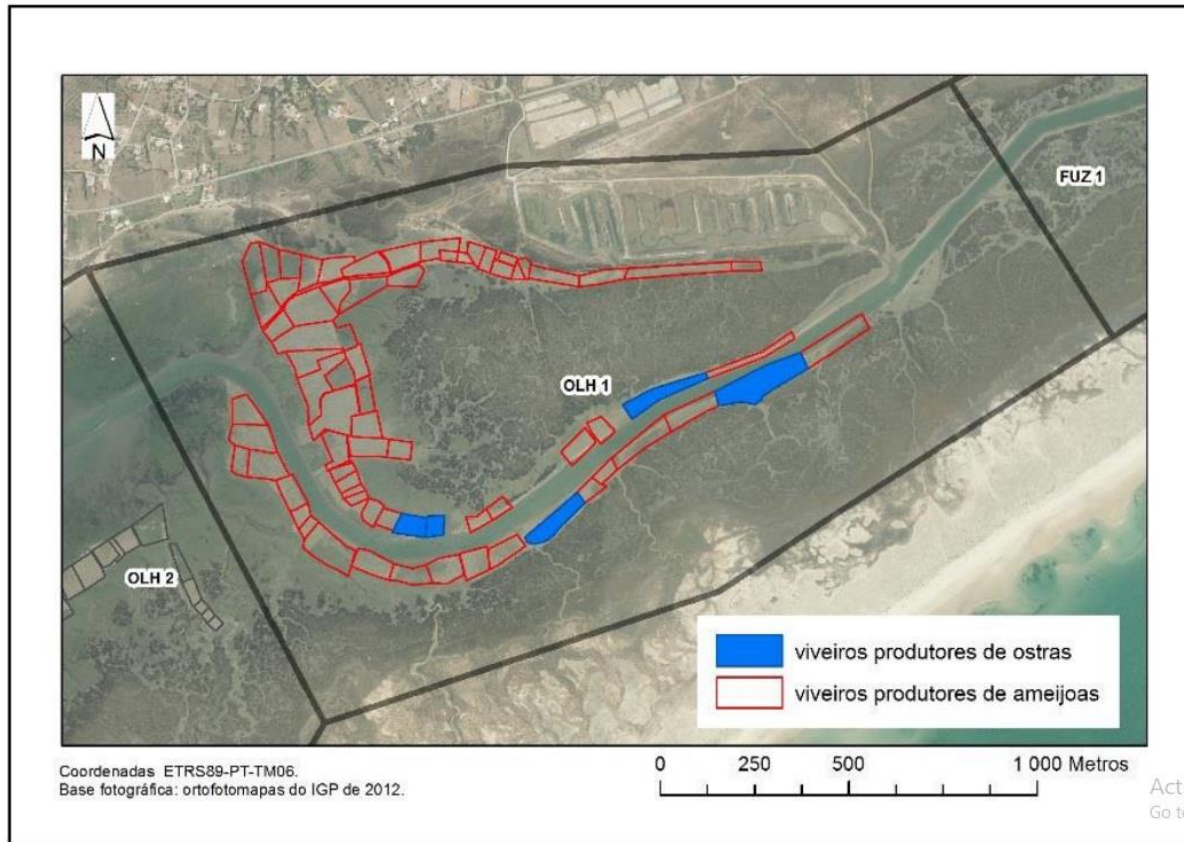
Ria Formosa



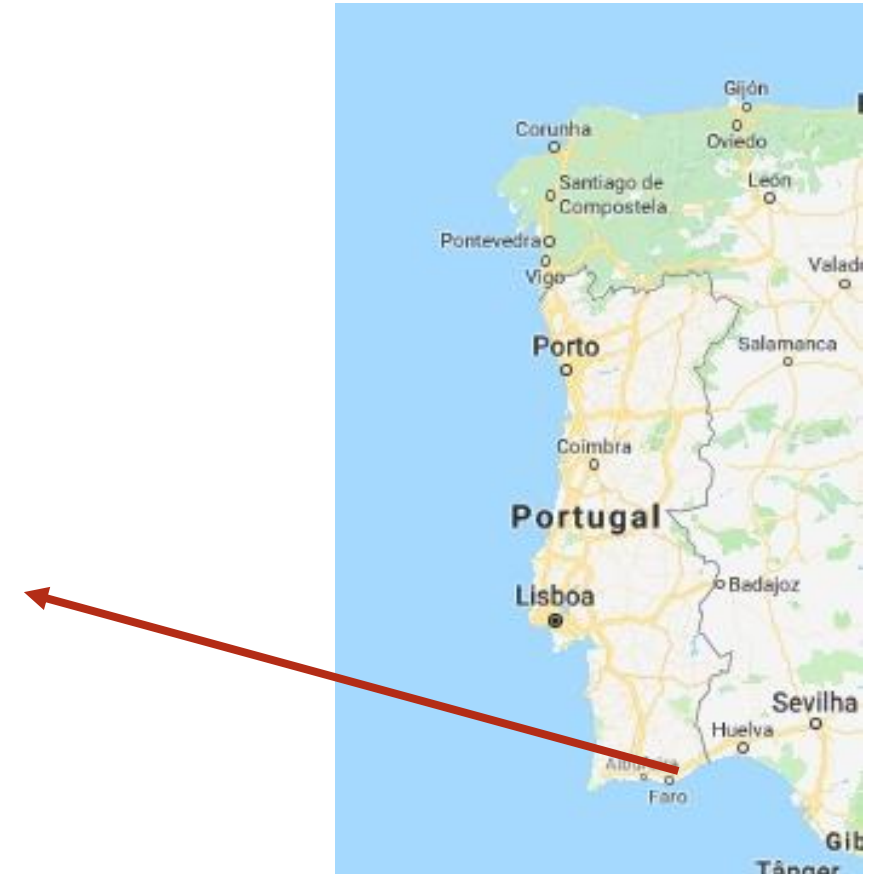
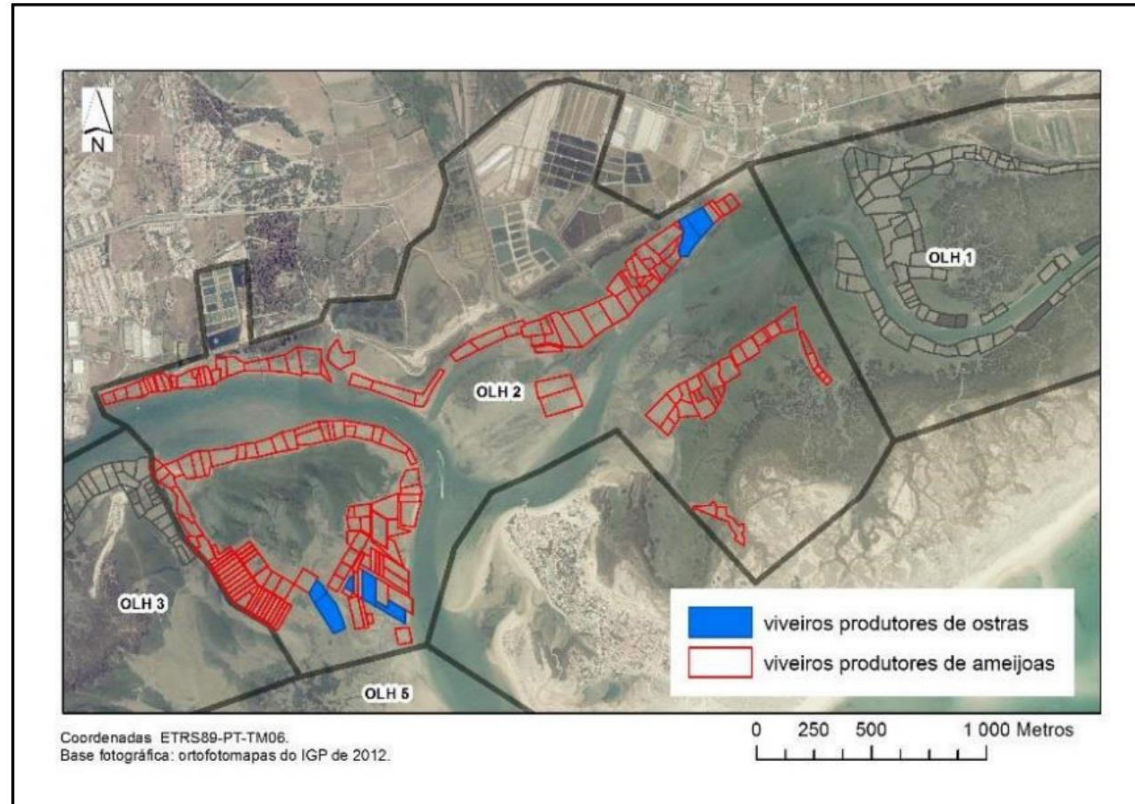
Where are we?



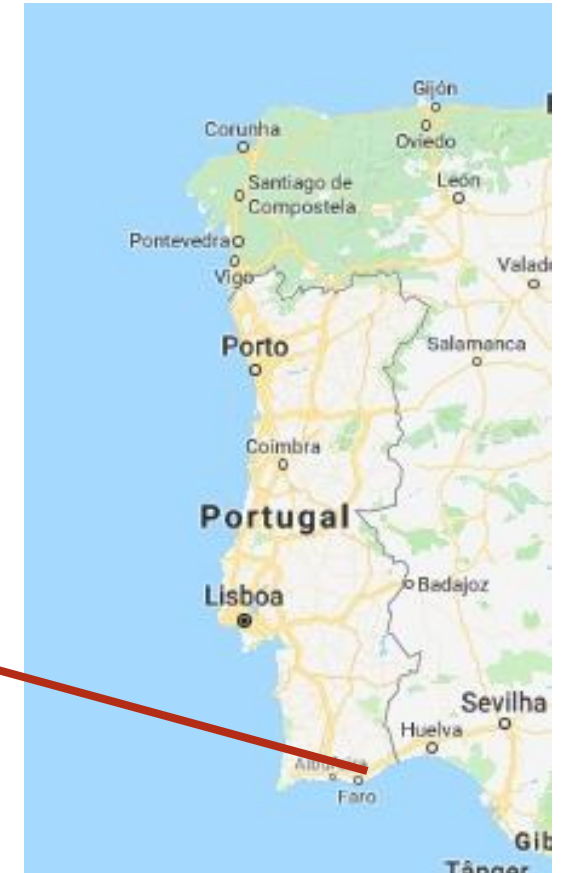
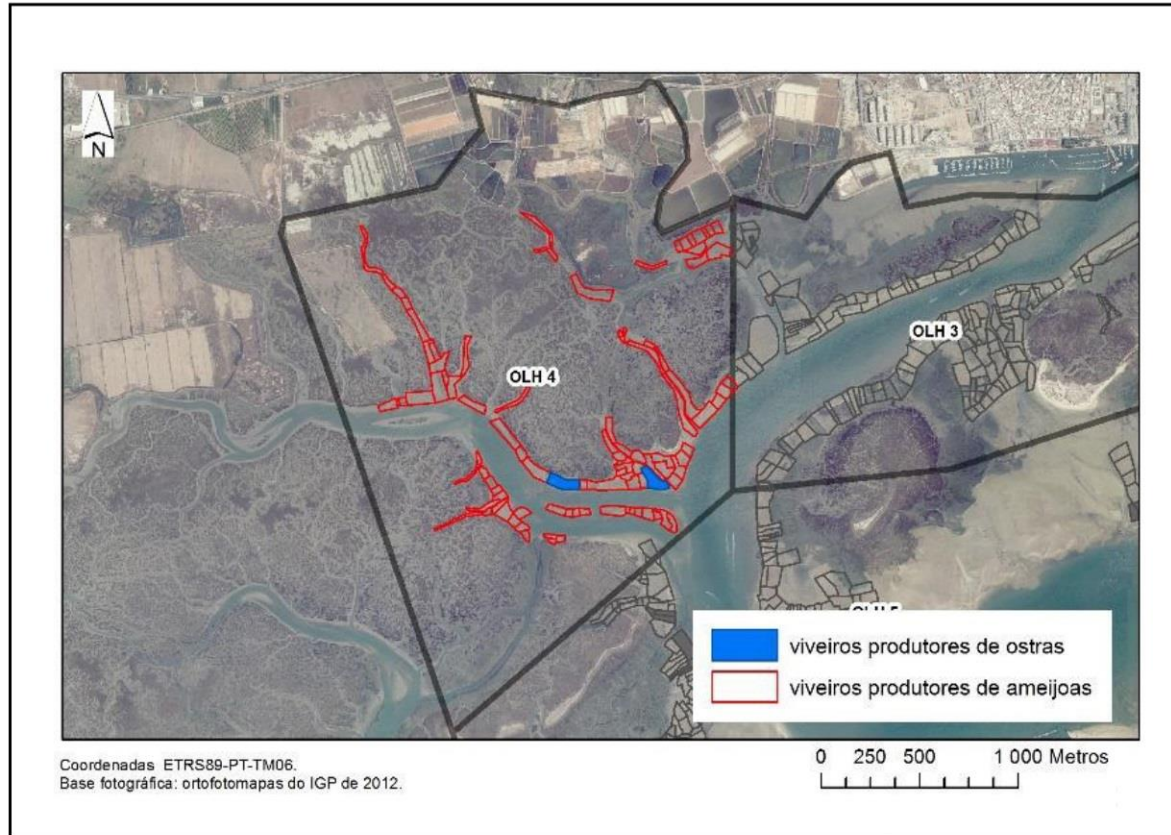
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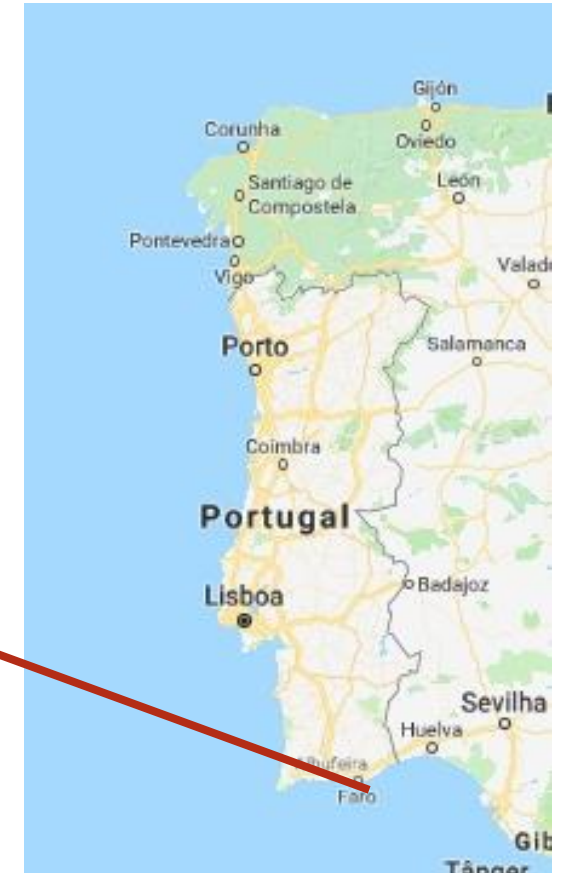
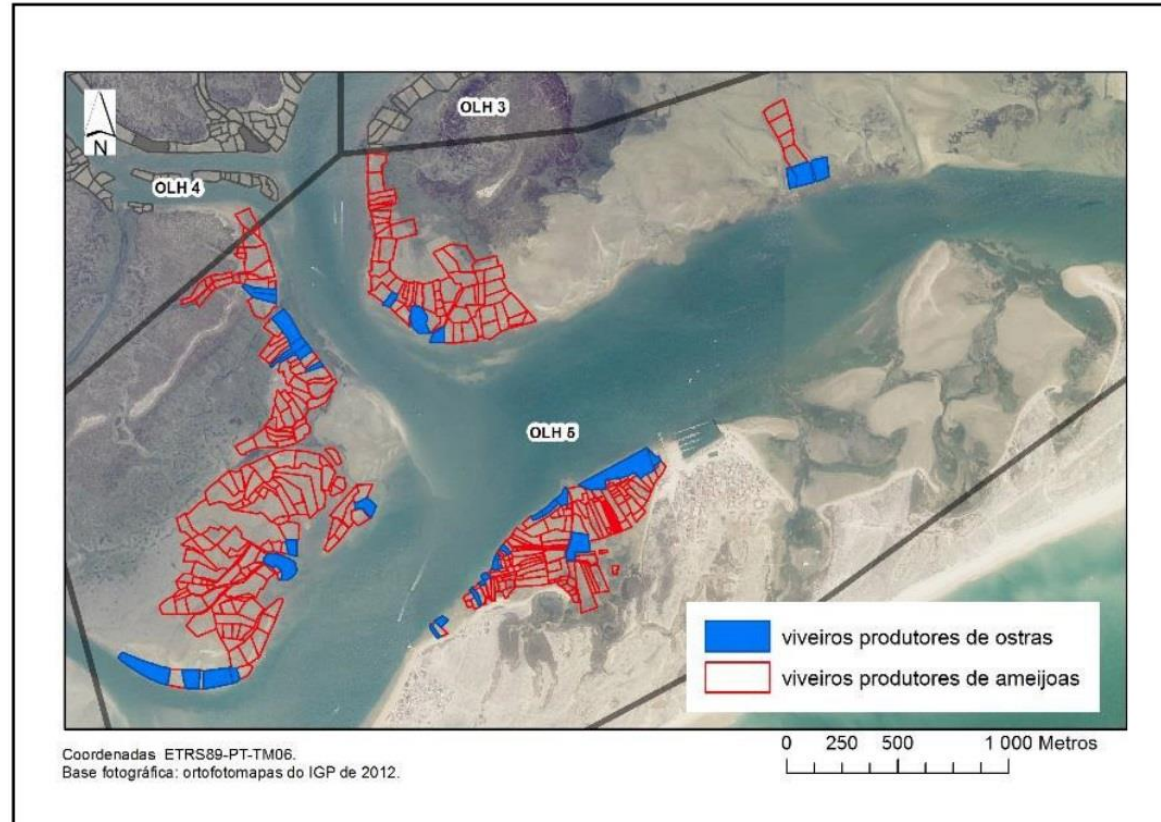
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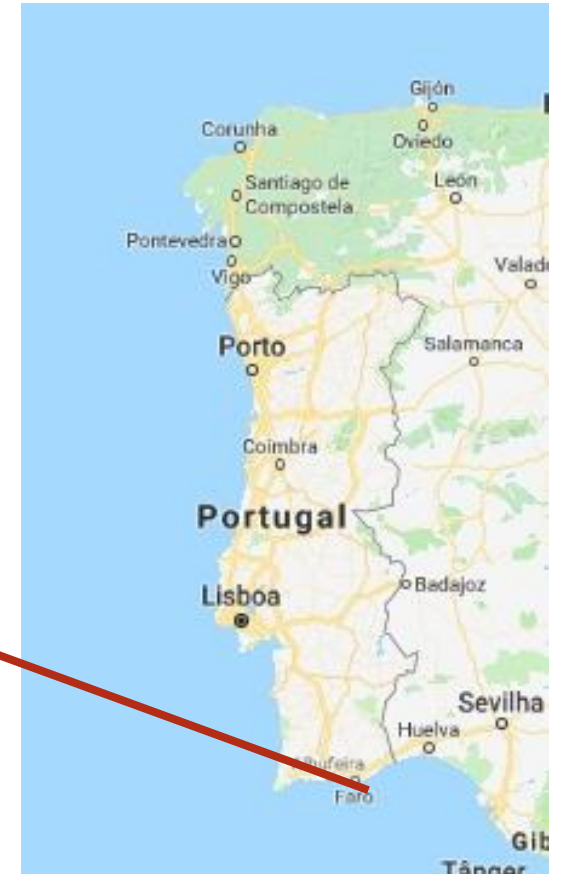
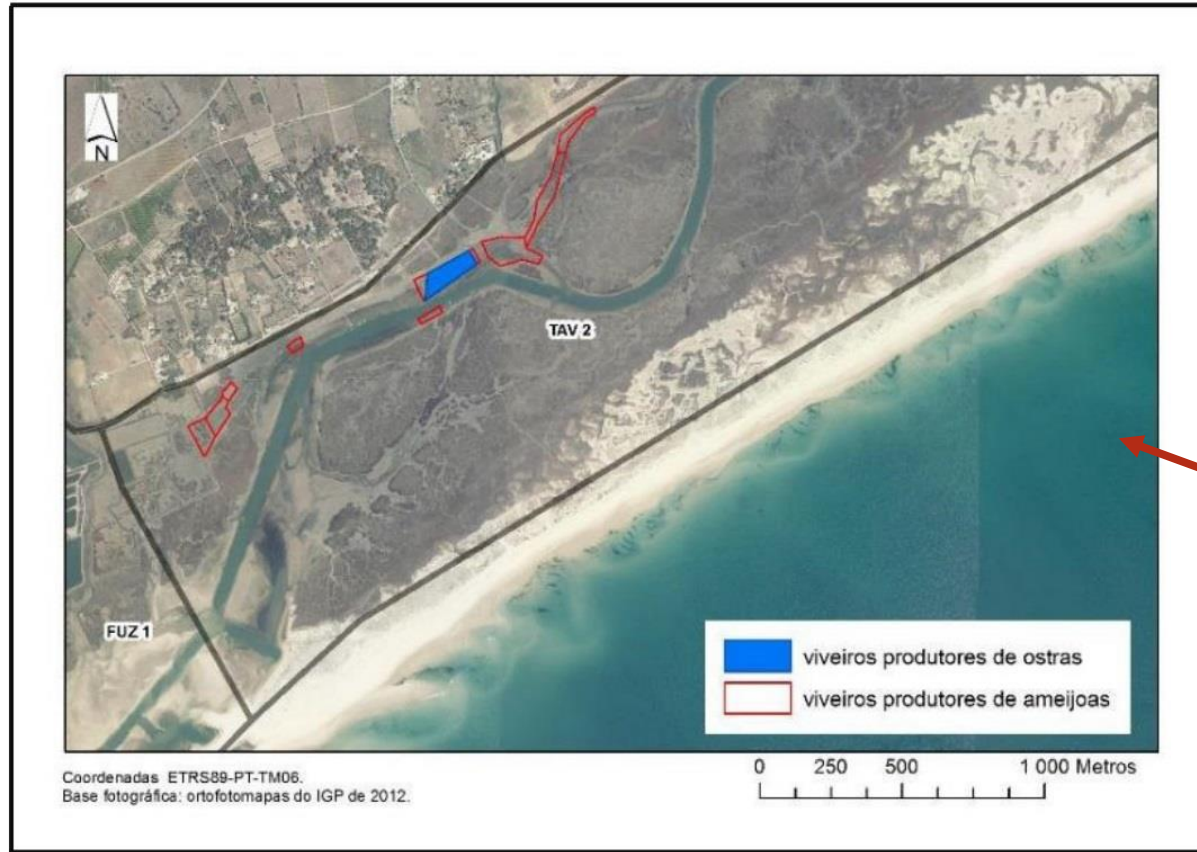
Where are we?



Where are we?



Where are we?



What are the most representative species produced in Algarve?



Clams (*Ruditapes decussatus*)



Oysters (*Magallana gigas*)



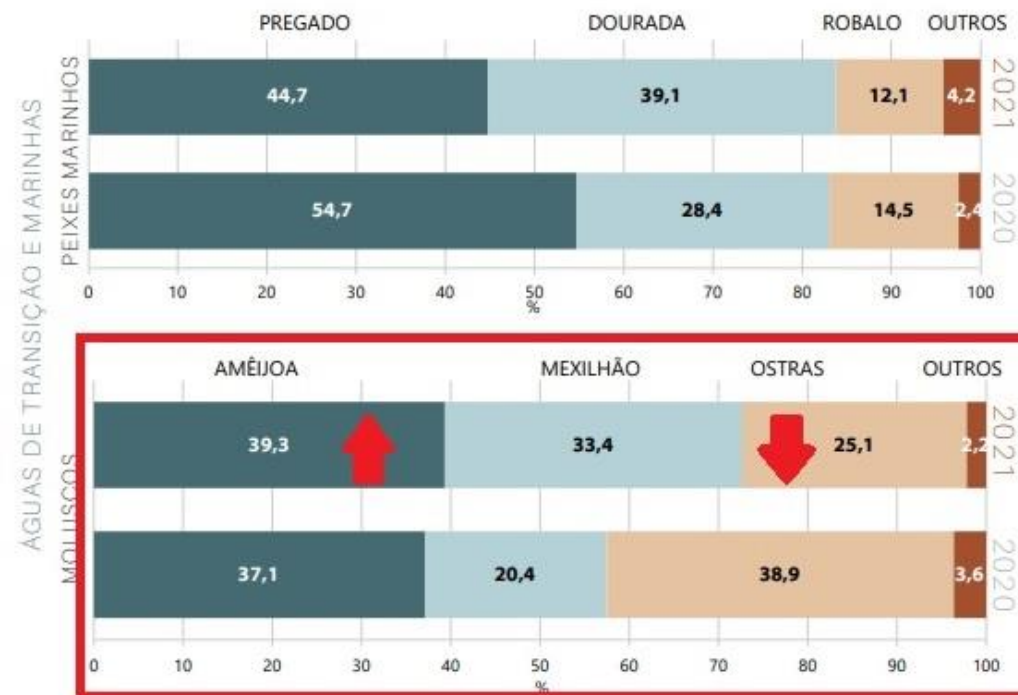
In 2021, bivalves production represented 50,9% of the total nacional aquiculture production.

2021

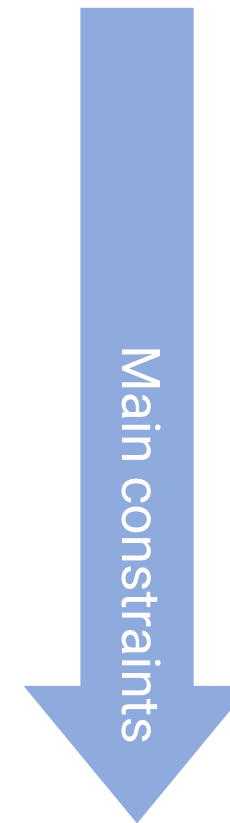
Clams 3585 tons

Mussels 3044 Tons

Oysters 2293 Tons



- licensing/Dificult access to área
- Pollution/Classification of the production areas (Ecoli)
- Dredging and maintenance of Ria Formosa navegation channels
- Diseases
- High bivalve mortality rates
- Exoctic species in the Natural Park
- Lack of land-based infrastructure for aquaculture

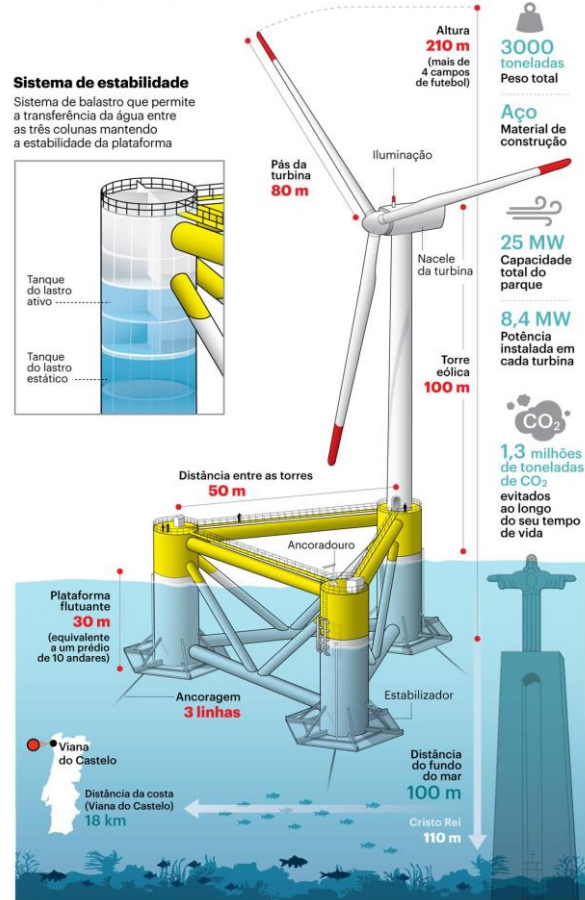


Bivalves molluscs aquaculture in new spaces

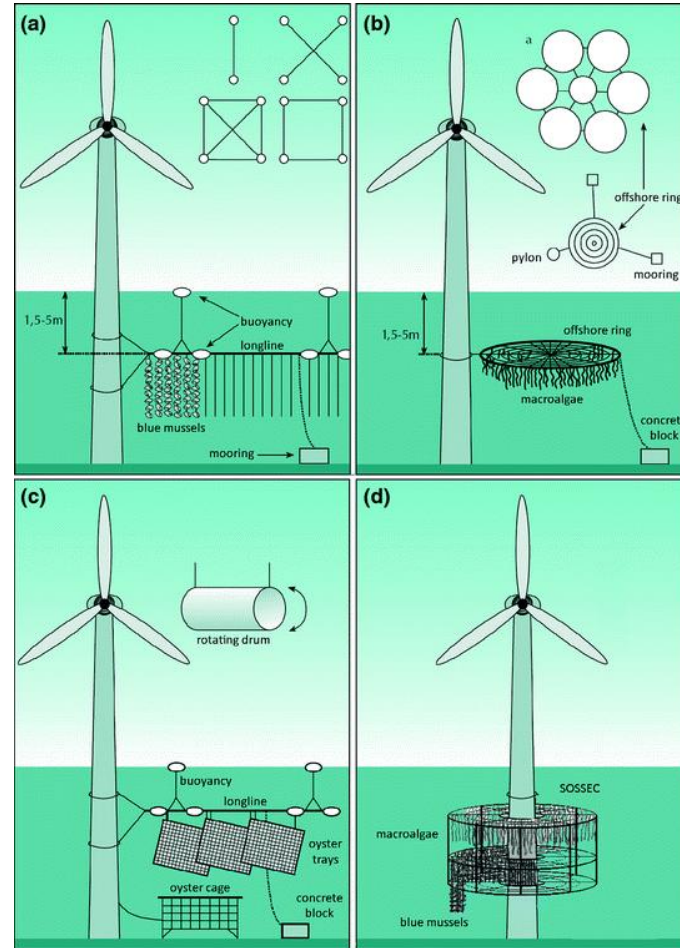


Parque eólico flutuante offshore

O mar português vai receber a primeira central eólica flutuante do mundo, com inauguração prevista para finais de 2019. Terá capacidade para produzir eletricidade para 60 mil pessoas



Fonte: EDP, Principle Infografia: Tânia Sousa/DN



Images AWI/Prof. Dr. Bela H. Buck

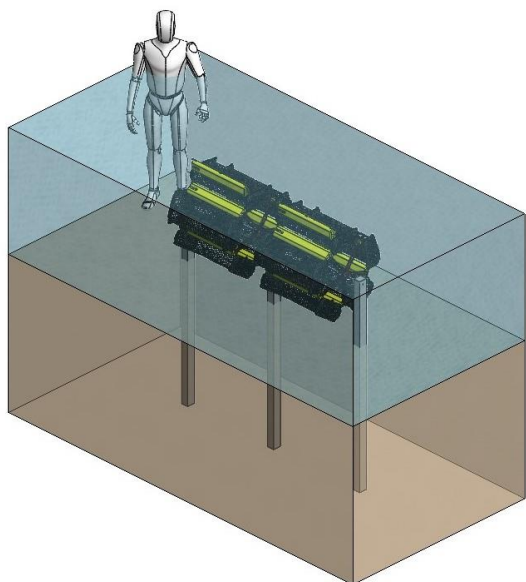
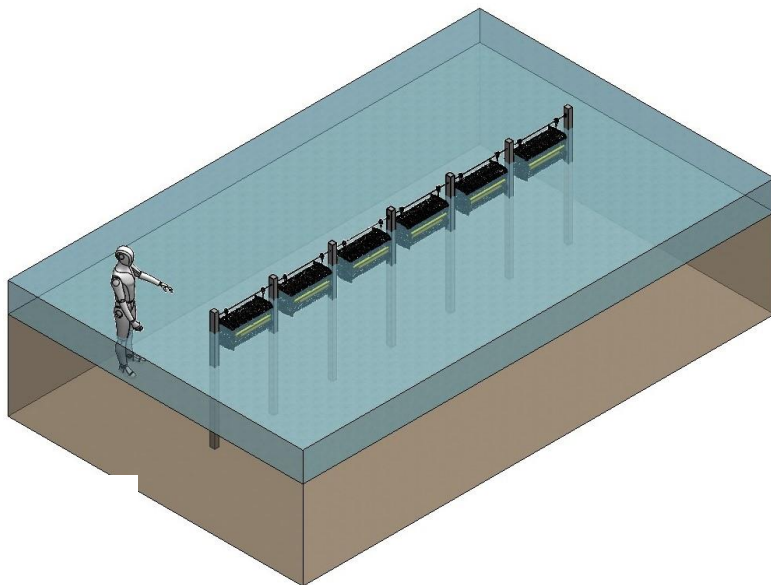




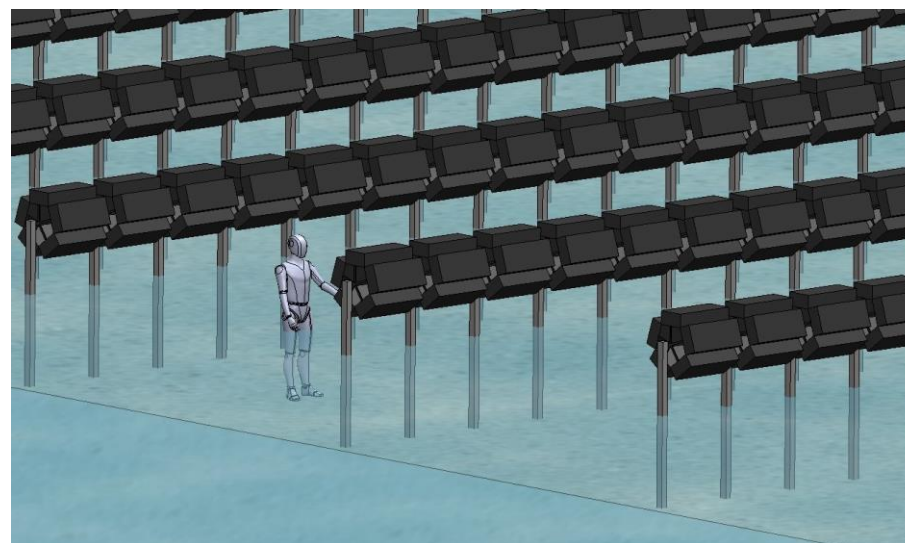
Synergies

- The synergy between wind farms and aquaculture would have a positive impact to mitigate potential less positive public and environmental impacts.
- Space sharing will lead to the optimization of operating costs (transport, maintenance, surveillance, training, financing). A substantial part of the costs are spent on these operations.
- Easier bureaucratic licensing processes, operating licenses, environmental impact studies, licenses and signs for the regulation of maritime traffic.
- The integration of Multi-Trophic Aquaculture seems to solve the problem of environmental sustainability. Energy production companies will enrich their annual sustainability report.
- The growth rate of the bivalves in an offshore environment is significantly better than in comparison with traditional production locations (inshore or nearshore, in the case of bivalves)

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