



Generalitat de Catalunya
**Departament d'Acció Climàtica,
Alimentació i Agenda Rural**

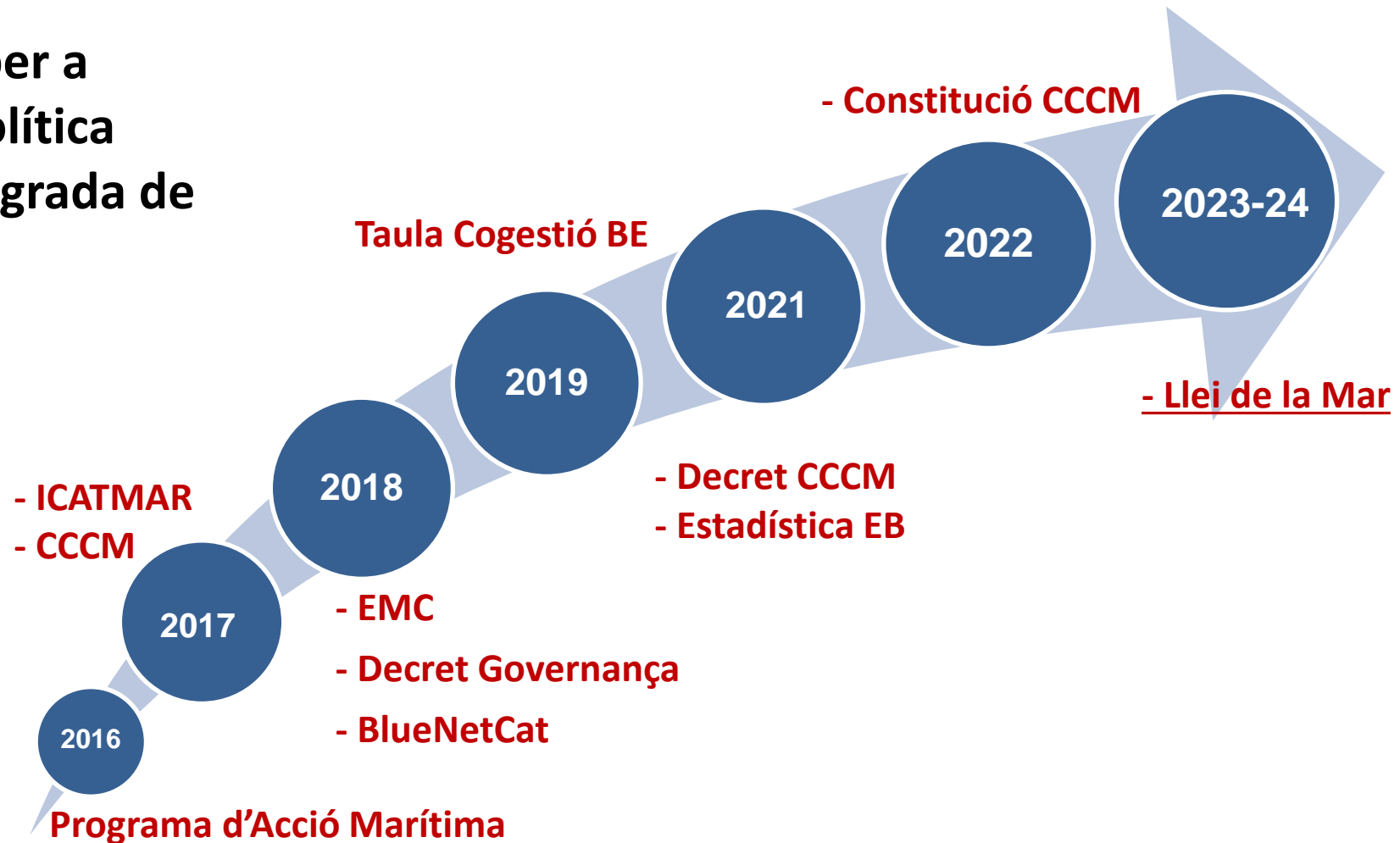
Estratègia i Tecnologies clau de l'Economia Blava a Catalunya

Marketplace d'oportunitats científico-tecnològiques i Economia Blava

Barcelona, 20 de setembre 2023

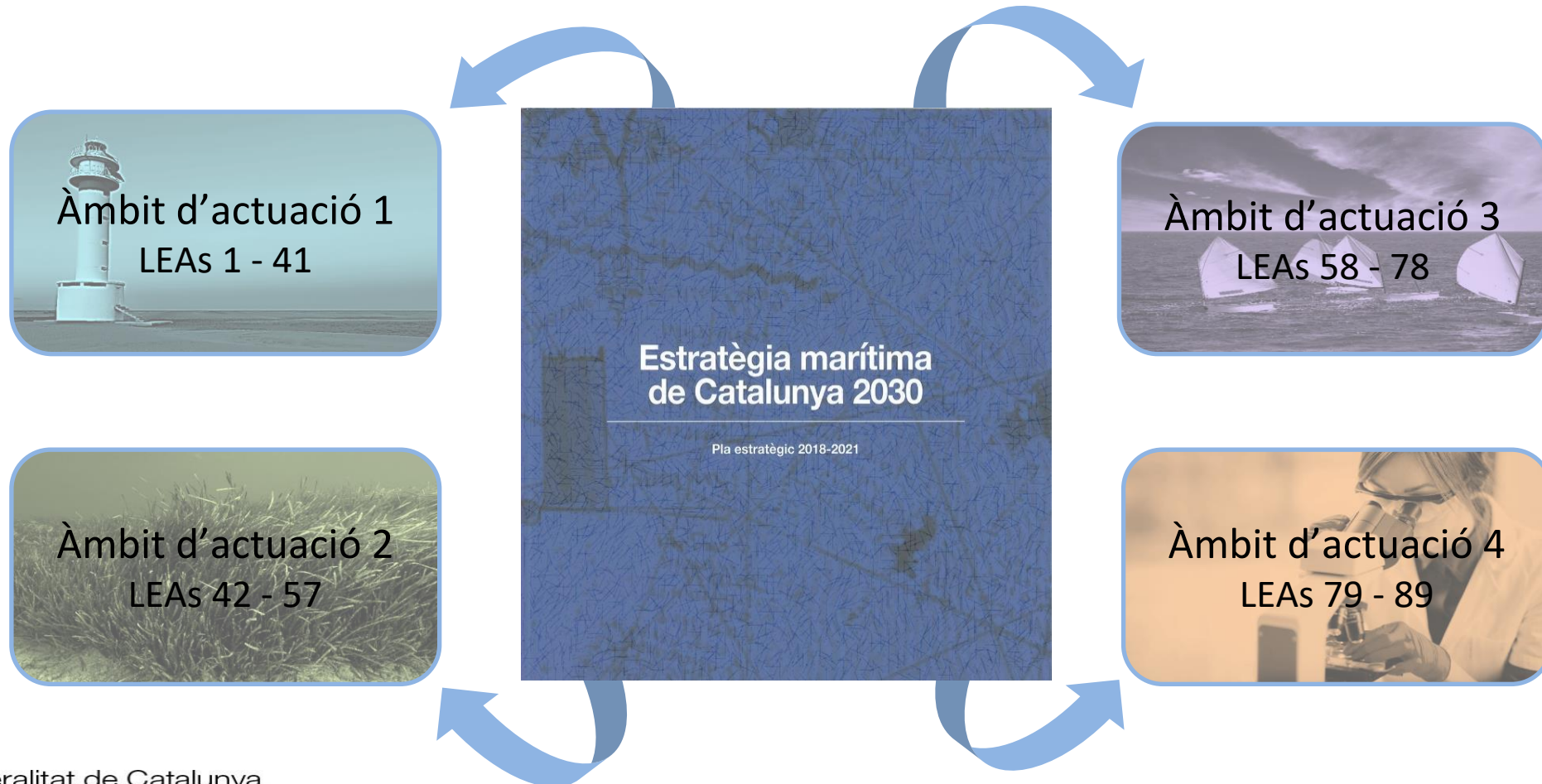
Agenda Marítima de Catalunya

Instrumentes per a impulsar la Política Marítima Integrada de Catalunya



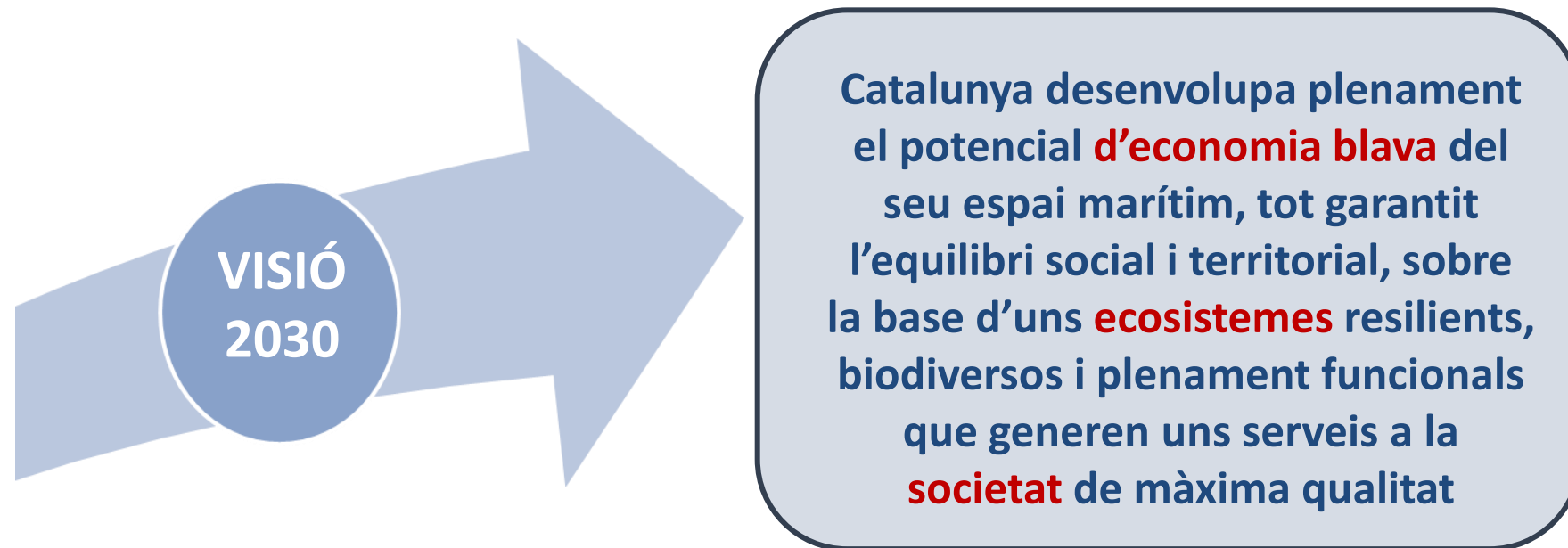
Estratègia Marítima de Catalunya

Estructura: 4 àmbits d'actuació amb LEAs específiques per cada àmbit



Estratègia Marítima de Catalunya

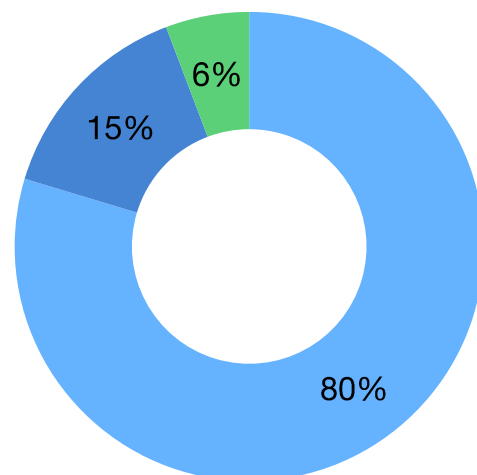
Una Estratègia de govern aprovada al 2018 conjuntament amb el seu primer Pla Pluriennal (2018-2021)



Avaluació de la implementació del primer Pla pluriennal de l'EMC

Resultats

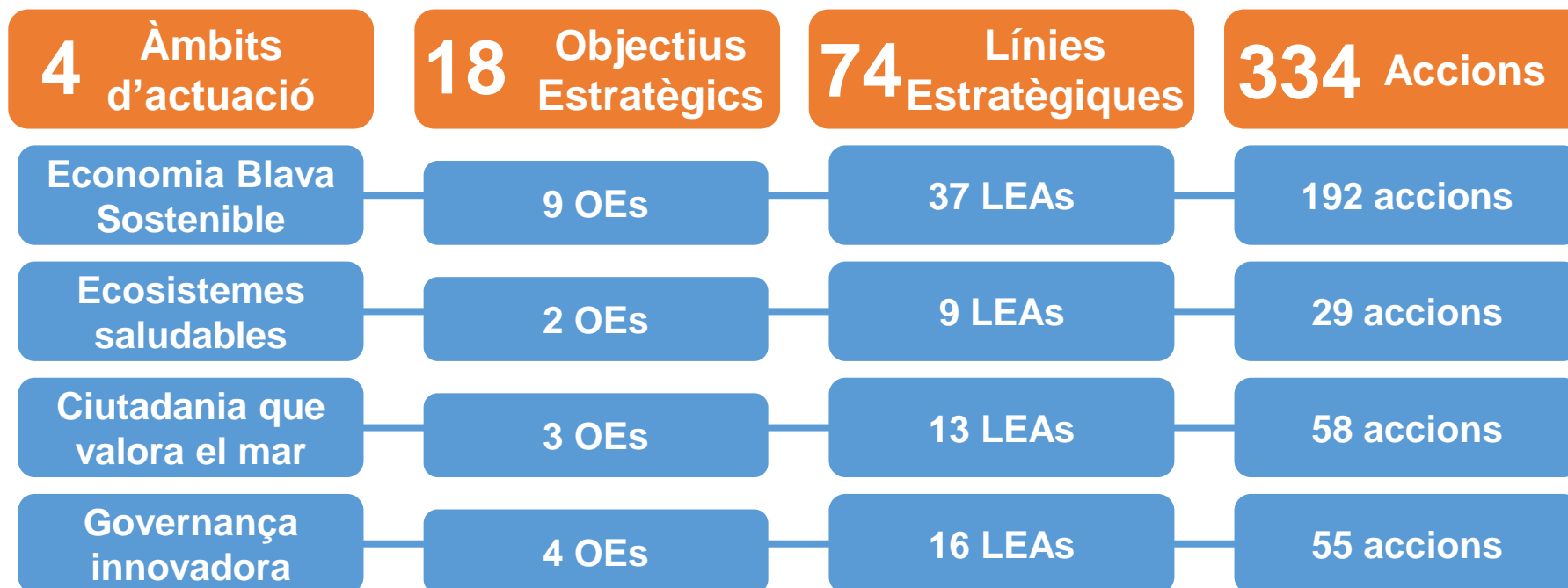
El 80% de les accions plantejades estan finalitzades i el 15% en execució



- Acció finalitzada
- Acció iniciada
- Acció programada no iniciada



Pla Pluriennal (2023-2026)



Novetats del Pla Pluriennal (2023-2026)

ÀMBIT 1

- Desenvolupar un full de ruta per l'avaluació del **capital natural** a Catalunya
- Nou OE transversal per impulsar la **transició energètica**
- **Turisme marítim** innovador
- **Pla d'Acció de Relleu Generacional Pesquer**
- Aposta per l'**aqüicultura restaurativa**
- Optimitzar la gestió de la **pesca marítima recreativa**
- Dinamitzar les **activitats marítimes recreatives**
- Una **construcció i reparació de vaixells** compromesa amb la economia circular i la sostenibilitat
- Consolidar el sector de les diverses fonts d'**energia renovable marina**
- Explorar les **propietats biotecnològiques** d'espècies produïdes a Catalunya

ÀMBIT 2

- Execució d'una **Cartografia dels habitats** marins conjuntament amb l'ESNATURA
- Avaluació de l'**impacte dels sectors blaus** sobre el medi i proposta de millora

ÀMBIT 3

- Beneficis per a la salut al tenir una **relació propera amb la mar (salut blava)**
- Reforçar el teixit empresarial del territori amb accions d'**economia social**
- Consolidar l'Associació Catalana de **Dones de la Mar** constituïda durant el primer Pla

ÀMBIT 4

- Consolidar la **cogestió com model de governança marítima**
- Consolidar un **assessorament científic d'excel·lència per a la gestió**
- Consolidar la **Xarxa GALP** com eina clau d'implementació de l'EMC
- Desenvolupar un **pla d'ordenació** de les activitats i usos a mar
- Desenvolupar la **lleï de la Mar**

Proposta de Pla Pluriennal (2023-2026)

Àmbit 1. Una Economia Blava Sostenible en el marc d'una Política Marítima Integrada respectuosa envers el conjunt dels usos del mar

9
OEs

37
LEAs

192
accions

48
actors

OBJECTIUS TRANSVERSALS

- OE1.1. Potenciar un **sector marítim** fort, modern, ben dimensionat, basat en el coneixement i segur
- OE1.2. Impulsar la **transició energètica** de l'activitat econòmica blava per a donar resposta al **canvi climàtic**

SECTORS ECONÒMICS

- OE1.3. Desenvolupar un **turisme** marítim modern i sostenible
- OE1.4. Potenciar uns **sectors pesquer i aquícola** competitius i una **cadena de valor** moderna i resilient
- OE1.5. Desenvolupar un nou model de **pesca recreativa** respectuós amb el medi
- OE1.6. Potenciar unes **activitats marítimo-recreatives i esportives** de baix impacte ambiental que dinamitzen l'economia
- OE1.7. Potenciar una activitat industrial sostenible de **construcció, reparació i desballestament de vaixells**
- OE1.8. Consolidar el sector de les **energies renovables** marines
- OE1.9. Promoure el desenvolupament de la **biotecnologia** marina

Proposta de Pla Pluriennal (2023-2026)

Àmbit 2. Uns ecosistemes saludables i resilients



OE2.1. Incrementar l'**observació** i el coneixement dels **hàbitats marins**
OE2.2. **Preservar, restaurar** i reduir l'impacte sobre els **hàbitats marins**

Proposta de Pla Pluriennal (2023-2026)

Àmbit 3. Una ciutadania que estima i valora el mar com font de benestar i riquesa



OE3.1. Apropar la **ciutadania** al medi marí i a les activitats marítimes

OE3.2. Reforçar l'arrelament de l'**economia local i social** en els sectors marítimes

OE3.3. Fomentar el reconeixement, la participació i la integració de la **Dona** en els diferents sectors de l'Economia Blava

Proposta de Pla Pluriennal (2023-2026)

Àmbit 4. Una governança marítima innovadora en mans de la ciutadania



- OE4.1. Desenvolupar i consolidar mecanismes participatius i innovadors basats en la **cogestió**
- OE4.2. Consolidar un **assessorament científic** d'excel·lència per a la gestió
- OE4.3. Crear i consolidar una **Xarxa GALP** com instrument d'implementació al territori de la Política Marítima Integrada
- OE4.4. Desenvolupar l'**ordenació dels usos i les activitats marítimes** de Catalunya com a eina per a assolir una Política Marítima Integrada

Informe de Economia Blava EU 2020:

➤ Catalunya es posiciona al costat de les economies marítimes més importants d'Europa (Portugal, Estònia, Grècia, Croàcia, Malta i Xipre)

➤ **>5% de ocupació**

➤ **>3% of VAB**

➤ En el conjunt d'Europa, l'economia blava aporta el **2,2%** de l'ocupació total, i l'**1,5%** del VAB de la Unió

Dades 2017

The Blue Economy in Catalonia

In 2018, the regional Government of Catalonia approved the *2030 Maritime Strategy of Catalonia*¹⁵ with the aim of fully developing the potential of the Blue Economy in Catalonia, guaranteeing social and territorial balance, based on resilient, biodiverse and fully functional ecosystems that generate the highest quality services for society. Through this Strategy, Catalonia contributes to the implementation of international and regional initiatives as the UN 2030 Sustainable development Goals, the EU Blue Growth Strategy, and the WestMED Initiative for the Sustainable Development of the Blue Economy in the Western Mediterranean. The governance of the

¹⁵ Further details about the report can be found here: <http://www.cetecima.com/?p=2718>

¹⁶ Technology Centre of Marine Sciences, Canary Islands.

¹⁷ Twenty-Foot Equivalent Unit.

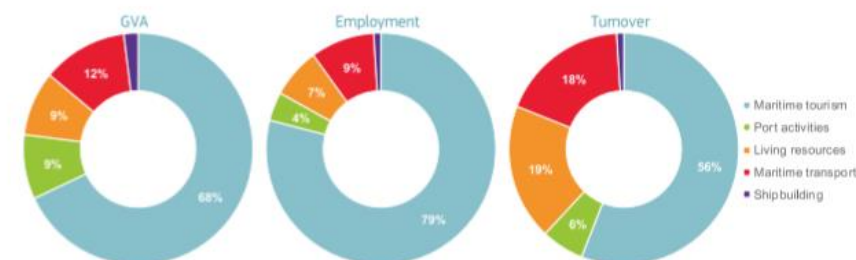
¹⁸ Available at: http://agricultura.gencat.cat/web/contenid/08-pesca/politica-maritima/enllacos-documents/fibers-binaris/ESTRATEGIA-MARITIMA-2030-Pla-2018-2021_EN.pdf

Strategy will rely on the Catalan Maritime Co-Management Council, a newly created body designed to ensure an adaptive review of the Strategy by stakeholders (economic sectors, scientists, civil society and administrations) following the principle of co-management. The Strategy includes the creation and regular maintenance of a specific database to bring together and integrate economic, social and environmental data.

The Strategy has identified six established economic sectors contributing to the Blue Economy in Catalonia: *Maritime tourism, Professional fishing, Aquaculture, Recreational fishing, Maritime recreational and sporting activities and Shipbuilding*. Two emerging economic sectors with strong development potential have been also identified: *Renewable energy and Blue biotechnology*. The Strategy has identified *Recreational fishing and Maritime recreational and sporting activities* as commonly practiced by local residents all year round, creating a very specific and relevant economic activity. They are different from *Maritime tourism* activities undertaken by visitors (linked to the beaches, cruises, etc.). There are 84 nautical schools in Catalonia, which have issued over 156 000 recreational nautical licences in the past 25 years. The 184 authorised nautical centres and 215 diving centres, constitute a sizeable economic sector that in 2016 had a turnover of some €360 million from the sale of products and services. On the other hand, a first provisional assessment of all modalities within the recreational fishing sector has provided a turnover of €89 million.

Following a classification and methodology inspired by the EU Blue Economy Report, the established economic sectors in the Catalan Blue Economy are estimated to have directly employed **214 496 people** in 2017 (5.8% of the total employment in Catalonia), generated **€25 billion of turnover** and **€7.3 billion of Gross Value Added (GVA)** (3.4% of the GVA in Catalonia). The distribution of the Blue Economy sectors in Catalonia is shown in Figure A.2.

Figure A.2: Size of the Blue Economy in Catalonia, distribution by sector, 2017



Notes: Figures for the city of Barcelona are considered as urban tourism and therefore are not included. Recreational fishing and maritime recreational and sporting activities have not been included.

Source: Elaborated by the Centre for Agro-Food Economics and Development (CREDA), based on data from the Statistical Institute of Catalonia (IDESCAT); Ministry of Agriculture, Fisheries and Food (Spain); Department of Agriculture, Livestock, Fisheries and Food (Catalonia).

- Un **volum de negocis** de **25.170,7** milions d'euros (**7,6% superior** a l'any anterior).
Aquesta dada representa un **5,4%** del valor de la producció a Catalunya per a l'any 2019
- Un **valor afegit brut (VAB)** de **7.304,9** milions d'euros (**2,6% superior** a l'any anterior).
Aquesta dada representa un **3,2%** del VAB a Catalunya per a l'any 2019
- Una **ocupació** directa de **209.278** treballadors (**2,4% superior** a l'any anterior). Aquesta dada representa un **5,5%** del total de persones ocupades a Catalunya per a l'any 2019

Dades 2019 (novembre, 2022)

2021 | 2022

Figure 8.2 Division of the Catalan coast into 21 zones.

Zones 1-8 correspond to the North region, zones 9-13 to the Centre region, and zones 14-21 to the South region.



161
2021

8.4. RECREATIONAL MARITIME FISHING IN CATALUNYA⁶²⁸

Introduction⁶²⁹

Recreational fishing is defined as "a non-commercial fishing activity exploiting marine living resources for recreation, tourism or sport"⁶³⁰. In other words, it is a non-professional activity practiced for sport and leisure with no commercial purpose. This activity includes three main modalities: shore fishing, boat fishing, and spearfishing. The popularity of this practice in coastal populations all year round in Catalonia reflects its social and cultural relevance. There has been a significant increase in this practice in recent decades mostly due to a rise in citizen interest in experiencing outdoor activities, but also likely due to the expansion of tourism.

Professional and recreational maritime fishing often impact the same fishing resources. However, their combined effect on natural resources is yet unknown. This fact has now drawn the attention of decision makers and the scientific community, convinced that management should incorporate knowledge about the impact of recreational maritime fishing.

The Directorate General for Fisheries and Maritime Affairs, through the Catalan Research Institute for the Governance of the Sea (ICATMAR), developed, in the framework of the 2030 Maritime

Strategy of Catalonia, a monitoring program, which takes into account recreational maritime fishing. During 2019, this program included a pilot study for which data from online and onsite surveys were collected. Results of the pilot study show preliminary figures regarding the economic, social and environmental impacts of recreational fishing in Catalonia.

The Catalan Research Institute for the Governance of the Sea was created as a result of the collaboration between the Directorate General for Fisheries and Maritime Affairs of the Government of Catalonia and the Institute of Marine Sciences (ICM-CSIC). It is an autonomous organization that responds to the need for generating scientific advice for management purposes in the Blue Economy. During 2019, ICATMAR carried out the first qualitative and quantitative assessment of recreational maritime fishing along the Catalan coast. The results and experience gathered throughout 2019, in addition to offering a preliminary overview, have made it possible to design a continuous data collection program, which was launched in 2020.

Methodology. Data was collected from the practitioners of the activity via voluntary field and online surveys. Both included questions regarding the modality used, the socio-economic profile, the fishing effort, the fishing performance, the target species, and the daily and annual expenses for the practice of the activity. The area

⁶²⁸ This case study was based on the Diagnosis of Marine Recreational Fishing in Catalonia done by the Catalan Research Institute for the Governance of the Sea in 2019. A complete analysis can be consulted on the following address: http://oguluna.gencat.cat/web/contenidor/008-pesca/politica-maritima/web/visor-document/fitxers-bioma/diagnosi-marine-recreativa-fishing-catalunya-2019-ICATMAR-20-04_046.pdf

⁶²⁹ Note: The information presented must be taken with caution, given that many of the data used are subject to important sources of bias (sex ratio, seasonality, perception and memory biases), but particularly due to the fact that voluntary respondents tend to engage the activity more actively and hence tend to be in the upper side of the activity spectrum. Additionally, both surveys were undertaken during the warmer months, for which cold season activity is underrepresented.

⁶³⁰ Council Regulation (EC) No 1224/2009 and RAO, 2016.

Contribucions de Catalunya al EU Blue Economy Report:

➤ **2021**
Dimensionament de la Pesca marítima Recreativa

➤ **2022**
Caracterització i quantificació de la brossa marina al mar Català

THE EU BLUE ECONOMY REPORT | 162

BOX 6.2 Marine litter in Catalonia

Marine litter, the remains of all kinds of objects and materials dumped at sea, are currently one of the main causes of pollution, creating serious environmental and economic problems around the world.

The Mediterranean Sea, is especially vulnerable to the effects of marine litter⁶³¹ and is currently considered one of the most polluted seas on the planet⁶³². Collection and disposal of marine litter is very difficult because of the drift and the immensity of the tri-dimensional space through which objects and particles move. In addition, there are no efficient methods to clean the seabed. Thus, there is a need to take advantage of existing resources, such as fisheries, to help eliminate accidentally caught litter while disseminating both their work and the need to preserve the oceans⁶³³.

Monitoring marine litter

The Catalan Research Institute for the Governance of the Sea (ICATMAR) was created as a result of the collaboration between the Directorate General for Fisheries and Maritime Affairs of the Government of Catalonia and the Institute of Marine Sciences (ICM-CSIC). As an autonomous organization it responds to the need of generating scientific advice for management purposes in the Blue Economy field. Through the ICATMAR, the ICM-CSIC has developed, a monitoring program with the trawling fleet to characterize the catch, including marine litter, in the framework of the 2030 Maritime Strategy of Catalonia. Data collection began in 2018 and will continue to offer the data needed to sustain fisheries and improve management plans. However, the data collected and analyzed below covers 2020-2021 for and overview of the debris fished in the Catalan coast and help develop best management practices.

Results On a global scale

Most of the fished marine litter corresponded (in weight) to clinker, which represented 36 % of the total litter (Figure 6.10) and a density greater than 33 kg per km². Clinker can be considered as a tracer of trading routes from recent centuries and the high tradition of this activity in the Mediterranean translates in frequently findings of clinker on the seabed. The next most abundant category by weight was processed wood, which would mainly correspond to boxes or remains of ships and ports, being of 25 % of the marine litter which correspond to a density of 23.6 kg per km². The third category most abundant category was glass (19% and 17.7 kg per km²) and then, plastic (9% and 8.8 kg per km²).

Marine litter is present in the Catalan seafloor being clinker, processed wood, glass and plastic the categories with the highest densities. However, benthic marine macro-litter is not evenly distributed with variability according to area, depth and season. In detail, when analysing the data by zones, marine litter ranges between 31% and 35% but plastics are most abundant in the central area. At depth, the shelf contains most of the marine debris accumulating up to 50% of the total being plastic and processed wood the main components of the catch. Seasonally, most marine litter was caught in autumn, being 41% of the catch.

Within the plastic category, the results showed that wet wipes are the major component of the plastic fraction, accounting up to 57% of the plastic. The distribution of wet wipes, however, was more than 10 times higher in the central area (8.1 kg per km²) representing 59.3% of the plastic fraction, coinciding with the most urbanized coast of Catalonia.

The study of the macro-benthic marine litter of fishing grounds on the Catalan coast reveals the amount of waste that exists on its seabed, which vast majority is originated from land. Thus, it is recommended to take advantage of fisheries to study and extract accidentally fished marine litter and improve waste management actions on land, especially in the central area of Catalonia.

Figure 6.10 Relative percentage by weight of each category of marine litter collected by the trawling fleet

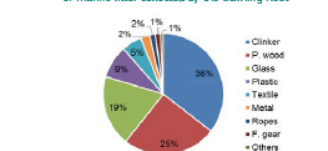
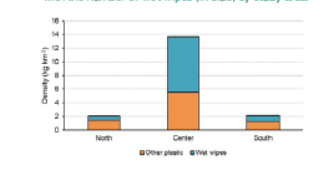


Figure 6.11 Average density (kg per km²) of the plastic category (total column) detailed with the number of wet wipes (in blue) by study area.



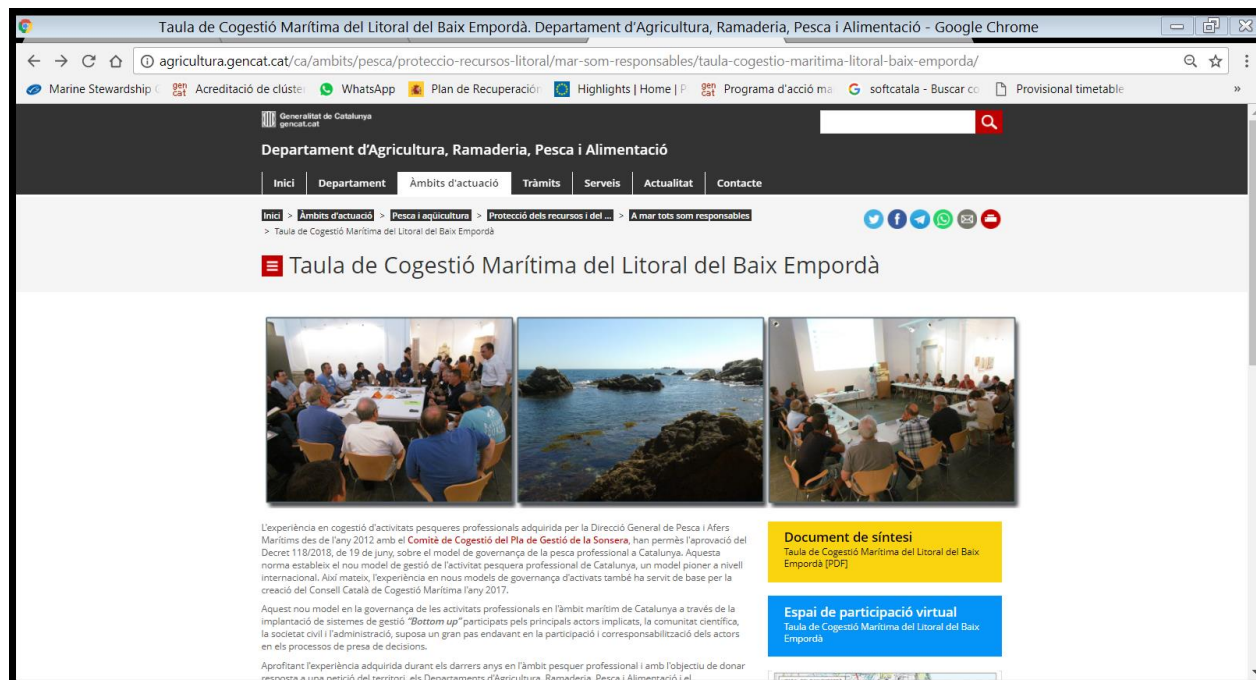
⁶³¹ FAO, 2018. The State of Mediterranean and Black Sea Fisheries, p. 172.

⁶³² Galgani, F., Claro, F., Duplède, M., Fossi, C., 2014. Monitoring the impact of litter in large vertebrates in the Mediterranean Sea within the European Marine Strategy Framework Directive (MSFD): Constraints, specificities and recommendations. Marine Environmental Research 100, 3-9.

⁶³³ Galgani, E., Marco-Herrero, E., Soto, S., Recasens, L., Lombarte, A., Llorent, J., ... & Ramón, M. (2019). Benthic marine litter in shallow fishing grounds in the NW Mediterranean Sea. Waste Management, 95, 620-627.

Taula de Cogestió Marítima del Litoral del Baix Empordà

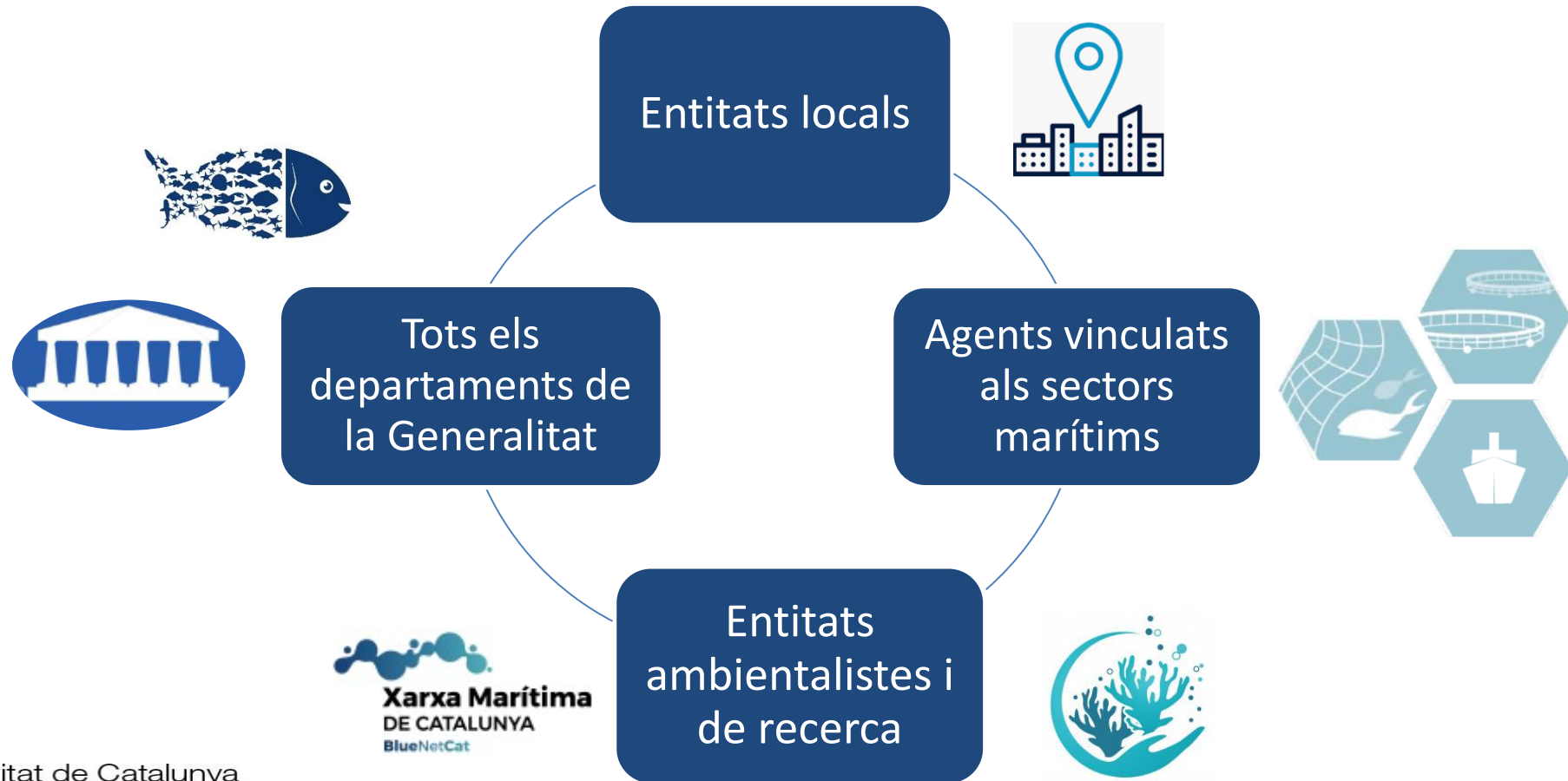
Taula de cogestió marítima del litoral del Baix Empordà



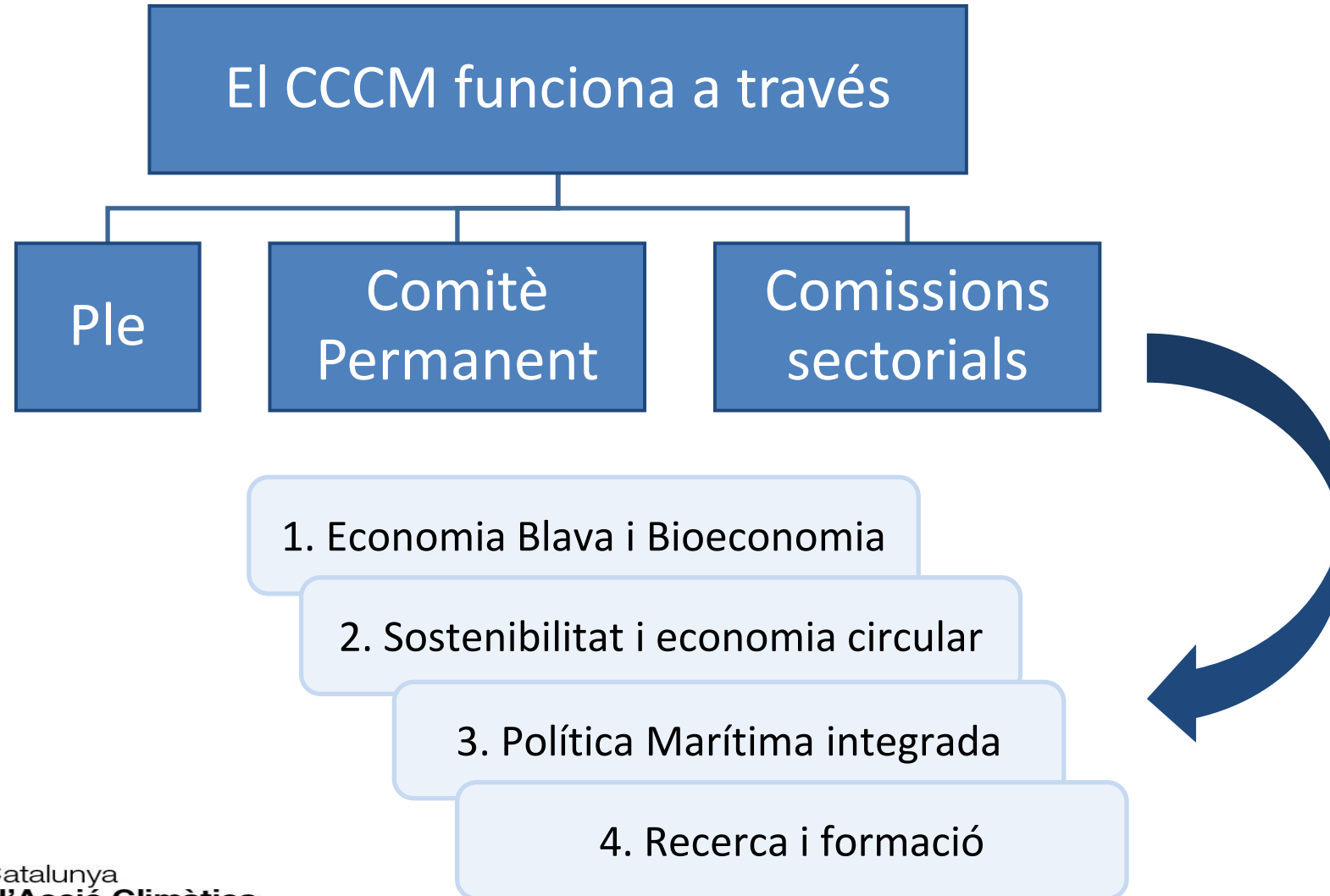
- ✓ Gran diversitat d'actors (76) i usos
- ✓ Dos anys de treball preparatori
- ✓ Primer pla d'acció per al 2020-2021

CONSELL CATALÀ DE COGESTIÓ MARÍTIMA

El Consell Català de Cogestió Marítima està format per:



Consell Català de Cogestió Marítima

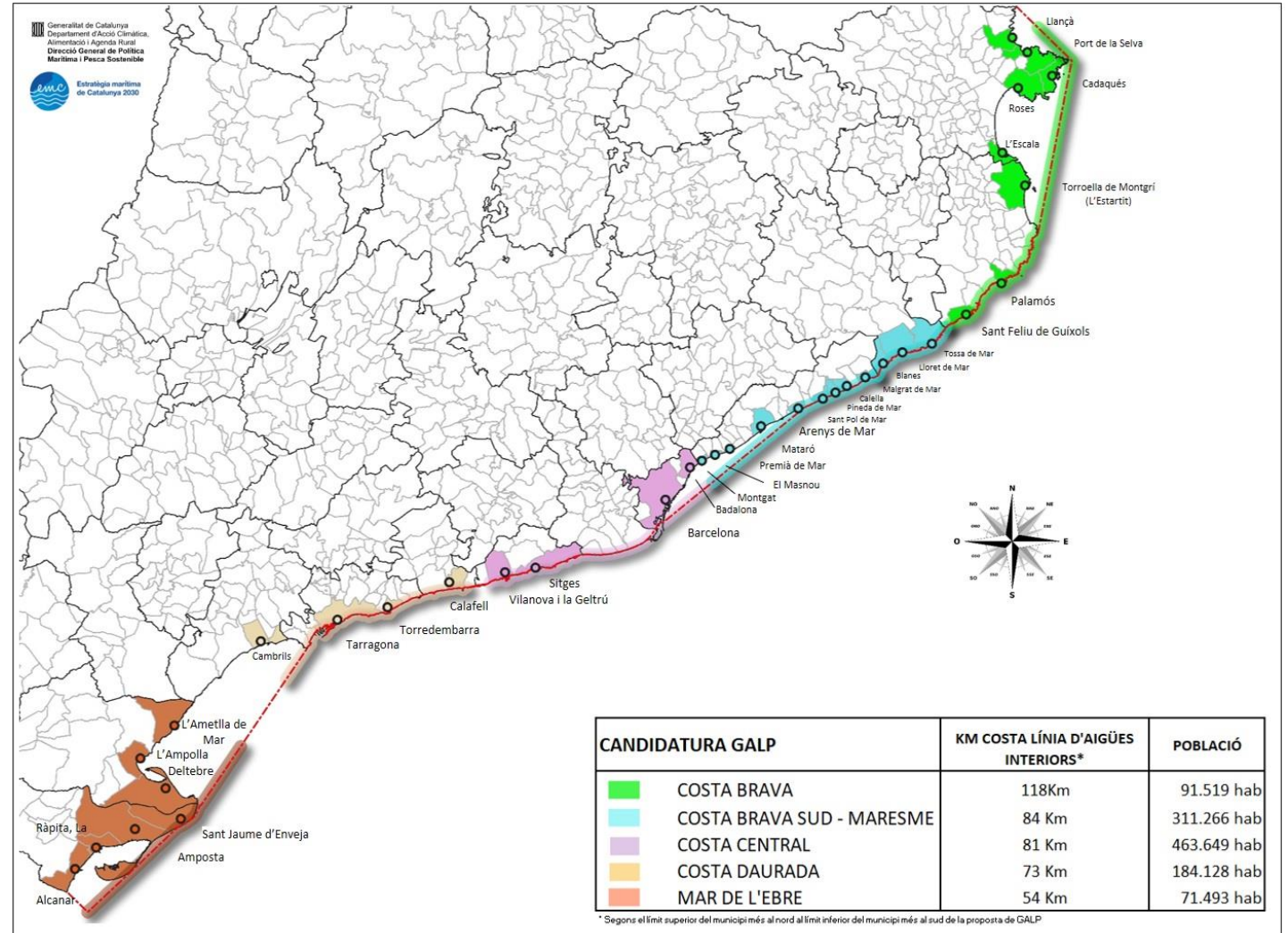


Participatiu

EDLP 2023-2027

GALPs com a vehicle d'implementació en els territoris marítims de l'EMC: dinamització territorial de l'EB

**26% del Pla financer del FEMPA:
15,6 millions € fons públics**



Governança del Mar

Assessorament integral per una gestió sostenible de l'Economia Blava

- Recollida de dades
- Treballs científics
- Estudis de seguiment



Serveis actuals:

- Servei d'Assessorament Pesquer (SAP)
- Servei d'Oceanografia Operacional (SOCAT)

Governança del Mar

Servei d'Assessorament Pesquer (SAP)

Informes

La reproducció dels informes està permesa sempre que es reconegui l'autoria de l'obra, (aquesta pot ser reproduïda, distribuïda i comunicada públicament), però no es pot utilitzar l'obra ni els treballs derivats per a finalitats comercials, i no es pot alterar, transformar o generar una obra derivada de l'obra original.

<p>State of fisheries in Catalonia 2021, Part 1: Report on the monitoring of the commercial fishing fleet</p>	<p>State of fisheries in Catalonia 2021, Part 2: Stock assessment</p>	<p>Fisheries advisory report for the Northern GSA6 2021</p>	<p>Scenarios for the implementation of management measures reported in Article 11.3 of the western Mediterranean Multiannual Plan and Presidency Statement of December 2021</p>
<p>2020-2021 Evolució de les captures i els preus de venda del sector pesquer a Catalunya</p>	<p>2021 Report on the continuous monitoring of marine recreational fishing in Catalonia (ICATMAR, 21-04)</p>	<p>State of Fisheries in Catalonia 2020. Part 1: Methods and Results (ICATMAR, 21-02)</p>	<p>State of Fisheries in Catalonia 2020. Part 2: Annexes (ICATMAR, 21-02)</p>
<p>Evolució de les Captures i els</p>	<p>Evolució de les Captures i els</p>	<p>Estudi socioeconòmic sobre la flota pesquera comercial</p>	<p>Evolució de les Captures i els</p>

Treball tècnic (7)

Seguiment de la pesca marítima recreativa a Catalunya (2020-2021)

Governança del Mar

Servei d'Oceanografia Operacional (SOCAT)

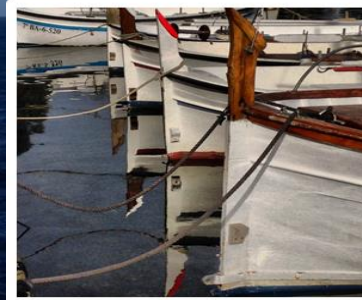
- L'oceanografia operacional comprèn totes aquelles activitats que es dediquen a mesurar i recopilar dades i informació sobre mars i oceans de manera sistemàtica per a la seva interpretació, modelització i difusió
- Amb el desenvolupament del Servei d'Oceanografia Operacional de Catalunya, a través de l'Institut Català de Recerca per a la Governança del Mar (ICATMAR), s'integraran:



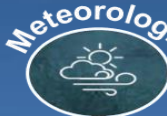
Les dades generades per la **XARXA DE RADARS**



INFORMACIÓ OCEANOGRÀFICA: teledetecció, boies oceanogràfiques fixes i a la deriva



Proporcionarà informació com ara



Oferirà serveis per a



Governança del Mar

Servei d'Oceanografia Operacional (SOCAT)

XARXA DE RADARS HF DE CATALUNYA

Aquesta infraestructura donarà informació dels corrents superficials (1r metre) en temps real.

A finals de 2024



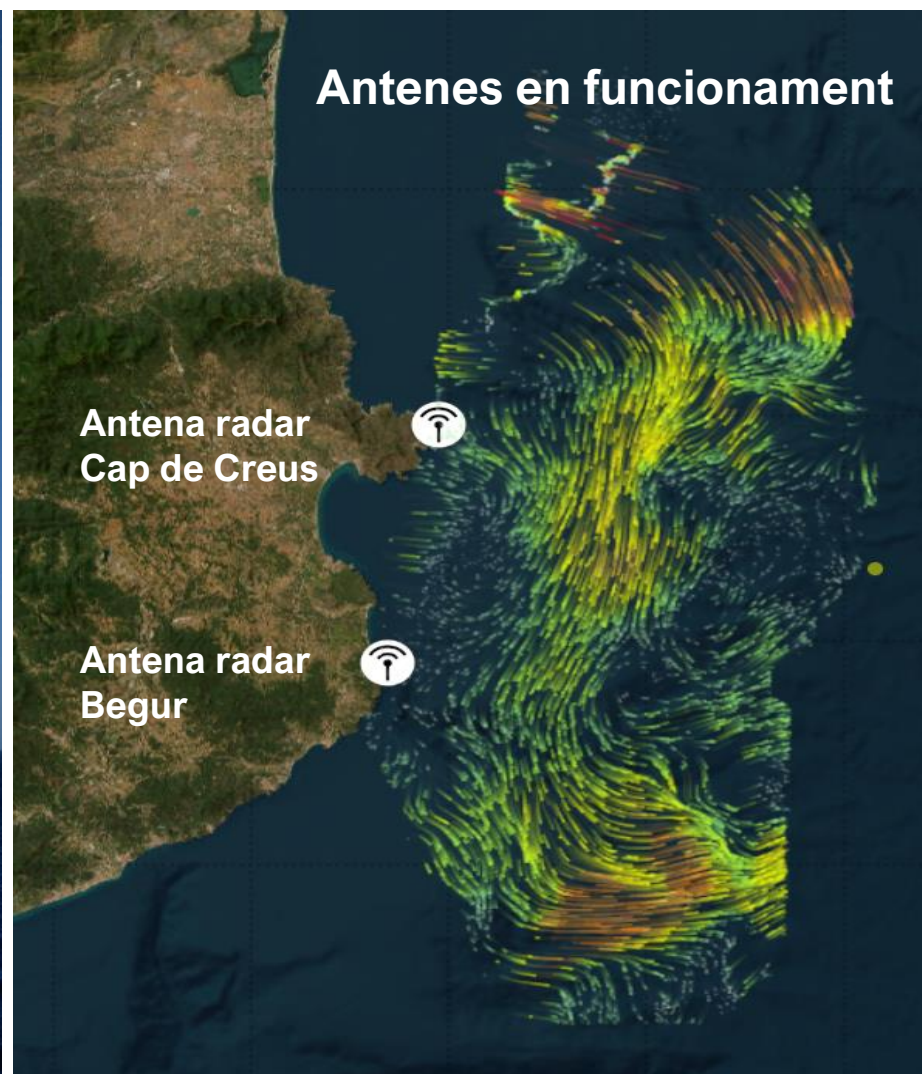
La xarxa estarà formada per 7 estacions radar d'alta freqüència i es coordinarà amb altres xarxes nacionals i internacionals



La Generalitat disposarà d'informació actualitzada cada hora sobre corrents superficials amb un abast de fins a 80 km.

Calendari de desplegament

2022	2023	2024
Cap de Creus	Begur Arenys de Mar Barcelona Garraf	Tossa de Mar Segur de Calafell



Marítima de Catalunya



Xarxa Marítima
DE CATALUNYA

Composició

67 grups de recerca

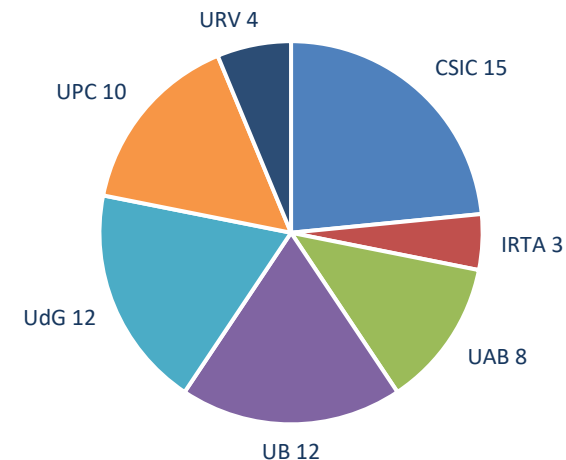
7 institucions

600 persones

Objectiu

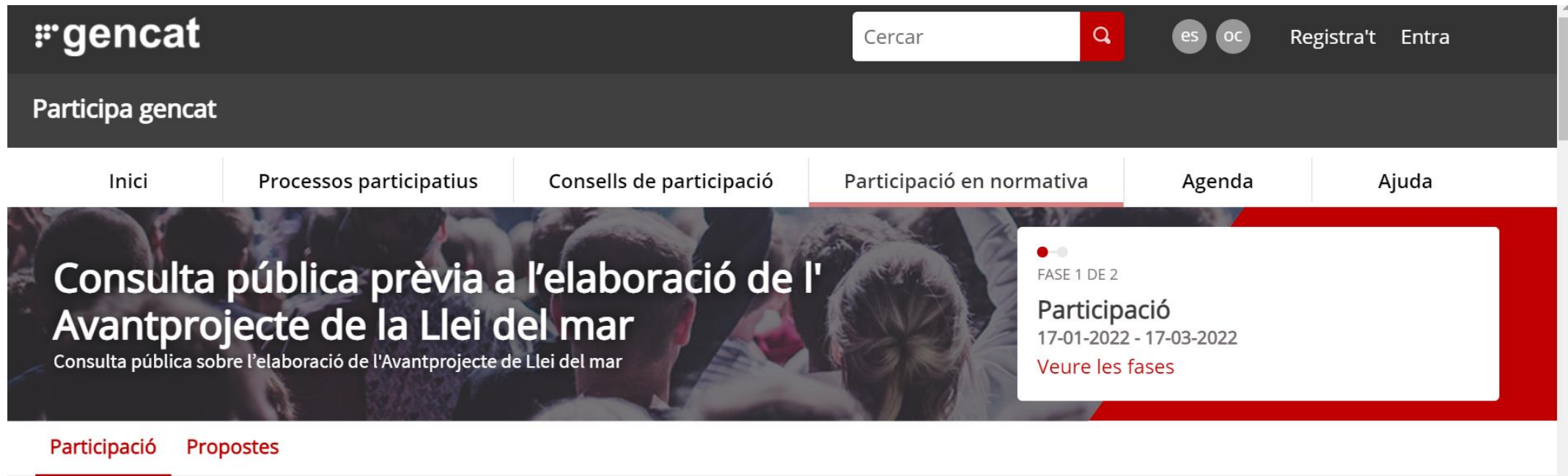
Crear un **ecosistema interdisciplinari de transferència i innovació**, un pont amb la quàdruple hèlix, per millorar la **competitivitat del sector de la innovació en Economia Blava a Catalunya**.

Grups de recerca



Desenvolupament d'un marc normatiu per a la Política Marítima Integrada de Catalunya

Previsió: 2023-2024



The screenshot shows the gencat website interface. At the top left is the gencat logo. To its right is a search bar with the text 'Cercar' and a magnifying glass icon. Further right are language selection buttons for 'es' and 'oc', and links for 'Registra't' and 'Entra'. Below the search bar is a navigation menu with the following items: 'Participa gencat', 'Inici', 'Processos participatius', 'Consells de participació', 'Participació en normativa' (which is highlighted with a red underline), 'Agenda', and 'Ajuda'. The main content area features a large banner with a background image of a crowd. The banner text reads: 'Consulta pública prèvia a l'elaboració de l' Avantprojecte de la Llei del mar' and 'Consulta pública sobre l'elaboració de l'Avantprojecte de Llei del mar'. On the right side of the banner, there is a white box containing a progress indicator 'FASE 1 DE 2', the title 'Participació', the dates '17-01-2022 - 17-03-2022', and a link 'Veure les fases'. At the bottom of the page, there is a secondary navigation bar with 'Participació' (highlighted with a red underline) and 'Propostes'.



Generalitat de Catalunya
**Departament d'Acció Climàtica,
Alimentació i Agenda Rural**



<https://ruralcat.gencat.cat/web/guest/oficina-del-mar>