



Towards integrated European marine research strategy and programmes

Seas era
EUF7ERA-NET

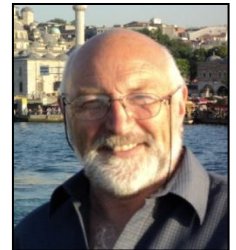
<http://www.seas-era.eu>



Towards a Marine Research Plan for the European Atlantic Sea Basin

Atlantic Ocean

- ✓ What is SEAS-ERA?
- ✓ How can SEAS-ERA contribute to the Atlantic Action Plan?



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Atlantic Forum Meeting: Faial-Azores, 20th – 21st September 2012.



What is SEAS-ERA ?

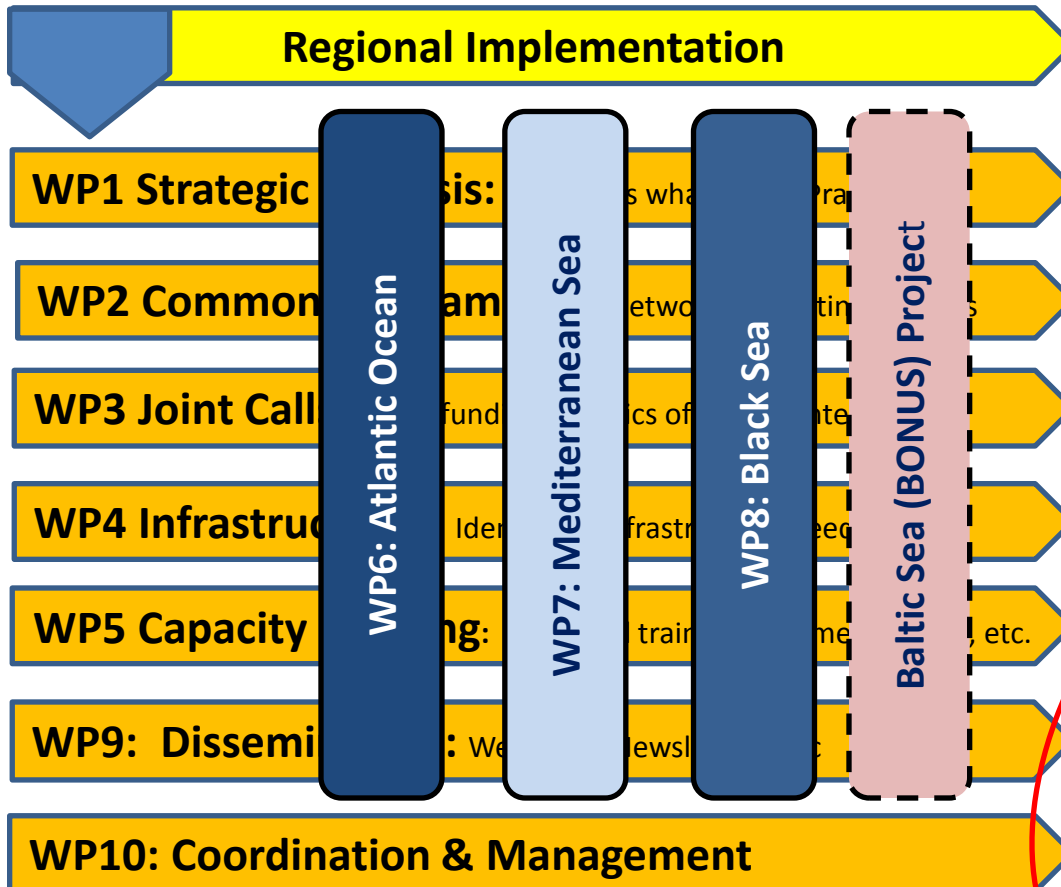
An EU FP7 funded Network of Marine Research Funding Organisations (RFOs)

- working together to improve co-operation, develop joint funding and common programmes in areas of mutual interest.



SEAS-ERA:

- 21 partners + 2 Third Parties
- 18 EU member + Associated States

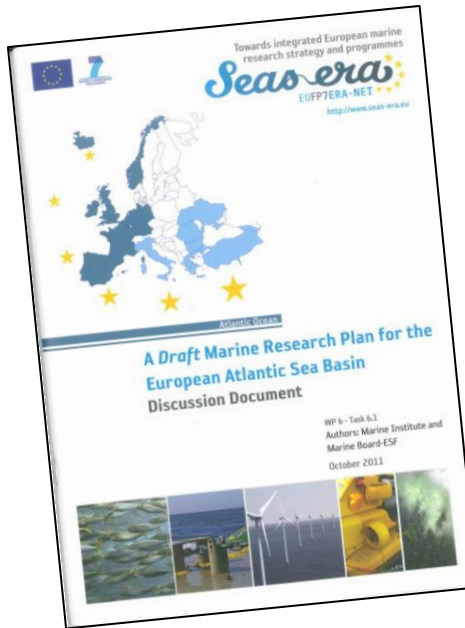


SEAS-ERA Atlantic Partnership:

- 14 partners
- 10 EU member + Associated States



A Draft Marine Research Plan for the European Atlantic Sea Basin



22 Separate Topics - 83 indicative priority research topics and enabling actions

- ✓ identify a suite of priority marine research projects/actions
- ✓ relevant to the sustainable development of Atlantic resources,
- ✓ which are of mutual interest to the participating Research Funding Organisations (RFOs) and
- ✓ which could form a basis for Common Programmes & Joint Calls

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Basic Research & New Knowledge

1. Ecosystem functioning and processes
2. Climate Change
3. The Deep Ocean Frontier
4. Conservation and Protection of Marine Biodiversity
5. Transformative and enabling technologies.

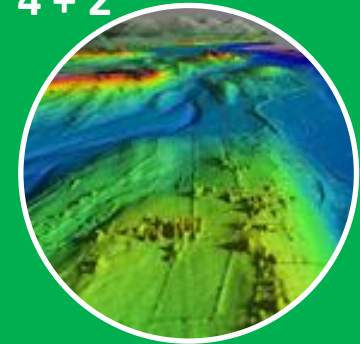
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Applied Research: Science supporting Society & Economic Development:

6. Marine Environmental Research
7. Utilising existing Data
8. Marine Renewable Energy
9. Shipping and Maritime Transport
10. Maritime Safety, Security & Surveillance
11. Marine Leisure and Tourism
12. Marine-BioResources
13. Hi-tech knowledge-based Marine Products & Services
14. Blue Biotechnology
15. Oil and Gas Resources
16. Mineral Resources.

4 + 2



Research Support and Cross-Cutting Issues

17. Marine Socio-Economic Assessment
18. Data Management and Dissemination
19. Seabed Mapping
20. Management Tools (MSP, MPAs)

Enabling Infrastructures (21) and Capacity Building (22)

A Discussion Document (October 2011)

CONSULTATION Oct 2011/ July 2012

Over 1,000 copies distributed
Presentations at 12 Workshops
32 Written responses
37 On-line responses (>150 comments)
62 Individual participants (Focus Workshops)

WP6 – Atlantic region

Partners:

- BELSPO, Belgium
- RANNIS, Iceland
- MI, Ireland
- ANR, France
- IFREMER, France
- FZJ-PTJ, Germany
- NWO, Ne
- FCT, Port
- MCINN, S
- NERC, Ur
- DEFRA, U
- RCN, No



WS1: SEAS-ERA Atlantic Science Workshop

Ostend (Belgium) 28 – 29th February 2012

WS2: Joint SEAS-ERA & AAC-CPMR Atlantic Governance Workshop

Lisbon (Portugal) 23-24th April 2012

WS3: East-meets-West Workshop

Dublin (Ireland) 13th July 2012



Powerpoint presentations, Agendas, Participation Lists available at: www.seas-era.eu/np4/34/

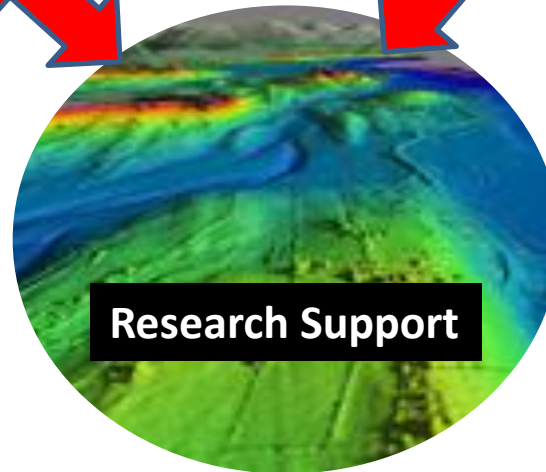
Analysis of Responses (Sept- Dec 2012)

A Marine Research Plan for the European Atlantic Sea Basin

Everything is connected to, and influences, everything else!

Really Exciting opportunities lie at the interfaces

Seas era
EUFP7ERA-NET



Atlantic Ocean Observatory

Marine Socio-Economic Database

Informing

Enabling

Technology Foresight

Research Infrastructures & Capacity Building

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Joint Calls: Progress to-date:

Having identified over 80 *indicative* priority research topics and enabling actions

In May 2012, a 1st Joint Call (3 topics/ Budget €4.5m) was launched by 7 SEAS-ERA partners

Topic A Ecosystem approach and ecosystem models in North Atlantic and coastal areas

In September 2012, five projects were selected, with grant aid of €4.7 m, three of which are relevant to the Atlantic

SEAMAN: Spatially resolved Ecosystem models and their Application to Marine Management

Topic B Risk assessment of invasive alien species

EMOSEM: Ecosystem approach as Support to Eutrophication Management in the North Atlantic Ocean

Topic C Indicators for the determination of GES in the Mediterranean Sea

INVASIVES: Invasive seaweeds in rising temperatures: impacts and risk assessments

+ 2 Mediterranean Projects

In spite of this success, it is relevant that **only of the 5 of the 10** Atlantic partner countries were able to contribute financially to the Joint Call

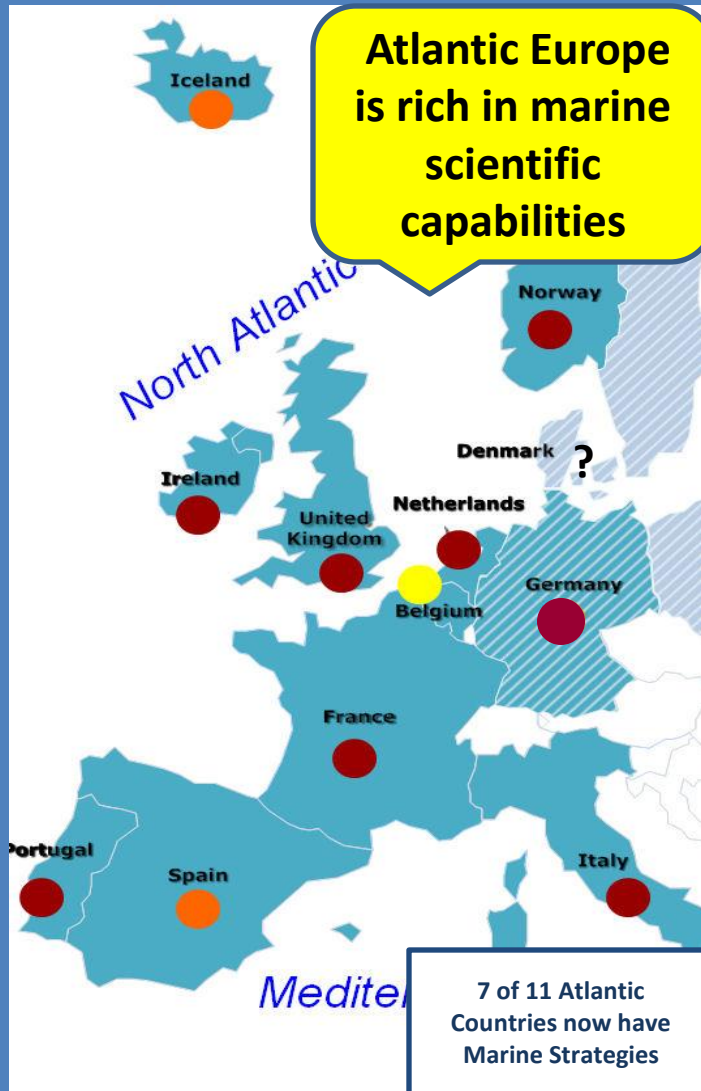
In reality, Member State Research funding is still primarily focussed on:

- ✓ addressing national priorities,
- ✓ supporting national competitiveness and
- ✓ building national capacity

Save the date:
2nd SEAS-ERA Strategic Forum,
Brussels, Belgium
06 February 2013

What can SEAS-ERA Contribute to the Atlantic Action Plan?

Marine Science Policies



Based on SEAS-ERA WP1 (2011)

Specialist Marine Infrastructures

- 138 Research Vessels
36 Global; 30 Regional; 72 Coastal
- 66 ROVs/AUVs
- 11 Fixed Point Ocean Observatories
- 180 Fixed Point Coastal Observatories
- 800 Oceanic Profilers (Argo)
- 34 Gliders
- 16 Ferry Lines
- 14 Coastal Satellites
- 7 Ocean Satellites
- 30 Data Centres
- 50 Wave Basins/Flume Tanks
- 9 Wave Energy Test Sites

Source: SEAS-ERA WP4 Infrastructures (2012)

Atlantic Research Centres

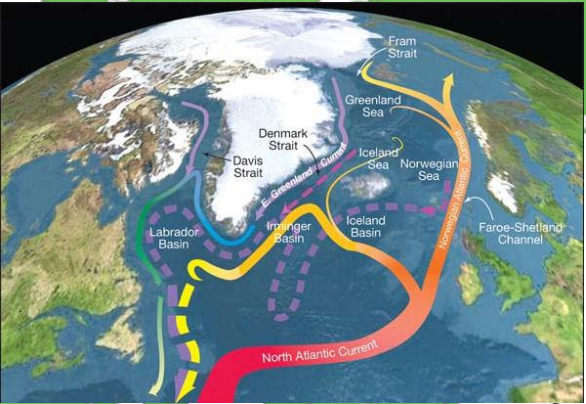
- Belgium - 15
- Denmark - 22
- France - 74
- Germany - ?
- Iceland - 14
- Ireland - 28
- Netherlands - 21
- Norway - 25
- Portugal - 24
- Spain - 64
- UK - 60

TOTAL = >340

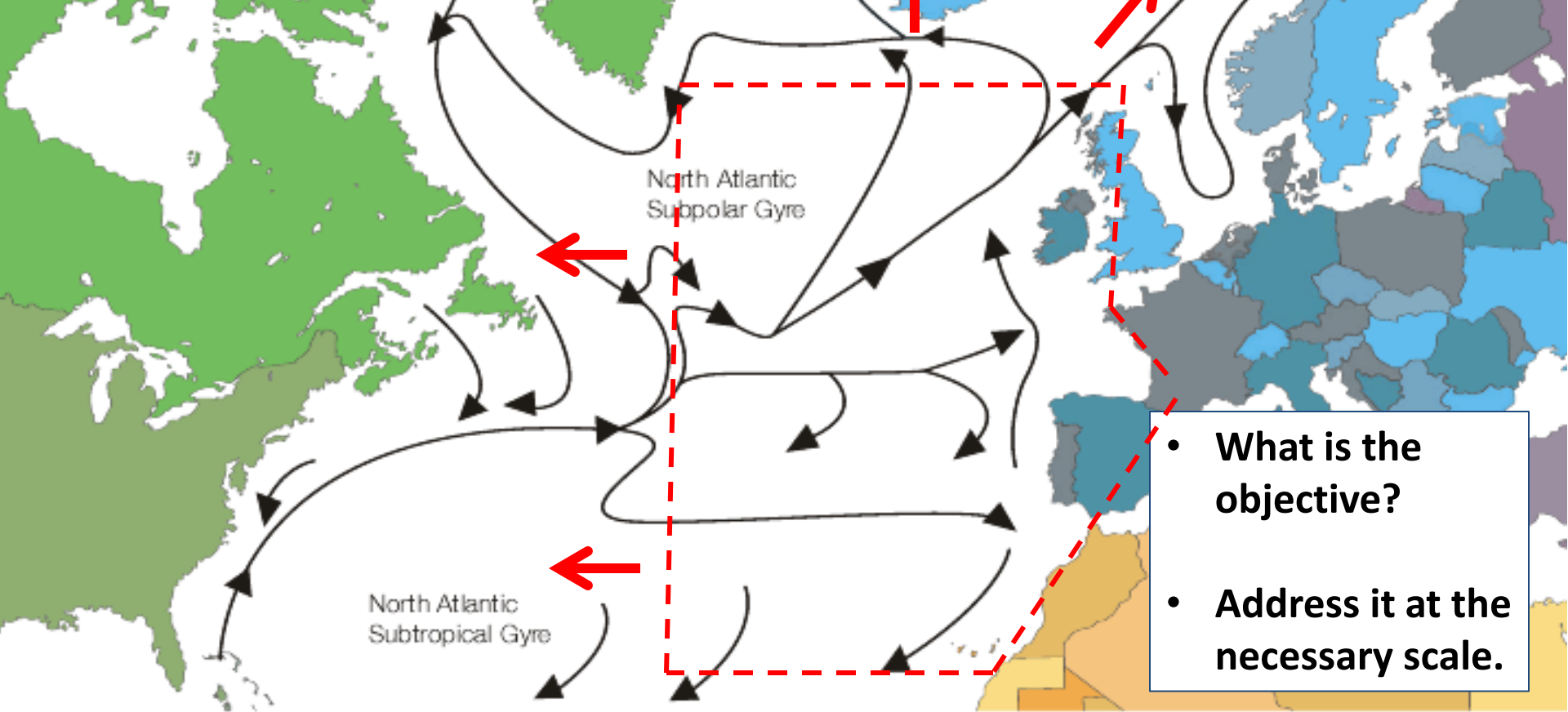


Source: <http://marineinstitutes.eurocean.org/map.jsp>

The North Atlantic a complex system

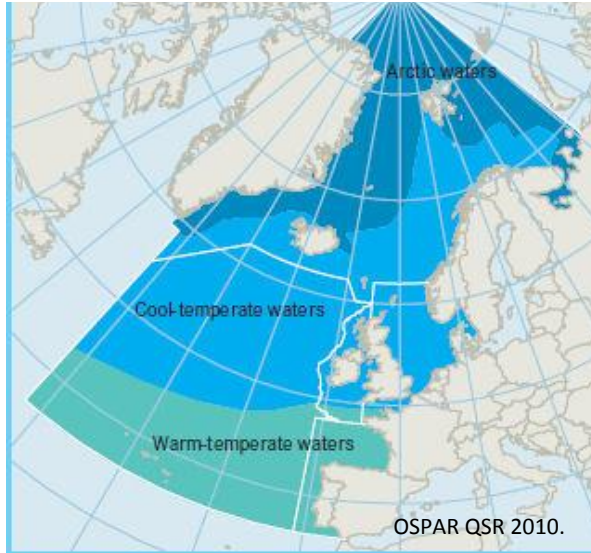


Adopt flexible geographic boundaries



- What is the objective?
- Address it at the necessary scale.

The North Atlantic is rich in biological and non-living resource and service opportunities



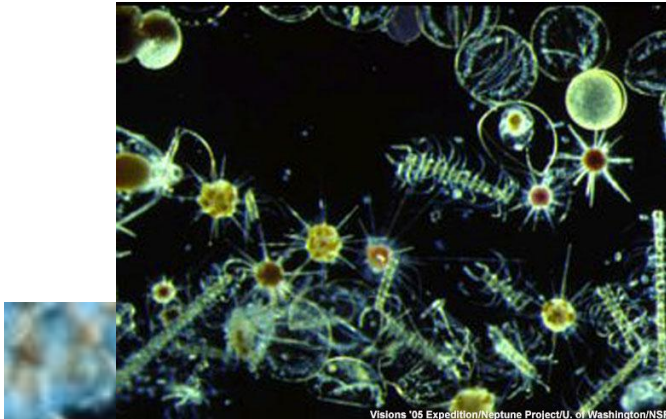
Remember the most productive sectors

By value (€):

- Tourism
- Shipping

By employment:

- Tourism
- Fishing



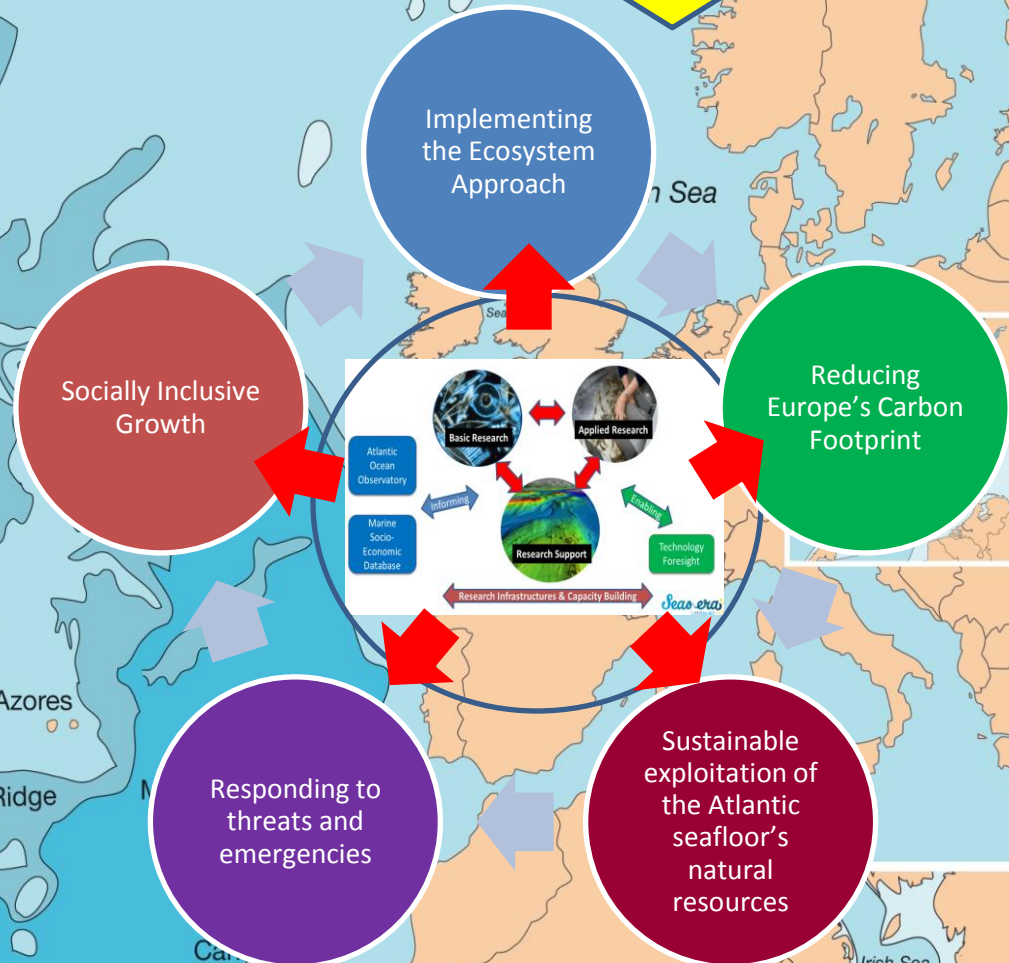
The European Union Strategy for the Atlantic (EUSA 2011)

Know what you want to achieve and when

Components of an Atlantic Action Plan

- ✓ A Vision
- ✓ A Geographic context
- ✓ **SMART economic, environmental and social goals**
- ✓ Implementation Plan
 - Political commitment
 - Stakeholder Engagement
 - Research -
 - Enabling Actions -
 - Supporting Infrastructures -
 - Other decisions/actions necessary for successful implementation

Annual Conference to review progress of the Action Plan and introduce modifications where necessary



SMART: Specific – Measurable – Achievable – Relevant - Timebound

Sharing Our Vision

Tentative



The **European Atlantic Sea Basin Research Plan** seeks to improve our **understanding and protection** of the European Atlantic, and its ecosystems, in order to catalyse a **dynamic maritime economy**, in **harmony with the environment**, which has **sustainable development** at its core. This will be achieved through **harnessing new and emerging science, technology and innovation** to **add value and competitiveness** to traditional sectors and create new and dynamic maritime sectors in a spirit of **regional partnership** and **international co-operation**.

A shared vision for the European Atlantic Sea Basin (2012)

Thank You

Obrigado

Gracias

Merci

Tak

Takk

Danke

Dank U



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Essential Support Structures

Technology Foresight Platform

Identifying new and emerging science, technology and innovation, new disruptive technologies, horizon scanning: – marine biotechnology, genomics, nano-technology, materials science, ICT and the sea, et., which can contribute to basic, applied and supporting research

Innovation Union – Smart Specialisation Platforms

A European Atlantic Ocean Observatory

An integrated multi-sensor / multi-platform ocean observing system providing real and near-real time data on ocean conditions (seabed, water column, sea surface) coupled with integrated seabed / seabed habitat mapping and supporting long-term data collection, management and dissemination

- Essential for understanding the marine ecosystem, ecosystem functioning, supporting research, the ecosystem approach, the MSFD, ocean modelling and forecasting

Green Paper (August 2012): Marine Knowledge 2020 - from seabed mapping to ocean forecasting
Linked to the USA/Canadian Ocean Observing Initiative (OOI), August 2012

A European Atlantic Marine Socio-Economic Database

Providing accurate, up-to-date and comparable data on the:

- **Economic value** (€) and trends related to the various productive sectors (fisheries, aquaculture, energy, maritime transport, tourism, etc);
- **Societal indicators** (employment, GDP, innovation, technology transfer, etc)
- Essential for economic and environmental planning, policy development, forecasting and scenario development and good governance.

Blue Growth Study - Linked to EUROSTAT
INTERREG-IV Project MARNET (Marine Atlantic Regions Network)

Example of some comments received

...plan needs to reflect the inherent complexity in marine ecosystems and *nonlinear* interactions and feedbacks within food webs ...

“Without applications, science is just curiosity”

The *draft* Plan identifies a very large number of priorities. A drastic scrutiny and reduction of the key priorities would be highly desirable during the course of consultations with the stakeholders.

Get young people in and use their creativity!

The overall approach adopted, has clear benefits and is complementary to an emerging array of European macro-regional strategies pioneered by the EU Strategy for the Baltic Sea Region in 2009.

It is essential to recognise the existence of fundamental links between the deep sea and the rest of the Earth system.

Complexity is not a guarantee of efficiency and applicability. It is preferable to make simple and efficient projects rather than complex and inapplicable ones.

A Strategic Research Agenda is not a final document, but an on-going process

Research must take place collaboratively with MPA managers to help inform them how they can improve and adapt management to ensure that the MPA is fulfilling its requirements and potential.

New knowledge is not exclusive to Basic Research, but also delivered to support Applied and Cross Cutting Research.

.... need to develop multidisciplinary approaches (integration of ecological and socio-economic aspects) at the most appropriate ranges in spatial temporal scales, and to investigate the cumulative effect of multiple stressors (including human impact) on ecological communities.

Seafloor mining is coming, and offers a major source of societal benefit. Concerned scientists must participate to: anticipate burdens - design experiments - detect impacts.

To grow, European (aquaculture) production must have a level playing field, with smart legislation for access to sites and clear standards for production from third countries, to ensure health and safety for European citizens.

If the results of scientific research are to be used, scientists must involve stakeholders/end-users from the earliest point in the planning process.

Draft is weak on the importance of marine geology and marine geo-hazards

The EU and US should organize a Transatlantic Policy Dialogue, and establish an online Transatlantic Platform for data and knowledge sharing on climate change information.

Maritime Spatial Planning (MSP) is not a replacement for ICZM MSP is a tool that can only be implemented successfully under some form of integrated management framework.

Is it wise to draw up a science plan for the Atlantic without the participation of bordering nations – USA, Canada, Greenland?”