Food and Agriculture Organization of the United Nations

General Fisheries Commission for the Mediterranean

FEAP
FEDERATION OF EUROPEAN AQUACULTURE PRODUCERS

Mapping of artificialized areas abandoned for use in aquaculture

"Guidelines for streamlining aquaculture licensing and leasing processes"

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Aquacultores.pt

FEAP-GFCM Workshop, 18 January 2024

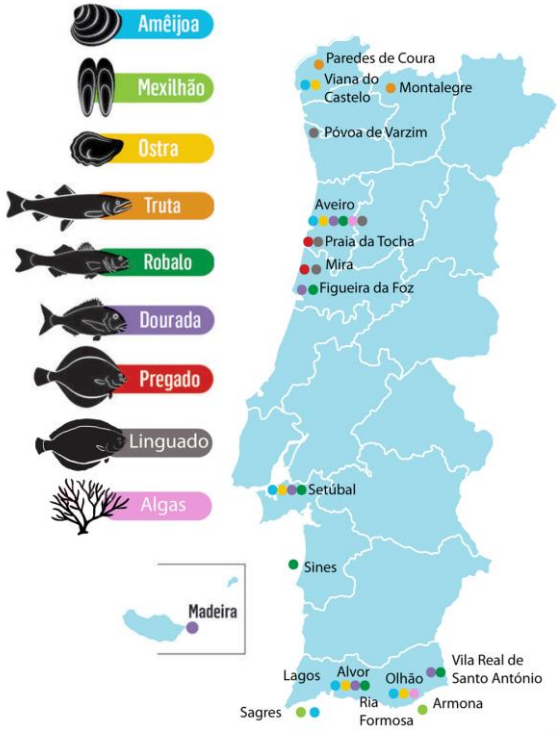
Aquaculture in Portugal

Main species farmed by volume (tons)

Main species farmed	2015	2016	2017	2018	2019	2020	2021	2022f	2023f	2024f	2025f
Fresh water											
Trout	890	676	665	665	949	904	867	867	867	867	867
Salt water											
Sebream	1099	1196	1038	898	1953	1768	3091	4085	5706	6575	8353
Seabass	297	427	701	200	882	904	954	1275	1321	1355	1390
Turbot	2302	2388	2745	2582	3580	3407	3538	3825	4135	4470	6333
Sole	130	147	151	145	234	151	327	847	1207	1507	1607
Carpet shell	2299	3714	3870	3966	3275	3652	3576	3699	3827	4059	4399
Cockle	106	125	288	201	250	352	181	196	212	229	248
Oysters	1035	1014	1185	3451	1690	3838	2293	2548	2837	3169	3439
Mussels	1315	1474	1722	1746	1457	2007	3044	3580	4911	6076	7146
Others	88	98	184	138	67	17	88	13	983	1563	2113
Total	**9561**	**11259**	**12549**	**13992**	**14337**	**17000**	**17959**	**20935**	**26006**	**29870**	**35895**

- ✓ Following 11% cagr between 2015 and 2021, growth is expected to accelerate to 19% cagr into 2025, as new projects come on stream
- ✓ Relevant expansions in turbot, sole, seabream and seabass and possibly new species into 2025

Source: INE, DGRM, forecast Aicep



The Importance of Algarve

PARQUE NATURAL DA RIA FORMOSA

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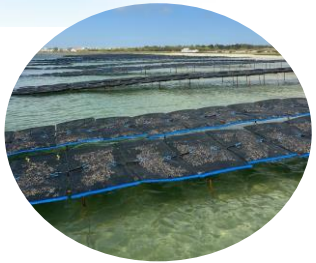
da Natureza e das Florestas



Artificialized Areas

2 different perspectives

Protection and spontaneous **recovery** by nature

Reconversion with environmental valorization projects including aquaculture

Type Of Aquaculture Facilities Required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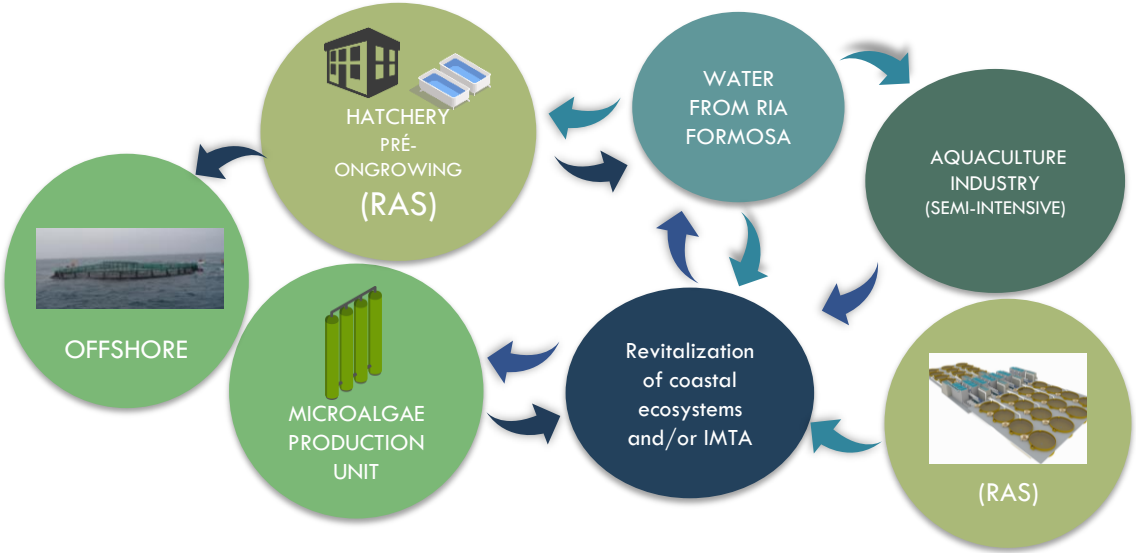
da Natureza e das Florestas
apa
agência portuguesa
do ambiente
S2AQUA
Laboratório Colaborativo
Sustainable and Smart Aquaculture

Circularity of Aquaculture Production

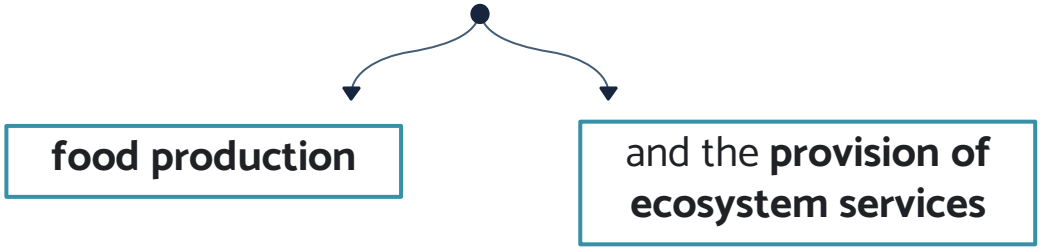


Ecosystem services associated with aquaculture:

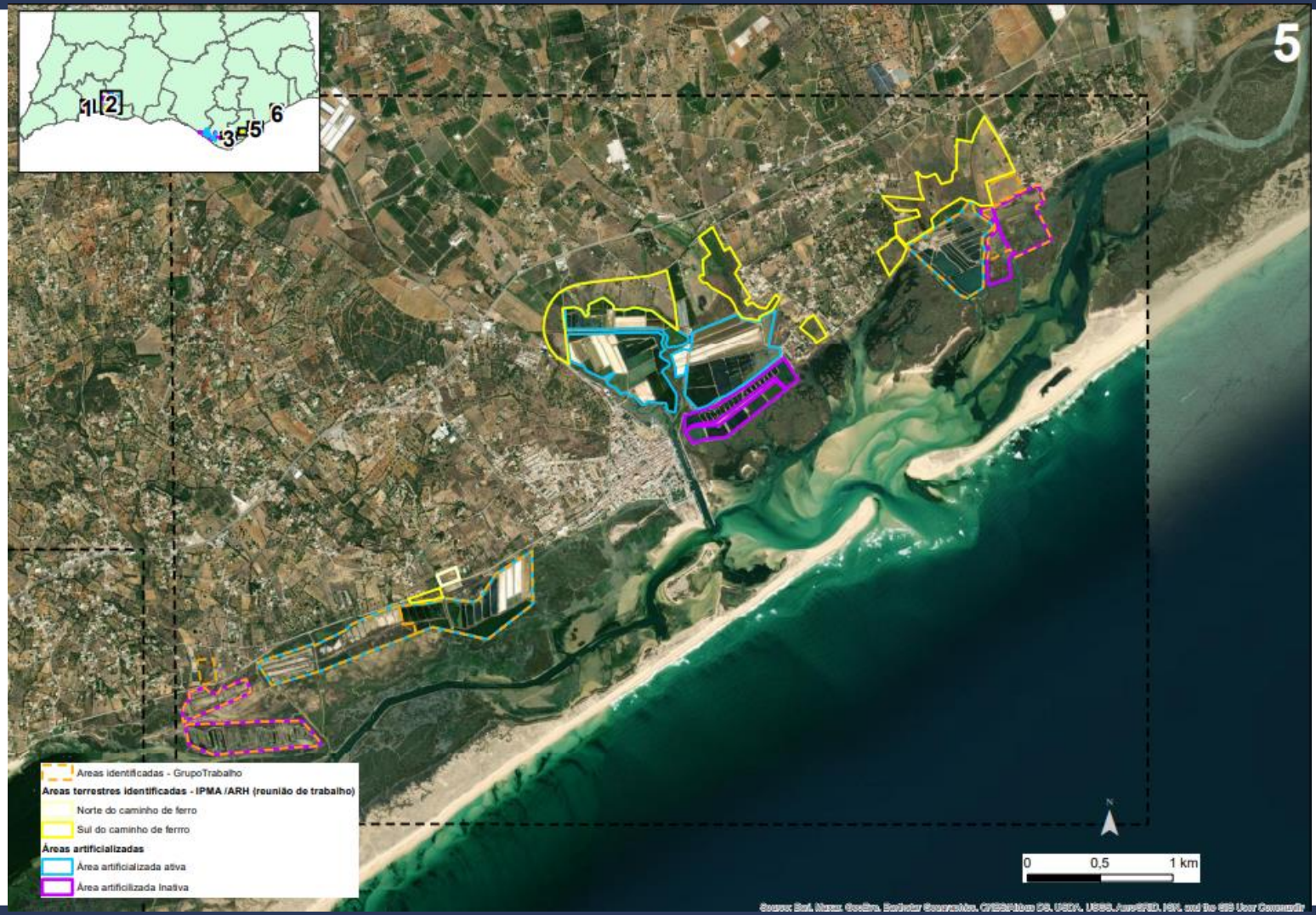
1. Direct and indirect **carbon sequestration**
2. **Biodiversity** (maintenance/diversification of habitats and fauna and flora)
3. Reinforcement of **breeding stock**
4. Assistance in animal and plant **repopulation**
5. Creation of **diverse habitats** associated with water intake, rejection and circulation areas
6. **Improvement of water quality** (through bioremediation processes with primary producers, detritivores and filter feeders)
7. Assistance in reversing the **loss of biodiversity** in adjacent ecosystems
8. Simultaneously promoting **visitation** and **environmental literacy**
9. Promoting conditions for **birdlife and birdwatching tourism**
10. Promotion of **tourist sport fishing**, and possibly other well-being and leisure activities, in a controlled environment

Ecosystem services associated with aquaculture:

In other words, the new food production units now have a dual purpose:



Always in a financial balance that provides success for this type of investment.


5
1
2
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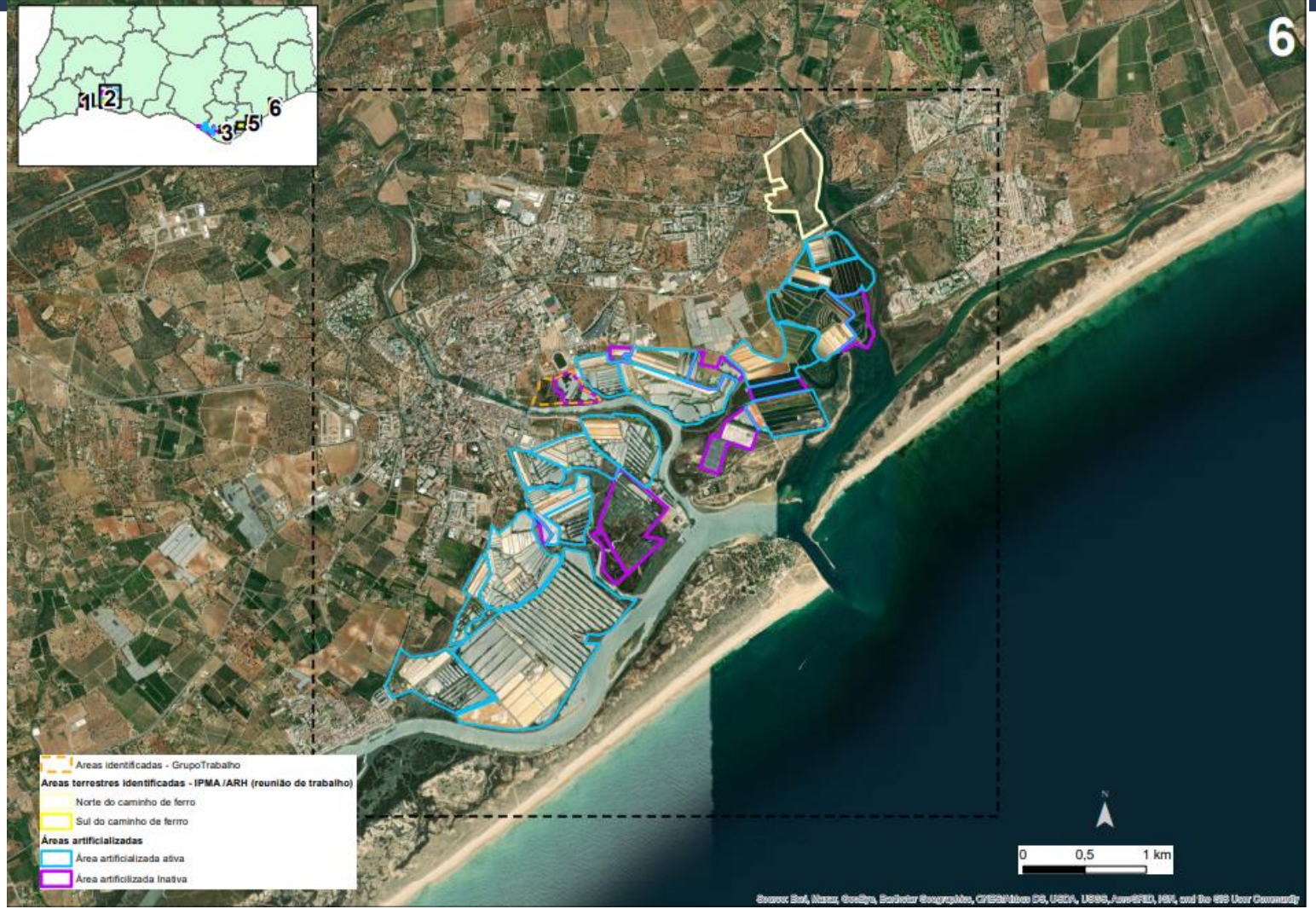
6
Áreas identificadas - GrupoTrabalho
Áreas terrestres identificadas - IPMA /ARH (reunião de trabalho)
Norte do caminho de ferro
Sul do caminho de ferro
Áreas artificializadas
Área artificializada ativa
Área artificializada Inativa
N
0
0,5
1 km


6
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Areas identificadas - GrupoTrabalho
Areas terrestres identificadas - IPMA /ARH (reunião de trabalho)
Norte do caminho de ferro
Sul do caminho de ferro
Áreas artificializadas
Área artificializada ativa
Área artificializada Inativa
N
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1 km


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Areas identificadas - GrupoTrabalho
Areas terrestres identificadas - IPMA /ARH (reunião de trabalho)
Norte do caminho de ferro
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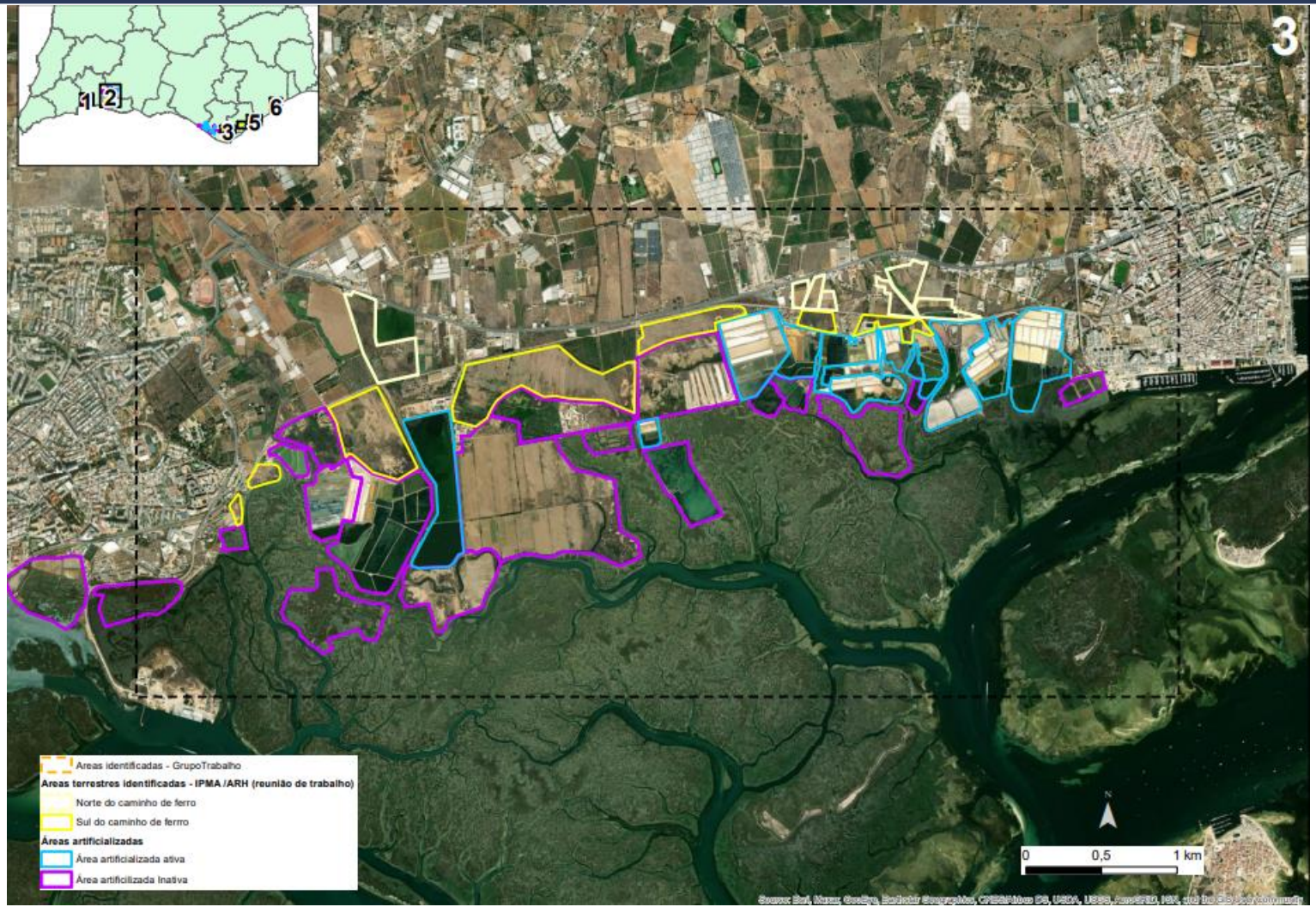
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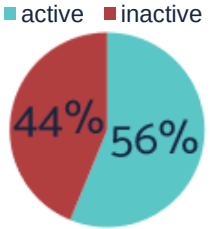
0
0,5
1 km

Estuarine-lagoon system	Natural limits of wetlands (ha)	artificialized area (ha)	artificialized area (%)	active artificialized area	inactive artificialized area	% inactive artificialized area of the total artificialized area
Ria de Alvor	780	399	51	47	352	88
Rio Arade	1138	558	49	128	429	77
Ria Formosa	10844	1969	18	1323	645	49
Sapal Castro Marim	1396	770	55	578	192	33
TOTAL	**14158**	**3696**		**2076**	**1618**	

Active and Inactive areas



These 1618 ha correspond for the most part to **former salt pans** and **inactive fish farms**

The potential of this work results from:

1

The significant **size of the areas** eventually available for intervention

(1,618 hectares in a maximalist scenario)

2

The **scientific research** that Universities and Public Institutes have developed around the issues of **ecosystem services** and **blue carbon** and the **advances in fish farming biotechnology**

(sectors that in the Algarve are represented by agents of exceptional quality in terms of innovation)

3

The predisposition of new generations of citizens to have, close to urban centers, informal spaces for **recreation and leisure close to nature and primary sector activities**, often traditional, such as non-mechanized salt farming

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THANKS!

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