



SEALINES

GUIDEBOOK

A BLUEMED START-UP

blueMed

ABOUT

Thousands of kms of submarine pipelines and cables lie in harsh marine environment of which those related to O&G upstream sector represent a significant share.

The **Mediterranean Sea** is a peculiar marine region with a delicate environmental balance. A more sensitive approach to assess all maritime and marine activities carried out, has become necessary, in order to embrace a more sustainable path.

Actions to increase safety, surveillance and awareness align with the growing need to readress economic development towards blue economy principles.

SEALINES is a project tackling sustainability of blue growth activities in line with BLUEMED SRIA, identifying best solutions to reduce impacts in the upstream sector, on the marine environment, supporting resilience and healthy productivity of the Mediterranean basin.

**SOLUTIONS TO REDUCE
IMPACTS ON THE
MARINE ENVIRONMENT AND
TO SUPPORT HEALTHY
PRODUCTIVITY AND
RESILIENCE OF THE
MEDITERRANEAN SEA**



WHERE WE'RE AT TODAY

“SEALINES” builds on the expansion of networks, comprising administrations, policy makers, private enterprises and research centers, towards a Mediterranean one.

The multi-faceted international scale network represented an innovative way of working in defying methods, common standards and best practices for maintenance, monitoring and re-purposing of the sealines contemplating a circular economy perspective and aiming at implementing a sensible management of the seafloor and its biological resources.

SEALINES” Start-Up contributed to increase awareness about blue economy supporting energy transition from fossil fuel to renewable energy.

The start-up promoted more efficient devices and non-invasive technologies to prevent and mitigate possible accidents and pollution, assuring high safety standards.

SEALINES considered also environmental issues, geohazards and sea dynamics, promoting data collection, data sharing and data integration.

BLUEMED INITIATIVE

The BLUEMED Initiative was jointly developed and agreed between Cyprus, Croatia, France, Greece, Italy, Malta, Portugal, Slovenia, and Spain and facilitated with the support of the European Commission in 2014. It was afterwards endorsed by all the countries of the European Union, and with the signature of the Valletta Declaration in 2017 it was also adopted by all the member countries of the Union for the Mediterranean (UfM). BlueMed has hence the opportunity to act on both sides of the Mediterranean and of promoting Euro-Mediterranean collaboration, fostering Blue Growth-related research and innovation activities.

SEALINES START-UP ACTION MAIN OUTPUT AWAITED:

1. Identification of a real case study in the Adriatic Sea to implement strat-up action results
2. Creation of a Mediterranean Interdisciplinary Network on offshore safety
3. Planning for a Med-based high education training programme on offshore safety and susatinable growth

SRIA THE BLUEMED STRATEGIC RESEARCH AND INNOVATION AGENDA

The BlueMed Strategic Research and Innovation Agenda (SRIA) outlines a set of key challenges for the Mediterranean and particularly knowledge gaps, specific activities enabling the blue growth as well as measures for capacity creation and skills' enhancement. Sectors of interest include ecosystems, climate change, biotechnologies, aquaculture, fisheries, tourism, shipbuilding, transportation, observing systems, data, off-shore platforms, cultural heritage, spatial planning.

FEW NUMBERS

1ST MEETING

RAVENNA MARCH 28TH, 2019

43 participants from different EU and non EU countries, 67% from research institutes and administrations, while the rest from private enterprise and academia

E1, E2, D1, A

SRIA GOAL

are amongst the challenges addressed by the project under the BlueMed SRIA, particularly those related to crosscutting international cooperation sustainable development and governance

2ND MEETING

ATHENS, JUNE 24TH, 2019

69 international experts from administrations, private companies and research institutes

OUR NEXT STEP

The main outcome of the Start-up action is a proposal for a feasibility study to test a renewable integrated energy system on an inactive platform, and its infrastructures.

In line with Blue economy principle on reuse, and sustainability, an inactive offshore platform, otherwise decommissioned, appears to be the perfect test-site for technologies and methodologies to be further applied to larger-scale case.

The Ministry of Economic Development, having obtained the opinions of the competent offices of the Ministry of the Environment and the

Ministry of Cultural Assets and Activities (for the aspects under their jurisdiction), establishes the list of platforms and related infrastructures that can be reused (art. 5 “National guidelines for decommissioning”).

Azalea A platform, located in the Adriatic Sea, has been identified and, as stated in the Official Hydrocarbon Bulletin, (BUIG – Bollettino Ufficiale degli Idrocarburi e delle Georisorse, published in August 2019), may be subject to reuse.

RETHINKING OFFSHORE INFRASTRUCTURES

According to the BUIG only two platforms are suitable for the reuse.

“Azalea A”, a bitubular platform located in Rimini's offshore area, it is considered a good test-site to carry out a feasibility study about the possible reuse as a research hub for a green integrated energy system.

The methodological approach proposed by Sealines start-up action could be largely applied to any other Mediterranean sea infrastructure.

Considering AZALEA A technical features and renewable resource potential

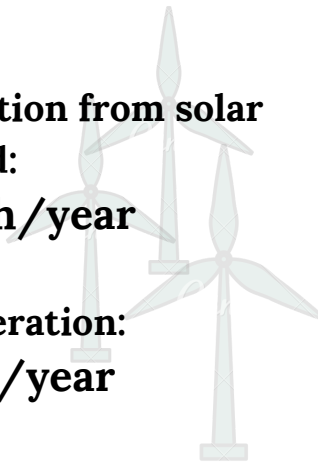
WHAT ARE WE GOING TO TEST IS THE INTEGRATION OF:

- Wind and marine turbines
- Photovoltaic power generation
- Submarine aquaculture and subsea garden
- Hydrogen generation
- Hydrogen Storage
- Sealine as power line or hydrogen
- Innovative monitoring systems

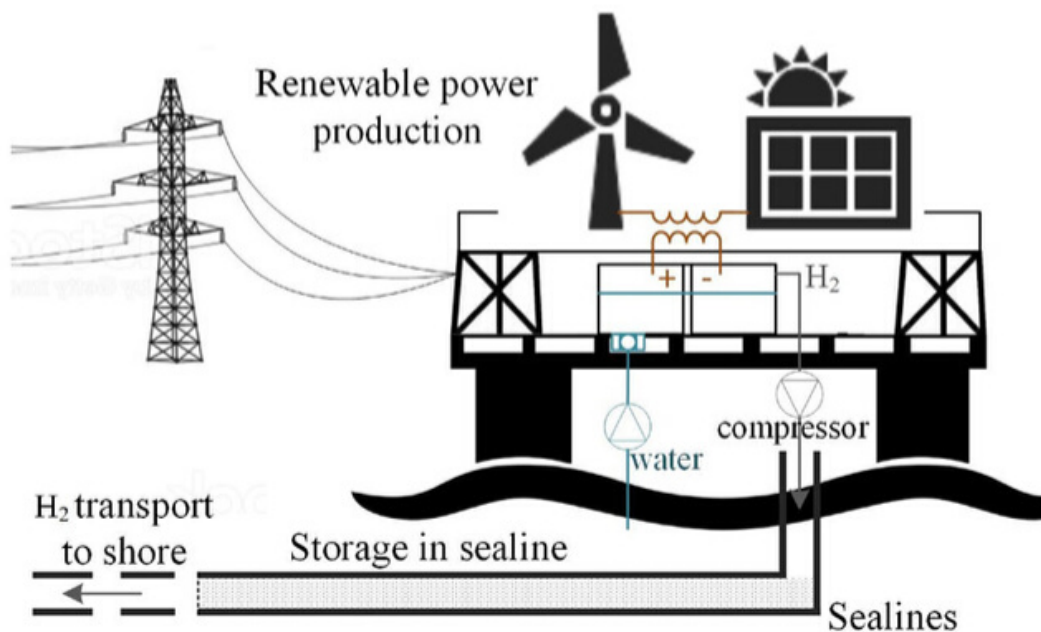
**Electric power production from solar
and wind:
270.000 kWh/year**

**Hydrogen generation:
40.000 Nm³/year**

**Hydrogen storage by existing sealines
on Azalea A maximum:
1852 kg**



A CONCRETE OPPORTUNITY TO
EXPLORE INNOVATIVE,
KNOWLEDGE-BASED PATHWAYS
AND FORWARD-LOOKING VISIONS
WITH A MISSION-ORIENTED
APPROACH, FOR FURTHER UPTAKE
AND DEVELOPMENTS



HUGE STEP FORWARD

Strategic Tests on Real Cases

- SUPPORTING ENERGY TRANSITION-

Shifting focus on the offshore platforms from the oil processing to renewable energy

Integration of existing offshore infrastructures with **hybrid power generation systems** as positive example of Blue Economy

Keep boostin **international expansion** of the network

ABOUT OUR TEAM

ADMINISTRATIONS, RESEARCH CENTRES AND PRIVATE ENTERPRISES FROM 6 MED-COUNTRIES

**MINISTRY OF ECONOMIC
DEVELOPMENT**

MAIN COORDINATOR

ITALY

ROSETTI MARINO CO-LEAD

ITALY

NATIONAL RESEARCH INSTITUTE OF
ASTRONOMY AND GEOPHYSICS

EGYPT

HELLENIC HYDROCARBON RESOURCE
MANAGEMENT

GREECE

CROATIAN HYDROCARBON AGENCY

CROATIA

MINISTRY OF TRANSPORT LABOUR,
WELFARE AND SOCIAL INSURANCE
AGRICULTURE, RURAL DEVELOPMENT
AND ENVIRONMENT

CYPRUS

NATIONAL INSTITUTE
OF OCEANOGRAPHY AND APPLIED
GEOPHYSICS

ITALY

UNIVERSITY OF AQUILA

ITALY

NATIONAL INSTITUTE OF MARINE
SCIENCES AND TECHNOLOGIES

TUNISIA

POLYTECHNIC OF TORINO

ITALY

NATIONAL RESEARCH COUNCIL
INSTITUTE OF MARINE SCIENCES

ITALY





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Ministry of Economic Development

edited by Marzia Bevilacqua



SEALINES HANDBOOK

GOT ANY QUESTIONS?



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An R&I initiative aiming at boostinG bluegrowth, create new job in the marine and maritime sector in the Mediterranean supported by H2020 BLUEMED CSA