

TAKE AWAY IDEAS REPORT

SCIENCE AND INNOVATION DIPLOMACY IN THE MEDITERRANEAN



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FOREWORD

In the Euro-Mediterranean region, cultures and science met and mingled for millennia, creating spaces for innovative and inclusive solutions to common challenges. This makes science diplomacy a promising tool for cooperation between Southern Mediterranean countries and Europe, and a field that the Union for the Mediterranean (UfM) strongly supports through its work on research and innovation, higher education, blue and circular economy, climate change, food systems, and water. In this framework, the UfM has an indispensable role as a privileged dialogue forum for its 42 Member States, recognised recently by a Joint Communication of the EU for “A new Agenda for the Mediterranean”.

It is in this spirit that UfM supports training, discussions, and initiatives about science diplomacy in the Mediterranean, in the belief that strengthening Euro-Mediterranean cooperation in research and innovation is a way forward for fully tapping into the potential of a prosperous Mediterranean. The 1995 Barcelona Declaration stated that “science and technology have a significant influence on socio-economic development” of the Euro-Mediterranean region. In 2017, UfM Ministers of Research held a EuroMed Conference on Research and Innovation (R&I) in Valletta, and in 2021 the UfM Regional Platform on Research and Innovation approved a new research agenda on climate change, health, and renewable energy. A UfM Ministerial Conference in Research and Innovation is currently scheduled for 2022.

In December 2020 and October 2021, the UfM, in partnership with the Horizon 2020 project S4D4C (Using Science Diplomacy for Addressing Global Challenges) and CREAM, organized two virtual workshops to analyze the state of science and innovation diplomacy in the Euro-Mediterranean and increase awareness, capacities, and dialogue among different stakeholders, including national governments, multilateral institutions, industry, research organizations, and civil society. The conclusions of these events have inspired the preparation of this report, which offers a synthetic view on the main outcomes of past experiences on science diplomacy within the UfM framework and many lessons for the way forward.

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1. INTRODUCTION: WHY DOES THE MEDITERRANEAN REGION NEED SCIENCE DIPLOMACY?

The Euro-Mediterranean region is a crossroads of civilizations where cultures and science have been intertwined for millennia. Throughout history, science has served as a meeting point to build alliances between countries beyond political circumstances in support of diplomatic agreements in areas of global health, biodiversity conservation, ocean governance, water resource management, nuclear non-proliferation, energy security, or climate change, among many others.

As one of the main hotspots for climate change on Earth,¹ the Mediterranean region is already experiencing extreme weather events, food insecurity, water scarcity, biodiversity loss, marine and atmospheric pollution, emerging health threats, among many other direct and indirect consequences. If not addressed, the region will face an escalation in the impacts at all levels of society, the environment, and the economy.

These problems need to be tackled through regional long-term cooperation in research, innovation, and capacity building. But while international research collaboration is essential to understanding these shared challenges and providing common ground, it is not sufficient. Robust diplomatic frameworks must also be in place to overcome obstacles to cross-border cooperation caused by political, geographical, social, or conflict-related challenges. This will require stronger alignment on the scientific and diplomatic agendas at both the national and regional levels, as well as innovative instruments, partnerships, and coalitions among a broader range of actors to ultimately place science, health, climate, and the environment at the heart of the regional agenda.

The 42 countries from the European Union and the Southern and Eastern Mediterranean shores encompass broad and highly diverse regions with strong historical, cultural, and geographic links and interdependencies. Science diplomacy has the potential to leverage scientific cooperation on shared environment and health problems to bridge the divides between the South-East and the North shores. At the same time, it can help reduce disparities between subregions on issues where wide gaps persist, such as in education, social inequalities, technology, access to safe water, and gender equality. This makes the Mediterranean region an optimal testbed for all those transformative initiatives.

It is worth noting that scientific and cultural diplomacy are two sides of the same coin that must go hand in hand given the shared Mediterranean values and identity. Science diplomacy can be a powerful tool for understanding and achieving regional objectives while fostering a positive sense of belonging to a cross-border community based on skills, openness, and win-win solutions. Science can create a knowledge bridge to tackle issues of common interest, resulting in an outcome greater than the sum of individual or national efforts.

This report brings together key examples of successful regional institutions, research initiatives, and cooperation programmes working to advance science diplomacy in the Euro-Mediterranean. The selection was based on the two workshops organised by UfM, in December 2020 in partnership with the Horizon 2020 project S4D4C (Using Science Diplomacy for Addressing Global Challenges) and in October 2021, in partnership with CREAM. The examples presented here show the raising importance of science diplomacy as a positive tool in the Euro-Mediterranean space.

3. The latest [IPCC AR6 report](#) identifies the Mediterranean as one of the regions where the impacts of climate change will be more acute.

2. AN EMERGING POLITICAL FRAMEWORK FOR SCIENCE DIPLOMACY IN THE MEDITERRANEAN

Over the last decade, [science diplomacy](#) has been conceptualized and institutionalized as a policy tool, diplomatic framework, and transdisciplinary research field, becoming increasingly adopted by national governments, multilateral organizations (including the European Union, the United Nations system, and the UfM) and is now the object of academic study and reflection at universities and international scientific organizations around the world.

In 2015 science diplomacy was elevated in the European Union as an external dimension of the EU's science and innovation policy by then Commissioner for Research, Science and Innovation, Carlos Moedas, who characterized it as a "[natural extension of European values](#)" and sought to position research and innovation at the center of EU global action. A particular focus was given to the Euro-Mediterranean partnership through support for projects such as the Partnership on Research and Innovation in the Mediterranean Area (PRIMA) and BLUE-MED. The strategy also encompassed strengthening scientific capacities in the European External Action Service (EEAS) and the inclusion of science diplomacy as a research topic in [Horizon 2020](#)² to assess and strengthen its impact in the European Union and its Member States.

The Barcelona Declaration of 1995³ already recognized the importance of science diplomacy and the role of science and technology in the socio-economic development of the Mediterranean. In 2017, Ministers of Science of the Euro-Mediterranean region ([Valletta Declaration](#),

[2017](#)) identified knowledge as the engine for sustainable development and job growth in the region, to promote brain circulation, avoid duplication, reduce fragmentation and promote science as an instrument for regional integration in the Mediterranean, grounded in gender equality and scientific excellence.

The Renewed Partnership with the Southern Neighbourhood: A New Agenda for the Mediterranean (European Commission, 2021) sees research and innovation as key ingredients for the achievement of more resilient and inclusive growth, as well as the creation of sustainable employment opportunities. It promises to step up the dedication to innovation and science as a way to create a knowledge society and economy, mostly through Horizon Europe.

The UfM has highly regarded the role of science diplomacy since its inception, as it has promoted through its multi-stakeholder platforms informed dialogue between experts, governments, and diplomats on its priority areas.

Taken together, all these policy instruments demonstrate a broad political consensus for science diplomacy in the Mediterranean region. The Covid-19 pandemic has been exemplary to demonstrate why international scientific cooperation must be integrated with diplomacy to tackle shared challenges that countries cannot deal with alone, and the recovery phase is the opportunity to put science at the service of sustainable development and society's wellbeing.

A new agenda for research and innovation in the Mediterranean

In July 2021, the [UfM Regional Platform in Research and Innovation adopted](#) a new agenda for cooperation in research and innovation in the region, with a focus on **renewable energy, health, and climate change**.

These three priority areas create a common roadmap for the UfM member states for future research and innovation and capacity-building activities, emphasizing their horizontal integration and the interlinkages between them, and the need for transdisciplinary research methods characterized by the collaboration between natural and social scientists, as well as the involvement of non-academic stakeholders, such as public officials, citizens, private sector or not-for-profit organizations.

Read the full agenda: <https://ufmsecretariat.org/new-research-and-innovation-agenda/>

1. S4D4C, InSSciDE, EL-CSID, BlueMED

2. [25 Years of the Barcelona Process - Union for the Mediterranean - UfM](#)

3. PERSPECTIVES ON SCIENCE DIPLOMACY FROM THE MEDITERRANEAN

The goal for science diplomacy is to create or strengthen multi-stakeholder approaches to promote scientific evidence into decision-making processes on transnational issues of common interest. Science diplomacy actions can take many different forms: inserting scientific capabilities in foreign policy structures, big-scale regional research programmes, networks of research centres, academic mobility schemes, joint access to large research infrastructure, dedicated conferences and training events, and also regular ministerial meetings on priority topics for the development of the region.

The following examples are selected from the two science diplomacy workshops organised by UfM in 2020 and 2021 in partnership with the Horizon 2020 project S4D4C (Using Science Diplomacy for Addressing Global Challenges) and CREAM.

3.1 SUSTAINABLE FOOD SYSTEMS

The Mediterranean is a region with high population growth and increasing environmental and climate risks, which pose challenges to food security and nutrition. The region used to be an export region for agriculture but now is importing [20-50%](#) of its food, and water scarcity is widespread for most countries, along with agrobiodiversity loss. At the same time, reviving the Mediterranean diet holds the potential to act as a powerful lever for bridging food consumption and production in a sustainable way. A sustainable food systems approach requires coordinated efforts across a range of actors, institutions, and sectors, balancing the different objectives and perspectives of these stakeholders, with the aim to address trade-offs between competing economic, environmental, and societal objectives.

In this context, regional collaboration and multi-stakeholder dialogue is needed to identify common priorities and boost transformative actions for a rethinking of food systems. To this end, the United Nations Food and Agriculture Organization (FAO), the

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International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), and UfM have joined forces to develop the [SFS-MED Sustainable Food Systems Platform](#), a regional framework to leverage existing knowledge, experience, and skills of institutions across the Mediterranean to develop and adopt an innovative and science-based framework to support the transformation towards more sustainable food systems, providing a platform for a robust science-policy interface and facilitating science diplomacy.

Key actors and instruments:

FAO - Food and Agriculture Organization of the United Nations

FAO is a specialized agency of the United Nations that leads international efforts to achieve food security for all and ensure that people have regular access to enough high-quality food to lead active, healthy lives. With over 194 member states, FAO works in over 130 countries. FAO promotes a global framework for countries to agree on a scientific basis for common standards, for instance in the case of food safety, and this is enabled by a strong science-policy interface where decision-makers are made available of the latest advancement brought forward by science. FAO recently appointed a Chief Scientist with a convening capacity to improve the delivery of results and to strengthen FAO's support to innovation. FAO's Strategic Framework seeks to

support the 2030 Agenda through the transformation to more efficient, inclusive, resilient and sustainable, agri-food systems. For this, FAO applies a number of “accelerators”, including technology, innovation, and data, as well as governance structures, institutions, and human capital.

CIHEAM - International Centre for Advanced Mediterranean Agronomic Studies

CIHEAM embodies and implements science diplomacy from its inception in the 1960s. Promotes a common scientific understanding in the Mediterranean by training generations of scientists and policymakers (nearly 40,000 people trained to date). Trainees acquire and share scientific knowledge, technical skills, experiment, and test protocols, and share common ideas, values, and ambitions with other young professionals of the region (for example through a doctoral platform and forum which regularly bring together young researchers and PhDs from all the Mediterranean). Alumni have become ambassadors contributing to building a joint regional future (many years before the Erasmus program) promoting the mobility of human capital and knowledge and shaping a strong Mediterranean identity.

CHEAM’s flagship scientific cooperation projects address issues mainly related to rural and agricultural development, food security, food systems adaptation to climate change, the preservation of terrestrial and marine natural resources and ecosystems, and the sustainable management of soils and waters - which led to, for example, the creation of a Mediterranean network on organic agriculture.

PRIMA - Partnership for Research and Innovation in the Mediterranean Area

PRIMA is a 10-year, EUR 500+ million research initiative promoting research and innovation on agriculture, water, and addressing climate change in the Mediterranean region by promoting scientific exchanges between the North and the South. The success of PRIMA relies on a governance model based on principles of mutual benefit, equal-footing partnerships between Northern and Southern countries, co-ownership, co-decision, and co-financing, as well as excellence and added value (European Commission, 2018) and potential for enhancing the stability of the region and its sustainable economic and social development, resulting in mutual trust-building and encouraging

collaboration among stakeholders. Since all PRIMA projects have partners from the North and the South Mediterranean, a combination of natural sciences and social sciences, including behavioral sciences, is essential to understand the societies in which science and innovation need to have an impact. PRIMA is recognised as a key initiative by the EuroMed Valletta Declaration on Research and Innovation (2017).

3.2. CLIMATE CHANGE

The Intergovernmental Panel on Climate Change (IPCC) has repeatedly highlighted the Mediterranean region as particularly vulnerable. Despite the obvious regional consequences of climate change (e.g. heat waves, ocean acidification, extreme precipitation events, droughts, sea-level rise, ocean circulation changes etc.) and the substantial body of scientific knowledge, research activities, monitoring data and other knowledge generation about climate change and other environmental changes are not sufficiently coordinated, and the results of climate research remain often not easily accessible to policymakers. To address this, the Network of Mediterranean Experts on Climate and Environmental Change ([MedECC](#)), supported by UfM, provides a comprehensive synthesis and assessment of recent trends, likely future developments, and the consequences of environmental change for natural systems, the economy, and human well-being. Some of the most vulnerable regions and economic sectors in the Mediterranean are insufficiently studied, notably in the South and the East.

On this line, the 2030 [GreenerMed Agenda](#) has been established to provide a regional structured framework that creates political and operational convergence to accelerate the transition of the Mediterranean region towards a green, circular and inclusive economy.

Regional political frameworks, such as the Mediterranean Action Plan (MAP), developed under the auspices of United Nations Environment Programme (UNEP) was adopted in 1975 as the institutional framework for cooperation in addressing common challenges of marine environmental degradation. In 2016, the 19th Ordinary Meeting of the Contracting Parties to the Barcelona Convention (COP19) adopted the Mediterranean Strategy for Sustainable Development (MSSD) 2016-2025, as a

strategic guiding document for all stakeholders and partners to translate the 2030 Agenda for Sustainable Development at the regional, sub-regional and national levels. The MSSD provides an integrative policy framework for securing a sustainable future for the Mediterranean region consistent with the Sustainable Development Goals (SDGs).

The Flagship Initiative for the MSSD Objective 4 (Addressing climate change as a priority issue for the Mediterranean) recommends “the establishment of a regional science-policy interface mechanism (...) with a view to preparing consolidated regional scientific assessments and guidance on climate change trends, impacts and adaptation and mitigation options”. Furthermore, linked to the Mediterranean Strategy for Sustainable Development (MSSD), is the Mediterranean Strategy on Education for Sustainable Development (MSESD), endorsed in 2014 by the UfM Ministers for Environment and Climate Change. The strategy aims to ensure that national frameworks support ESD, promote sustainability through all levels and types of education, develop educators’ competencies, and promote research and cooperation on ESD.

An Action Plan has been adopted by the Nicosia ESD Ministerial Conference (2016) in order to start the implementation of the Strategy, with a Mediterranean Committee on ESD to support the Mediterranean countries.

3.3 MARINE BIODIVERSITY AND THE BLUE ECONOMY

The blue economy encompasses the set of human activities depending on the sea and/or underpinned by land-sea interactions in the context of sustainable development, and notably including industrial and service sectors such as aquaculture, fisheries, blue biotechnologies, coastal and maritime tourism, shipping, ship-building/repair, ports, ocean energy, and marine renewable energy, including offshore wind, which are among the main traditional and emerging economic maritime sectors in the Mediterranean Sea basin.

Key actors and instruments:

Research coordination actions in the blue economy: [BLUEMED](#) aims to achieve critical mass in research funding by connecting national initiatives in a single

The challenge of eliminating marine plastics exemplifies the interconnectedness of transnational environmental problems in the Mediterranean and the urgent need for ocean science diplomacy.

research and innovation agenda. This allows to clarify goals, map available tools, and instruments, increase dialogue, alignment, and exchange, avoid duplication and maximize resources. UfM has supported the BLUEMED initiative in the extension, on a voluntary basis, to countries from the South and East Mediterranean, including the training of BlueMed Young Communication Ambassadors in non-EU Mediterranean countries, tasked with the mandate to spread the BlueMed approach to a shared, sustainable Blue Growth in their countries and beyond, and to create and enhance a network.

The [Mediterranean Blue Economy Stakeholder Platform](#) (MedBESP) is a regional networking platform for sharing knowledge and supporting the development of the blue economy. It works as a “one-stop shop/online web portal allowing for the consolidation and sharing of general, technical and sectoral information related to marine and maritime affairs aimed at providing a systemic and coherent framework to improve maritime governance in the Mediterranean.”

Intergovernmental actions: [UNEP-MAP](#) The Mediterranean Action Plan (MAP)–Barcelona Convention System works with Contracting Parties and partners to fulfill the vision of a healthy Mediterranean Sea and Coast that underpin sustainable development in the region. Under this framework, the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its seven protocols brings together the 21 Mediterranean riparian countries and the European Union, as Contracting Parties to the Barcelona Convention. The MAP-Barcelona Convention system is a legally-binding set of instruments, policies, and action plans for addressing common issues and challenges of environmental degradation and protecting marine and coastal ecosystems of the Mediterranean Sea.

The Mediterranean Islands as Science Diplomacy Laboratories

ALCÚDIA TECH MAR (Mallorca, Spain): A pioneering project to establish an International Center for the Decarbonization of the Sea will bring an investment of over 100M Euro to transform an old power plant in the north of Mallorca into an international research, training and policy center in the Mediterranean. The Center will be a multidisciplinary platform dedicated to marine renewable energies, sustainable fisheries and aquaculture, clean maritime transport, sustainable tourism, and the blue economy. Alcudia Tech Mar will also serve as an international decision-making center, attracting multilateral organizations, businesses, NGOs, entrepreneurs and academic experts focused on maritime strategy. <https://alcudiatechmar.org>

CENTER FOR SCIENCE DIPLOMACY AND TRAINING

(Ponza, Italy): The Ponza PRIMA-Med/Pontine PRIMA initiative aims at the rehabilitation and transformation of the Villa delle Tortore on the island of Ponza into a 'Euro-Mediterranean Center for Higher Education and Science Diplomacy' on sustainable development, which embodies the vision of a future of peace, integration, and development for the Mediterranean. The initiative aims at enhancing the Pontine Archipelago's Islands as centers of dialogue, connecting "dots" in the Mediterranean Sea, thus linking the historical dream of Altiero Spinelli for a 'common European home' and the aspiration, outlined in the Barcelona Declaration, for a partnership between the two shores of the Mediterranean.

Marine litter and plastics: The challenge of eliminating marine plastics exemplifies the interconnectedness of transnational environmental problems in the Mediterranean and the urgent need for ocean science diplomacy. The [Plastic Busters MPAs project](#) addresses the entire management cycle of marine litter, from monitoring and assessment to prevention and mitigation. The project also includes actions to strengthen networking between pelagic and coastal marine protected areas (CMPAs) located in Albania, Croatia, Greece, Italy, France, and Spain. The results and achievements are planned to be expanded to the Mediterranean basin at large.

Maritime skills, careers, and employment: The importance of the marine and maritime industries will continue to grow in the Mediterranean region as the blue economy gains importance as the engine of human and economic development for the

entire region. Taking full advantage of this sector's potential will require a multi-skilled workforce from a wide variety of marine and maritime professional backgrounds, and areas such as marine biotechnology and marine renewable energy will also necessitate new knowledge, skills, and innovation. To this end, the [BlueSkills project](#) promotes opportunities for "Blue" marine and maritime careers by developing skills, exchanging knowledge, and valorising research for a more sustainable Mediterranean Sea. Its aim is to develop new curricula and increase employability in the marine and maritime sectors. By supporting the Euro-Mediterranean communities of the Blue Economy stakeholders through higher education, research and innovation, the project will enhance the shared knowledge of the Mediterranean Region

3.4 WOMEN IN SCIENCE DIPLOMACY

Women empowerment refers to the concept of power: the empowerment cannot be operationalized without the concrete and direct involvement of women in shaping public policy and decision-making processes in parliaments, ministries and scientific institutions.

Topics such as climate action and food systems discussed earlier in this report are good examples of sectors with unbalanced power relationships. For example, COP26 is "recognising and celebrating" gender equality and the empowerment of women in climate policy and action. However, women are still missing at the top climate table.

[SHE Changes Climate](#), a campaign founded in 2020 to call for equal gender representation in climate negotiations, said that advancing gender equality could add an estimated \$12trn to the global economy. The [Climate Action Gender Gap report](#) showed that not only are women largely excluded from most high-level government and corporate discussions on climate, but their role as change-makers is largely unrecognised and underestimated.

The issue of women's underrepresentation in climate negotiations is further exacerbated by the gender bias in science research. A recent analysis titled [The Reuters Hot List](#) ranked the 1,000 "most influential" climate scientists - largely based on their publication record and social media engagement. Only 122 of

the 1,000 authors are female. It is the same at the corporate level.

A recent UNDP report showed that in most parts of the world, women's participation in environmental protection ministries remains low, averaging 33 percent globally. However, research shows a clear linkage between women's leadership and pro-environmental outcomes. For example, countries with higher proportions of women in parliament are more likely to ratify international environmental treaties, create protected areas, and to have stricter climate change policies. Countries where women enjoy greater social and political status have lower emissions and climate footprints.

According to the recent [Global Food 50/50 report](#), 1/3 of international food organizations lack transparent gender equality policies and diversity and inclusion policies. Most organizations recognize the role of gender in influencing their programmatic outcomes, but fewer publish disaggregated data that would allow for analysis by sex. Even fewer see policy commitments to workplace equality translated into equitable outcomes in power, parity, and pay. Among CEOs and board chairs 73% are men. Just 6% of leaders are women from low- and middle-income countries. For one-third of the organizations, women represent fewer than 34% of their senior management and governing bodies.

The same could apply in the area of water diplomacy where the nexus between water, security and gender will be among the key areas of both the upcoming 4th Mediterranean Water Forum 2021 and of the 2022 World Water Forum in Dakar.

The challenges of gender equality in science diplomacy are closely linked with the imbalances in STEM careers: approximately 34 to 57 percent of STEM graduates are women (UNESCO) but these percentages decrease significantly in terms of women participation in leadership positions in the public administration and private sectors (less than 30%).

All the recent crises (health, geopolitical, financial and environmental) have not been gender-neutral and have exacerbated all the structural inequalities pre-existing in the Euro-Mediterranean societies. As an emerging field, science diplomacy has the [opportunity to not perpetuate the gender imbalances](#) of the scientific and diplomatic fields, where women are generally underrepresented in leadership positions.

At EU level, the [EU Gender Equality Strategy 2020-2025](#) highlights gender equality as a core priority for both EU research policy and external action. This priority is reflected and anchored in the EU's [Action Plan on Gender Equality and Women's Empowerment in External Action 2021-2025 \(GAP III\)](#), which aims for 85% of all new external relations actions to contribute to gender equality by 2025.

Finally, the [Communication on a new European Research Area](#) (ERA) for Research and Innovation adopted by the European Commission on 30 September 2020 defines gender equality as one of the four strategic objectives for the ERA and related policies.

3.5. INTERNATIONALISATION OF HIGHER EDUCATION, MOBILITY AND ACADEMIC NETWORKS

The UfM report [The Internationalisation of Higher Education in the Mediterranean - Current and Prospective Trends](#) recommended Mediterranean actors strengthen and promote science diplomacy actions aimed at increasing academic collaborations and paving the way for further scientific cooperation. The study analyzed the internationalisation trends and patterns of 10 Southern and Eastern Mediterranean countries (Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Mauritania, Morocco, Palestine and Tunisia), identified the obstacles and challenges for internationalisation and made a series of recommendations for the UfM to foster regional integration. Several recommendations were designed to address national and regional challenges, the most salient being the need to supporting scientific collaboration with the aim of easing political tensions, upscaling bilateral cooperation towards a thematic regional approach, supporting long-term stability and, ultimately, reducing the countries isolation through the improvement of the attractiveness of local higher education systems.

Key actors:

Euro-Mediterranean University (EMUNI), a UfM-labelled project, EMUNI was established in 2008 in Slovenia as an international organisation and entrusted with the mission of contributing to knowledge amongst people in the region by



establishing and fostering a Euro-Mediterranean higher education and research area. Network of more than 130 universities from over 30 Euro-Mediterranean States, is a university that operates through true partnership with other universities across the Mediterranean and it is also a platform for intercultural dialogue and science diplomacy to bridge the shores of the Euro-Mediterranean and serve its interests and challenges.

UNIMED: The Mediterranean Universities Union, founded in 1991, is an association of Universities from the countries of the Mediterranean basin. It counts 141 Universities from 23 countries on both shores of Mediterranean. UNIMED acts in different scientific fields and its aim is to develop research and education in the Euro-Mediterranean area in order to contribute to scientific, cultural, social, and economic cooperation. UNIMED promotes the international dimension of universities, mobility in the Euro-Mediterranean region, for students, researchers, and academic staff, creates thematic networks to foster scientific cooperation within specific fields, and organises meetings, discussions, seminars, and round tables both at a national and international level, and training academic and administrative staff of Universities, particularly for the staff of International Relations Offices.

Agence Universitaire de la Francophonie: The Agence Universitaire de la Francophonie (AUF) brings together 1,007 universities, grandes écoles, university networks, and scientific research centers using the French language in 119 countries. Established 60 years ago, it is one of the largest associations of higher education and research institutions in the world. The AUF promotes solidarity between higher education and research institutions for the implementation of projects that concretely transform the university system. It partners with many partners: private companies and their foundations, states and governments, national development aid agencies, international organizations, non-governmental organizations, and academic, scientific and cultural associations. AUF promotes research and higher education exchanges between the North and the South of the Mediterranean.

5 . CHALLENGES AND BARRIERS

Following the two UfM workshops on Mediterranean science diplomacy, the following challenges and barriers to fully tap into the potential of science diplomacy in the region were identified:

FRAGMENTED LANDSCAPE

While there are many successful research and innovation collaboration initiatives in the Euro-Mediterranean, the multiplicity of actors and initiatives in the region leads to the fragmentation of efforts and to limited synergies between them, with a risk of redundancy or unbalanced allocation of resources. The meta-governance of research and innovation programmes and initiatives is almost inexistent.

SILOED COMMUNITIES

In most Mediterranean countries the scientific and diplomatic communities are siloed both educationally and professionally, and do not share a common language, worldview or platform for effective collaboration.

LACK OF AWARENESS AND SKILLS

Many of the research and innovation initiatives in the Mediterranean are connected to science diplomacy in different fields and institutional configurations, but these rarely carry that terminology, which complicates their categorization, systematization, and broader adoption. This calls for further efforts on awareness-raising, training, dialogue, and coordination.

ASYMMETRIC COOPERATION

The rules for international research cooperation

across Mediterranean countries need to be more aligned, especially in terms of rules of participation. Furthermore, South-South cooperation needs to be strengthened in order to foster a culture of cooperation among Southern Mediterranean researchers, particularly in terms of long-term ownership and sustainability.

DISINFORMATION AND MISINFORMATION

The Covid-19 pandemic represented an opportunity to bring science into the mainstream and improve public and political understanding of the value of research, but it has also fueled disinformation and misinformation.

COOPERATION VS COMPETITION

Science diplomacy can be collaborative, whereby nations cooperate to tackle shared challenges, but also competitive, where they defend and promote national interests or attract the best scientific talent. The success of science diplomacy for the SDGs will require the transition from competition to cooperation as the underlying principle informing innovation policy. Open access research can be a way to deal with this tension.

SCIENTIFIC EXCELLENCE AND POLITICAL NEUTRALITY

Covid-19 has reignited the concerns about perceived politicization of science and instrumentalization of scientists for political and diplomatic goals.

GENDER POLICY OR ACTION PLANS ARE INSUFFICIENT

Concrete tools are needed to bridge commitments with implementation strategies.

6. RECOMMENDATIONS AND PROPOSED ACTIONS

Based on the recommendations emerging from the two UfM science diplomacy workshops, the implementation phase of the Mediterranean research and innovation agenda should strongly support **capacity building, institutional innovation, and networking** actions that foster solid 'boundary-spanning' interfaces, mechanisms, and incentives to facilitate the knowledge exchange, partnerships, and trust-building between scientific and diplomatic actors.

Specifically, UfM member states, international organisations, academic institutions, the private sector and civil society groups should come together to strengthen science diplomacy through the following actions:

- Developing **training and awareness programmes** for the academic and diplomatic communities, separately and together.
- Promoting **joint research projects** between the Northern and Southern Mediterranean countries on transboundary issues of common interest such as health, climate, energy, water and food systems as outlined in the Mediterranean research agenda (following the successful PRIMA and BLUEMED models).
- Establishing **science advisory mechanisms in foreign policy** structures (e.g. science attachés in embassies, science and technology advisors to foreign ministries, science diplomacy fellowships and exchange programmes).

- Encouraging better integration between the scientific and diplomatic spheres through both formal dialogues and informal bottom-up networks and intercultural engagement at the national and regional level, for example through an **EuroMed Hub of Science Diplomacy** tasked with coordination of the diplomatic and scientific communities from the 42 UfM countries and relevant international organizations in the region.
- Investing in capacity-building and technical assistance for **gender mainstreaming** in public administration and the academic and private sectors, based on evidence-based correlations between gender equality and positive impact for all.

PROPOSED ACTION

The proposed EuroMed **Joint-Research Centre focused on Health, Climate Change, and Environment and Renewable Energies (EuroMed JRC)** is envisioned to have one headquarter in the Northern countries and another in the South-East Mediterranean to create a bridge between the EU and the Northern African countries. This interconnected structure would overcome regulatory and legislation divides between EU and non-EU countries. Circulation of resources, scientists, technologists and projects would be common and free under the same umbrella, so that diplomatic mechanisms can be put in place to facilitate this effective movement.

7. CONCLUSION

Science diplomacy is a powerful tool for understanding and achieving regional objectives while fostering a positive sense of belonging to a cross-border community based on skills, openness, and win-win solutions. Aware that the Mediterranean has always been an area of brilliant minds and great ideas, the Union for the Mediterranean is driven to promote science diplomacy as an essential tool to foster regional integration.

By showcasing prominent examples and initiatives, this short publication aims to highlight the continuous multi-layered work of the many passionate researchers, experts, and government officials working together on linking science and human development. The way in which cooperation on Science, Research and Innovation has developed during years in the Euro-Mediterranean area can be pointed out as a “best practice” of positive relations and a melting pot of ideas and useful projects, which have created a web of human and scientific linkages connecting our shores.

Reflecting on the current state of the art, and on the basis of the new UfM Theories of Change/Impact Pathways (TC/IPs) on climate change, renewable energy and health, the UfM wishes to continue promoting science diplomacy as a tool for peace, dialogue and cooperation in our common sea.

APPENDIX:

UFM – S4D4C WORKSHOP

WHAT ROLE FOR THE SCIENCE DIPLOMACY IN THE MEDITERRANEAN: THE COVID19 AS A CASE STUDY

15-16 DECEMBER 2020

CONCEPT NOTE

The size and scope of global challenges need to be addressed through global and multidimensional approaches, such as in the case of joint actions on climate and environment, sustainable economic growth, or global health. This holds true also for the Euro-Mediterranean region, an area where cultures and science met and mingled for millennia. In this context, regional multistakeholder cooperation through science is fundamental in order to achieve sustained systematic efforts leading to the creation of innovative and inclusive solutions. The creation of such opportunities requires the establishment of appropriate partnerships among key stakeholders, including scientists, policymakers and diplomats.

Historically, science diplomacy has been a powerful tool for understanding and achieving regional objectives while fostering a positive sense of belonging to a cross-border community based on skills, openness and win-win solutions.

Science and research cooperation are an established tool of any diplomatic policy, including at a regional level in the Mediterranean region. This applies in particular to many areas where science-based cooperation is required in order to achieve common goals, for instance on fields of sustainable development where research and innovation have a significant role, such as climate action, sustainable agriculture and water, blue economy, and the deep roots of migration. This cooperation model offers opportunities to create stronger human and knowledge links binding together the Mediterranean shores, creating a knowledge bridge for scientists and researchers to come together and tackle issues of common interest, resulting in an outcome great than the sum of individual or national efforts.

The interconnections and synergies created as a by-product of scientific programmes and exchanges facilitate the spreading of best practices, foster innovations among enterprises and research centres,

and encourage scientists in up-taking international development agendas.

The Union for the Mediterranean (UfM) has highly regarded the role of science diplomacy since many years, as it has promoted through its multistakeholder platforms informed dialogue between experts, governments and diplomats on its six priority areas.

Science diplomacy can take different forms, such as in the case of big-scale regional research programmes, networks of research centres, academic mobility programmes, joint access to large research infrastructure, setting up of innovative research centres, dedicated conferences and so forth.

In the belief that the positive effects of strengthening Euro-Mediterranean cooperation in research and innovation are a way forward for fully tapping into the potential of economic growth and sustainable development of the Mediterranean, UfM Ministers of Research held a EuroMed Conference on Research and Innovation (R&I) in Valletta in 2017.

Through the resulting Ministerial Declaration, they reconfirmed their “commitment to knowledge creation”, wishing to “achieve sustainable growth and decent job creation for the region, by capitalizing on achieved results and best practices including through removing barriers, promoting brain circulation, avoiding duplication, reducing fragmentation and promoting integration, while fostering gender equality and research ethics.”

In order to showcase and reinforce the state of science and innovation diplomacy in the Euro-Mediterranean region, UfM is organizing a virtual workshop to be held on **15 and 16 of December** that will be hosted digitally from its headquarters in Barcelona, Spain. This meeting will also mark the 25th anniversary since the Barcelona Declaration, which stated that “science and technology have a significant influence

on socioeconomic development” of the EuroMed region.

During this event, the main ongoing programmes and initiatives related to science diplomacy will be presented, discussions will touch upon the main issues to be tackled and high-level speakers will advance ideas for further action.

The event is organized in the framework of the UfM Regional Platform in Research and Innovation and in partnership with the Horizon 2020 project S4D4C (Using Science Diplomacy for Addressing Global Challenges). S4D4C has undertaken research on science diplomacy, fostered networking between scientists, diplomats, policymakers and other key practitioners, and provided training opportunities in science diplomacy. Particularly, S4D4C published the policy report “[Calling for a Systemic Change: Towards a European Union Science Diplomacy for Addressing Global Challenges](#)” in May 2020. This report identifies the set of stoppers, warnings, and drivers for the systems of science, diplomacy, and science diplomacy to fully stir global collective action and successfully address global challenges. This joint event between UfM and S4D4C will allow fostering a reflection for the future of Science Diplomacy in the Mediterranean region.

AGENDA

Dates: 15-16 December

Day 1 - 15 December 2020 (Open to the general public)

An interactive session showing how we tackle global challenges in the world post Covid-19 and bring foresight into R&I policy, supported by a panel of experts from industry, academia, national administrations and civil society stakeholders.

11h00 Institutional Opening

Itaf Ben Abdallah, Senior Advisor for Higher Education and Research, UfM Secretariat

Elke Dall, Project Coordinator, S4D4C

11h15 Presentation of the topic and ice-breaker by S4D4C

11h30 High Level Virtual Panel on Science and Innovation Diplomacy in the Mediterranean

Placido Plaza, CIHEAM Secretary General

Jamie Morrison, Director, Food Systems and Food Safety, FAO

Emilian Cioc, Agence Universitaire de la Francophonie

Octavi Quintana, Director, PRIMA

Gihan Kamel, SESAME

Moderator: **Giuseppe Provenzano**, Advisor for Research and Innovation, UfM Secretariat

Q&A from the audience (via Chat)

13h00 Closure

Day 2 - 16 December (Close sessions to the general public)

Training/Webinar on Science Diplomacy

Science Diplomacy Multi-stakeholder Conversation: The COVID-19 pandemic added a massive shock to a system already strained by geopolitical, societal, economic and environmental tensions. UfM is hosting a Mediterranean online workshop on the future of science and diplomacy to tackle global challenges.

11h00 Science and Innovation Diplomacy: State of Art (Joint Session)

Giuseppe Provenzano, Advisor for Research and Innovation, UfM Secretariat

Ana Elorza, Science Advice and Diplomacy Coordinator, S4D4C

13h30 Lunch break

14h30 Breakout sessions

Session 1: Research cooperation in the Mediterranean towards Global Challenges

Moderator: **Lorenzo Melchor**, FECYT

Jerneja Penca, Euro-Mediterranean University (EMUNI)

Mitchell Young, Charles University in Prague

Session 2: Reinforcing the Mediterranean scientific and diplomatic communities to have an impact on regional challenges

Moderator: **Ana Elorza**, FECYT

Pierre Bruno Ruffini, University of Le Havre

Mounir Ghrabi, Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (OGS)

Session 3: Science and Society in the Mediterranean

Moderator: **Izaskun Lacunza**, FECYT

Giuseppe Provenzano, Advisor for Research and Innovation, UfM Secretariat

16h15 Conclusions and joint policy recommendations (Joint Session)

16h30 Closure

APPENDIX:

UFM-CREAF WORKSHOP

INCREASING AWARENESS OF SCIENCE DIPLOMACY IN THE MEDITERRANEAN

27 TO 29 OCTOBER 2021

The Union for the Mediterranean (UfM) invites institutional nominations and individual expressions of interest from UfM Member States to participate in the workshop **'Increasing Awareness of Science Diplomacy in The Mediterranean'**, to be held virtually from 27-29 October 2021. The workshop will explore how regional multi-stakeholder cooperation across the Mediterranean through science and innovation can help achieve long-term sustainability and prosperity in the region, and provide participants with in-depth knowledge, skills, practical tools, and networks to put science diplomacy into action for the benefit of the Mediterranean.

The workshop aims to map the current science diplomacy landscape in the Mediterranean, analyzes its potential to address common challenges - such as climate change, environmental degradation, biodiversity loss, marine, and atmospheric pollution, clean energy, water scarcity, sustainable food systems, or health security - and inform about existing diplomatic, governance and capacity-building frameworks that place science and innovation at the center of Mediterranean cooperation.

LEARNING OBJECTIVES

Upon completion of the program, participants will have increased their awareness, visibility, networks, and skills in science diplomacy and learned how to leverage its potential for the benefit of the Mediterranean. In particular, participants will gain:

- Greater awareness of the role of science as a driver of regional integration and to cultivate a shared Mediterranean identity.
- Increased understanding of how scientific collaboration on priority areas (e.g. climate, health, energy) can help tackle global and regional challenges.
- Knowledge of the current landscape of policy tools, instruments, organizations, programmes, and best practices in science diplomacy in the Mediterranean.
- Networking opportunities with science diplomacy leaders from all sectors: government, scientific

community, NGOs, foundations, multilateral organizations, private sector, and civil society.

- Skills and practical tools to navigate the science and diplomacy interfaces.
- Expert advice and peer support to advance their careers in science diplomacy.

METHODOLOGY

The programme will combine expert lectures and panels with leading science diplomacy scholars and practitioners, professional development and skills-building sessions, interactive case studies, networking opportunities, and leadership training. The agenda will strive for regional and gender balance among participants and speakers.

PARTICIPANTS

Nominations and expressions of interest are invited for candidates in mid-level roles in Foreign Affairs/Higher Education and Research Ministries, Diplomatic Missions, International Organizations, Higher Education Institutions, Research Institutes, NGOs, Civil Society, and Private Sector organizations based or operating in the Mediterranean. Participants will be selected to ensure a balance of stakeholders, gender, career level, and geographic diversity from the UfM 42 Member States.

LANGUAGE

The programme will be held in English. To ensure a highly dynamic and interactive learning experience, all participants are required to have a good working level of English. No interpretation in other languages will be available.

DURATION

The workshop will be held from 10:00 to 13:00 CET on October 27, 28, and 29. After attending all 9 course hours, an UfM certificate of completion will be issued.

ORGANIZERS

The workshop is organized by the Union for the Mediterranean and implemented by CREAM.

AGENDA

27 to 29 October 2021 from 10:00 - 13:00 (Barcelona time) via Zoom

DAY 1:

Master of Ceremony: **Giuseppe Provenzano**, Union for the Mediterranean
Institutional Welcome: **Itaf Ben Abdallah**, Union for the Mediterranean

Opening High-level Panel: **AN EMERGING MULTILATERAL FRAMEWORK FOR SCIENCE DIPLOMACY IN THE MEDITERRANEAN**

- **Nasser Kamel**, Secretary-General, Union for the Mediterranean
 - **Maria Cristina Russo**, Director for International Cooperation, DG Research & Innovation, European Commission
 - **Alicia Pérez-Porro**, Scientific Coordinator, CREAM
 - **Jamie Morrison**, Director, Food Systems and Food Safety Division, FAO
- Moderator: **Itaf Ben Abdallah**, Union for the Mediterranean

Course overview: **Marga Gual Soler**, SciDipGLOBAL

Setting the scene: **Introduction to Science Diplomacy**: History, conceptual frameworks, actors, policy tools, instruments, and mechanisms in the Mediterranean.

Marga Gual Soler, SciDipGLOBAL

Lecture: **Environmental Diplomacy and Intercultural Relations for Sustainable Development in the Mediterranean.**

Jürgen Scheffran, Professor of Climate Change and Security, University of Hamburg

DAY 2:

Panel: **CHALLENGES AND OPPORTUNITIES FOR SCIENCE DIPLOMACY IN THE MEDITERRANEAN**

- **Climate change and interconnected risks to sustainable development.** Enrique Doblas, CREAM & MedECC
- **Protecting marine biodiversity across borders.** Dania Abdul Malak, Mediterranean Biodiversity Protection Community
- **Sustainable Food Systems.** Sandro Dernini, UfM-FAO-CIHEAM Platform
- **Integrated water policies and practices.** Annelies Broekman, CREAM
- **Understanding the deep roots of Migration.** Monia Braham, Euro-Mediterranean Women's Foundation

Moderator: **Marga Gual Soler**, SciDipGLOBAL

Panel: **A NEW MEDITERRANEAN RESEARCH AGENDA: THE ROLE OF SCIENCE IN TACKLING TRANSBOUNDARY CHALLENGES**

- **Emilian Cioc**, Agence Universitaire de la Francophonie
- **Armela Dino**, Ministry of Science and Innovation, Spain
- **Rita Giuffredi**, BLUEMED
- **Ali Rhouma**, PRIMA
- **Ana Elorza Moreno**, Spanish Foundation for Science and Technology (FECYT)

Moderator: **Giuseppe Provenzano**, UfM

Case study: **Science advice across borders and during emergencies: lessons from COVID-19 for health and environmental crises.** Jan Marco Müller, Science & Technology Advisor, European External Action Service (EEAS)

DAY 3:

Case study: **Advancing women in STEM fields and at decision-making tables for a sustainable future.** Alicia Pérez-Porro (CREAM), Anna Dorangricchia (UfM)

Skills session: **Upskilling the Mediterranean scientific and diplomatic communities to impact regional challenges.** Marga Gual Soler, SciDipGLOBAL

Closing session: **Ideas for strengthening science diplomacy in the Mediterranean.** All participants



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