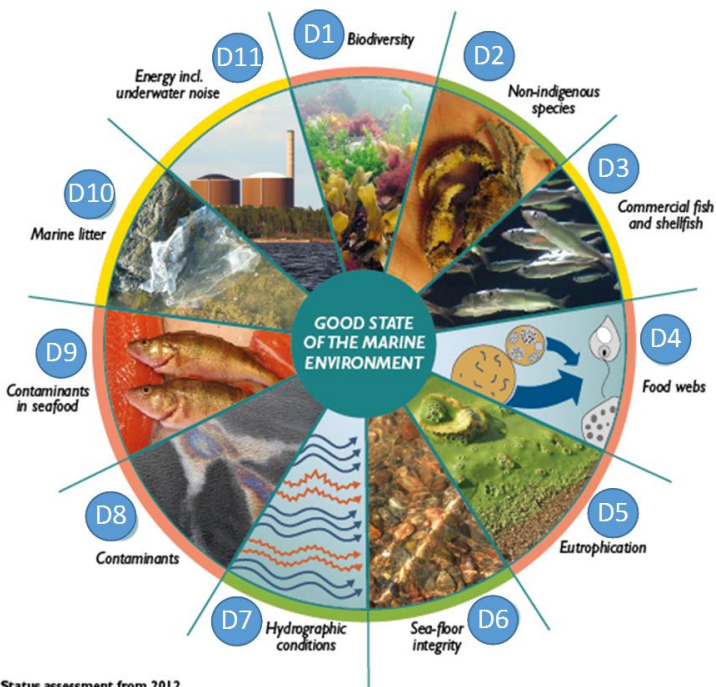




# THE NATIONAL TECHNOLOGICAL CLUSTER BLUE ITALIAN GROWTH

THE ACTION PLAN FOR THE PROMOTION  
OF INNOVATION IN THE BLUE ECONOMY  
SECTOR

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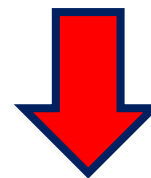


Status assessment from 2012

- State is good
- Good state has not been achieved
- Assessment could not be carried out

© SYKE  
 Photos: Mats Westerborn,  
 Maju Lehtimäki, Riku Lamtano,  
 the Finnish Border Guard/SYKE,  
 Per Mickwitz and Eija Rantaöfret.

- **TO CREATE A COMMUNITY OF NATIONAL IMPORTANCE IN THE CONTEXT OF THE ECONOMY OF THE SEA;**
- **TO PROMOTE INNOVATION-DRIVEN BLUE GROWTH, MAKING A PRIVATE AND PUBLIC RESEARCH SYSTEM;**
- **TO ENCOURAGE THE INTEGRATION OF EXISTING INFRASTRUCTURES AND SKILLS**



*ECONOMIC DEVELOPMENT STRONGLY DRIVEN BY  
 INNOVATION IN THE FACE OF  
 UPKEEP OF NATURAL CAPITAL (GOOD ENVIRONMENTAL  
 STATUS)*

**BIG - NATIONAL TECHNOLOGICAL  
 CLUSTER  
 MISSION**







- To **generate** roadmaps and technological scenarios;
- To **align** and integrate regional and national roadmaps and R&I actions with European and Mediterranean ones;
- To **support** the development of informed policies towards policy makers;
- To **support** the address of funds dedicated to industrial research;
- To **promote** the system of research infrastructures of interest;
- To **promote** internationalization;

**BIG - NATIONAL TECHNOLOGICAL  
CLUSTER  
MISSION**





**85 members** operating in the field of sea economy and representing the entire Italian supply chain and 12 Italian regions:

**7 large companies,**

**4 medium-sized companies**

**8 small companies**

**13 micro companies**

**4 Business Networks**

**9 Regional Clusters**

**26 Universities**

**7 Other research organizations**

**7 Organizations and Entities** operating in blue economy

**12 Italian Regions** - Basilicata Region, Campania Region, Emilia Romagna Region, Friuli Venezia Giulia Region, Liguria Region, Puglia Region, Sicily Region, Tuscany Region, Veneto Region, Lazio Region, Lombardy Region and Calabria Region

**BIG - NATIONAL TECHNOLOGICAL  
CLUSTER**





**T1 Marine environment of inland waters and coastal strip**



**T2 Marine Biotic Resources**



**T3 Marine Abiotic Resources**



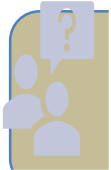
**T4 Shipbuilding and Marine Robotics**



**T5 Renewable Energy from the Sea**



**T6 Blue Biotechnology**



**T7 Marine and maritime research infrastructures and transfer of technology**



**T8 Sustainability and economic uses of the sea**



**T9 Skills & Jobs**

**TRAJECTORIES**

## Circular Blue Economy

- Beyond the linear production model «take, make, dispose»;
- Developing interconnected economic systems aimed at:
  - Rehabilitating and regenerating the natural capital;
  - Reducing wastes;
  - Enhancing efficiency (materials and energy)
  - Keeping products at their maximum utility

### Axes of the proposal:

Innovative fish supply chain: product traceability, fish waste valorization,  
Decarbonization of the cold chain;

Integrated resource management: water, wastes and potential components  
for reuse (marine litter);

Responsible tourism: digital logistics, sustainability of transport & fishingboats;

Resilience of marine landings, growth of new businesses and new professional skills

PROJECT

# PROJECT ITEM

## TECHNOLOGICAL INNOVATION FOR THE PROTECTION AND ENHANCEMENT OF MARINE ECOSYSTEMS

*ITEM aims to prepare the measures and planning necessary for the development of new technologies to bridge the Italian technological gap and the experimental validation of available technologies for the protection and enhancement of marine ecosystems.*



Source: Item project

Partners: (1) CNR, (2) CONISMA, (3) OGS, (4) SZN, (5) INGV, (6) ENI, (7) E-GEOS, (8) ITALBIOTEC

- **Gap Analysis**
- **Testing technologies** to monitor impacts from O&G infrastructures
- **Design new technologies for:**
  - ✓ Observing the marine environment
  - ✓ Sustainably exploit biotic and abiotic marine resources
  - ✓ Applying blue biotechnologies to environmental remediation and bio-based industries
- **Addressing sustainable use of the sea**



# PROJECT TEOREMA

## TECHNOLOGICAL SOLUTIONS FOR MULTI-OBJECTIVE OFF-SHORE ENERGY PLATFORMS



Source: IHSReport, 2016)

*TEOREMA is focused on Blue Economy (Marine and Maritime Economy). In particular, it is related to the following technological research lines:*

- 1. Renewable Marine Energy**
- 2. Blue Biotechnologies**
- 3. Marine Environment and Coastal Areas**
- 4. Shipyard industry and marine robotics.**

**Partners:** (1) Consiglio nazionale delle Ricerche (CNR) , (2) National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) , (3) Politecnico di Torino (POLiTO), (4) Enel Green Power (EGP), (5) Fincantieri Oil & Gas , (6) Wave for Energy (W4E)

**Main objective:** to define the concept for two different technologically innovative offshore platforms for energy production from wind, solar radiation, waves and Microbial Fuel Cell



**01**

**TECHNOLOGICAL ROADMAPS AND INNOVATIVE DEVELOPMENT  
OF THE SPECIALIZATION AREA**

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**02**

**ACTIVITIES SUPPORTING THE REALIZATION OF TECHNOLOGICAL  
ROADMAPS AND DEVELOPMENT AND CREATION OF AN  
INDUSTRIAL RESEARCH COMMUNITY**

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**03**

**MEZZOGIORNO**

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**ACTION PLAN  
STRUCTURE**



**T1 Marine environment of inland waters and coastal strip**



**T2 Marine Biotic Resources**



**T3 Marine Abiotic Resources**



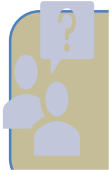
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**T7 Marine and maritime research infrastructures and transfer of technology**



**T8 Sustainability and economic uses of the sea**



**T9 Skills & Jobs**

**TRAJECTORIES**



Strategic support for policy  
makers.



Internationalization



Animation and networking



Communication and promotion



Support for research enhancement,  
and technology transfer processes



Support for the qualification of  
human capital.



Development of knowledge  
management systems.

# SUPPORT ACTIVITIES



G	Actions
<b>CORE ACTION</b>	<b>Action 1: Coordination and piloting of the strategic consortium</b>
<b>LOBBYING &amp; THINK TANK</b>	<b>Action 2: Creation of a permanent advocacy platform</b>
	<b>Action 3: Establishment of a coordinated monitoring of guidance and analysis activities for financing opportunities</b>
	<b>Action 4: Establishment of an ad hoc international monitoring observatory</b>
<b>DISCLOSURE</b>	<b>Action 5: Participation and animation within national and international boards</b>
	<b>Action 6: Participation and organization of networking and promotion events</b>
	<b>Action 7: Creation of an interchange web platform</b>
<b>SUPPORT FOR MEMBERS FOR R&amp;D</b>	<b>Action 8: Endorsement and promotion of the development of advanced training programs</b>
	<b>Action 9: Support to open innovation &amp; intellectual propriety processes</b>
	<b>Action 10: Establishment of an Innovation challenge among the members</b>

# SUPPORT ACTIVITIES



The strategic role of Southern Italy in the Mediterranean



Reference scenario of the specialization area for Southern Italy



Internationalization and investment attraction



Cooperation and collaborations



Support for research enhancement, innovation and technology transfer processes



Support for the qualification of human capital

**MEZZOGIORNO**



Proposals to improve  
competitiveness



Proposals for supporting the  
qualification of human  
capital



Proposals for mapping  
implementation



Cooperation proposals and  
collaborations

# MEZZOGIORNO FRAMEWORK FOR ACTIONS



[www.clusterbig.it](http://www.clusterbig.it)

**Thanks for your attention**

**CLUSTER TECNOLOGICO  
NAZIONALE BLUE ITALIAN  
GROWTH**