## Western Mediterranean Forum (Euro Mediterranean Dialogue 5+5)



#### **RESEARCH, INNOVATION AND HIGHER EDUCATION**



## BLUEMED Initiative

## Dialogue 5+5

### **PRIMA** Initiative



Istituto Nazionale di Oceanografia e di Geofisica Sperimentale

EUSA

## The BLUEMED initiative

The BLUEMED Initiative fosters integration of knowledge and efforts of EU member states of the Mediterranean Basin to jointly create new 'blue' jobs and a sustainable industrial growth in the marine and maritime sectors of the area.



Bluemed Research and innovation initiative for blue jobs and growth in the Mediterranean area

Strategic research and innovation agenda



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## **PRIMA** initiative



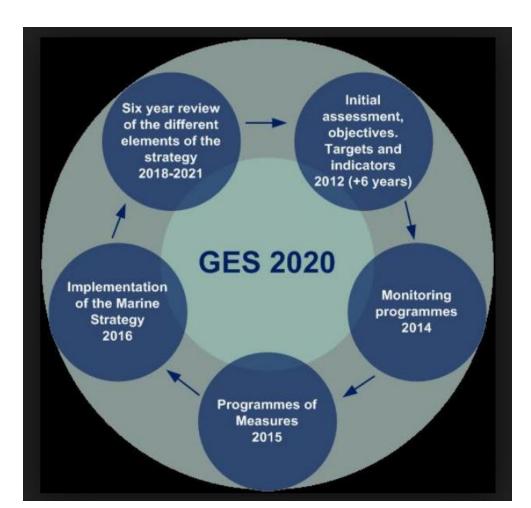


## **EUSAIR**



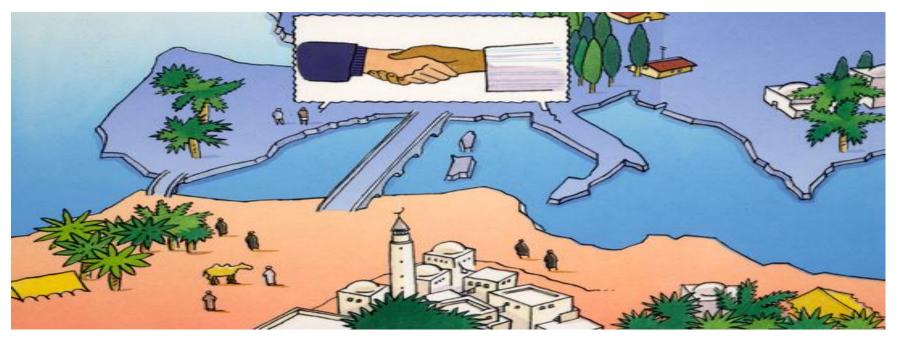
## EU coastal and marine Policy and Law

The state of local implementation of environmental policies and legislation, and level of similarity to EU environmental policies (e.g. Water Framework Directive, Marine Strategy Framework Directive, Maritime Spatial Planning)





## Dialogue 5+5



The Western Mediterranean Forum (5+5 Dialogue) is an informal political dialogue that brings together ten Western Mediterranean countries: Algeria, France, Italy, Libya, Malta, Mauritania, Morocco, Portugal, Spain and Tunisia. Its aim is to reinforce and enrich the political, economic and cultural dialogue between the two shores of the Mediterranean.

Ist Meeting: Rabat, 19-20 September 2013

2nd meeting: Madrid, 23-24 March 2015

♦ 3rd meeting: Tunis, 30-31 March 2017





À Tunis pour la réunion du dialogue 5+5 @sup\_recherche et innovation et la signature de la déclaration ministérielle commune #Coopération

L+ Segui



Tunis Declaration, 31 March 2017



Ravi d'être en oper la réunion ministérielle 5+5 #UEMed. #H2020 est ouvert au monde. #PRIMA\_EU en est l'exemple parfait. #Opentotheworld

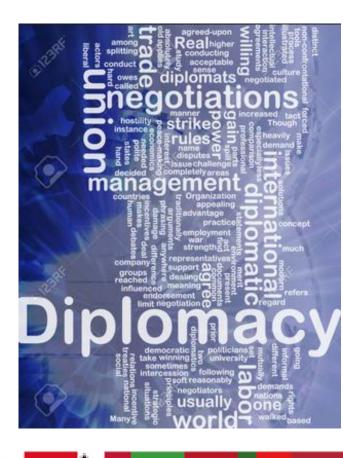
2 Segui





# Science and Diplomacy

- Informing foreign policy objectives with scientific advise (Science in Diplomacy)
- Facilitating international science cooperation (Diplomacy for Science)
- Use science cooperation to improve international relations between countries (Science for Diplomacy)



As a Transnational initiative, the "raison d'être" of the Dialogue 5+5 is to ensure closer cooperation between the five EU Member States and the five Arab Maghreb Countries through political dialogue and cooperation and by encouraging more effective resource management as a means of strengthening interdependence and regional development.

To stimulate growth and employment, the Dialogue 5+5 Countries should deploy more efforts to promote entrepreneurship, a powerful engine of shared prosperity. In fact, the creation and growth of enterprises promotes employment and development of new skills, reinforces innovation and increases market potentials.

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Many Countries are engaged in processes of reforming their political, economic and social systems to stimulate investment, to encourage initiative and to foster strong economic partnerships that are essential throughout the Western Mediterranean region. Dialogue 5+5 Countries need to revitalize their economies to promote smart, sustainable and inclusive growth for the purpose of developing disadvantaged regions and **enhancing job creation** in line with international labour standards.

Research, innovation and higher education play a key role in job creation. There is a need for solid framework of cooperation and conducive synergies among the ten Countries. Confronted with several challenges, the Dialogue 5+5 Countries are invited to deepen their partnership to further stimulate economic growth and social stability.

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Aiming at fostering:

- the synergies between higher education, research and innovation programmes in the Western Mediterranean Area;
- the role that higher education, research and innovation in growth improvement and job creation of the Western Mediterranean Area.

### The identification of specific instrumental action lines







### Actions for networking:

A1: Setting-up of an instrument for networking

A2: Strengthening the potential of the Dialogue 5+5 Member Countries to compete for available funding mechanisms (H2020 and other funding instruments)

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Actions for research and innovation A3: Entrepreneurship **A4:** Access to infrastructures A5: Technology transfer A6: Program for Improving Intellectual **Property Management Capacity in** Dialogue 5+5 Member Countries A7. Development and implementation of open innovation and smart specialization strategies in the Dialogue 5+5 Member **Countries** A8. Strengthening the institutional

11

capacity of research structure



### Actions for Higher Education

- A9: Creation of a Network of Higher Education Institutions within the Dialogue 5+5
- A10. Quality assurance and accreditation
- A11. Governance
- A12. Fostering mobility and joint research programmes

A13. Building capacities and developing skills on blue economy

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OGS represents Italy in the Western Mediterranean Forum (Euro Mediterranean Dialogue 5+5)



Western Mediterranean Forum (Dialogue 5 +5),Barcelona, 28-29 January 2015;

Western Mediterranean Forum (Dialogue 5 +5), Rabat, 27-28 February 2014.



A sub-regional forum for dialogue between Western Mediterranean countries and a 'space' for research and innovation to promote cooperation in science, technology and higher education.

The Maghreb countries involved are Algeria, Libya, Mauritania, Morocco and Tunisia, and the European nations are France, Italy, Malta, Portugal and Spain..



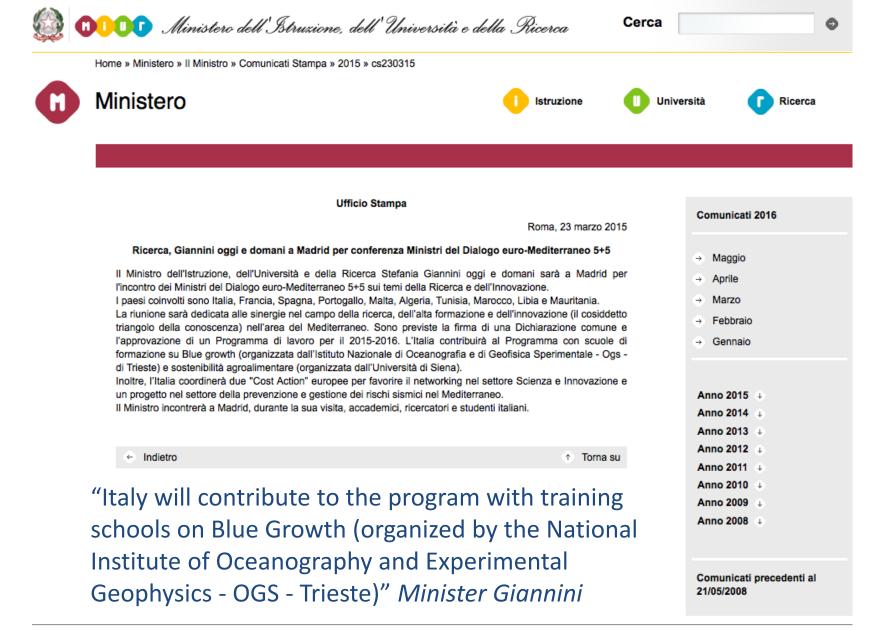


**Madrid, 24 March 2015.** A high-level delegation of the UfM Secretariat headed by the Secretary General Fathallah Sijilmassi participated in the 2<sup>nd</sup> Dialogue 5+5 Ministerial Conference on Research, Innovation and Higher Education conveyed by Spain on 23-24 March 2015 in Madrid.

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# Sustainable Blue Growth Initiative for the Mediterranean Region









## Blue Growth = Value + Jobs + Sustainability





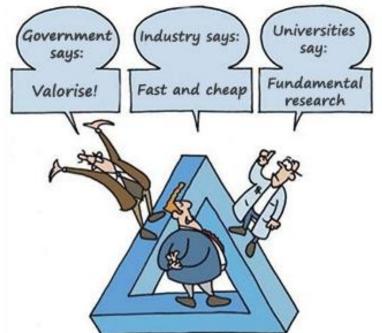
Type of activity	Ocean service	Established industries	Emerging industries	New industries	Drivers of future growth
Harvesting of living resources	Seafood	Fisheries	Sustainable fisheries		Food security
			Aquaculture	Multi-species aquaculture	Demand for protein
	Marine bio-technology		Pharmaceuticals, chemicals		R&D in healthcare and industry
Extraction of non-living resources, generation of new resources	Minerals	Seabed mining			Demand for minerals
			Deep seabed mining		
	Energy	Oil and gas			Demand for alternative energy sources
			Renewables		
	Fresh water		Desalination		Freshwater shortages
Commerce and trade in and around the ocean	Transport and trade	Shipping			Growth in seaborne trade
		Port infrastructure and services			International regulations
	Tourism and recreation	Tourism			Growth of global tourism
		Coastal development			<b>Coastal urbanisation</b>
			Eco-tourism		Domestic regulations
Response to ocean health challenges	Ocean monitoring and surveillance		Technology and R&D		R&D in ocean technologies
	Carbon sequestration		Blue carbon (i.e. coastal vegetated habitats)		Growth in coastal and ocean protection and conservation activities
	Coastal protection		Habitat protection, resto	ration	
	Waste disposal			Assimilation of nutrients, solid waste	

Activities that can contribute to restoring ocean health



A platform for the development of skills and the valorisation of scientific knowledge in the field of Blue Economy for the benefit of Mediterranean countries;

 A contribution of Italy to the Western Mediterranean Dialogue (Dialogue 5+5).





# Curriculum development based on the occupational needs

Job dissatisfaction despite low occupation opportunities is an indicator to fair **job matching**.

Creation of **new job profiles** that can be bankable.





OGS Initiative on Blue Growth is highly recommended by the Dialogue 5+5 member countries.

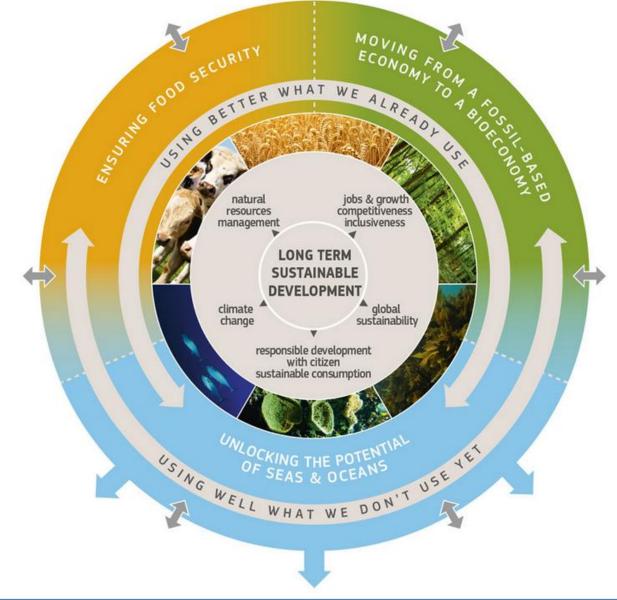
Coordinated by Italy (OGS) to support research, higher education, innovation and international mobility for sustainable growth in the marine and maritime sectors with the objective to promote jobs' creation and the increase of products and services in the blue economy.





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# The green part of the blue













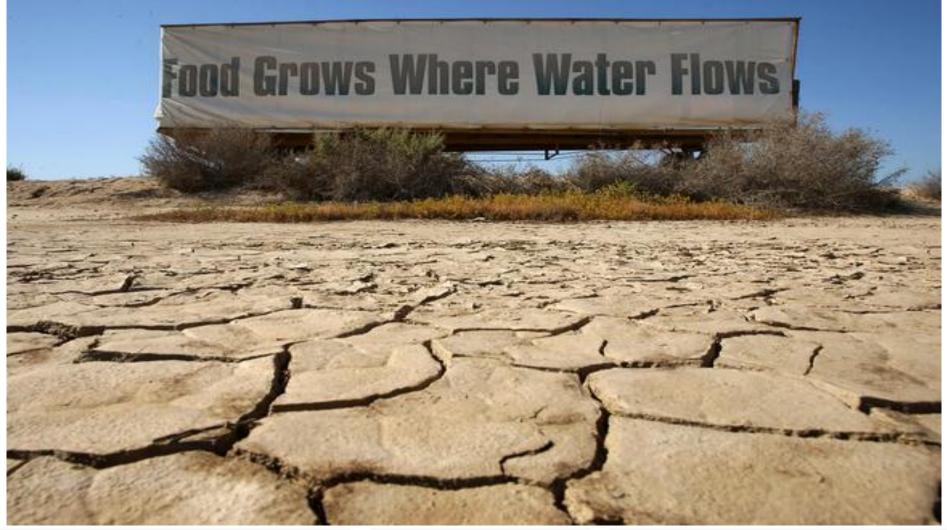
## Water is life... but water is also death



Istituto Nazionale di Oceanografia e di Geofisica Sperimentale









Tornado



Flood



Tsunami



## **Planned activities**

 1) Summer School in Trieste (Summer School on Sustainable Blue Growth)

This is an advanced training initiative, organized in Trieste with annual recurrence, with regard to the blue economy, addressed to researchers, innovators, scientists, and managers of institutions, universities and research centres of the Mediterranean and Black Sea countries: Albania, Algeria, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Egypt, France, Jordan, Greece, Israel, Italy, Lebanon, Macedonia, Malta, Morocco, Mauritania, Montenegro, Palestine, Portugal, Romania, Serbia, Slovenia, Spain, Tunisia, Turkey and Ukraine.



# Trieste, 14-18 July 2014



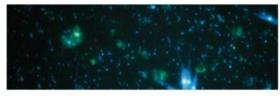






## **Topics**











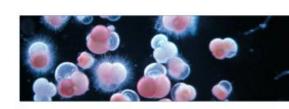
Fishing and aquaculture

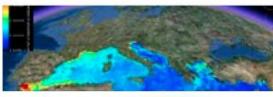
Marine biotechnology

Coastal and maritime tourism



Ocean energy









Marine knowledge

Maritime spatial planning

### Integrated maritime surveillance

Sea basin strategies

### Trieste, 20-24 July 2015







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Advanced Training School on Sustainable Blue Growth in Mediterranean and Black Sea countries

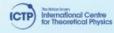
### 20-24 July 2015

Kastler Lecture Hall Adriatico Guest House, the Abdus Salam International Centre for Theoretical Physics (ICTP) Via Grignano n. 9, Trieste





Istituto Nazionale di Oceanografia e di Geofisica Sperimentale Borgo Grotta Gigante 42 /C - 34010 Sgonico (TS) Tel.+ 39 040 21401 - Fax + 39 040 327307















In the context of the BLUEMED Initiative

Contacts: summerschool.inogs.it - ricerca@ogs.trieste.it

### Trieste, 4-8 July 2016





### Sustainable Blue Growth in Mediterranean and Black Sea countries

Building capacities and developing skills in the marine and maritime sectors

### Dates: 4-8 July 2016

Venue: Adriatico Guest House, the Abdus Salam International Centre for Theoretical Physics (ICTP), Via Grignano n. 9, TRIESTE

Taking into consideration the current economic crisis and the evolving political, social and environmental conditions in the Mediterranean Region, there is a need to put together multidisciplinary actors from different countries, make ideal environment for constructive dialogue (science diplomacy) and create all conditions that include the role of people, economics and policies to attract investments while reconciling tensions and balancing priorities between economical growth, social implication and environmental conservation.

Tackling climate change, understanding ecosystem func-

tion, managing sustainability: all of these require a much more tangible initiatives and strategies. Hence, the EU Blue Growth initiative represents a long-term strategy to support growth in the maritime sector as a whole by harnessing the untapped potential of Europe's oceans, seas and coasts for jobs creation and economic growth. Establishing appropriate training and mobility opportunities to train new generation of scientists, technicians and operators, in the marine and maritime sectors, equipped with appropriate skills to bridge the gap between scientific research and sustainable development and support the creation of career opportunities in the blue economy represents an important part of this strategy.

### UNIQUE OPPORTUNITY







Ritmare La ricerca italiana per il mare



In this context, OGS, the Italian National Institute of Oceanography and Applied Geophysics, in collaboration with other partner-institutions is organizing an advanced training school in Trieste for researchers, scientists and managers from the Mediterranean and Black sea Countries.



OGS intends to support the creation of stable and attractive career pathways and highly skilled talents that will be needed to support expanding marine and maritime sectors.

The focus of the training school is on strengthening professional skills and enhancing competencies in fields related to the blue economy.

### Specific objectives

- to increase the professional skills and the quality of research in the field of marine sciences, climate related aspects, environmental protection and integrated management of coastal areas;
- to increase the educational offer to extend the current economic development and growth, with particular focus on activities and aspects related to the sea;
- to identify actions, partnerships and financing instruments that can help scale up activities that

ultimately result in sharing research outcomes and disseminating scientific knowledge.

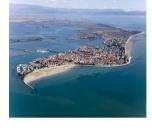
### **Target beneficiaries**

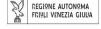
The School will be addressed to scientists, researchers, post-doctoral fellows and Ph.D. students dealing with aspects related to oceanography (physics, chemistry and biology), marine biology, geology, geophysics, geochemistry, environmental engineering, ecological modelling, climate study, coastal zone management and other related fields. Project managers, economists and policy-makers are also eligible to participate. However, applicants should be able to demonstrate their ability particularly to assimilate new concepts related to Blue Growth particularly aspects related to economic growth, environmental protection and societal challenges. A high level scientific committee will follow a well defined selection criteria and only motivated and qualified candidates will be selected.

Only 2 candidates per each eligible country will be selected and granted fellowships. Additional candidates supported by their institutions might be considered if they ensure supporting their own costs. Highly qualified professors will be invited to lecturing and tutoring during the School.

### **Target countries**

Eligible participants are coming from the Mediterranean and Black Sea countries (Albania, Algeria, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Macedonia, Malta, Mauritania, Morocco, Montenegro, Lebanon, Libya, Palestine, Portugal, Romania, Serbia, Slovenia, Spain, Tunisia, Turkey and Ukraine).





UNIVERSITÀ DEGLI STUDI DI UDINE









Topics

Fostering innovation in the Blue Economy: creating value from innovation

- Climate change, governance and adaptation
- From observing systems to products and services for science and society: marine knowledge from observation and collection of marine and coastal data to information, products and services for intermediate and end-users
- Future of offshore hydrocarbon exploration
- New threats for the marine environment: microplastics, munitions in the sea, oil spills hazards, etc.



## Trieste, 10-19 July 2017

### Sustainable Blue Growth in Mediterranean and Black Sea countries

Building capacities and developing skills in the marine and maritime sectors

Dates: 10-19 July 2017

Venue: Adriatico Guest House, the Abdus Salam International Centre for Theoretical Physics (ICTP), Via Grignano n. 9, TRIESTE

Taking into consideration the current economic crisis and the evolving political, social and environmental conditions in the Mediterranean Region, there is a need to put together multidisciplinary actors from different countries, make ideal environment for constructive dialogue (science diplomacy) and create all conditions that include the role of people, economics and policies to attract investments while reconciling tensions and balancing priorities between economical growth, social implication and environmental conservation.











### Target countries

Eligible participants are coming from the Mediterranean and Black Sea countries (Albania, Algeria, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Macedonia, Malta, Mauritania, Morocco, Montenegro, Lebanon, Libya, Palestine, Portugal, Romania, Serbia, Slovenia, Spain, Tunisia, Turkey and Ukraine).

### Registration

No registration fees are required.

OGS particularly encourages qualified women to apply to our summer school. Candidates supported by their own Institution through a support letter will be taken in particular consideration. Selected candidates will be granted fellowships covering their expenses for travel and accommodation. Candidates not requesting fellowships will be also evaluated for admission and invited to participate in case of successful application while demonstrating their ability to cover their own expenses. **Apply here** 

### Deadline for applications

Applications must be sent before Monday May 1, 2017 at 17:00. Apply here

### Scientific Committee:

Abdelhamid El Zoheiry, President, EMUNI (Euro-Mediterranean University), Portorož, Slovenia Carlo Carraro, President Emeritus, Universita' Ca' Foscari Venezia, Vice Chair, IPCC Working Group III, Full Professor of Environmental Economics and Econometrics, Director, International Center for Climate Governance, Venice, Italy Slim Choura, Professor of Mechanical Engineering, Director General of International Cooperation, Ministry of

Higher Education and Scientific Research, Tunisia

David Cox, Programme manager, Joint programming Initiative Healthy and Productive Seas and Oceans (JPI Oceans)



Within the framework of the Euro-Mediterranean Forum Dialogue 5+5



Advanced Summer School in Sustainable Blue Growth: enhancing capacities and developing skills in the marine and maritime sectors

# **4M**<sub>s:</sub>

## Marine, Maritime and Migration in the Mediterranean



### 2) International Workshop Series

♦ The workshops are sharing platforms of scientific and technological knowledge including also industrial knowhow addressed to researchers, scientists and specialists in research and development, production and control of environmental quality and specific topics as safety and security at the sea, etc.





### 3) Master's Degree

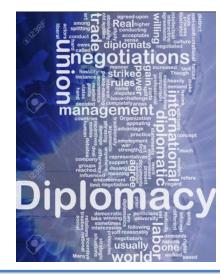
Increase the professional skills and the quality of research in the marine and maritime sectors, thus contributing to the creation of new professional profiles and more chances for job opportunities;

Increase the provision of training to expand the current economic development and growth, with particular attention to the activities and aspects related to the importance of the sea (including security and safety at sea);

Promoting those activities that are eventually leading to share the results of research and dissemination of scientific knowledge;

Expose students to cross cutting issues such as financing tools and management of projects in the field of blue growth;

Introducing innovative themes such as science diplomacy, to facilitate dialogue between countries and facilitate mobility and access to research infrastructures.





### Structure of the Master

 $\diamond$ It is a part-time program lasting 12 months (including a series of short courses spread over the duration of the Master). This teaching method may go well with the work requirement, and is focused on three pillars: capacity building, skills development and science diplomacy.

 $\diamond$ Lectures are planned and will be enriched with materials available on the online platform, and visits to leading companies, such as the blue technological innovation.

 $\diamond$ The master will end with the preparation of a work project after an internship at a company.

### Master in Sustainable Blue Growth

#### A UNIQUE OPPORTUNITY

Taking into consideration the current economic crisis and the evolving political, social and during the total duration of the course. environmental conditions in the Mediterranean Region, there is a need to put together multidisciplinary actors from different countries, make ideal environment for constructive dialogue (science diplomacy) and create all conditions that include the role of people, economics and policies to attract investments while reconciling tensions and balancing priorities between economical growth, social implication and environmental conservation,

Tackling climate change, understanding ecosystem function, managing sustainability: all of these require a much more tangible initiatives and strategies. Hence, the EU Blue Growth initiative represents a long-term strategy to support growth in the maritime sector as a whole by harnessing the untapped potential of Europe's oceans, seas and coasts for blue jobs creation and economic growth. Establishing appropriate training and mobility opportunities to train new generation of scientists, technicians and operators, in the marine and maritime sectors, equipped with appropriate skills to bridge the gap between scientific research and sustainable development and support the creation of career opportunities in the blue economy represents an important part of this strategy.

#### The Master

The Master in Sustainable Blue Growth is established to bring scientific excellence and technological innovation at the centre of a number of Blue Growth initiatives.

Within the framework of the Western Mediterranean Forum (Dialogue 5+5) and in support of the BLUMED initiative and the EU strategy for illue Growth, the Italian National Institute of Oceanography and Experimental Geophysics (OGS), in collaboration with other partnerinstitutions i.e. Central European initiative (CEI), the Abdus Salam International Centre for Theoretical Physics (ICTP), The World Academy of Science (TWAS), Euro-Mediterranean University (EMUNI), University of Trieste, etc., is organizing a Master in Sustainable Blue Growth for researchers, scientists and managers from the Mediterranean and Black sea Countries.

OGS intends to support the creation of stable and attractive blue career pathways and highly skilled talents that will be needed to support expanding marine and maritime sectors. The focus of the Master is on strengthening professional skills and enhancing competencies in fields related to sustainable blue growth with valorisation of needs of priorities of target countries.

#### Specific objectives

- · to increase the professional skills and the quality of research in the marine and maritime sector. Thus contributing to the creation of new job profiles and more chances for blue jobs' opportunities:
- · to increase the educational offer to extend the current economic development and growth, with particular focus on activities and aspects related to the importance of the sea (including security and safety in the sea);
- to help scale up activities that ultimately result in sharing research outcomes and disseminating scientific knowledge
- to expose students to cross-cutting aspects such as financing instruments and project management in the field of blue growth;
- to introduce innovative topics such as science diplomacy to ease the dialogue between countries and facilitate mobility and access to research infrastructures.

#### Structure of the Maste

It is a part-time programme lasting 12 months (a number of short courses distributed on the whole duration of the Master), that can fit with work commitment, and it is focused on three pillars: capacity building, skill development and science diplomacy. Traditional lectures are envisaged and will be enriched with specific feature materials on the online platform, with hands-on workshops/seminars and visits to leading companies, as for blue technology innovation. The master's course ends with the drafting of a project work.



### Istituto Nazionale di Oceanografia e di Geofisica Sperimentale

KEY FACTS Format: Part-time, distributed short courses

Duration: 12 months

Language: English

Priority area: Mediterranean and Black Sea Countries

Target countries: Albania, Algeria, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Macedonia, Malta, Mauritania, Morocco, Montenegro, Lebanon, Libva, Palestine, Portugal, Romania, Serbia, Slovenia, Spain, Tunisia, Turkey and Ukraine,

Participants: 20-30 (preferably 28 participants i.e. 1 participant from each target country).

#### Average age: 35 years

Fields of studies of participants Oceanography (physics, chemistry and biology), marine biology, geology, geophysics, geochemistry, environmental engineering, ecological modelling, climate coastal zone management study, environmental economy and related fields.

#### Envisaged topics of the Master Interdisciplinary course covering a number of topics related to blue economy including environmental aspects, socio-economic fields and science diplomacy.

#### How to apply

Interested, qualified persons are invited to submit an online application, Candidature should contain detailed CV (Europass Format] and a support letter from home institution.

#### Contact us

For more information on the Master please contact

bluegrowth@inogs.it

# 4) International Mobility and Scientific Networking

♦ Exchange programs of researchers in the international arena, especially in the Mediterranean region and the Black Sea.





5) Support activities to business development and creation of start-ups or/and spin-off

- Give visibility and promote the development of business ideas that can be generated from the world of research
- Promote highly innovative value to support the creation of startup and / or spin-off focused on Blue Growth sector also on activities that include land-sea interaction.





OBERNO E ESPANA

# 6) Dissemination activities (public outreach) and museum

Series of conferences with on-demand topics.

Sensitizing public opinion on Plastic Waste (macro and micro)













# 7) Access to research infrastructures

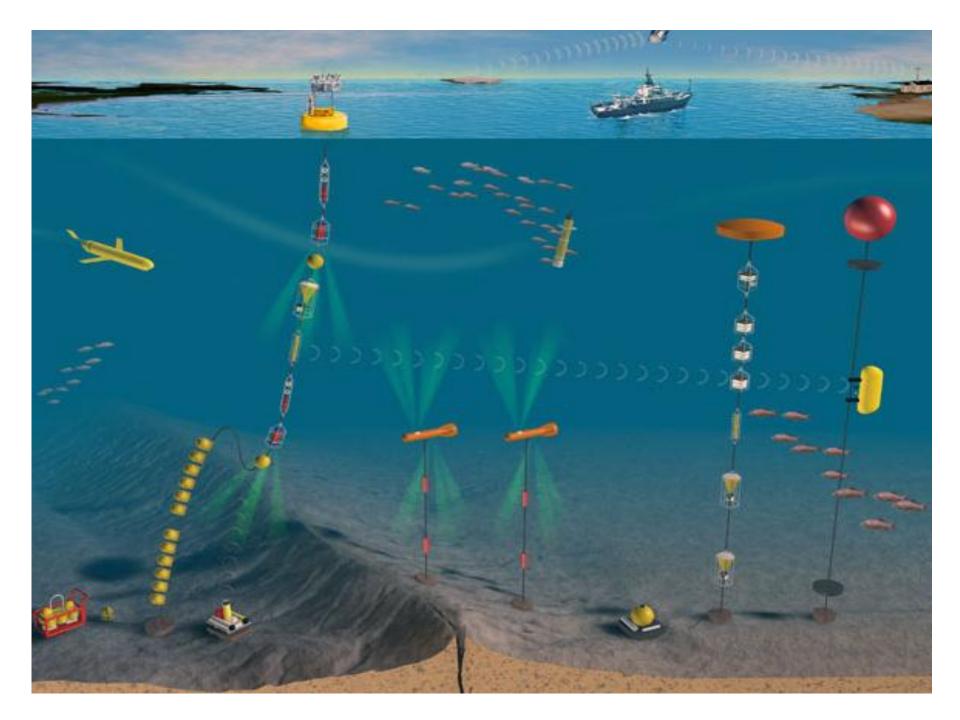
☆Among many infrastructure managed by OGS, the most suitable for this project are those related to the marine environment. OGS has a research vessel (OGS Explora) and a small transport vessel for water sampling (Patrol vessel 500 class). OGS can provide a broad spectrum of technological equipment for the marine environmental survey, both under the seabed or on the water column. OGS has in fact the equipment to carry out the mapping of the seabed, the geophysics acquisitions, water samplings, etc.







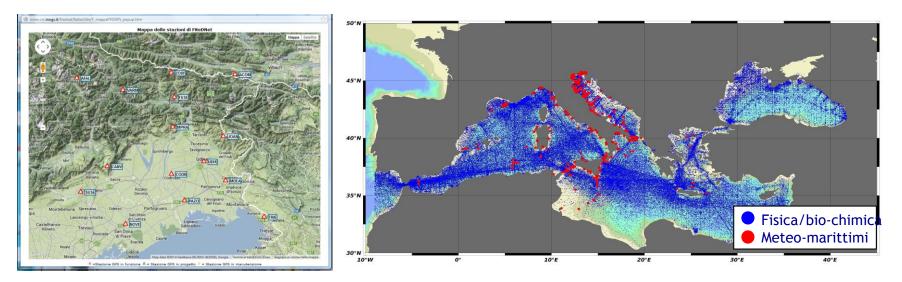




OGS data infrastructure is articulated in three disciplinary sectors:

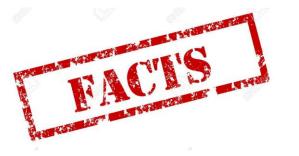
- Oceanography
- Bathymetry and sea seismological data
- Seismic ground and geodetic

The information system is integrated into European networks (EMODNet, SeaDataNet)



Access to data, key point for research and marine management (from climate change to blue growth)





- Interaction land-sea with an integrated approach for costal management and offshore development;
- Cross-cutting disciplines;
- Second level master on specific topic related to Blue Growth;
- Involvement of private sectors and industries;
- Importance of the international component;
- Dialogue and science diplomacy.





### Within the framework of the BLUEMED initiative





Ing. Mounir GHRIBI, Ph.D. In-Charge of International Cooperation and Strategic Partnerships Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS Borgo Grotta Gigante, 42/c 34010 SGONICO (Trieste) ITALY mghribi@inogs.it