



## ***Introducing Maestrale***

*I am glad to announce the launch of MAESTRALE, a project aimed at prompting initiatives to exploit renewable energy in marine environment, the so called Blue Energy Sources (BES), that still are at the early stage in the Mediterranean area. This is a big challenge because blue growth has to be carefully planned, especially in Mediterranean regions, taking into account a number of variables and constrains including legal, environmental and landscape issues, often different from place to place. MAESTRALE has been properly structured in order to face these problems and finally trigger a process of spread deployment of BES starting from a participating design process. Blue Energy Labs have been conceived at both transnational and local level in order to raise awareness and engage all the possible actors in concrete actions.*

*MAESTRALE is the Italian name for the NW wind in the Mediterranean. We have chosen this symbolic title aware of the aphorism by Seneca: "there is no favourable wind for the sailor that does not know where to go". Our project aims at providing the compass for a sustainable and inclusive development of Blue Energies.*

*Buon vento!*  
*Simone Bastianoni*  
*University of Siena*

## ***The objectives of the INTERREG MEDITERRANEAN COOPERATION PROGRAMME (2014-2020)***

The EC Communication of January 2014 on Blue Energy highlights the potential of European seas and oceans as sources of clean energy. According to the EC, marine renewable energy includes both offshore wind and ocean energy and it is recognised as a new driving force of EU economy that generates economic growth and jobs, secure the energy supply and enhance competitiveness through technological innovation. The ocean energy sector was also highlighted in the EC's Blue Growth Strategy as one of five developing areas in the Blue Economy that could help drive job creation in coastal areas.

To date, the Blue Energy use in the Mediterranean basin is still in an embryonic phase when compared to the situation in other seas/oceans and is headed by single and experimental projects. The Mediterranean Sea is characterized by more or less suitable areas for the development of the Blue Energy exploitation, considered in all its sources - waves, tides, currents, salinity and temperature gradients along with other alternative energy forms related to the use of off-shore wind farms and the use of marine biomass.

Within this general framework, which also includes the major challenges of the Europe 2020 Strategy, the new Interreg MED 2014-2020 fits perfectly in line with the Priority Axis 1 (Innovation) and Specific Objective 1.1 (Clusters and networks) gives special emphasis on Blue Growth, or:



**INTERREG V - B MEDITERRANEAN (MED) COOPERATION PROGRAMME (2014-2020)**

Overall Objective	To promote sustainable growth in the Mediterranean area by <i>fostering innovative concepts and practices</i> (technologies, governance, innovative services, etc.), <i>reasonable use of resources</i> (energy, water, maritime resources, etc.) and supporting social integration through integrated and territorially based cooperation approach.
Priority Axis 1 – Innovation	<i>Promoting Mediterranean innovation capacities</i> to develop a smart and sustainable growth
Specific Objective 1.1	To <i>increase transnational activity of innovative clusters and networks</i> of key sectors of the MED area.  <u>Expected results:</u> reinforced empowered and increasingly transnational innovation clusters and networks in key sectors of the MED area, <i>including the Blue Growth and in particular the Blue energy (algae, thermic energy, waves).</i>
Types/Modules	<p><u>Module 1 – Studying:</u> Designing common approaches/strategies at transnational level            Expected activities/outputs:</p> <ul style="list-style-type: none"> <li>➤ design of common approaches/strategies;</li> <li>➤ rules and norms at transnational level;</li> <li>➤ analyses, state of the art, information sharing;</li> <li>➤ establishment of networks;</li> <li>➤ benchmarking;</li> <li>➤ joint action plan</li> </ul> <p><u>Module 2 – Testing:</u> Pilot demonstration actions            Expected activities/outputs:</p> <ul style="list-style-type: none"> <li>➤ testing of processes, techniques, models;</li> <li>➤ setup of solutions applicable to a wider set of users and territories;</li> <li>➤ compulsory transferability of pilot activities to the territory;</li> <li>➤ preliminary studies (feasibility), common methodology for demonstration, testing and evaluation, plan of results portability.</li> </ul>

***The MAESTRALE Project: an Overview***

Within the framework of the Priority Axis n. 1 of Interreg MED 2014-2020 Programme, the MAESTRALE Project aims to lay the foundations for a strategy for the deployment of maritime energy in the Mediterranean area. Based on a survey of existing and innovative technologies, barriers and potentials in participating Countries, MAESTRALE aims to broaden the sharing of knowledge among scientists, policy makers, entrepreneurs and citizens and encourage effective measures and investments for the Blue Growth.



In fact, despite the existence of several academic and technical studies in the field of Blue Renewable Energy, in the MED region there is a lack of concrete initiatives and operating facilities. To close this gap, the Project Partners will cooperate to identify the maritime renewable energy potentials in the participating Countries with regard to their physical, legal, technological, economic and social contexts. Issues to be addressed include environmental sustainability, technological innovation, citizen acceptability and possible conflicts with marine ecosystems.

The overall objective of MAESTRALE is to promote the development of Blue Energy in the Mediterranean area as a key sector of sustainable growth by promoting the creation and transnational networking of innovation clusters.

### MAESTRALE SPECIFIC OBJECTIVES

#### *Specific Objective # 1/3*

##### Knowledge transfer

Based on the exchange of experiences and knowledge among partners and between actors in Southern and Northern Europe (field trips to operating plants), this will concern a comprehensive and exhaustive survey of regulations, existing and innovative technologies, best practices and hindrances and SWOT. This will act as the essential knowledge basis for blue growth considering both transnational common aspects and specific features of regional areas.



##### Planned actions/Expected results:

- Overview of regulations, opportunities, hindrances and benefits;
- State-of-art, survey of existing technologies, previous studies and (EU) projects;
- Field visits (northern Europe and Atlantic coast)
- Online geo-database;
- Energy potential analysis including a catalogue/roadmap of possible solutions;
- Communication/dissemination.

#### *Specific Objective # 2/3*

##### Blue Energy Labs BEL

Transnational network among key actors in Blue Energy at the MED/EU level including public authorities, research centres, energy agencies, enterprises, and groups of citizens. BELs will take place in each participating region to support the creation of public-private partnerships, ensure knowledge and innovation exchange among actors and lay the basis for concrete initiatives for blue growth.



##### Planned actions/Expected results

- Transnational BEL meetings (kick-off meeting + n.5 BEL meetings + final conference);
- Regional BELs (including training activities, clustering and start-up launching);
- Communication/dissemination;
- Map of target groups;
- Coordination with horizontal projects (n.6 meetings).




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**Specific Objective # 3/3**

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**Blue Energy pilot projects  
in MED regions**

Regional BELs will elaborate 2 or more pilot projects of blue energy plants in each regional area, providing the best conditions to ensure feasibility, financial support, technological means, social acceptance, and involving administrators, enterprises and groups of citizens. These projects will serve as prototypes for innovative start-ups and further EU developments.



**Planned actions/Expected results**

- Capacity building (awareness, climate mitigation, energy self-sufficiency);
- Feasibility studies and business plan of 20 pilot projects (to be funded by ERDF);
- Communication/dissemination (including n.10 open day events).

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The core activities of the MAESTRALE project are divided into the following themes:



**Studying**

Based on outcomes from previous studies (e.g. EU-funded projects E-Wave, ENERCOAST, BLUENE, KIMERAA, IEE SI OCEAN, the FP7 CoCoNet and MARINET) and drawing on existing platforms and data collections (i.e. European Biofuels Technology Platform, European Algae Biomass Association, European Sustainable Biofuel Forum and MED cluster FaceCoast), this activity aims at updating and widening the geographical scope of existing knowledge regarding: the state of the art of Blue Energy development in the MED area and in Europe in general; the current regulations (at EU and national level) that govern

the sector, including available funding opportunities; the key actors that are (or can be) involved in Blue Energy projects; the potential for Blue Energy development in the involved regions and the hindrances it might face, in order to provide a reliable informative support to potential investors and to set the basis for the definition of innovative clusters in line with the current market demands and needs.





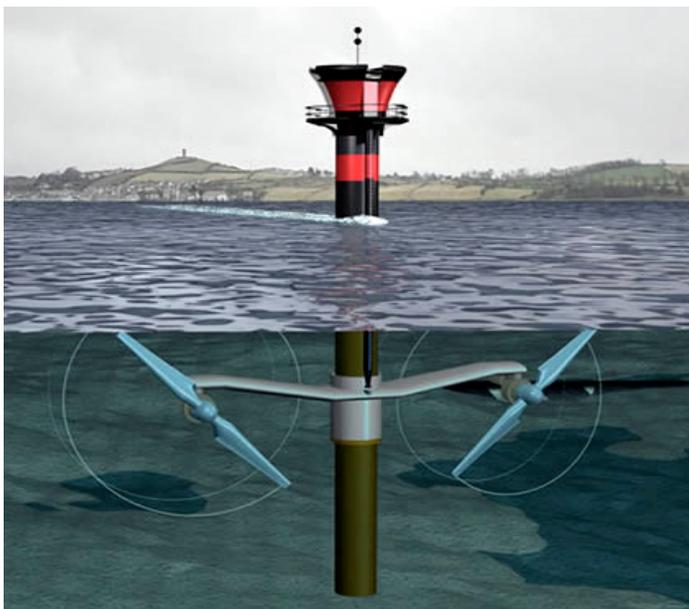
### Testing

Tools and methodologies set up for the Blue Energy potential analysis will be used to establish permanent coordination networks, both at transnational and regional level, that will represent the “embryo” of innovative Blue Energy clusters. These bodies (1 Transnational and 10 Regional BELs) will perform activities aimed to:

- create/develop/strengthen networks at regional, national and transnational level, aimed at fostering the development of the Blue Energy sector in the MED area;
- provide capacity building and training;
- define tailored services for potential investors;
- develop feasible Blue Energy projects to be implemented based on EU structural funds

and/or national funds.

These bodies' activities will be monitored to assess their effectiveness and procedures for their functioning will be systematized for transferring and capitalizing. All Partners will participate in the Transnational BEL according to their specific field of action (research&innovation or business support).



### Transferring

This activity aims at making ideas, methods and tools developed by MAESTRALE available for other MED and EU organisations, willing to transfer project results and successful experiences. This aim will be pursued through 2 kinds of activities:

- a joint analysis, comparison and assessment of the experiences made within the Regional BELs, that will lead to the production of a highly operational toolkit for the development of Blue Energy clusters and business projects with a high market potential, including procedures to establish and implement Regional Labs and develop partnerships among enterprises, R&I and public administration actors;
- procedures/tools for the project idea design and evaluation; the identification of the business services needed for the project development and successful implementation; networking activities with other EU projects aimed to foster the transferring of the toolkit and create synergies with similar experiences all around Europe, in order to widen the international community of stakeholders.



### *The MAESTRALE Partnership*

LP	<b>University of Siena - Department of Physical, Earth and Environmental Sciences - UNISI</b> Banchi di Sotto 55 - 53100 Siena (IT)	<a href="http://www.unisi.it">www.unisi.it</a>
PP1	<b>Business Innovation Centre of Valencia - CEEI</b> Av. Benjamin Franklin, 12 - 46980 Paterna (ES)	<a href="http://www.ceei.net">www.ceei.net</a>
PP2	<b>Istrian Regional Energy Agency - IRENA</b> Rudarska 1 - 52220 Labin (HR)	<a href="http://www.irena-istra.hr">www.irena-istra.hr</a>
PP3	<b>Advanced Technology Centre for Renewable Energies - CTAER</b> Paraje Retamares S/N. - 04200 Tabernas (ES)	<a href="http://www.ctaer.com">www.ctaer.com</a>
PP4	<b>Aristotle University of Thessaloniki - School of Architecture, Faculty of Technology - AUTH</b> Ktirio KE.D.E.A- Tritis Septemvriou - Panepistimioupoli - 54636 Thessaloniki (GR)	<a href="http://www.arch.auth.gr">www.arch.auth.gr</a>
PP5	<b>Goriška Local Energy Agency - GOLEA</b> Trg Edvarda Kardelja 1 - 5000 Nova Gorica (SI)	<a href="http://www.golea.si">www.golea.si</a>
PP6	<b>University of Cyprus - Oceanography centre - UCY</b> University Ave. 1, Aglantzia-Nicosia P.O.Box 20537 - 1678 Nicosia (CY)	<a href="http://www.ucy.ac.cy">www.ucy.ac.cy</a>
PP7	<b>INFORMEST - Agency for Development and International Economic Cooperation</b> Via Cadorna 36 - 34170 Gorizia (IT)	<a href="http://www.informest.it">www.informest.it</a>
PP8	<b>University of Algarve - Division of Entrepreneurship and Technology Transfer - UAlg</b> Universidade do Algarve, Campus da Penha 8005-139 Faro (PT)	<a href="http://www.regione.fvg.it">www.regione.fvg.it</a>
PP9	<b>Autonomous Region Friuli Venezia Giulia - Department of Education, Training and Research - RAFVG</b> Via San Francesco 37 - 34133 Trieste (IT)	<a href="http://www.ualg.pt">www.ualg.pt</a>
PP10	<b>Joint Research Centre for Renewable Energy Sources and Environmental Sustainability - Malta Intelligent Energy Management Agency - MCAST-MIEMA</b> 9c, Mikiel Anton Vassalli Street VLT - 1310 Valletta MT)	<a href="http://www.miema.org">www.miema.org</a>



*Merry Christmas and Happy New Year from all the Staff!*

