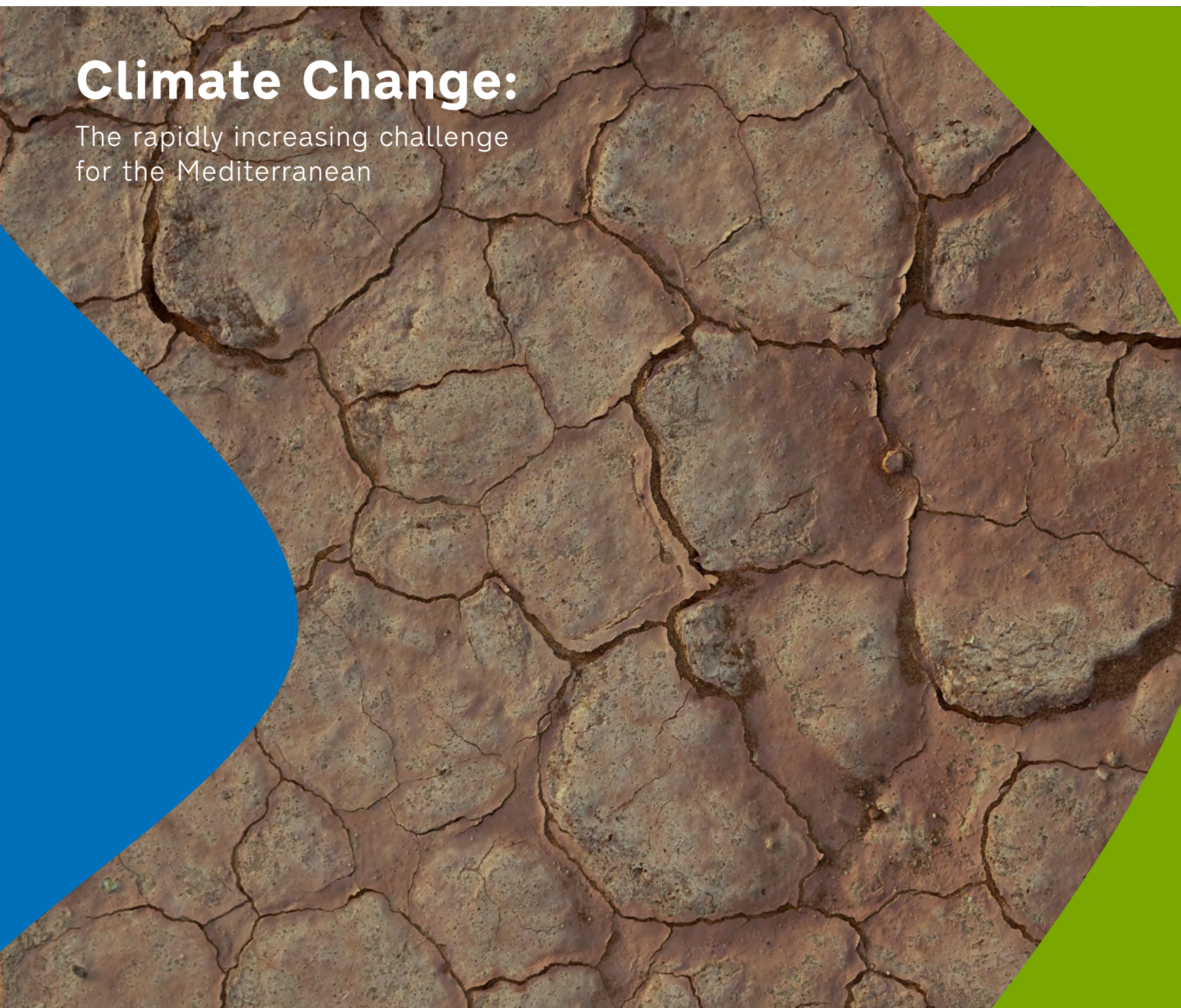


Sustainable Mediterranean

MEDITERRANEE DURABLE | ΒΙΩΣΙΜΗ ΜΕΣΟΓΕΙΟΣ | MEDITERRANEO SOSTENIBILE | المتوسطة المستدامة

Climate Change:

The rapidly increasing challenge
for the Mediterranean





Guest Editor's Corner

As dawn rose over snow-covered Kyoto, (Japan) sleep-deprived delegates, observers and my fellow journalists cheered and clapped as the final all-night session of the UN Framework Convention on Climate Change's COP3 (December 1997) adopted the text of the Kyoto Protocol. The world's then leading emitter, the USA (now overtaken by China), refused to ratify. However it came into force in 2005 mandating modest greenhouse gas emission cuts by 37 industrialised nations between 2008 and 2012, subsequently extended to additional cuts between 2012 to 2020.

How many, if any, of those present could have imagined that 23 years later the world would be on the brink of an irreversible climate catastrophe – as ceaselessly warned by the current Pope and other religious leaders, the UN Secretary-General, countless scientists, environmental activists – now including millions of highly informed, outraged schoolchildren regularly taking to the world's streets?

While the 2015 Paris Agreement (negotiated at COP 21) called for "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C" scientists now insist that 1.5 is the maximum 'safe level'. Attainable only by cutting global greenhouse gas emissions by 45% below 2010 levels by 2030.

We have already reached +1.22°C.

As the [Potsdam Institute for Climate Impact Research](#) recently warned, the world faces a high

degree of risk of overstepping the 1.5°C limit – a level which would limit the risk of giving certain Earth tipping points an additional push. Needed emission cuts will not only require a decarbonisation revolution – by phasing out fossil energy – but at the same time maximising efficiency and sufficiency, achieving climate-friendly behaviours and diets as well as nature-friendly carbon removal through afforestation and land use change while assuring the safe operation of Earth systems. On 27 May, the World Meteorological Organisation warned that the global temperature **could 'temporarily' reach +1.5°C during the next five years.**

On May 18, the International Energy Agency issued a report setting out 400 measures needed to reach net zero in 2050 – which included permanently ending all further investments in fossil fuels exploration or capacity development during this year, 2021.

Eighty-four revised Nationally Determined Contributions (NDCs) (updating post-2020 commitments made in 2015 ahead of the negotiation of the UNFCCC's 2015 Paris Agreement) so far tabled with UN Climate add up to a cut by 2030 of just 12-14%...and that includes the revised US NDC announced by President Biden at his Leaders' Summit on Climate, following the US return to the Paris Agreement from which President Trump had withdrawn. Even including other announcements made at the summit (but not contained in formal submissions to the UN) we currently remain on the path to 2.9°C or more by

2100 – with the 'collapse of civilisation as we know it' foreseen some time before that.

The UK-hosted 'live' COP 26 in Glasgow this November (with doubts persisting whether the UK health situation and/or vaccination shortfalls in developing countries will force postponement) is billed as 'the last chance' to keep the 1.5°C possibility open – if total emission reduction commitments on the table there suffice to deliver the 45% target...and thus make possible the achievement of the net zero target by 2050, currently adopted by 131 nations accounting for 70% of world emissions – though barely 20 have so far actually tabled related formal plans. Sufficient finance to support developing nations' mitigation and adaptation needs looms as a deal maker, or breaker. The UK-hosted G7 Summit (11-13 June) failed to deliver significantly improved financial commitments to support developing nations' essential climate change mitigation and adaptation

actions – casting a shadow of doubt on prospects for a successful COP 26 outcome.

If urgent comprehensive global action is essential, so by definition are its components – regional and national action.

So thank you, Prof. Scoullos, for this timely publication to mobilise Mediterranean citizens and governments and for honouring me with the privilege of being its guest editor.

Thank you also, Haris Paliogiannis, MIO-ECSDE's Junior Policy Officer for your tirelessly energetic support as editorial assistant and skilful drafting of all the remaining boxes.

Vanya Walker-Leigh TSSF
Economist and journalist



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Prologue

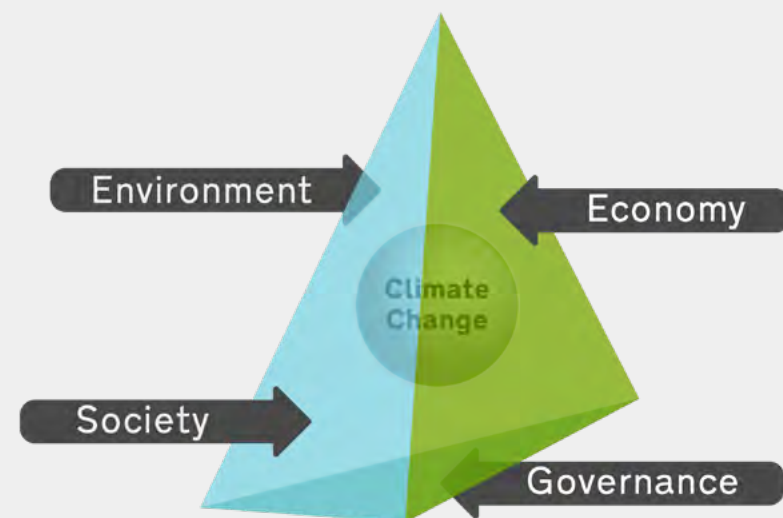
In the first two decades of the 21st century we have experienced unprecedented developments in a rapidly changing world. Among them, climate change has become for humanity a major threat that requires elaboration and adoption of urgent mitigation and adaptation measures to be implemented at the same time and in parallel on many different fronts.

This is undoubtedly a big challenge for all levels of governance. In the Mediterranean, we have already experienced the impacts of climate change more than in other parts of the world. We have just concluded the second hottest decade in recorded history, during which the “hottest-ever” year title was surpassed eight times!

In addition to that, it was made clear to humanity that climate change is not only placed in the cen-

tre of the four facets of the sustainable development tetrahedron of environment, economy, society and the enabling governance in an abstract way, but it is inextricably linked with a cluster of fundamental, for our life, issues such as health, the security of the water-energy-food-ecosystem nexus, extreme poverty, hunger, deepening inequalities, displacement, migration and justice, but also, the other colossal existential issue of biodiversity loss, all of which are both drivers and consequences of the changes we witness.

The magnitude and complexity of accumulated older and emerging problems are due to a combination of governance factors, negligence, greed and arrogance and remind us of conditions leading to calamities of Biblical and Mythological dimensions.



Addressing effectively this situation, necessitates urgent deeper, faster and more substantial transformation to a sustainable future. High-level, global and regional political initiatives (e.g. the United Nations Sustainable Development Goals (SDGs), the European Green Deal, the Barcelona Convection and its system, the 2030 GreenerMed Agenda of the UfM), propose systemic and technological change as a solution, while other leading international initiatives and upcoming events (e.g. COP 15 of the UN Convention of Biological Diversity, COP 26 of the UN Framework Convention on Climate Change, IUCN World Conservation Congress), offer a decisive momentum and opportunity not to be lost in order to address the climatic crisis holistically and step up our efforts to achieve climate neutrality.

In the Mediterranean region in particular, despite the progress made during the past years, we are still far from achieving and fully implementing the SDG objectives related to climate change. We also far from strengthening convergence of living standards across the Mediterranean states by revising unsustainable practices and changing attitudes to more precautionary approaches and solidarity. The pandemic, even if it has acted for some people as a “wake-up call”, has made these SDGs more difficult to achieve by 2030. Furthermore, recovery measures to address the pandemic’s socio-economic consequences and the mode of their enforcement, will determine whether the Mediterranean moves towards a sustainable development model by 2030 or locks in unsustainable pathways, instead. More importantly, achieving the SDGs and combating climate change will require fundamental societal and economic transformations to foster adaptation.

The Mediterranean region includes “organically” a considerable part of the European Union, the most committed group of countries to the scope of decarbonisation. The knowledge, capacity and solidarity of the latter remain decisive for the support of the Southern Neighbourhood under conditions of mutual understanding,

respect and shared responsibilities. Deepening of cooperation, including technology transfer and North-South sharing of good practices regarding climate change, have been suggested in the articles included in the present edition. It is worth mentioning that many of the still existing gaps between these inseparable “neighbours” are often bridged or filled by CSOs, with their few and inadequate means.

Nevertheless, if the Mediterranean continues on the current path and pace, the natural “safety net” provided by ecosystem services and social fabric will be weakened to the extent that we will need to adapt to a scenario of collapse of everything that still provides us security.

The Mediterranean region is a great example where strong, particular and specific warnings related to climate change are already loud and clear. These include, for example 5 to 20 mm/year observed sea level rise in the Eastern Mediterranean, as well as devastating droughts, extensive forest fires and heatwaves, damaging the vital, terrestrial, freshwater and marine ecosystems. For the latter, heatwaves under specific meteorological conditions may result to unexpectedly fast warming of marine waters.

For instance, in summer 2006 and in only 14 days (8-26/07), surface waters in the Balearic region warmed from 22°C to 30°C resulting to the mass mortality of at least 28 marine species of invertebrates (bivalves, ascidians, bryozoans) with sponges and cnidarians (gorgonians, etc.) mortality rates reaching 75% and 90% respectively. In the same areas and period, a *meteotsunami* was recorded in the harbour of Ciutadella in Menorca which caused yachts crushing into each other and then sinking as it drained away, causing tens of millions of euros in damage. Meteotsunamis are originated by atmospheric conditions. Current research suggests that climate change could significantly increase their frequency and strength in the Mediterranean, particularly during summer periods when fast winds of dry air from Afri-

ca can be racing through the atmosphere some 1,500 meters up even under calm conditions at ground level.

Under high temperatures and abrupt changes, the ice and snow cover of mountains becomes thinner, lasts for shorter periods, and melts rapidly, and in synergy with the increasing heavy rainfalls results to accelerated erosion and fertile soil loss, contributing to desertification, large scale floods, silting of dams and destruction of ecosystems (due to longer dry periods even during winter), droughts and rapid increase of suspended solids and unconsolidated sediments in lakes, wetlands and estuaries. Furthermore, all models agree that it is perhaps the world's second, after the Arctic, most vulnerable, climate change hotspot, being at the same time a major biodiversity, cultural and tourism hotspot.

Achieving regional energy efficiency, increasing the size of protected terrestrial and marine area networks, reaching climate neutrality and promoting new models for sustainable management of tourism, all reveal a very complex and often conflicting picture. Policy makers will face such issues in the coming years and, to date, most of these technical issues are still insufficiently addressed in "silos" and not in an integrated way. It becomes apparent that, the already hard to achieve climate related SDGs at the global level, require even more focused coordinated and cohesive actions at the regional and peripheral level.

Moreover, the migration crisis exacerbates, through the Mediterranean, the abovementioned challenges that also call for action at the global and regional level.

The fight against climate change remains a generational challenge. In our efforts to devise new narratives of change, it is of paramount importance that this change is just, socially inclusive and democratic. The role of youth and women in the process of forming new low-carbon blueprints

is vital. Developing new local niche jobs and markets for youth and women in the renewable energy and nature conservation sectors while minimizing the gap between the skills of the labour force and the evolving needs of green/circular industry and sustainable enterprises, remain areas with a clear need for structural changes. Education for Sustainable Development (ESD) with focus on all aspects of climate change holds such power to transform the world towards more ecologically sustainable and climatic and socially resilient models. The Mediterranean is home to some of the most powerful and pioneering initiatives in this field and is the only ecoregion worldwide having a Strategy and Action Plan on ESD that require the due attention of authorities and donors to bear the fruits they are able to.

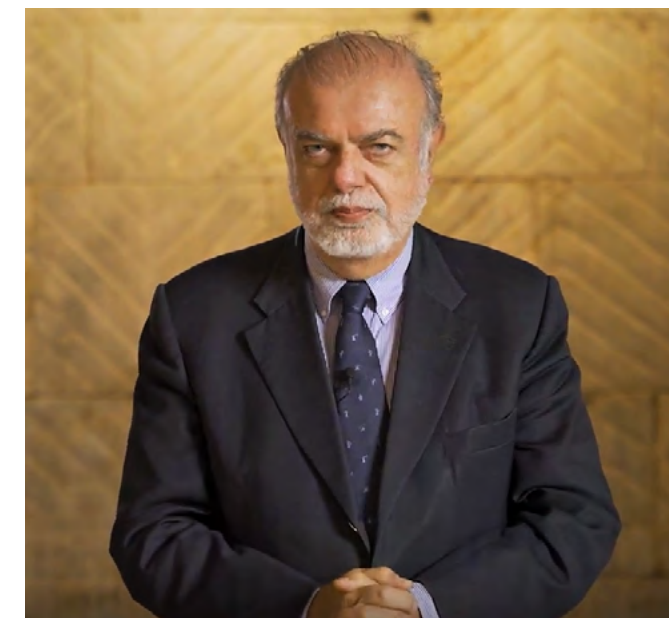
Another ally in climate change mitigation is restoration. The UN Decade on Ecosystem Restoration (2021-2030) set to launch during this year's summer, highlights that there has never been a more urgent need to restore damaged ecosystems than now. As nature-based solutions, ecosystem restoration can effectively combat climate change. Although restoration takes many forms, full restoration of historical baselines is, in most cases, not achievable and this fact needs to be included in our understanding of adaptation. Nevertheless, revitalisation of natural processes provides invaluable benefits by expanding sequestration and maintaining carbon stocks in soils and vegetation.

Finally, restoration and proactive prevention of further damage need to include the colossal capital for the entire humanity that the Mediterranean region holds in the form of tangible (but also intangible) cultural heritage. This old, resilient region, so many times greeted as the "cradle" of so many important civilizations, the birthplace of the three most important monotheistic religions, of philosophy, democracy and modern education and science should find the strength and means to collectively address effectively the climate change challenge and prove its ability to

regenerate to a better future without forgetting that the future we want is the one that we, ourselves, create.

MIO-ECSDE, bringing together the majority of the region's environmental, cultural and development organisations with permanent links also to academia, the region's Parliaments through COMPSUD, Education through [MedIES](#), and strong representation in various EU, UNEP/MAP, UfM, UNESCO, UNECE, and LAS working/expert groups and activities, has been an effective North-South channel, contributing to the introduction, promotion and implementation of important regional policies and strategies.

The flexibility, openness and careful way in approaching difficult issues such as the climate-related ones and even controversial aspects of relevant policies, have resulted in the wide acceptability of MIO-ECSDE's role, views, approaches and proposals.



The present special issue of "**Sustainable Development**" is devoted to **Climate Change**, edited by our Guest Editor and Senior Climate Change Advisor, Ms Vanya Walker-Leigh, whom I sincerely thank, provides a unique opportunity to distinguished authors from some of the major regional organisations, institutions and stakeholders to present their policies and actions and share their views on this urgent and "burning" for the Mediterranean problem, contributing also to the democratic dialogue around climate change, at a critical moment considered as a "turning point" for climate action by the international and Mediterranean community.

Prof. Michael Scoullou, D.Sc., Ph.D.,

- Chairman of MIO-ECSDE
- Chairman of GWP-Med
- Team Leader of the EU-funded Water and Environment Support mechanism in the ENI Southern Neighbourhood region
- Director of the UNESCO Chair & Network on Sustainable Development Management and Education in the Mediterranean (National and Kapodistrian University of Athens)
- Chairman of the Hellenic National Committee MAB/UNESCO

Some thoughts on the global warming effects in the Mediterranean



Prof. Christos S. Zerefos
Secretary General, Academy
of Athens; [Climate Envoy for
Greece](#)



The Mediterranean is undergoing global warming and facing its consequences but with particularities caused by its topography and its quasi-enclosed sea.

Climatologically speaking, it is a hotspot in terms of the expected increase of air and sea surface temperatures in the decades to come. Already, Mediterranean air temperatures have been increasing by more than 1°C above their preindustrial mean. The 1.5°C target as the maximum safe level above the pre-industrial global average, a safe level to limit global warming, looks a little difficult but not impossible to achieve. Per capita emissions of greenhouse gases, or in carbon equivalent, range between 2-5 tonnes of carbon per year in the Mediterranean, depending on the country. This is the result of the increase of emissions from industry, transport and households and the reduction of the rates of removal of CO₂ in the warmer environment.

A second reason is the insufficient education on

what every Mediterranean needs to do, which has not progressed enough until now. People need to understand that all inhabitants of our planet need at this point to drive electric, switch to heat pumps, eat less animal products and drastically reduce their consumption of natural resources (economise water and reduce waste).

The consequences of global warming in the Mediterranean have been felt in a bitter way in the past few decades. Sea level rise, which has increased by over 30 cm in the past century is expected to increase by another 30 cm in coming decades. This is a region-wide threat. First because of the intrusion of salt water into land masses and second because the shore mechanics show that sandy beaches can be threatened by the mean sea level rise.

The increase of extreme weather phenomena seen globally, is also evident all over the Mediterranean, with more frequent extreme rainstorms and extreme weather in general, resulting in more

intense forest fires and the threat to a number of ecosystems. The natural phenomena that have shaped so many civilizations in the Mediterranean are also becoming more extreme. They are expected to become more frequent and intense. We have seen changes in the past decades that resulted in more transport of Saharan dust to the northern Mediterranean shores and beyond and we have seen gale force winds occurring more frequently.

The period of Khamsin weather with winds from the Sahara blowing off the northern shores of Africa combined with the recent gale force winds turned the “Ever Given” container ship, which blocked the Suez Canal until the water level rose due to the tide. There was a multimillion-dollar hourly cost to the shipping industry affected by the incident.

Mediterranean forest fires have cost lives and property; agriculture has suffered from the drop in underground water levels which also threaten certain parts in the Mediterranean with desertification.

Just in the case of Greece, the cost of doing nothing about global warming will add up to more than 700 billion euros by the end of the century¹. Similar damages can be calculated for every other Mediterranean country. Adaptation could reduce by half these amounts and mitigation will be achieved only if everybody participates in the global effort inscribed in the Paris Agreement and the European and global documents tackling global warming.

¹ “The Environmental, economic and social impacts of climate change in Greece”, Climate Change Impacts Study Committee, Bank of Greece, ISBN 978-960-7032-49-2, pp. 1-136, 2011. https://www.bankofgreece.gr/publications/ClimateChange_FullReport_bm.pdf
“Greek tourism and climate change: adaptation policies and a new growth strategy”, Climate Change Impacts Study Committee (CCISC), Bank of Greece, ISBN 978-960-7032-66-9, 2014. https://www.bankofgreece.gr/Publications/CCISC_Tourism%20and%20climate%20change_Fw%20Ch1.pdf

Regional organisations and networks

Interview with Dr. Gaetano Leone



Coordinator*, Mediterranean Action Plan of the United Nations Environment Programme (UNEP/MAP) - Barcelona Convention Secretariat



In your view, what are the most severe and challenging climate change threats to the Mediterranean?

I would sum up the multiple threats which climate change brings to the Mediterranean in one word: disruption.

According to the network of Mediterranean Experts on Climate and environmental Change (MedECC), an independent scientific network that the UNEP/MAP - Barcelona Convention sec-

retariat supports jointly with the Union for the Mediterranean, climate change will affect both natural ecosystems and human livelihoods.

The scientific secretariat of MedECC is hosted by the UNEP/MAP Regional Activity Centre Plan Bleu based in Marseille, France. The First MedECC Report (MAR1) issued in December 2018 fills knowledge gaps and puts scientific evidence at the fingertips of decision-makers. This report was produced in the context of a Flagship Initiative of the Mediterranean Strategy for Sustain-

able Development 2016-2025 (MSSD) under the Barcelona Convention.

We now know that climate is already changing at a faster rate in the Mediterranean Basin compared to global trends. Heat waves are expected to intensify. Summer rainfall will likely be reduced by 10 to 30% in some areas, increasing existing water shortages, desertification and decreasing agricultural productivity.

Sea water temperature is expected to rise between +1.8°C and +3.5°C by 2100 with impacts on vulnerable marine and coastal fauna and flora. Sea-level rise, projected at 3 centimetres per decade, poses threats to coastal infrastructure and economic activities along the highly built Mediterranean coast. There is also the spectre of extra-tropical cyclones - sometimes referred to as "Medicanes" - inflicting disaster on some parts of the basin.

Impacts of climate change are exacerbated by demographic and socio-economic drivers of environmental degradation that the report on the [State of the Environment and Development in the Mediterranean \(SoED 2020\)](#) - prepared by our Regional Activity Centre Plan Bleu - explores in detail. If current trajectories continue unabated, we are headed for a crisis that would dwarf the one caused by the COVID-19 pandemic.

The main challenge is ensuring that decision-makers consider the evidence in order to address those threats in an adequate manner. This is at the heart of our work on bolstering the science-policy interface. Because healthy ecosystems act as a bulwark, protecting us against shocks, greater compliance with and enforcement of the Barcelona Convention and its Protocols are our best chance to rescue the Mediterranean Sea and its coastal region from their predicament, while bolstering the resilience of our societies and economies.

What are the current activities of your organi-

sation on climate change, at the Co-ordination Unit and Regional Activity Centre levels?

What were the main points of the climate change related decisions taken at the Barcelona Convention COP 21 (Naples 2019)? And what decisions on climate change would you like to see adopted at the next COP?

UNEP/MAP has a mandate to carry out a range of environmental assessments and prospective studies that provide insights into climate change impacts. The Integrated Coastal Zone Management Protocol (ICZM) of the Barcelona Convention adopted in 2008 which entered into force in 2011 is a legally binding instrument for coastal protection, including through the reduction of the impacts of climate change.

The MSSD adopted under the Barcelona Convention provides an inclusive strategic framework for all stakeholders and partners, including the private sector, to translate the UN 2030 Agenda for Sustainable Development and the 17 SDGs into progress towards a low-carbon and resilient Mediterranean region. Furthermore, the Regional Climate Change Adaptation Framework for Marine and Coastal Areas, adopted by the Contracting Parties together with Coastal Area Management Programmes (CAMPs) provide an operational framework for adaptation in the Mediterranean context.

More recently, the [Naples Ministerial Declaration](#) adopted at the December 2019 Barcelona Convention COP 21, identified climate change as a priority theme for action by the Contracting Parties. Several adaptation-related projects and activities implemented by our six Regional Activity Centres, including PAP/RAC (Priority Actions Programme Regional Activity Centre), are bolstering coastal resilience. In June 2020, UNEP/MAP and the Global Environment Facility (GEF) launched the landmark [Mediterranean Sea Programme](#) which, among other objectives, aims at strengthening climate resilience and water security in the region.

* From July 2021 Ms Tatjana Hema is the Coordinator of UNEP/MAP

The UNEP/MAP Medium-Term Strategy (MTS) 2016-2021 included Climate Change Adaptation as one of its cross-cutting themes, recognizing the importance of strengthening the resilience of the Mediterranean natural and socioeconomic systems to climate change by promoting integrated approaches. In preparation of the MTS 2022-2027, climate resilience is considered as one of the main themes: this new strategy is to be submitted for adoption at COP 22 (Antalya, Turkey, December 2021).

A Union for the Mediterranean Ministerial Meeting on Environment and Climate Action is planned in the coming months. How will UNEP/MAP prepare for the climate action component of the conference?

UNEP/MAP has had a bilateral MoU with the UfM Secretariat since 2012. The implementation of the MoU is followed up on a regular basis and we participate in each other's events to enhance synergies. We are in the process of updating the MoU to strengthen our co-operation including climate change. The upcoming UfM Ministerial Meeting will provide an important policy forum where we will advocate for a green renaissance in the context of the recovery from the COVID-19 pandemic and where we will work with our partners in the UfM Secretariat to build on existing instruments and tools provided by the UNEP/MAP – Barcelona Convention system.

This important policy forum should build on what the Contracting Parties have already achieved under the Barcelona Convention. For instance, this conference could serve as a platform for advocacy for the ratification of the ICZM Protocol – which is closely linked to climate change adaptation – by the ten Parties still to do so and for greater compliance through adequate national policies. It could also highlight the Regional Climate Change Adaptation Framework (adopted by Contracting Parties in 2016) and build on the strong expression of political will contained

in the Naples Ministerial Declaration adopted at our COP 21 in December 2019.

The conference could also provide opportunities for bolstering the science-policy interface by highlighting the findings of the latest UNEP/MAP knowledge products, such as the State of the Environment Report in addition to the MedECC First Mediterranean Assessment Report which, as already mentioned, we support jointly with the UfM.

Is UNEP/MAP planning to be represented at the United Nations Framework Convention on Climate Change (UNFCCC) COP 26? In this connection, is your organization participating or associated in any way with the revision by Barcelona Convention Contracting Parties of their Nationally Determined Contributions as per the Paris Agreement?

Reflecting UNEP's global mandate in the Mediterranean, the UNEP/MAP – Barcelona Convention system works to enable science-based decision-making, capacity support and institutional strengthening on relevant climate-related themes. We will contribute to UNEP's participation in UNFCCC COP 26. UNEP/MAP also provides legal instruments and implementation frameworks that enable nature-based solutions, coastal resilience and advocates for climate-smart development that protects marine and coastal ecosystems, including through NDCs. Mediterranean NDCs can be a practical and important step towards initiating the green renaissance which we are advocating in the context of recovery from the COVID-19 pandemic.

Does your organisation also conduct joint activities on climate change with the League of Arab States or the UN Economic and Social Commission for West Asia (ESCWA)?

The three UN Economic Regional Commissions sharing the Mediterranean Basin (i.e. in addition

to ESCWA, the Commissions for Africa and Europe - UNECA, UNECE) take part in the deliberations of the Mediterranean Commission on Sustainable Development, the multi-stakeholder advisory body to the Contracting Parties to the Barcelona Convention.

Are there other leading multilateral organisations with which you collaborate on climate change (whether regional or global e.g. the World Bank)?

In addition to providing secretariat services to the Barcelona Convention, UNEP/MAP also has memoranda of understanding with several multilateral environment agreements and regional organizations that work on climate change. Currently, we are working with our UN partners on the rollout of the UN Decade on Ocean Science for Sustainable Development and the UN Decade on Ecosystem Restoration. Both endeavours have a strong climate change component. Our latest collaboration with the GEF in the context of the MedProgramme will deliver a substantive contribution to the Mediterranean region.

Nature-based solutions for climate change have emerged as a key proposal at the UN Climate Action Summit of 2019 and are expected to figure prominently at UNFCCC COP 26. How prominently is seen to depend on what is agreed at the preceding COP 15 of UN Convention on Biological Diversity (CBD) in Kunming, China this autumn. Can you highlight specific activities of your organisation on this topic and whether you will be submitting comments/proposals to these two COPs and/or to your membership?

Our work in the Mediterranean is linked to global processes. The UNEP/MAP Specially Protected Areas Regional Activity Centre (SPA/RAC) is aligning the post-2020 Strategic Action Programme for the Conservation of the Biological Diversity in the Mediterranean Region (SAPBIO)

with the post-2020 Biodiversity Framework under the CBD (tabled for adoption by the UN CBD COP 15).

Under the SPA/BD Protocol of the Barcelona Convention, the Contracting Parties have established a growing network of Specially Protected Areas of Mediterranean Importance (SPAMIs). Overall, there are 39 SPAMIs among the 1,233 Marine Protected Areas (MPAs) and other area-based conservation measures located in the Mediterranean. MPAs are recognized as providers of nature-based solutions to climate change by providing a range of ecosystem services that buffer impacts and increase the ecological, social, and economic resilience of coastal communities.

A strengthened network of effectively managed MPAs will be a key part of the post-2020 SAPBIO. In consultation with UNEP, our work in this field will feed into the forthcoming conferences of UN CBD, UNFCCC and the IUCN World Conservation Congress.

Given the growing extent of 'school strikes for climate' (Fridays for Future) worldwide, does UNEP/MAP have working relations with youth groups? Do you foresee more?

UNEP/MAP is committed to ensuring that the voice of Mediterranean youth be heard. On 23 October 2019 in Naples, UNEP/MAP and Italy convened a COP 21 preparatory meeting with young delegates nominated by the Contracting Parties. The young delegates had participated in an [InforMEA course](#) on the UNEP/MAP – Barcelona Convention system. On 4 December 2019, one of those delegates, Ms Federica Gasbarro from Italy, delivered a vibrant message calling upon the Contracting Parties to press ahead on the path to sustainability, including through adequate climate action. A number of our UNEP/MAP partners work closely with youth on themes pertaining to climate action.

UNEP recently named Leteris Arapakis, a young man from Greece, Europe's Young Champion of the Earth. Leteris founded [Enaleia](#), Greece's first professional fishing school. Its mandate is to instil sustainability in fishing practices and to enlist fisherfolks' help in removing plastic litter from the Mediterranean. We are determined to seek ways to support Leteris and other talented youth around Mare Nostrum. We will seek to strengthen our links with youth groups among UNEP/MAP Partners and beyond as we continue to advocate for a green renaissance in the Mediterranean.

After your forthcoming retirement from UNEP/MAP do you visualise continuing your commitment to Mediterranean issues in some way?

The Mediterranean is far more than a professional assignment for me, but rather a central dimension of my identity. Yes, I will do whatever I can to contribute to the sustainability of this extraordinary place that we love and call "home" – in ways that are appropriate for a former UN official. While I am optimistic and positive about the future (this region still enjoys unique cultural richness, access to advanced research and knowledge, a vibrant civil society and especially youth, access to financial resources, inventiveness and creativity), I am also scared of the consequences of the on-going multiple crises, including climate change and populism. We all need to contribute what we can to find responses.

Interview questions by the guest editor

Box 1

MAR1 & MedECC: Bridging the gap between research and decision-making

The [First Mediterranean Assessment Report \(MAR1\)](#), issued last November and supported by the Secretariat of the Union for the Mediterranean and Plan Bleu, highlighted the unprecedented challenges to the region's well-being due to accelerating changes in their environment, including climate change, land use change and urbanization, pollution, sea-level rise and biodiversity loss. Despite many scientific studies, no sufficiently coordinated comprehensive synthesis and assessment of risks of recent trends has been undertaken so far.

The report was compiled by the network of Mediterranean Experts on Climate and Environmental Change (MedECC), an open and independent network of more than 600 scientists working towards a regional science-policy interface about climate and environmental changes in the Mediterranean Basin. MedECC was launched during a side

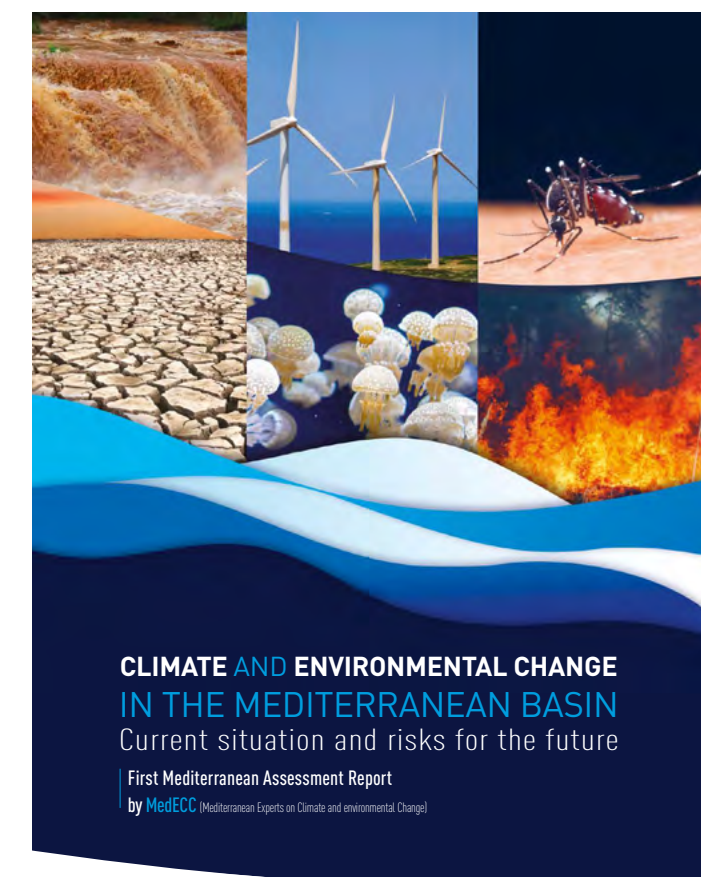
event organized at the 'Our Common Future under Climate Change' conference in Paris, in July 2015. Their work is inspired by the [Intergovernmental Panel on Climate Change \(IPCC\)](#), which aims at providing the world with a scientific view of climate change and its political and economic impacts.

The report assesses drivers of climate and other environmental changes, associated challenges for key sectors, focusing on water, food, energy, ecosystems and ecosystem services, development, health and human security. This initiative received the Council of Europe's North-South Prize, as a model of collaboration between countries of the North and South of the Mediterranean by facilitating data sharing through existing or new platforms.

It also contributes to the implementation of the [Mediterranean Strategy for Sustainable Development \(MSSD 2016-2025\)](#) as a Flagship Initiative, the [Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas \(UNEP/MAP\)](#), the [1st UfM Ministerial Declaration on Environment and Climate Change](#), as a major deliverable, as well as the proposal included in the ['Agenda of Positive Solutions'](#) approved at the COP21 of the Barcelona Convention Contracting Parties.

MAR1 will take central stage at the Convention's COP 22 which will adopt the UNEP/MAP Medium-Term Strategy (MTS) 2022-2027. Synergies with other policy dialogue structures are developed, especially with the Mediterranean Commission on Sustainable Development (MCSD) and Plan Bleu Focal Points.

compiled by MIO-ECSDE Secretariat



Interview with HE Dr. Kamal Hassan Ali



Assistant Secretary-General for Economic Affairs, League of Arab States ([LAS](#))



In your view, what are the most severe and challenging climate change threats to the Arab world's social structures, development prospects and biodiversity?

Climate change presents a major challenge for Arab countries. The region will be one of those more vulnerable to potential impacts due to the threat to coastal areas, increased drought and desertification, water scarcity, increasing salinity of groundwater as well as the spread of epidemics, pests and diseases in an unprecedented way. There will be severe implications for agricultural yields, vegetation, biodiversity, food security. Climate change implies a major threat to vital economic interests, the poorest will be hit hardest perhaps giving rise to migratory flows from affected areas to other locations whether within or between countries, neighbouring or further afield. Such flows would result in increased pressure on the environment and resources, also with possible implications for public health due to growing air pollution, extreme heat waves and spread of infectious diseases.

What are the current activities of your organisation concerning climate change and how is it preparing for UNFCCC COP 26? And how are climate change issues being incorporated into COVID-19 recovery strategies being proposed by your organisation?

From the outset, the League of Arab States realized that facing the potential impacts of climate change required international action and solidarity within the framework of the UN Sustainable Development Goals, based on the principle of common but differentiated responsibility benefiting all countries. Our organization attaches special importance to helping developing countries most vulnerable to climate change. Within the framework of strengthening joint Arab action and international solidarity in dealing with climate change issues and preparing to confront its potential impacts and reduce the risks of its economic, social and environmental impacts, the Council of Arab Ministers responsible for environmental affairs sought to find an appropriate mechanism to increase the ability of Arab countries to take appropriate measures. This mech-

anism aims to strengthen the institutional and legislative frameworks, promote modern energy services in poor areas, improve energy efficiency and rationalization of consumption in oil, gas and electricity production, develop renewable energy uses and many other activities.

No Arab head of state/government spoke at the virtual UN/UK commemoration of the Vth anniversary of the adoption of the Paris Agreement on 12 December 2020. Only eight (Comores, Djibouti, Lebanon, Mauritania, Morocco, Somalia, Sudan, Tunisia) have committed to enhanced ambition in their revised Nationally Determined Contributions as members of the 103-nation [Climate Ambition Alliance](#). Only six (Comores, Djibouti, Lebanon, Mauritania, Somalia, Sudan) have joined the [123-nation 'Race to Zero'](#) (achieving net-zero greenhouse gas (GHG) emissions by 2050) launched by UK and Chile climate champions in June.

Firstly, I am sure that all Arab countries take the commitments under the Paris agreement very seriously and give it high priority. Secondly, I think this is a very sensitive issue and we believe that such a decision has to be taken by each member country according to its situation. Our rule is to harmonize and facilitate the way towards taking common action in favour of Arab countries as a group.

Also, in this connection, is your organisation supporting ongoing work by Arab governments to revise their Nationally Determined Contributions?

The Arab League is supporting all ongoing work in a common strategic vision to achieve Arab priorities in climate change, so we have a technical Arab experts and negotiators group preparing for this issue.

Adaptation actions have become a priority to deal with the issues of climate change during the first half of this century, based on objective fac-

tors related to the inevitability of climate change because of previous emissions and the limited impact of mitigation actions in the Arab region, the conditions of the natural, economic and social environment, as well as the effective impact of adaptation actions to save lives and reduce the risks associated with climate variability and change. These activities include awareness raising, strengthening institutions, enhancement of capacity building to identify vulnerabilities, the advancement of planning and technology transfer and targeting climate damage reduction or avoidance. There are also sectoral adaptation programmes for water, land, biodiversity, agriculture, forestry, industry, energy, transport, building and construction, population, human settlements and health. The focus of these programmes is in particular to provide the infrastructure necessary to reduce the potential risks and improve the efficiency of natural resources management using monitoring and surveillance systems, early warning and appropriate technologies, readiness to confront disasters, capacity building and so on.

Does your organisation conduct joint activities on climate change with the Union of the Mediterranean, the UNEP/MAP and the UN Economic and Social Commission for Western Asia? If so, can you please describe the main points?

All those organizations are our partners and we do have many joint activities on climate change and related issues. The main joint activities are capacity building, studies, preparing the common position for the negotiations. We also have joint activities with UN Climate and other structures.

Nature-based solutions for climate change have emerged as a key proposal at the UN Climate Action Summit of 2019 and are expected to figure prominently at COP 26. How prominently is seen to depend on what is agreed at the preceding UN Convention on Biological Diversity COP this autumn. Can you highlight specific activities of your organisation on this

topic and whether you will be developing a joint Arab League approach to the two COPs?

Biodiversity is a very important issue for the Arab countries and there are expert committees dealing with these issues working on developing a joint Arab approach to the COPs. We have carried out several joint activities with the secretariat of the UN CBD and our related Arab organizations such as the [Arab Organization for Agricultural Development](#) and the [Arab Center for the Studies of Arid Zones and Drylands](#). These activities have focused on developing human skills to deal with the impact of climate change on biodiversity, enhancing the capacity of Arab negotiators in related issues before the COPs and developing policies for preserving genetic resources, rehabilitating degraded forests and grasslands.

Regarding the current situation amid COVID-19, work is continuing on by video conferencing in order to develop a vision for the needs of the region in financing both mitigation and adaptation measures taking into consideration the severe consequences of climate change on the Arab region.

In this context it has been reported that an all-inclusive Arab States Climate Finance and Access Strategy will be developed in collaboration with the Arab States. The Strategy is to be endorsed at the highest political level. What is the current state of play on this initiative? And what does your organisation consider could be the role of green bonds, 'suk-kuk' instruments, Special Purpose Vehicles and other structures designed to attract private investors, both Arab and non?

As we said, climate finance is playing a very crucial role in adaptation measures; one of the main instruments is green bonds issued by some Arab countries. The experience was promising and could be continued in the future. There is no doubt that Arab countries have different economic structures and situations making for a wide

diversity of priorities in selecting the appropriate instrument. However, I would say that this diversity enables discussion of all possible instruments and their economic and social impacts. In this regard, the cooperation between the League and the Islamic Development Bank is very good in terms of supporting research and joint discussions. We are looking forward to deepening our cooperation in the near future.

Currently not a single Arab nation is represented in the 60-country Coalition of Finance Ministers for Climate Action. What is your view and can your organisation encourage its members towards membership?

I believe that this decision would be taken by country representatives according to their evaluation of the role of the coalition.

There is one passing reference to climate change in the Sharm El Sheikh Declaration issued by the EU-Arab League Summit in 2019. Is there is any formal collaboration on climate change issues between the two? What are the main points and future prospects?

Current cooperation with the EU on climate change is limited to joint workshops and capacity building. However, we are looking forward to deepening our cooperation in the near future. This could be in different areas including but not excluding discussing any issues that could bridge the gap between some respective negotiation positions and also provide technical assistance on climate change to least developed countries and to the responsible section in the LAS Secretariat. Such mutual cooperation could involve facilitating technology transfer on mitigation and adaptation to countries needing it and mutually sharing best practices

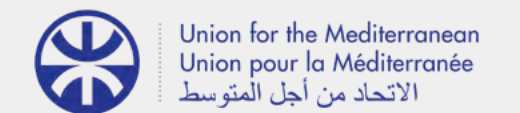
Interview questions by the guest editor

Box 2

Climate: The Mediterranean hotspot



Dr. Grammenos Mastrojeni,
Senior Deputy Secretary
General, Union for the
Mediterranean (UfM)



The Mediterranean region has been identified as one of the main climate change hotspots in the world. It faces huge climate related vulnerabilities, such as extreme weather events, an increase of desert areas and the rise of sea level. These phenomena are impacting the quality of the air we breathe, the access to freshwater resources, the land availability for agriculture and livestock, urban infrastructures and tourism and now – clearly and dramatically – also health, economy and security. But the biggest mistake would be to face those impacts as a collection of separated problems or – even worse – localized ones. In essence, climate change is undermining the very basis of the Mediterranean civilization and regional balances. If nowadays mankind lives in organized societies it is not due to the industrial revolution, but to a more ancient one that started

around the Mediterranean: the agricultural revolution. It was the moment in which human beings shifted from being users of their territories to a position of managers of lands. And it happened first around the Mediterranean because here we had a very special, extremely favourable climate: with this large internal sea acting as a stabilizer, climate around it was mild and predictable. We could start agriculture because we could count on stable, predictable cycles of nature to plan on, but the abrupt climate change now destroys this fundamental advantage, we cannot count on a stable nature anymore and this will reshuffle interests while making us all more fragile: a dangerous situation if we do not act together, at once

That is why UfM aims at making things happen now since we do not have any more time to just sit and think: governments, business, finance, common people, we all have to join hands and recognize that there is – at the same time – a huge threat and a huge opportunity coming with accelerated climate change over the Mediterranean. Various actions are considered based on the objective truth described by science, as turning science into concrete choices is our method. And science outlines the fundamental reality that inspires us: climate change is a threat if we face it divided, fighting each other for decreasing resources; it becomes the greatest ever opportunity of fair and accelerated development, justice and peace, if instead we recognize that no single nation or community, not even the strongest or the richest around our Sea, has enough means to face climate change impacts on its own. We need each other, we need to put together contemporary and old and traditional technologies mastered by different peoples; we need to count on our neighbour's stability and good health to stay safe, not on its demise to feel stronger. In the end, our common home planet is sending us a deep message: finally make justice and peace! Mother nature is compatible with development, not with unbalanced and unfair growth. And this implies fundamental changes, a new "normal" for the world and our region.

Would it make sense to rush back to "normal", if normal was the problem? COVID-19 - just to mention the most recent and vast environment related problem - is leaving grief and scars worldwide, both human and socio-economic. But it is also obliging us to awareness: that, if not all, something fundamental went wrong in a system designed to create prosperity and that instead is facing insecurity.

Science had warned us now over a decade ago:

the COVID-19 crisis was not an unpredictable variable; it started and spread because of failures in human policies. Basically, it came due to our mismanagement of the ecosystem, it hit more those areas severely afflicted with pollution, and is becoming a structural threat due to unfair and unbalanced distribution of wealth and resources.

But transmissible diseases, climate change impacts, and domino effects of economic failures know no boundaries, so that leaving behind the weakest - in a condition of poverty acting as incubator of instability and contagion - goes to the detriment of all.

This lesson, valid at a planetary scale, is nonetheless a more urgent one for the Mediterranean region, where all the conditions of fragility and exposure are concentrated. Around our Sea, connecting Europe to Africa and Asia, overintense relations and contacts overlap a tragic asymmetry in means and development; so that, clearly, leaving behind the weakest implies we will all lag behind. On top of it, the health and wealth threat multiplier represented by climate change is especially intense over the Mediterranean basin, with warming progressing 20% faster than the global average.

So here, around our shores, we face exceptionally intense health insecurity, climate change, and development unbalance: three different problems to tackle - we would be tempted to conclude - all three competing to secure scarce recovery funds and actions. But the truth is different: the very same actions that build individual health also protect and boost environmental, social, and economic recovery. The Euro-Mediterranean region needs to build a development strategy based on the promotion of local, regional and circular economies which are now recognized as an engine of sustained and yet sustainable,

fairly distributed and yet performant, gender and youth protective and yet technologically advanced growth: one that ends up a 360-degree health frame.

In few words, recognizing that one action solves the root causes of three fragilities is the vision of the Union for the Mediterranean, aiming at one health - individual, social, environmental and economic - in one space that we all share as the meeting crossroads of three continents. As the only regional organization covering this common space, UfM therefore has a plan: not a one-of-a-kind dream, but one that is consistent with the after COVID-19 strategies emerging within our partner organisations and stakeholders, with whom we are gearing up to join forces. There is a clear circular link between climate, energy security, economy, justice and health. The same causes of climate change are fostering asymmetry and poverty, with higher health risks, in weaker economies (climate change is caused by concentration of resources, not development) and their further deterioration caused by COVID-19 crisis will even further aggravate climate change, in a dangerous feed-back loop: we urgently need to break the cycle.

All sectors count. Among others - just one example of a new approach - UfM looks at tackling health insecurity, water and sanitation gaps, climate change, enlargement of infectious diseases areas, destabilization of health infrastructure, air pollution, disruption and cross-contamination of ecosystems, all through agriculture and manufacturing systems that absorb CO₂, while consolidating food security in a way that surrounding ecosystems become health protective. New concepts, new business models, new administration strategies to perform this change of paradigm are there, and do not need to be invented. Energy, infrastructure, urbanisation, industry, can all

be grounds for co-benefits that couple economic recovery and employment with health protective societies and ecosystems.

With one problem: were, we, as institutions to convince and take on board all other institutions, it simply does not work as a top down imposed change of pace. Live societies, actual business, real world finance need to recognize that it is primarily their game. UfM, our members, our partners, can look ahead; but who joins in?

The Arab Region's priorities and needs



Dr. Rola A. A. H. Dashti
UN Under Secretary-General and Executive Secretary, United Nations Economic and Social Commission for Western Asia ([UN-ESCWA](#))



The Arab region is facing numerous challenges caused by climate change, including water scarcity, food insecurity, ecosystem degradation and socioeconomic difficulties which are affecting the region's ability to chart a path towards achieving the UN 2030 Agenda for Sustainable Development.

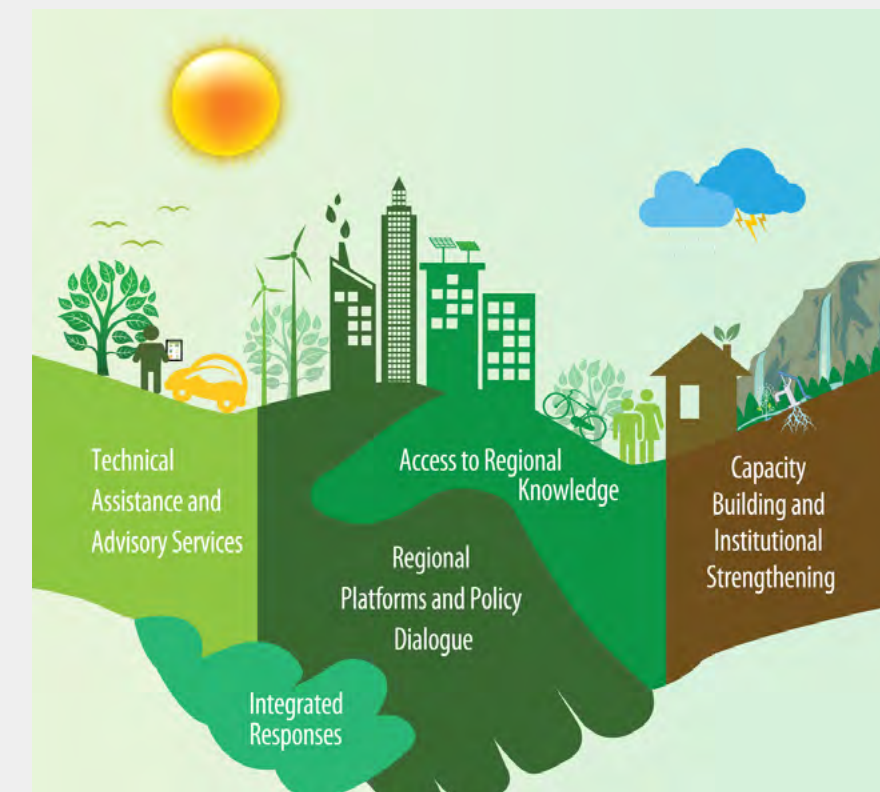
In an effort to address these challenges, Arab countries are conducting climate change impact assessments, implementing adaptation and mitigation measures to operationalize their NDCs under the Paris Agreement (currently being revised for submission to UN Climate) and raising awareness on climate action. ESCWA has undertaken various normative initiatives, technical cooperation activities and capacity building efforts to address the challenges of climate change in collaboration with the League of Arab States as a strategic partner.

In June 2018 ESCWA established the [Arab Centre for Climate Change Policies](#) to provide its member States with technical assistance and advisory services, strengthen institutional frameworks, for-

ulate programmes and policies, support regional platforms to build consensus, promote comprehensive responses to climate-related challenges and deliver knowledge products, regional data and statistics.

The Centre has allowed ESCWA to intensify its outreach to a number of stakeholders (including line ministries, international organization, national governments, development banks, farmers and cooperatives, local governments, universities, training and research institutes) by facilitating access to a wide range of scientific outputs that inform the regional dialogue on climate change adaptation related to water resources, smart agriculture, ecosystems, health and extreme climate events.

A key pillar of the Centre is the Regional Initiative for the [Assessment of Climate Change Impacts on Water Resources and Socio-Economic Vulnerability in the Arab Region \(RICCAR\)](#), which has established a knowledge base on climate change impacts and vulnerability at the regional level through a science-based process address-



ing regional climate modelling, hydrological modelling, integrated assessments and sectoral impacts. Built on several other ESCWA reports, the [Arab Climate Change Assessment Report](#), provides a scientific basis for Arab States to update and review their NDCs through regional projections and assessments based on an internationally validated Arab domain.

ESCWA has also scaled up regional networking to enhance scientific knowledge sharing through the [RICCAR Regional Knowledge Hub](#). The Hub data portal allows interactive visualization of RICCAR maps and provides access to the RICCAR data repository. The Hub also provides govern-

ments, planners, policymakers, civil society and researchers with region-specific knowledge for advancing climate adaptation to ensure synergy between the national-level NDC review process and national development planning and sectoral policies. To guarantee a swift shift from science to policy, RICCAR outputs were used to formulate adaptation strategies and led to the establishment in 2017 of the Arab Climate Outlook Forum to generate seasonal consensus statements and a collective understanding of regional climate variability and extremes.

The Centre has also enabled ESCWA to institutionalize its partnerships with various organiza-

tions including the Global Centre on Adaptation, the World Bank and the UNFCCC. For example, ESCWA, UN Climate and the League of Arab States are implementing a climate needs-based finance project to inform and facilitate the development of Arab climate finance mobilisation and access strategy to catalyse climate finance and investment for the implementation of priority mitigation and adaptation actions in national plans and NDCs. Moreover, ongoing collaboration with the Islamic Development Bank aims to mainstream climate action within national development planning and provide guidance on aligning the five-yearly NDC review cycles with climate-resilient development strategies and plans.

In coordination with UN Climate and other organizations, ESCWA convened a regional consultation in October 2020 attended by technical experts from Arab Governments responsible for NDC preparation and communication. Participants discussed the NDC updating process and related challenges and needs, as well as the lessons learned from the region on ongoing efforts to update or develop NDCs. Capacity building and support were also provided to Arab technical experts on the Enhanced Transparency Framework of the Paris Agreement including tracking progress towards achieving NDCs and adaptation action with a view to informing the 2023 global stocktake under the Paris Agreement.

Since 2013, in collaboration with the League of Arab States and other partners, ESCWA has held 13 capacity-building workshops for Arab climate change negotiators on various issues including adaptation, mitigation, finance, technology and capacity development. Participants reviewed a mapping study of NDCs submitted by Arab countries and discussed common regional interests and priorities. The mapping exercise provided information on various climate-related topics such as adaptation activities, mitigation contributions, emissions reduction, costs of implementing adaptation/mitigation measures and economic diversification.

In preparation for COP 26, ESCWA is engaging with Member States and stakeholders to step up the implementation of the Paris Agreement, working with member States, regional partners and UN Climate to build capacity and exchange experiences at the technical level, with an emphasis on priorities such as NDC reviews and transitioning to the Enhanced Transparency Framework.

ESCWA is also focusing on regional priorities such as facilitating efforts to develop a collaborative regional work plan to close adaptation knowledge gaps under the [UNFCCC Lima Adaptation Knowledge Initiative](#). MENA (Middle East and North Africa) is the first global region to enter the second phase of this initiative, which is of critical importance given that adaptation is a key priority for Arab countries. ESCWA aims to advance national climate priorities while facilitating multilateral negotiations by providing national knowledge bases to inform proactive participation, so as to reach mutually agreeable outcomes which reflect the region's needs and priorities.



Photo Credits: Pixabay

Message from Bruno Coimbra



Member of the [Assembleia Da República](#) (Portuguese Parliament), Chair of the Committee on Energy, Environment and Water of the Parliamentary Assembly of the Union for the Mediterranean ([PA-UfM](#))



Last September I was elected Chair of the Committee on Energy, Environment and Water of the Parliamentary Assembly of the Union for the Mediterranean for the 2020-2022 mandate.

As difficult as the present circumstances are, I am determined to make my mandate a fruitful one and together with the Vice-Presidents of the European Parliament and of the Parliaments of Algeria and Tunisia, to provide impetus to the parliamentary dimension of action to mitigate and adapt to climate change in the Mediterranean.

The central themes we have selected for this mandate – climate change, renewable energies and energy transition, pollution in the Mediterranean as well as the effects of the refugee crisis on water and energy infrastructures – are fully in line with the priority announced by the PA-UfM Presidency currently held by the European Parliament which is “the fight against climate change in the Mediterranean Region”. It could not be timelier. For the Mediterranean, the time to act is now.

Many studies show that the Mediterranean Region has become significantly warmer over recent years and above the global average with temperatures forecast to continue rising throughout this century. Global environmental change has been the cause of natural disasters, water scarcity, land-use changes, increasing urbanisation, agricultural intensification, pollution, declining biodiversity and habitat loss, but also of conflicts and people displacement, increasing the challenges facing a population already stricken by so many serious problems.

On the 25th anniversary of the Barcelona Declaration, we are reminded that an enhanced partnership in the Mediterranean is crucial to overcome the region’s challenges, aggravated by the global pandemic and requiring a common regional response.

In the run-up to the 2nd UfM Ministerial Meeting on Environment and Climate Change, the involvement of Members of Parliament through the PA-UfM is crucial due to our role in overseeing public policy in this area. In our capacity as cit-

izens’ representatives we can be a contributing force along with civil society, business and all others on the frontline of climate change, inspiring climate action and effective change so as to achieve sustainable development results.

We are also closely following the work of the Portuguese EU Presidency in the first half of 2021 to affirm the European Union’s position as a leader in the fight against climate change and supporting the implementation of the European Green Deal with a view to generating green growth.

Within the framework of the parliamentary dimension of the Presidency of the Council of the European Union and as a part of the Declaration signed on 29 June 2020, the Trio Presidency committed to promoting the consolidation of EU’s ecological, economic and social resilience. Furthermore, a new dimension was added to the European Semester Conference - [the Inter-Parliamentary Conference on Stability, Economic Coordination and Governance in the EU](#) held on 22 February 2021 - where in the context of EU’s economic recovery issues such as climate, social

and economic resilience and the European Green Deal were highlighted in the implementation of the national recovery and resilience plans.

On the road to COP 26 we will commit to working with international partners, participating in the parliamentary process to support a green and resilient recovery and making our governments commit to submitting ambitious Nationally Determined Contributions as well as to setting out long-term strategies to reach net-zero emissions. There can be no social or economic development without protecting the environment and safeguarding natural resources. In order to ensure a sustainable future for the Mediterranean Region and to secure peace, stability and prosperity, these issues must be tackled.

The role of parliamentarians in adapting international commitments to regional conditions, in overseeing the implementation of national strategies and in stimulating regional cooperation to achieve common goals is central to these efforts. We are committed to being a part of the solution.

Message from Prof. Moh Rejdali



Chairman, Circle of Mediterranean Parliamentarians for Sustainable Development (COMPSUD), Member of the House of Representatives of Morocco; Mayor of Temara; Professor at [L'institut Agronomique Et Vétérinaire Hassan II](#) of Rabat



COMPSUD, as a Circle of Parliamentarians of Mediterranean countries, benefits from sharing experiences – good and bad – among its members, and with competent other stakeholders, in order to stimulate the introduction, reorientation of policies and implementation of appropriate actions and initiatives of governments. These are useful for national and regional concerns, and in the present case, for climate action.

Allow me to say that Morocco is currently Africa's leader in terms of efforts to combat the effects of climate change, enhancing the country's commitment to the Paris Agreement. Through our revised Nationally Determined Contributions as members of the 103-nation [Climate Ambition Alliance](#), by 2030 we intend to reach a renewable energy target of 52% of our electricity supply and reduce GHG emissions by 42%. Furthermore, the Kingdom of Morocco was featured among the top ten countries on [Climate Change Performance Index](#)

([CCPI](#)) 2021, a position reaffirming our commitment to the fight against climate change. Since the UNFCCC COP 22 in Marrakech (2016), the Moroccan government has already implemented a series of projects and programmes as well as strategies on climate change adaptation.

Morocco is successfully continuing its progress in climate policies, as well as in the integration of climate change into public policies and development plans and law enforcement in all climate change related issues. In this regard, some noteworthy steps Morocco has already taken regarding climate change adaptation are:

- the National Climate Plan 2030
- the National Sustainable Development Strategy 2016-2030
- the National Water Strategy
- the national programme for water storing

in irrigation, seawater desalination and the reuse of treated wastewater project

- the National Reforestation Plan
- the National Plan against global warming
- the Moroccan Green Plan for Agriculture
- the National Strategy for Biodiversity
- the Moroccan Plan for Sustainable Mobility

The political evolution of the preceding COPs only shows that 2021, and particularly COP 26, will be a decisive moment to achieve significant progress in complying with the Paris Agreement. We expect all Parties to follow Morocco's example and raise their national ambitions and arrive with commitments on climate change mitigation. This year's focus on nature-based solutions to limit the global temperature increase to less than 1.5°C by preventing GHG emissions is something to be anticipated. What is more, President Biden's decision to re-join the Paris Agreement in one of his first acts after his election will ramp up action in the battle against climate change.

This is specifically relevant in the case of the Mediterranean Sea given its high vulnerability to climate change, as well as its natural capital. However, without an inseparable and unified regional platform on climate change, the Mediterranean region will fail to progress towards a low-carbon future by taking concrete actions to mitigate the impacts of climate change. The upcoming UfM Ministerial Meeting and the new Declaration on Environment and Climate Action to be adopted will mark a significant milestone in the efforts towards a resilient and more sustainable Mediterranean region. In addition, the Mediterranean Strategy for Sustainable Development 2016-2025, the Regional Climate Change Adaptation Framework and the preparation of the UNEP/MAP Medium-Term Strategy 2022-2027 can provide an operational framework for adaptation in the Mediterranean context.

Without a regional platform it becomes apparent that the role of Parliaments is crucial in linking international commitments to regional policies and fostering multilateralism to counteract common challenges. Many of the conditions of the two shores of the Mediterranean are contrasting. In order to face the climate change threat to our region, the Euro-Mediterranean nations need to build a common climate change platform based on the promotion of local and regional particularities. COMPSUD with its close link to regional Governments, NGOs, Media and Academia can provide a collaborative framework to open public dialogue on challenges, impacts and solutions to climate change.

Apart from being a climate change hotspot, the Mediterranean holds considerable potential for renewable energy given its geographical position and renewable energy resources. Morocco has become a leading force both continentally and worldwide in the field of renewable and green energies. Although the North and the South of the Mediterranean basin display different energy dependence, availability of energy resources and energy demand, energy security is critical for all Mediterranean nations. This can only be achieved through transfer of energy transition, hydrogen production and carbon sequestration technologies, capacity building activities as well as the dissemination and use of accessible data.

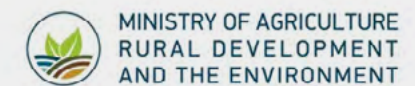
The natural capital of the Mediterranean must be preserved at all costs to enhance resilience to climate change. There lies the answer to climate neutrality. The Water-Energy-Food-Ecosystem (WEFE) Nexus approach that is one of the key objectives of COMPSUD is an important tool to address the climate challenge. We have all the ingredients for a green Mediterranean renaissance such as solidarity, natural resources, technology and access to knowledge. Regional cooperation, a common vision and coordinated actions hold the key to transitioning to a sustainable future for the Mediterranean.

Mediterranean nations towards the UfM Ministerial Meeting, biodiversity and climate change COPs

Prof. Kostas Cadis



Minister of Agriculture,
Rural Development and the
Environment, Cyprus



According to many studies, the Eastern Mediterranean and Middle East region is particularly vulnerable to the effects of climate change and has been described as a “Climate Change Hotspot”.

The countries in this area have expressed their concern about the impact of climate change in the region, as well as their willingness to contribute to the implementation of the Paris Agreement. This willingness is articulated by the Cyprus Initiative for the development of regional cooperation to address climate change in the wider Mediterranean area - a regional approach we propose to the climate change crisis.

Countries involved are Greece, Egypt, United Arab Emirates, Jordan, Iraq, Iran, Israel, Qatar, Kuwait, Lebanon, Bahrain, Oman, Palestine, Saudi Arabia, and Syria.

Actions for the implementation of this Climate Change Initiative, including dissemination of results, are underway. During this year, our Initiative will be presented by the delegations of the Republic of Cyprus at forthcoming international meetings, including the UNFCCC COP 26

and the Union for the Mediterranean Ministerial Meeting on Environment and Climate Action.

The Cyprus Climate Change Initiative is based on the results of an International Conference held in Cyprus in May 2018, focused on the topic “Climate Change in the Mediterranean and the Middle East”. Organised by the Cyprus Institute, the conference attracted important international figures and scientists from more than 30 countries, highlighted the role of regional cooperation in tackling climate change in the region and the importance of shaping policies based on scientific knowledge. Based on the main concepts of the Conference, the President of the Republic of Cyprus Mr. Nikos Anastasiades announced the Initiative which affirms Cyprus’s position, while expressing its excellent relations with the countries of the region.

The aim of this Initiative is the cooperation of Cyprus with neighbouring nations to draw up a Regional Action Plan to achieve their commitments under the Paris Agreement. This Regional Action Plan will be based on the proposals of the scientific community and will include practical, targeted, science-based and cost-effective mea-

asures to address the effects of climate change in a wide range of sectors considering the particularities of our region. Under the Regional Action Plan the countries concerned will be able to formulate and implement appropriate national policies and measures. Among other things, joint projects and/or bilateral and multilateral collaborations may arise, as well as alignment with other relevant international - regional centres and/or Conventions for the purpose of mutual cooperation, exchange of knowledge and support.

The Initiative is structured in two components: the scientific and the political. The scientific component includes the establishment of Scientific Teams involving over 200 scientists working in 13 scientific fields. Through their research and scientific meetings, they will formulate their suggestions for the measures to be included in the Regional Action Plan. These suggestions will be processed and approved accordingly within the framework of the political component of the Initiative, during high-level meetings to take place in 2022, first at the level of relevant ministers and then at heads of state level.

Through the implementation of this Initiative it is expected among other things that the countries of the Eastern Mediterranean and the Middle East will:

- promote appropriate actions to reduce greenhouse gas emissions and adapt to climate change
- create the necessary conditions for more resilient and competitive economies
- improve their access to financial instruments and mechanisms for climate change action
- create new employment opportunities

A key focus of the Cyprus Climate Change Initiative is to protect food security. Tackling climate change is crucial to eliminate the food crisis facing both our region and the planet at large. We

believe that maintaining the productivity of rural ecosystems and agriculture should be based on the implementation of policies and tools derived from scientific data and high-quality research, in which we should invest more (and in a more targeted manner) in order to achieve the required innovation.

Investing in research to address the effects of climate change is an important pillar for adaptation of the agricultural sector. Research and development of adaptation tools are a high priority for Cyprus; a number of research programmes, such as "[LIFE Adapt2Clima](#)" and "[ORGANIKO LIFE+](#)", can make a decisive contribution to the development of national and regional policy for the adaptation of Mediterranean agriculture to climate change.

The Agricultural Research Institute of our Ministry of Agriculture, Rural Development and Environment conducts thorough and long-term research with the aim of creating genotypes adapted to the effects of climate change, with particular emphasis on water scarcity and rising temperatures. Thus, a significant part of our livestock feed production is now based on varieties used during the prolonged drought Cyprus has faced in recent years.

Lessons and achievements that Cyprus can share with its Mediterranean neighbours

The effects of climate change in Cyprus and the wider region are already visible. Extreme weather events such as floods and prolonged droughts are expected to increase and intensify in many areas of the Mediterranean, with adverse effects on the environment and ecosystems, the economy and society, human health and well-being.

Considering these facts, Cyprus has prepared its National Strategy for Adaptation to Climate Change which aims to strengthen our capacity to adapt to the already observed and project-

ed climate change effects. The National Action Plan for Adaptation to Climate Change has been formulated to implement this Strategy, which includes measures for the sectors expected to be most affected by climate change: agriculture and livestock, forests, biodiversity and ecosystem services, aquaculture, water resources, coastal zones, tourism, energy, infrastructure, transport and public health.

The Strategy and Action Plan were both developed with the participation of the scientific community and other stakeholders (social partners) and are the first steps in an ongoing and flexible process of designing and implementing appropriate adaptation measures at the national level. This approach is aligned with the general objectives, guiding principles and means of implementing a modern, effective and sustainable development strategy, as identified by the United Nations Framework Convention on Climate Change, the EU Climate Change Strategy, the European Directives and international governance. The design and implementation of this Strategy could be an example of good practice for other countries.

Nature-based solutions and Biodiversity

The European Union's Biodiversity Strategy for 2030 promotes the implementation of nature-based solutions for climate change mitigation. Respectively, at the national level, the National Strategy and Action Plan for the Biodiversity of Cyprus include actions for the restoration of ecosystems and the expansion of protected area coverage which contribute to climate change adaptation and mitigation. These solutions are extremely important in tackling challenges such as floods, heat waves and pollution, especially in urban areas.

In the Eastern Mediterranean, where rising temperatures and extreme heat waves are expected, the integration of nature-based solutions into ur-

ban planning can help mitigate these effects by promoting green urban infrastructure. For example, trees can effectively reduce the temperature in urban environments through evapotranspiration and shading. Planting various native species can moreover have a positive effect on local biodiversity, providing for example shelter for species such as birds and insects.

HE Dr. Nabil Masarweh



Minister of Environment,
Jordan



In view of the upcoming Union for the Mediterranean Ministerial Meeting on Environment and Climate Action followed by the UNFCCC COP 26 Conference planned for November 2021, the Hashemite Kingdom of Jordan would like to emphasise its commitment towards the Mediterranean and the whole Globe.

Cooperation on environmental matters has a long-standing tradition in the Mediterranean region. Fourteen years of co-operation started in 2006 with the [3rd Euro-Mediterranean Ministerial Conference on the Environment \(Cairo, November 2006\)](#) and the launch of the H2020 Initiative for the Depollution of the Mediterranean Sea. Since then the Mediterranean has gone a long way forward.

As from 2014 and with the approval of the first [UfM Ministerial Declaration on Environment and Climate Change](#), the UfM countries have joined forces to promote and pioneer a new proactive regional approach to environment, fully integrating sustainable consumption and production and resource efficiency as well as the climate change dimension, both adaptation and mitigation.

On the occasion of the UfM Ministerial and the launch of Phase II of the H2020 Initiative, it was renamed H2020 Initiative [“Towards a Cleaner Mediterranean”](#), thus expanding its approach and scope - from the Mediterranean Sea to the Mediterranean region and also encompassing land-sea interactions and supporting the shift from depollution to pollution prevention and sustainable consumption and production, as a crucial step towards a green, low-carbon economy.

The upcoming Ministerial Meeting and the new UfM Declaration on Environment and Climate Action to be adopted will mark a significant milestone in the efforts towards a greener and more sustainable Mediterranean region.

Thus, the option of bringing the voice of the Mediterranean to the global level through an ambitious, clear and strong UfM Declaration is in our hands.

The [“2030GreenerMed” Agenda](#) and its implementation plan as well as the Climate Action Work Plan, whose text has already been informally agreed between responsible Ministers, will be the operational pillars of the 2021 Ministerial

Declaration on Environment and Climate Action. Technical cooperation on GreenerMed has in fact already begun, in view of the two-year delay.

In addition, the enhancement of the Nationally Determined Contributions under the Paris Agreement remains an important goal. Our efforts in that direction should be reinforced on the basis of the potential the NDCs can bring to our countries in terms of development, green growth and green recovery.

As Jordan shares the co-presidency of the UfM with our partners the European Union, I would like to emphasize the importance of access to climate and environment-related finance for our Southern and Eastern Mediterranean countries. Our region needs to foster matching between the financial availability and the economic needs in our countries and reinforce the attractiveness of the region.

The recent European Commission Joint Communication on the renewed partnership with the Southern Neighborhood has just been approved and provides new opportunities within the economic package of support. The Communication includes a dedicated Economic and Investment Plan to spur the long-term socio-economic recovery of the Southern Neighbourhood.

We know it is a great challenge given the overall current context. But the UfM is a unique platform of 42 countries represented on an equal footing and the dialogue is making good progress. A clear, ambitious, UfM political declaration will help the mobilisation of private and public funds for green, decarbonised grants and investments at all levels (regional, sub-regional, national, and sub-national). That can be one of our decisive contributions to the stability and sustainability of the region.

On the other hand, the UfM Ministerial will help to create a convergence of policy and financial resources around the GreenerMed priorities. Under

the Agenda 2030 for a Greener Med, we should all work together to achieve the main activities identified by countries and stakeholders which include supporting the transition towards a green, circular and socially inclusive economy; preventing and reducing pollution on land, air and sea; as well as protecting, preserving, managing and restoring natural resources in the Mediterranean region within an integrated ecosystems approach, including terrestrial, marine and coastal dimensions.

Jordan is committed to achieving its environment and climate action goals at the national level within a regional and global context. Jordan's Prime Minister, HE Dr. Bisher Al Khasawneh, issued a letter on 26 January calling all ministries and national institutions to include the NDC Action Plan and Green Growth Action Plan in their respective development plans. The NDC Action Plan will be mainstreamed in the Executive Development Plan (EDP), the government's national development plan for the upcoming three years. Through its NDC Action Plan, Jordan is actively identifying transformative investment opportunities related to climate change mitigation and adaptation.

The Ministry of Environment of Jordan has been taking solid action to support Jordan's green growth transformation.

In 2020 we developed the Green Growth National Action Plan 2021-2025 ([GG-NAP](#)) which lies at the heart of our continuous efforts and ambitions to support national environmental and climate action while also achieving our sustainable economic growth objectives. The plan covers six sectors; Agriculture, Energy, Waste, Water, Tourism and Transport and was drawn up in cooperation with the government institutions responsible for governing the six green economy sectors. It was endorsed by the Cabinet of Ministers as a national document towards transition into green economy.

Through a deeply collaborative approach, we were able to identify 86 priority enabling policy actions and projects which can trigger green growth. Many of these actions are ready for the support of donors, partners and private sector investors. In addition, Jordan is now in the process of updating its NDC towards achieving its global commitment of a 14% reduction in its greenhouse gas emissions by 2030, a big part of which is conditional upon international support.

These national efforts are in line with the regional and international efforts which aim to tackle our challenges. But the unprecedented time that we are all going through due to the COVID-19 pandemic, with all its economic and health chal-

lenges together with our environment and climate change challenges calls for all of us to work in a collective manner. The refugee influxes resulting from the instability and political conflicts in the region add to the existing challenges in terms of putting more burdens on resources, infrastructure, the economy and the environment.

Our collective responses will determine how fast we recover and how well we handle these pressing challenges.

We have in front of us a stark reminder of the need for tangible cooperation and we must show that we are up to the challenge.



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Prof. Konstantinos Aravossis



Secretary General for
Natural Environment
and Water, Ministry of
Environment and Energy,
Greece



Raising climate ambition and intensifying climate action at global level is now more needed than ever, in order to ensure a green, fair and sustainable recovery of our economies and societies from the pandemic and also minimise the risk of any future global disasters.

In our recovery stimulus packages, it is essential to integrate the environmental dimension and to ensure that any ongoing efforts to limit environmental degradation will not be undermined. Greece has an ambitious climate policy aiming towards a zero-carbon society by 2050 in line with the targets set by UN SDGs Agenda 2030, the Paris Agreement and the EU Green Deal. In this context, Greece adopted at the end of 2019 a revised National Energy and Climate Plan, with a very ambitious goal of 56% GHG emissions reduction by 2030 compared to 2005 levels.

In order to achieve carbon neutrality by 2050 we have laid out an ambitious plan that entails several actions that are also incorporated in our National Recovery and Resilience Plan, such as:

- Decommission of all lignite-powered electricity plants at the latest by 2028 with

a parallel stimulus package for the just transition of the lignite producing regions of the country.

- Intensive promotion of renewables: with a target of at least 35% of RES in gross final energy consumption, while for the share of RES in electricity consumption the target exceeds 60%.
- Improving energy efficiency: with a target of 38% reduction in final energy consumption by 2030 compared to consumption recorded in 2017. To succeed in this, the renovation rate of the building stock is foreseen to reach 12-15%.
- Promotion of clean transport: electromobility is expected to reach a 30% share in new registrations of passenger vehicles by 2030.
- Interconnection of the Greek islands with the mainland electricity grid and operation of innovative storage systems in the non-interconnected islands: this will assist the optimal integration of RES in the electricity network, it will reduce charges and rates for consumers and will help to further reduce emissions, while improving security of supply.

With regard to adaptation, Greece is implementing an ambitious integrated National Climate Change Adaptation Strategy through Regional Adaptation Plans, based on the distinctive characteristics and different needs of each Greek Region. An adaptation monitoring and evaluation mechanism is also being developed nationally, the results of which can be shared with other countries in the South-East Mediterranean countries with similar characteristics, since there is an urgent need to intensify cooperation in this field, especially since the Mediterranean basin has been identified as one of the two most vulnerable regions to climate change globally.

In this regard, Greece looks forward to the 2nd UfM Ministerial Meeting on Environment and Climate Action that could provide an additional platform for coordination in the region, complementing ongoing global and regional efforts to address environmental and climate change challenges in order to promote sustainable, green, low-carbon and circular resource-efficient approaches in the Mediterranean.

At the international level, Greece firmly supports the EU's position for increased climate ambition and fair contribution of all major emitters worldwide to the achievement of the Paris Agreement objectives.

Being deeply concerned with the impact of climate change on our cultural heritage, Greece has developed the proposal "[Addressing climate change impacts on cultural and natural heritage](#)", which was launched with the supporting partnership of UNESCO and the World Meteorological Organization (WMO), at the UN 2019 Climate Action Summit, in New York. So far, more than 70 UN member states committed to this proposal as well as WMO, UNESCO and the Council of Europe. In December 2019, the proposal and its follow up were presented at a side event at UN-FCCC COP 25 in Madrid, while in 2020 a Flexible Mechanism and a Coordination Unit hosted in

Athens were set up to further support implementation of this Greek initiative.

We would like to invite all Mediterranean countries to commit to the Greek proposal and work in partnership towards the protection of the cultural heritage of the Mediterranean Region which is very rich and of great importance at a global level.

Dr. Carlo Zaghi



Director General for Sea and Coastal Protection of the Ministry of Ecological Transition, Italy



MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE

Accounting for only 0.82% of the world's oceans, the Mediterranean is richly endowed with biodiversity as well as a natural and cultural heritage of inestimable value. However, the basin is currently under heavy human pressure rendering it one of the planet's most vulnerable seas.

According to 2018 estimates, the population of its coastal states is around 512 million, 6.7% of the world population, of which one-third is concentrated in coastal zones.

Moreover, the basin accounts for 20% of world hydrocarbons shipping, with unavoidable risks for marine and land-based ecosystems as well as the high pollution levels along the main shipping routes (the port of Trieste alone handled 43 million tonnes of crude in 2019).

In addition to pollution, excessive fishing and shipping traffic, the Mediterranean is especially sensitive to climate change.

As we know, the relationship between the marine environment and climate is fundamental. On the one hand, the oceans can absorb 40% of the car-

bon dioxide emitted each day by anthropic sources and regulate the climate by means of ocean currents. On the other hand, seas and oceans are undergoing the effects of climate change as well as of the rise in the global average temperature.

Without actions to mitigate global heating the increase in the Mediterranean temperature above pre-industrial levels could reach 2.2°C by 2040. The consequences would be especially evident even in Italy, where according to [ENEA](#) (the National Agency for New Technologies, Energy and Sustainable Economic Development) thousands of square kilometres of coastal zones could be submerged by sea level rise in coming decades.

The rise in temperature and sea level rise will damage habitats and marine species as well as having negative impacts on economic activities, coastal infrastructures, port cities or those located on low river deltas. The increase in greenhouse gas concentrations in the atmosphere causes a significant increase in seawater acidity levels with subsequent effects whether in terms of the reduction of CO² absorption capacity or of negative impacts on especially sensitive marine organisms and ecosystems. Apart from intensify-

ing atmospheric phenomena the increase in the seawater temperature also facilitates the penetration of invasive species into the Mediterranean, causing massive damage to current ecosystems.

In order to face these threats to our sea and coasts, Mediterranean nations must share a common approach which has as a fundamental cornerstone the Barcelona Convention adopted within the framework of the UN Environment Programme.

The central role of the regional conventions governing the basin is obvious if the transfrontier nature of problems to be faced is considered, since these go beyond the abilities of single States to deal with them.

At the COP 21 of the Barcelona Convention hosted by Italy in Naples in December 2019, Parties adopted an important decision giving a central place to the issue of climate change, rendering it, for the first time, a key element of the Medium-Term Strategy 2022-2027. It is worth emphasising that Italy strongly supported this initiative as well as that promoted by the International Maritime Organisation (IMO) for the designation of the Mediterranean as a Sulphur Emission Control Area.

Presented to COP 21, the First Mediterranean Assessment Report on the state of and present risks of climate change in the Mediterranean, compiled by the independent Mediterranean Network of Experts on Climate and Environmental Change, in collaboration with UNEP/MAP and the Union for the Mediterranean, represents an important tool for the region's nations to adopt common initiatives to mitigate climate change-related risks, safeguard marine biodiversity and preserve marine and coastal ecosystem services.

Work arising out of the Barcelona Convention is highly valuable, not only due to the participation of governments and the active dialogue with the scientific community but also to the broad stake-

holder involvement of environmental associations and their networks such as MIO-ECSDE. Policies involving the entire basin cannot succeed without a stable and structured dialogue with Mediterranean social and economic actors.

The efforts being made in the Mediterranean intersect with an especially relevant international agenda. 2021 is in fact a crucial year for the climate and the environment. The reduced format UN Environment Assembly took place in February. Other events, still uncertain due to the pandemic, include COP 15 of the UN Convention on Biological Diversity, the COP 26 of the UN Framework Convention on Climate Change and other leading international events such as the International Union for the Conservation of Nature Congress, the launch of the UN Decade for Ecosystem Restoration and that of the UN Decade of Ocean Science for Sustainable Development.

As regards COP 26, deferred from 2020 to 2021 due to the pandemic, Italy is a leading actor in its role as conference co-president with the United Kingdom.

Preparatory events will be organised of key relevance to determine the success of COP 26 in Glasgow. They are the [Youth4Climate](#) followed by the pre-COP in Milan at the end of September and the beginning of October.

Thanks to Youth4Climate-Driving Ambition, 400 young people, one of each gender from each of the 197 UNFCCC Contracting Parties will debate so as to gather ideas and proposals to be submitted to the pre-COP. Youths will meet ministers and negotiators to debate and confront each other on the main issues being negotiated.

A country open to dialogue and convinced supporter of multilateralism, Italy will make every effort to impel all Parties to raise the level of their ambition, seeking to favour a balanced approach between the positions of developed and developing nations.

Italy is also this year's G20 president, which enables putting in play important synergies to reach ambitious results. The outbreak of the pandemic can give a push towards the construction of a greener more sustainable and equal society. The recovery plans issued by governments to counter the effects of the pandemic crisis offer the opportunity to reorient development policies and measures towards a recovery rooted in sustainability and resilience.

Finally, it should be recalled for the relevance of adopted decisions, that the next Conference of Parties of the UN Convention on Biological Diversity will issue the new post-2020 Global Biodiversity Framework.

Stewardship of natural capital, currently in strong decline, entails the need to invest large amounts of financial resources and identify instruments which can offer integrated and efficient responses to counter both the effects of climate change and the loss of biodiversity.

In this context, nature-based solutions can play a fundamental role, yielding significant results in terms of greater resilience of marine and land-based ecosystems, thereby generating new jobs and integrating the goals of biodiversity management with those of economic development and social cohesion.

Translation from the original Italian by the guest editor



The European Union and the Mediterranean

Frans Timmermans' statement on climate change*



Executive Vice-President Of The European Commission In Charge Of The European Green Deal; Commissioner For Climate Action Policy



The EU Green Deal

What I would like to share with you is my sense of urgency. Our collective need to act.

At the global level, that is why we need to make a success of COP 26 in Glasgow in November. At the European level, there are so many things we can only do collectively as Europeans. At the

national level, right down to the local level. Every individual, every citizen has a role to play in this. The good news is that if we all commit to that transformation, we can come out successfully. The bad news is, if we are divided, if we're not convinced, if we believe others should be doing more and we should be doing less, then I fear we will not be able to limit the rise of the global temperature to below 2 degrees.

We have already seen what is happening to us with 1 degree increase. Changing weather patterns, droughts, floods, wildfires. Combined with the other crisis, which is the biodiversity crisis, the risk of losing 1 million species. It is without any doubt linked to the pandemic. Our distance to our natural environment is not well defined anymore. Viruses that would normally be absorbed by our natural environments now reach humanity almost immediately with the known effects.

So we need to fix things. The fundamental issue we need to tackle is that we need to learn, as humanity, to live within the boundaries that our planet sets us and that means changing almost everything.

When we devised the European Green Deal, our citizens responded very positively. That convinced everyone across the political spectrum, with the exception of some extremes, that really making an effort to become the first climate neutral continent by 2050, would be supported by our citizens.

I have to thank the Friday's for Future movement - that is the spark that got things going. They convinced their parents and their parents started talking to each other, etc. That's how we got to the European Green Deal. Now what is the European Green Deal and why is it important today also within the crises we are in? And why is the Climate Law in that context so important?

To get out of the crisis as soon as possible, we need to embrace the opportunities that the industrial revolution is offering us and at the same time confront the climate crisis and the risk of ecocide. The European Green Deal is our answer to those combined challenges because it offers a clear path to climate neutrality by 2050. And it gives us a clear indication of what needs to be done between now and 2050 to get there in a way that is feasible.

Some will argue, we see it in the international

scene: 'yes we will be climate or carbon neutral by 2050, and by 2040 we will get going.' That will not work. Then the changes will be too radical and society will not be able to accommodate those changes. But only if we start now, and I mean this literally, we can actually reduce our emissions step by step so that we reach climate neutrality in 2050.

EU Climate Law

Science has taught us that we need to up the ante, we need to do more. Up until recently, before the European Green Deal, our commitment was reducing our emissions by 40% as compared to 1990 in 2030. Now we are increasing that to 55%, and this is now set, at least politically, into law, because we have found an agreement between the Council and the European Parliament on the European Climate Law.

It's a Law of Laws. It's a law within which we have to operate with all the other proposals we will have to submit shortly, to make sure we increase our efforts to reduce our emissions. If we achieve this, and this can be done, then I think we are on a clear path to climate neutrality by 2050.

A year ago, this sounded a bit of a lonely place to be because around the world very few were following this example, but if you have seen what has been said during the Earth Day Summit, organised by president Biden, the commitments are coming from all over the place now to work towards carbon neutrality if not climate neutrality.

I think the world has turned a corner and is really set to try and make an effort to get where we need to be. Why is Europe leading this? I think we are leading this because over the last twenty years, we have seen an increase of our economy by over 60%. And at the same time, we have seen a reduction of our emission of 20%. We have proven, in fact, that there is a possibility to grow your economy and at the same time reduce your

*The present statement is based largely on [Frans Timmermans' statement at the Irish Climate Summit 2021 \(30th April 2021\)](#).

emissions. I think we're one of the very few places in the world where this has been demonstrated. But to get where we need to be, we need to implement quite a lot of measures in our [Fit for 55 package](#) that we will present before the summit.

Now what is in that package:

First of all, we need to reform and strengthen the European Emissions Trading System (EU ETS), which is a very successful method of putting a price on carbon. The Chinese are introducing it. In Korea they are also looking at this. This is the future of how industry, and perhaps even transport, households, especially also shipping, could be looking at putting a price on carbon and that price on carbon will stimulate the reduction of emissions. It is working well, the prices have gone up, the markets expect the ETS to continue functioning well and we need to strengthen it, we need to reduce the free allowances under the ETS and we need to look at the scope of the ETS and enlarging it in different sectors.

Then we also need to reform the Effort Sharing Regulation so that we can set new targets at Member State level. We have to translate what we do at the European level to the level of Member States.

We need a revised land-use, land-use change and forestry regulation, including to enhance our carbon sink. 75% of European forests are in a bad state and although the area of forestry has increased in Europe, sink has decreased, so there is a serious problem there. We need to address this. This has become even more urgent after the agreement reached between the co-legislators on the Climate Law, because the Climate Law agreement will force us to increase even more the potential of carbon sink. Which means that we have to be even stricter in the Forest Strategy, which we will be submitting.

We will also have to introduce more stringent CO₂ emission standards for vehicles. I think the

move towards electric vehicles is moving much faster than anybody would have anticipated. But still, I believe we need to become stricter in our emission standards to stimulate the production of electric vehicles. There are two things keeping electric vehicles away from people. First the price of the vehicle, it is still seen as a luxurious vehicle today, but that will change within five years I can assure you, and the lack of charging infrastructure. We need to stimulate both, we need to act on both very quickly on European level and at national level.

Then of course, much debated, we will make a proposal for a Carbon Border Adjustment Mechanism so that we tackle the risks of carbon leakage. We wanted to be in conformity with WTO rules. A lot of questions about this come from our international trading partners, because whenever we talk about this measure, they understand that they have to move into climate neutrality as well, to avoid being hit by protective measures at the borders. In that sense, the idea already of a Carbon Border Adjustment Mechanism, even without it being implemented, is stimulating the development into the right direction.

We will need to review the energy taxation, including to reduce the scope of fossil fuel subsidies. I think fossil fuel subsidies make no sense. If you look at the price development of renewable energy, wind and solar, spectacular! This never was predicted well. The International Energy Agency always got it wrong. The price decrease and the profitability of renewable energy was always underestimated. If you look at what is happening on solar and on offshore wind, the potential is tremendous. If you look at the price with the potential of creating electrolyzers, capability based on renewable energy which would create green hydrogen – which is a tremendous opportunity for difficult-to-abate sectors. If you combine that, I believe this is the future and we will certainly no longer need investments in fossil fuels. We need direct EU financial support for decarbonisation and environmental objectives.

We need to improve the enabling conditions, including through the [Action Plan on Financing Sustainable Growth](#) and [EU Taxonomy Regulation](#) for green investments. This is a very contentious issue that we are debating these days in Brussels.

We need to look very carefully at the State aid rules on climate, energy and environment to ensure that they are in line with the needs and objectives of the Green Deal and the climate neutrality objective. I believe this is a strategy not just to get us in line with our climate commitments, but also to get us up to a growth path in the new economy, in the post-industrial traditional economy into the digitisation, into living within planetary boundaries, circular economy, which has a huge potential.

COP 26 / COP 15

We really want to make a success of COP 26 in Glasgow. It is looking more promising than before, but still we have some huge challenges.

One that I want to mention, is that we have to show solidarity with the developing world. If you look at what is happening in the Pacific, if you look at what is happening in Africa and the Mediterranean, the devastating consequences of climate change are already happening now. We need to make sure we support those countries in their adaptation and mitigation measures. We need to bring them along, we need to help them leapfrog a number of developments, especially in the energy sector. We need to bring sustainable energy, renewable energy to many of these nations. Through solar power, wind power and hydrogen. They have a right to development. But they also have the right to development which is sustainable. We don't have the right to tell them that they should develop, because that would lead to more emissions. But we have a duty to help them develop in a way that helps their young people to find a future that is sustainable.

It is always bad form to end on a negative note, but one thing I want to leave with you, and that is something that I think about a lot. This is not just about doing the right thing for the environment. This is not just about renewing our economy. This is also a highly geopolitical issue. If we don't fix this at the global level and at the European level, there is no doubt in my mind that our children will be fighting wars over water and over food. I think that is the real situation the planet is faced with. It is certainly not inevitable, we can still fix this. But we can only fix this, we can only get to climate neutrality and learn to live within planetary boundaries, if we start changing now.



Message from the EU Presidency



João Pedro Matos Fernandes
Minister of Environment and Climate Action, Portugal



The Portuguese EU Presidency is sparing no effort to conclude the first European Climate Law. This will be the first legislative deliverable of the European Green Deal, representing a huge step forward in the Union's ambition to combat climate change. Adoption of the Law will cement the EU's climate leadership while providing a clear framework for our climate action and ambition in line with the Paris Agreement.

The EU is prepared to contribute to an ambitious outcome from COP 26 and has been working intensively to deliver enhanced climate action and ambition across the board. Steered by the goal of achieving climate neutrality by 2050, the EU and its Member States recently presented an enhanced Nationally Determined Contribution to UN Climate with a higher greenhouse gas emissions target of at least 55% 2030 compared to the 1990 level.

Climate action is based not only on mitigation, but on adaptation, identified as a key priority for the Portuguese EU Presidency. Portugal is among the European countries most affected by climate change. Its impacts are being increasing-

ly felt by our societies and economies, not only in the Mediterranean region but throughout Europe.

For this reason, the new EU Strategy on Adaptation to Climate Change is both welcome and timely, providing a long-term vision for the Union to become a climate-resilient society by 2050 while making adaptation action smarter, more systemic, faster and also aimed at spurring greater international action.

The Mediterranean Basin is one of the world's most richly endowed regions in terms of animal and plant diversity and is now at risk of irreparable damage due to climate change impacts. However, we now have a singular opportunity to redefine our approach to nature.

Science has shown time and again that nature-based solutions tackle climate change, mitigate natural disaster risks while offering a win-win strategy protecting biodiversity, enhancing connectivity and enabling natural biological processes.

Ecosystem restoration should be strongly sup-

ported as it is a way of protecting biodiversity and nature, sustaining healthy water supplies, oceans and soils, as well as promoting carbon storage. The UN Decade for Ecosystem Restoration being launched in June as well as the Global Biodiversity Framework proposed for adoption at this Oc-

tober's COP 15 of the UN Convention on Biological Diversity are strongly supported by the EU. Portugal is convinced that if we unite efforts, together we will succeed in overcoming the environmental challenges we face.

Box 3

The new EU strategy on adaptation to climate change

On 24 February 2021 the EC adopted its [new EU strategy on adaptation to climate change](#) aiming to shift the focus from planning to implementation. The Commission will discuss the strategy with the Member States in the Environmental Council which is expected to agree to conclusions on the new strategy when it meets in June 2021.

As part of the [European Green Deal Action Plan](#), the strategy aims to reinforce the adaptive capacity of the EU and the world and minimise vulnerability to the impacts of climate change, in line with the Paris Agreement and the [proposal for a European Climate Law](#). The EU will implement the Green Agenda for the Western Balkans and strong partnerships with its neighbourhood, in particular the Mediterranean region. The strategy warns that "exposing today's EU economy to global warming of 3°C above pre-industrial levels" – the trajectory the world is [currently on](#) – would lead to an annual loss of at least EUR 170 billion, or 1.36% of the EU's gross domestic product (GDP).

The Strategy has four principal objectives: to make adaptation

- **smarter** by improving knowledge and managing uncertainty;
- **swifter** by speeding up adaptation implementation across the board;
- **more systemic** by supporting policy development at all levels and all relevant policy fields;
- and to **step up international action for climate resilience**.

It will support the further development and implementation of adaptation strategies and plans with three cross-cutting priorities: integrating adaptation into **macro-fiscal policy, nature-based solutions** for adaptation and mitigation, and **local adaptation** action.

As a first concrete deliverable of the new Strategy, the [European Climate and Health Observatory](#) will be launched on [Climate-ADAPT](#), the European platform for adaptation knowledge, to better track, analyse and prevent the impacts of climate change on human health.

compiled by MIO-ECSD Secretariat

Box 4

The EU's new Agenda for the Mediterranean

Twenty-five years after the Barcelona Declaration and ten years after the Arab Spring, many environmental, political, socio-economic and security challenges remain daunting in the Mediterranean. To address these common challenges the [New Agenda for the Mediterranean](#) proposes to relaunch the EuroMediterranean partnership and unleash the region's untapped potential. This reflection resulted in the ["Joint Communication on the renewed partnership with the Southern Neighbourhood"](#) in February 2021.

It includes a dedicated Economic and Investment Plan to spur the long-term socio-economic recovery in the Southern Neighbourhood. Under the new EU's Neighbourhood, Development and International Cooperation Instrument (NDICI), up to €7 billion for the period 2021-2027 would be allocated to its implementation, which could mobilise up to €30 billion in private and public investment in the region in the next decade.

The Agenda aims to join forces in fighting climate change and speeding up the green, digital and sustainable food systems transitions, to renew the commitment to shared values. It proposes a range of actions along the following key policy areas:

- **Human development**, good governance and the rule of law
- **Strengthen resilience**, build prosperity and seize the digital transition
- **Peace and security**
- **Migration and mobility**
- **Green transition**: climate resilience, energy, and environment

In the area of "Green transition" the Commission proposes two flagships regarding actions to align with partners' National Determined Contributions under the Paris Agreement and support the external dimension of the EU Green Deal (FLAGSHIP 9 - Green Growth and climate action); and accelerate the transition from fossil fuels towards clean energy and enhanced energy security (FLAGSHIP 10 - Energy transition and energy security).

Taking advantage of the potential of a low-carbon future, the Agenda will continue to support Mediterranean countries in meeting their climate commitments, protect the region's natural resources, generate green growth and encourage resource efficiency.

compiled by MIO-ECSDE Secretariat



Financing regional Climate Change action



Ricardo Mourinho Félix
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Committee, European
Investment Bank (EIB)



As the EU climate bank, the European Investment Bank is one of the world's largest financiers of climate action and environmental sustainability. Since the adoption by the European Council 20 years ago of the EU Sustainable Development Strategy, the Bank has been involved in investments that protect our planet from the negative effects of climate change.

In 2007 the EIB pioneered the Green Bonds market, launching the first ever [Climate Awareness Bond \(CAB\)](#). Building on the success of CABs, which have now raised over EUR 33.7 bn, in 2018 the Bank issued its first [Sustainability Awareness Bond \(SAB\)](#) in line with the UN 2030 Agenda and the Sustainable Development Goals. The EIB took another bold step in 2019 by adopting an ambitious Energy Lending Policy, thus deciding to end the financing of unabated fossil fuel projects as from the end of 2021, including natural gas.

Climate action has been a key priority for the EIB, which has delivered significant climate finance volumes, underpinned by sector policies

and priorities, specific screening tools (carbon price, carbon footprint and climate risk assessment tool) and some of the highest lending standards in the financial world. After more than a decade's leading in this area, the EIB Board of Directors - consisting of representatives of the EU Member States - made a decisive move in 2020 in approving the Climate Bank Roadmap. This strategy supports the EU Green Deal and a sustainable post-COVID-19 green recovery, helping Europe to become the first carbon-neutral continent by 2050. The EIB will continue playing an instrumental role in extending these initiatives to the EU's Neighbourhood through its lending and advisory activities.

The southern Mediterranean is among the world's regions most likely affected by climate change. With its pre-existing natural and environmental pressures, rising sea levels and extreme temperatures will put an additional burden on the already scarce resources, in particular water. In turn, this will influence migration patterns, increasing the risk of conflicts while weighing on social structures, public services and goods.

We must turn these challenges into opportunities. Almost every country in the region has developed a Green Agenda to underpin their contributions towards achieving the global targets under the Paris Agreement. In the energy sector for example most MENA countries are committed to scaling-up their installed renewable energy capacity, while some countries have particularly ambitious plans: Morocco intends to have a national renewable energy target of 52% of total electricity supply by 2030, while Algeria aims for 27%. The UAE has a 24% target by 2021. In addition, innovation in clean technology, energy and transport solutions have soared. There is a need to support these initiatives through long-term investments; all players must act hand-in-hand, mobilising the necessary funding for this aim.

With its longstanding experience in the region, the EIB has the potential to align the EU's vision on climate with the priorities of the Mediterranean countries. The Bank's flagship projects in the region reveal a strong commitment. For instance, upon completion, the Noor Ouarzazate solar energy complex in Morocco will provide electricity for more than 1 million people and reduce national carbon dioxide emissions by at least 760,000 tonnes per year. In addition, the depollution of the Kitchener Drain in Egypt will improve sanitation and solid waste services for 6 million people, while the installation of rooftop photovoltaic systems on 500 schools in the West Bank will provide energy to 16,000 households. Likewise, the EIB is financing the rehabilitation and expansion of metro and tram systems in Alexandria and Cairo, contributing to increase the availability and quality of public transport systems in two cities where 30-35% of the country's population live and work while also reducing greenhouse gas emissions due to the expected modal shift.

Beyond these tangible contributions, the value added of the EIB also lies in its advice and expertise, channelled through initiatives such as Climate Action in the Middle East and North Af-

rica ([CAMENA](#)), financed by the Facility for Euro-Mediterranean Investment and Partnership ([FEMIP](#)).

Cooperation with the Union for the Mediterranean has enabled the implementation of impactful climate operations bearing fruit through projects such as the clean-up of Lake Bizerte in Tunisia or the [Clean Ocean Initiative](#), which can contribute to initiatives to depollute the Mediterranean Sea.

Going forward, a double trend will influence the Bank's operations. On one hand, the EIB has already set ambitious targets for climate action and environmental sustainability in line with the EU's leading climate objectives. On the other, new instruments in partnership with the European Commission, such as the European Fund for Sustainable Development Plus (EFSD+) will direct the EIB to new focus areas such as digitalisation for sustainable development.

In pursuit of its ambitious objectives, last year the Bank managed to direct about 30% of its investments outside of the EU towards climate adaptation and mitigation projects. This will continue to expand, not only in terms of the volume of the investment supported, but also of the policy dimension that will enable the integration of environmental objectives in a cross-cutting manner. No internal financial institutional or public balance sheet alone can cope in isolation with the current needs. In many countries in the region, the high levels of public debt limit even further the capacity to act through public investment. Private investment and financial markets must therefore play a key role if we want to further expand these initiatives and the impact of the related investments.

Channelling financial flows towards the sustainable projects that are vital for the transition to a low-carbon future, necessarily involves making the financial system greener. We need investors who consider climate and sustainability consider-

ations in their decisions. ESG (Environmental, Social and Governance) considerations are becoming increasingly important for investors.

Transparency and disclosure on climate-related aspects and risks are also becoming more pervasive in the market, which is key to enable investors to make more informed (and greener) investment decisions. The EIB also plays a fundamental role in helping to scale up critical investments for the transition, by crowding-in capital towards sustainable investment, demonstrating opportunities and potential returns, thus helping to mobilise other investors, using its catalytic role and reducing the associated risks.

To conclude, recent global developments shed light on the importance of tackling the climate change challenge. Amongst the numerous reflections already made in the context of the COVID-19 pandemic, the need to support a sus-

tainable green recovery is increasingly consensual. The return of the US to the Paris Agreement is clear evidence of this and the UNFCCC COP 26 in Glasgow will be an excellent opportunity to discuss future avenues in this direction.

In 2020, the EIB became the first Multilateral Development Bank (MDB) to be fully Paris-Aligned. By 2025, we aim to direct 50% of our investments to climate projects and by 2030 to mobilise over EUR 1 trillion in support of climate action. All these objectives, encapsulated in the new Climate Bank Roadmap, will enable the EIB to realise its ambitions in the EU, the Mediterranean region and beyond.



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Energy, water, agriculture, forests, cities, biosphere reserves

Energy Future: Fossil or Renewable based?

The Mediterranean's renewable energy future



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The COVID-19 crisis has contributed to a wider understanding of the potential consequences of the looming climate crisis.

The impacts of the pandemic and climate change know no borders and both put the poor and vulnerable at greater risk than the well-off; both demand government action on an unprecedented scale. The COVID-19 crisis has demonstrated the importance of concerted and decisive interventions to safeguard the global public interest, an approach that is also needed for a global energy transition to tackle the climate crisis.

The energy transition provides ample opportunities for the COVID-19 recovery stage. Increased uptake of renewables, energy efficiency and related energy transition technologies represent far-sighted investment amid the crisis. IRENA's post-COVID agenda shows that clean energy average annual investments of USD 2 trillion in the 2021-2023-recovery phase could create 5.5 million additional jobs in renewables and other energy transition-related technologies than would be possible with a conventional and more "mutated" policy response.

Another 19 million energy transition-related jobs would be created by 2030, following average an-

nual investments of USD 4.5 trillion up to that year. COVID-19 recovery plans provide opportunities to rebuild better, by setting more ambitious targets and mobilising investment in transitioning to a cleaner energy system.

At the same time, the call for achieving the UN Sustainable Development Goals is louder than ever, highlighting the need for a rapid deployment of renewable energy and the developing markets. Renewable energy technologies can provide affordable, accessible and clean energy services for countries and regions that lack access to energy or struggle with weak grids. These technologies can significantly improve the livelihoods, resilience and welfare of communities. In this context, the urgency of transitioning to a more efficient renewable-energy based system is clear.

The Mediterranean region is blessed with abundant natural resources, including renewable energy resources that are being exploited but not to their full potential. The region has outstanding solar insolation presenting significant potential for development of solar photovoltaic for power generation and solar thermal for heating. The highest values of insolation appear in the southern region where values exceed ~2200 kWh/m²/

year, while the level of insolation decreases gradually toward the northern region. Areas bordering the Mediterranean Sea receive moderate insolation of ~1600 kWh/m²/year, which could be suitable for solar power development. Similarly, the highest values of wind speed appear in the southern region where values exceed 7 m/s, while the lowest wind speed areas appear in the northern region except the extreme north of the Mediterranean.

Further assessment of the technical potential of solar and wind considering the regional infrastructure and socio-environmental constraints, namely protected areas, land use, topography, population growth, and proximity to transmission lines and roads, will identify feasible areas to host utility-scale renewable energy projects. The region's nations are at different stages of social and economic development, with significant variation in natural and financial resources and face diverse political and economic challenges. However, their futures are interlinked as they are located in a hotspot for climate change – a situation projected to cause substantial threats to their welfare in coming decades. Fossil fuels have been the dominant source of energy in all countries; domestic energy requirements continue to increase in many of the region's countries leading to significant socioeconomic and environmental challenges.

Along with energy efficiency measures, renewable energy technologies are offering an increasingly viable and cost-competitive solution for the decarbonisation of the regional power sectors. The Mediterranean's abundant renewable energy resources, including hydropower, combined with policy mechanisms such as renewable energy auctions, are resulting in record low prices for solar and wind energy projects. Countries such as Algeria, Egypt, Jordan, Lebanon, Morocco, Spain, Saudi Arabia, Tunisia and UAE are contracting solar and wind energy capacity through auctions. These auctions have already resulted in record low prices for Concentrated Solar Power

in Morocco, for wind in Spain and Saudi Arabia and for solar photovoltaics in UAE, Egypt, Jordan and Tunisia.

Most of the region's countries are aiming to increase renewable energy penetration in the coming years. They have specified renewable energy targets which, if implemented, could lead to a rapid increase in renewables in their energy mix, especially in their power systems. As the share of variable renewable electricity increases, flexibility measures such as demand response, energy storage, green hydrogen and electric vehicles with smart charging can help facilitate integration. Moreover, reinforcements in the transmission and distribution grids, which may also include development of regional grids to allow extensive electricity trade, can help increase the adoption or renewable energy technologies while allowing for economic development.

While policy making at the national level will be central to ensure a smooth energy transition in the region, the importance of regional cooperation cannot be overstated. Coordination actions like sharing and co-developing energy infrastructures and networks, facilitating technical exchanges and capacity-building activities and conducting regional integrated assessments could be essential elements towards decarbonisation. The European Union's model, though not fully transferable to the region, can serve as a good example of a determined and consistent approach towards sustainable transformation.

By the end of 2020, more than 12 countries and the European Union had passed or proposed laws around net-zero emissions by 2050 and had earmarked significant financial resources to green recovery plans centred on renewables. For these targets to be achieved, they need to be translated into long-term, integrated energy plans that coordinate the deployment of renewables-based solutions with other energy sources, together with measures to raise energy efficiency and develop the needed infrastructure. This is important

in order to avoid stranded assets that might result from the development of infrastructure which might not serve the future energy system, such as additional gas pipelines, for example.

The energy transition also requires levelling the playing field with fossil fuels and phasing out the hundreds of billions of US dollars currently spent on fossil fuel subsidies, to redirect them towards the energy transition. Where possible, policymakers should also consider adjusting and implementing fiscal policies such as carbon pricing, so as to internalise the negative impacts of fossil fuels. Of course, careful consideration of broader social and equity issues is necessary, particularly for low-income populations, for whom energy constitutes a larger share of household expenditures and whose budgets do not offer many options.

Also essential is a robust institutional coordination clearly defining roles and responsibilities that translates targets into actionable initiatives. Coordination between various governing bodies and stakeholders, including those responsible for and involved in energy and power, industry, agriculture, environment and forestry is required.

To achieve net-zero targets, the energy transition in heating, cooling and transport will be essential, as these end uses account for almost three quarters of global energy consumption. In contrast, policy efforts have so far focused on the power sector globally. A holistic policy framework is needed, where deployment policies and regulations such as subsidies, grants, tax incentives, go hand in hand with broader enabling policies and energy system integration policies. In the power sector, where renewables have become cost-competitive with fossil fuel-based electricity, a power market structure suitable for a renewables-based system is needed.

To maximise the socio-economic benefits of the energy transition, there is a need for an ecosystem that allows for broader systemic changes, in-

cluding education and training, industrial policies, support for R&D, and collaboration between industry and research institutions. Also important is the need to minimise the socio-economic cost of transitioning away from fossil fuels. This requires a set of labour market and social protection policies. The transition for workers in industries rendered obsolete needs to be smoothed by developing opportunities in new industries and providing re-skilling options for affected workers. In conclusion, policies for using renewables in heating and cooling should not be considered in isolation. They should be viewed as part of the broader socioeconomic structures upon which the energy system is built and with which it interacts. A systemic approach is required in the energy sector but also in the socio-economic systems we have constructed.

Mediterranean Energy Prospects



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Its geographical position and energy resources have made the Mediterranean an important transit corridor for global energy markets thus positioning its southern shore to be among Europe's leading suppliers for the past several decades. The countries of the region are also interdependent and complementary in terms of the availability of energy resources, technologies and demand. Overall, the region is energy deficient and energy security is a priority for all.

Goals, geopolitical tensions and unrest since 2011 have highlighted the urgency of accelerating the region's energy transition and the rethinking of regional cooperation. More recently, growing energy demand in the South and East, continuing geopolitical tensions and their impact on the oil and gas markets, new offshore gas discoveries in the eastern basin, security of demand and supply, the need to decarbonise economies and the emergence of multiple options and solutions, innovation and the intention of the European Union to play a leading role, have defined the context in which the current decade began for the Mediterranean energy sector.

On the other hand, the health crisis has taken

the whole world by surprise, with a greater impact on the Mediterranean countries, their economies and their energy sector, affecting the short term and presumably the medium and long term as well.

The two shores of the Mediterranean have contrasting energy prospects. For the region as a whole, primary energy needs are forecast to increase by almost 40% up to 2050 compared to 2018, but more than double over the same period in the South under current trends. In contrast, more than 25% (350 Mtoe) of this increase could potentially be avoided.

Although on a downward trend, hydrocarbons would still weigh in the energy mix in the Mediterranean in 2050. Given the considerable potential for renewable energy and natural gas in the region, a sustainable and environmentally friendly energy future is naturally one that would best combine these two assets, in addition of course to energy efficiency.

After a relatively late start compared to other parts of the world, renewable energies have registered a strong increase in the Mediterranean

in recent years thanks to a combination of favourable policy measures, technological innovation, cost reduction and attractive funding programmes. Renewable energy supplied 9% of total energy demand in 2018 and could reach 30% in 2050. Paradoxically, it is in the North that they will be the most developed with a share ranging from 25 to 44% of energy demand, depending on the scenario, against only 12 to 21% in the South.

Growth in electricity demand is expected to be more sustained than energy demand, driven by strong growth in the South and the trend towards greater electrification of the region's economies. The electricity mix will be mainly based on renewable energy and natural gas. In addition to promoting the development of renewable energy, the implementation of Nationally Determined Contributions under the Paris Agreement would avoid the construction of more than 100 GW installed capacity – equivalent to half the current installed capacity in the South.

One of the major challenges facing the region is energy security. Continuing current trends will exacerbate the situation. Indeed, if the countries of the North are expected to maintain a relatively stable level of dependence by 2050, the countries of the South will see their dependence increase from the current 9% to 31% by 2050 according to the trend scenario. The implementation of the NDCs would allow the countries of the South to become self-sufficient by 2050 following a net exporter situation by 2030.

As regards CO₂ emissions, the implementation of NDCs is absolutely necessary if the region is to reduce its emissions by 2050 to their 1990 level. Such a reduction would be tantamount to the North halving its current emissions by 2050 and their stabilisation in the South.

The OME scenarios thus clearly highlight the links between achieving climate goals in the Mediterranean and achieving the energy transition. The benefits go beyond significantly improved energy

security and consequently bring about a region with lesser stress and therefore more stable.

Implementing the energy transition posits technological advances as a key factor, not only through the deployment of renewables but also through the development of new technologies. Among the most anticipated are the large-scale deployment of technologies for hydrogen production and those related to carbon sequestration. These technologies could take off by 2035 and hint at the potential to go beyond NDCs and the proactive scenario where their contribution remains modest by 2050. The Mediterranean can afford more ambitious targets than those in the current NDCs.

Given the history, the current situation and the energy prospects of the Mediterranean and the challenges, but also and above all the strong ambitions, opportunities and decisions taken by the European Union, positioning itself as a leader in combatting climate change by setting the ambitious goal of carbon neutrality by 2050, regional cooperation is proving to be very important in reversing the current trend and achieving a more ambitious and successful energy transition.

In this context, the launch of three regional energy platforms under the auspices of the Union for the Mediterranean with the support of the European Commission, aims to intensify Euro-Mediterranean energy cooperation and accelerate progress towards energy development, sustainable, fair and shared energy transition. The EU's Hydrogen Strategy and the recent communication on a new agenda for cooperation with the Mediterranean, which includes energy amongst its priorities, are also key response elements to be supported and strengthened.

As an association of key energy actors in the Mediterranean, the OME intends to continue its efforts to promote regional cooperation through North-South and South-South dialogue on intersectoral energy issues and work to accelerate

the transition to sustainable development and a just and prosperous energy future in the Mediterranean alongside and in cooperation with its partners.

Editor's note: according to its website (www.ome.org) OME is the Voice of the energy industry in the Mediterranean area; a Platform for energy dialogue, cooperation

and best practices exchanges and a Think Tank of reference in the Euro-Mediterranean Region. The Association gathers leading Mediterranean energy companies, affiliates and associated members from sixteen countries. It also manages the [UfM Secretariat's Gas Platform](#).

translation from the French original by the guest editor

Water and Irrigation

Our Water Future: Are we intelligent enough to adapt?



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Projections make it abundantly clear that the Mediterranean will be hard hit by climate change.

We all know what this means for water: less availability, lower quality, more extreme phenomena and higher risks for livelihoods and economic development, particularly for the most vulnerable. It has taken 20 years for awareness to grow, but

today these near-certainties are well understood by Mediterranean countries, even when comprehensive impact assessments are missing. They are also largely realised by the public, even when details cannot be recalled.

Adaptation planning has advanced at all levels, even though it is too early to assess the effectiveness of strategies and feasibility of action

plans, not least because the adequacy of monitoring systems is yet to be proven. Institutional settings and regulatory frameworks are also evolving, though not at the same pace as planning, nor without shortfalls. However, it is investments and actual implementation that are crucially lagging behind. 'No news here', one may note, 'since challenges are far greater than available capacities'.

However, this is an integral part of the problem: in practice, we continue witnessing an absence of urgency against an imminent and inevitable threat. This prevents higher prioritisation and consequent mobilisation, possibly against other needs that are, rightly and firmly in the top must do list of national agendas. Substantial progress will be made only when countries' top leadership and not just the line leads, comprehend the severe and long-term socio-economic impacts, embracing available solutions along with the opportunities these can bring.

Over the years, several regional policy and action planning processes have advanced, including within the Union for the Mediterranean, the Barcelona Convention/UNEP Mediterranean Action Plan, the League of Arab States, the Regional Cooperation Council and more. Recently, powerful initiatives with voluminous investment packages have been launched, such as the European Green Deal, the new EU Agenda for the Mediterranean and the Green Agenda for the Western Balkans. Similarly, with the mobilisation of bilateral development partners such as Sweden and its new 2021-2025 Strategy for MENA. However, private sector participation remains limited in practice, mostly due to governance and financial risk issues.

So, how can we do more, better and faster?

First, we should close the science-to-policy gap. A science-driven approach should smartly utilise data, evidence, analysis and innovative tools helping to design operational targets and mon-

itoring systems at the service of climate policy priorities. Adaptation and mitigation targets should be jointly addressed through a [Water-Energy-Food-Ecosystems \(WEFE\) Nexus approach](#), recognising interdependencies and aiming for co-benefits, including through managing trade-offs. Among others, the online '2021 WEFE Nexus Science Advances Conference: From Science to Practice' (27-29/9/21, organized by DG JRC, DG Research, PRIMA and the Cyprus Institute) will provide a discussion and experience-sharing forum.

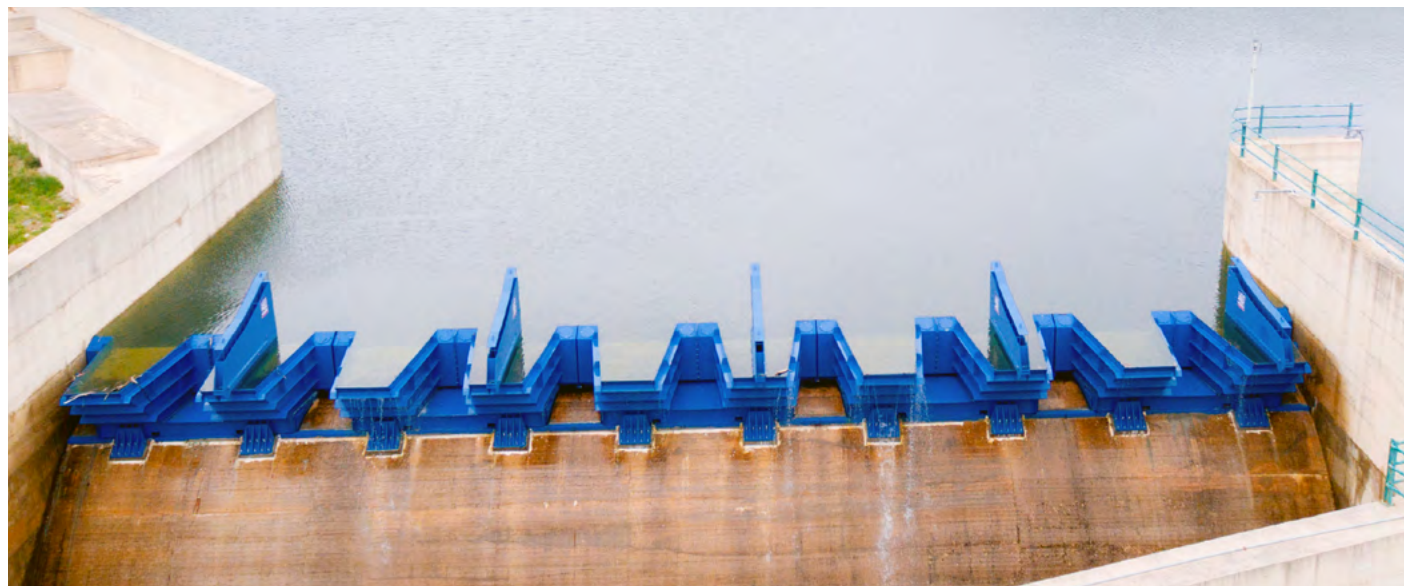
Transparency and public awareness are key for closing the science-to-policy gap, for promoting society-wide acceptance of solutions and intensifying demand for large-scale action. In this context, the media must actively connect with scientists and policymakers, enriching the dialogue and communicating facts, views and analysis to the public.

Though the WEFE Nexus is a relatively new agenda, elaboration of strategies, plans and investments are advancing at national, basin, coastal and transboundary level, most often with structured stakeholder participation, contributing to climate resilience targets. Contributing to this process are the work of GWP-Med, the UN Economic Commission for Europe and partners in the Western Balkans supported by Austria, also in the Drin Basin supported by the Global Environment Fund as well as the new [WEFE Nexus project of the GEF UNEP/MAP MedProgramme](#).

Furthermore, WEFE Nexus technical solutions include different practical interventions offering tangible benefits against local climate change impacts. Small/medium scale applications in rural and urban contexts can improve natural resource management, increase resource use efficiency, raise crop productivity 'per drop' and 'per KWh' and mobilise alternative sources, thus increasing the local water budget, among other benefits.

On a larger scale, multi-purpose infrastructure like wastewater treatment combined with resource recovery and bi-products production, desalination powered by renewable energy, optimisation and multi-purpose utilisation of existing and sometimes aged infrastructure like dams, etc. can offer multiple socio-economic benefits

in more than two sectors. Examples may be cited from Mediterranean initiatives, such as the 12-year Alter Aqua GWP-Med exercise with local partners on promoting non-conventional water resources in islands and coastal areas, supported by the Coca-Cola Foundation.



In partnership with local authorities of Alexandroupolis, Greece, and with financial support by The Coca-Cola Foundation, GWP-Med designed the “Water for the City” programme to increase urban freshwater availability, following a Nexus approach. Existing dam infrastructure was optimized through the installation of custom-made free-standing gates on the spillway, increasing capacity by 14%, without increasing the environmental footprint.

Applying these at scale can create opportunities for new jobs, from technical to managerial, in sustainable agriculture, integrated urban water management, industry, tourism, etc. A circular economy, sustainable production and consumption, blue economy, innovation and digitalisation provide further background for such “green/blue jobs”. Investing in entrepreneurship opportunities operationally linked with WEFE Nexus mainstreaming holds the potential of a new dynamic market, particularly through SMEs. Youth and women should be the focus of such investments securing their equal participation, building capacities and putting their employability skills into use while creating and assisting the development of realistic business plans.

This is timely since the long-term COVID-19 impacts on the real economy are forecast to be harsh, while major investment plans to assist economic recovery have been announced by governments and international partners. The opportunity of a ‘green recovery’ vs an old-style investment for tackling COVID-19 impacts and the wider job creation challenges must not be missed, also responding to important migration objectives. The recently (end 2020) launched SIDA/UfM - supported project on ‘Making Water Cooperation Happen in MENA: Piloting Tangibles’ implemented by GWP-Med will provide proof of the tangibility of integrated technical and employability interventions in Jordan and Palestine.

On the financing side, mitigation remains the clear winner, while according to the [UNEP Adaptation Gap Report 2020](#), adaptation finance is increasing more slowly than adaptation costs, thus widening the gap. The region’s limited utilization of climate financing instruments for adaptation, such as the [Green Climate Fund](#) is indicative. Since mid-2019, in response to countries’ demand, UfM and GWP-Med are strengthening capacities of national authorities and entities to access such opportunities, assisting them in preparing climate-resilient water projects.

The UNEP Report also notes that prioritisation of gender dimensions in national adaptation policies and plans remains unclear. Contributing to that is the GWP mid-2020 launch of the [Water, Climate, Development and Gender \(WACDEP-G\)](#) line within the GWP-Africa managed [Global Africa Water Investment Programme \(AIP\)](#). Initially focusing on Tunisia, this activity contributes to strategically advancing gender equality in the preparation, development, design, governance and management of ongoing and new climate-resilient water infrastructure investments, institutions and job creation interventions. In addition, and contributing to the transboundary agenda, an initiative on empowering women in water diplomacy in MENA was launched in March 2021 by GWP-Med and the Geneva Water Hub within the UfM framework, building on findings and recommendations of a comparative study in five MENA countries.

Climate challenges are too big and too critical for half measures. These directly contribute to social and political instability in a highly turbulent region. The forthcoming UfM Ministerial Meeting on Environment and Climate Action should go beyond the expression of political will. Building on ongoing and, importantly, new initiatives, it should endorse tangible and urgent climate commitments, thereby making a substantial contribution to COP 26. These should integrate and assist coordination of the range of regional instruments and investments, engaging both regional and national partners.

‘Intelligence is the ability to adapt to change’, Stephen Hawking pointed out. It is our time to prove it, individually and collectively, facing the fundamental reality of climate change.

Irrigation and Climate Change



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The fight against climate change has become the mother of all battles. An axis around which not just environmental but economic and social policies now revolve, defining the broad strategic lines to be followed by the main governments of the world.

The EU recently agreed to increase its emissions reduction target from 40% to 55% by 2030 below the 1990 level. In this scenario, given the urgency of reducing both air pollution and carbon dioxide in the atmosphere, it should be noted that crops, including irrigated ones are true CO₂ sinks. Our point of departure is that irrigated agriculture in combination with improved cultivation methods and practices could gradually become more fully sustainable and contribute even more to addressing climate change. Had farmers stopped cultivating fruit trees, olive trees, orange trees, vineyards, etc., and not cared for and protected many of the forests and pastures, such sinks would have disappeared.

Europe annually emits around 4,000 Mt of CO₂ equivalent. As the average price of CO₂ emission allowances oscillates around 25 euros per tonne, if all the allowances were auctioned, a

total amount of approximately 100 billion euros would be generated. On the other hand, agricultural crops absorb between 7 and 12% of emissions, so it is easy to calculate the economic value that farmers generate.

Likewise, if combating climate change goes hand in hand with a commitment to renewable energies, agriculture could and should profit from their application in pumping and the use of non-conventional water resources. It is worth highlighting the accumulation problem which emerges during the higher production phases. An important technology able to accumulate potential energy in sufficient quantities is the reversible hydraulic power plant.

In addition to enabling carbon dioxide absorption, irrigation contributes indirectly to the emission of oxygen to the atmosphere due to vegetation photosynthesis while also indirectly helping to reduce erosion and desertification, two phenomena which could be aggravated as a result of climate change. On the other hand, as carbon dioxide levels have reached their highest concentration in the last three million years, the spotlight is on the combustion of fossil fuels. Ag-

riculture and its by-products and waste could provide valuable raw materials for biofuels production. One of the EU objectives is that at least 10% of the energy used for transport should come from renewable sources including biofuels in order to reduce greenhouse gas emissions by 6%. Studies on climate change agree that in Mediterranean countries with arid and semi-arid climates, rainfalls will be torrential, increasingly frequent, and may cause severe floods. In the same way, there will also be more prolonged and extreme drought events, which is why river basin management and regulation, part of which is sustainable agriculture, has become an indispensable requirement to mitigate possible damages caused by both effects.

It has been proven that the best tool to reduce the use of water in agriculture is modernisation and investment in irrigation in both conventional and non-conventional irrigation water infrastructure. So, climate change policies should be closely linked and coherent with adaptation policies directly connected to water efficiency and integrated management. Within this framework, the distribution of future European funds will be conditioned by the guidelines set by the Europe-

an Commission, which are also aligned with the priority objectives of irrigation.

Irrigation is an important driver for economic and social recovery which, in turn, promotes and improves the quality of employment. Irrigation also facilitates the green and digital transition in accordance with the 'European Green Deal', saving water, promoting the use of renewable energy and incorporating new technologies and digitalisation in rural areas.

It helps to attract population to rural areas and to overcome the demographic challenge, as this type of agriculture is the backbone of the development of rural lands. In addition, crop diversity and productivity of irrigated areas is greater than in rain-fed areas. In our Mediterranean climate, irrigated and rain-fed agriculture have and will always coexist. It is noteworthy however that an irrigated hectare produces on average the equivalent of the output of six rain-fed hectares.

A large number of positive externalities that, without a doubt, make irrigation a true ally in the fight against climate change and winning the mother of all battles.



Agriculture and Food

Towards more sustainable Mediterranean food systems



Dr. Nicola Lamaddalena
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Agronomic Studies
([CIHEAM](#)) / Bari Institute



Joint actions to support the shift towards more sustainable food systems in the Mediterranean region so as to accelerate implementation of the UN 2030 Agenda for Sustainable Development are being jointly undertaken by CIHEAM, FAO and UfM under a recently signed tripartite Memorandum of Understanding.

Within this framework the three organizations are establishing a collaborative effort to build up a Multi-stakeholder Sustainable Food Systems (SFS) Platform in the Mediterranean, aiming at promoting a context-specific integrated sustainable food systems approach as an innovative, multi-sectorial, and science-based response to the different challenges facing the region's nations.

The [SFS-MED Platform](#) will be developed within the [UN Decade of Action for the SDGs](#), considering the preparatory process for the 2021 UN

Food Systems Summit and in alignment with the [UN Decade of Action on Nutrition Programme \(2016-2025\)](#), the [UN Decade on Family Farming Global Action Plan \(2019-2028\)](#) and the [UN Decade on Ecosystem Restoration \(2021-2030\)](#).

Activities for the 2021-2022 biennium include:

- the establishment of a "SFS-MED Partners' Community of Practice"
- the organisation of independent Food Systems Summit Dialogues as a contribution to the UN Food Systems Summit
- the organisation of the 3rd World Mediterranean Diet Conference on Actions towards more Sustainable Food Systems in the Region
- Identification and co-development of the initial flagship projects

The Mediterranean approach to the UN Food Systems Summit consists in showcasing the SFS-MED Platform flagship projects within the Summit and G20 preparatory frameworks. It is envisioned that the SFS-MED Platform will actively contribute to the achievement of the UN Food Systems Summit's Action Tracks within the region so as to:

- Ensure access to safe and nutritious food for all (enabling all people to be well nourished and healthy; progressive realisation of the right to food);
- Shift to sustainable consumption patterns (promoting and creating demand for healthy and sustainable diets, reducing waste);
- Boost nature-positive production at sufficient scales (acting on climate change, reducing emissions and increasing carbon capture, regenerating and protecting critical ecosystems and reducing food loss and energy usage without undermining health or nutritious diets);
- Advance equitable livelihoods and value distribution (raising incomes, distributing risk, expanding inclusion, promoting full and productive employment and decent work for all);
- Build resilience to vulnerabilities, shocks and stresses (ensuring the continued functionality of healthy and sustainable food systems).

In addition, a flagship proposal, led by CIHEAM-Bari, is currently under development in collaboration with FAO and UfM within the SFS-MED Platform. It will address the selected priority challenges of sustainable natural resources management and food systems through an integrated, holistic and multi-stakeholder approach context-specific for the Mediterranean and in a context-specific area. It will serve as a case study to trigger collaborative multi-stakeholder action for food systems transformation in the Mediter-

ranean to accelerate the region's implementation of the 2030 Agenda.

In past years, the CIHEAM-Bari institute and the [International Center for Agricultural Research in the Dry Areas \(ICARDA\)](#) (currently on temporary relocation to Lebanon from its permanent base in Syria) have collaborated together on water use efficiency and water harvesting topics. CIHEAM-Bari and ICARDA participated in a common scientific session within the framework of the World Conference on Sustainable Food Systems (Palermo, 2019) called "Solutions for coping with impacts of water scarcity, land degradation and climate change on Mediterranean Food Systems". On that occasion, they launched an additional potential collaborative venture focusing on the following key messages:

- Food systems should be based on diversity of farming systems (e.g. combine rain-fed and irrigation, agro-pastoralism, etc.)
- Food systems should reintroduce cropping systems which are also the basis for sustainable diets, i.e., barley instead of wheat, introduction of pulses as sources of vegetable protein, good rotation, etc.
- These types of solutions are more resilient to climate change, have a lower water footprint and help to reduce land desertification and degradation, while increasing soil health
- These food systems will also enable a balance between sustainable consumption with sustainable production while also promoting better relationships between urban and rural areas.

In 2017 CIHEAM-Bari participated as Special Rapporteur in the UN Committee for World Food Security (CFS 42) as Chair of the roundtable for the preparation of the policy recommendations on Water for Food Security and Nutrition.

Currently CIHEAM-Bari is member of the international platform on [“The Global Framework on Water Scarcity in Agriculture \(WASAG\)”](#), a Partnership Network established in April 2017 and hosted by FAO Headquarters. It consists of government agencies, international organizations, research institutions, advocacy groups and professional/membership organizations, aiming at supporting governments and stakeholders in the achievement of the water-related targets of the 2030 UN Agenda for Sustainable Development.

In that framework, CIHEAM-Bari and other Italian partners are currently developing the “Technical Guidelines for the Design of Modern Irrigation Systems” which should be completed and published during this year.

One of the priority challenges faced by CIHEAM-Bari is the balance between water demand (which is increasing) and its supply (which is decreasing) in agriculture. Therefore, context-specific challenges are associated with: water scarcity, producing enough food for a growing population; increasing competition for water between people and economic sectors; climate change; increasing degradation of water resources and ecosystems. In addition, there is the lack of fair and transparent allocation mechanisms that recognise and protect the interests and rights of all users. The most vulnerable and marginalised should be especially considered, along with the new challenge posed by the ongoing COVID-19 crisis. Technical and non-technical issues have to be considered to face the above said challenges, including the ecosystems and the people-centred approaches.

CIHEAM-Bari Institute has for many years collaborated with the most important water users’ as well as farmers’ associations in Italy. One of the leading WUAs in Southern Italy is the [Consortium of Capitanata](#), which has developed very advanced technical and governance models to manage the scarce water resources available to local agriculture. Italy’s farmers are obliged to be

associated with consortia. Through various Farmers’ Associations they can participate in the direct election of the Consortia Governing Boards.

The following projects (among others) are carried out by CIHEAM-Bari, dealing with the issues discussed above:

- [MADFORWATER](#) - Development and application of integrated technological and management solutions for wastewater treatment and efficient reuse in agriculture tailored to the needs of Mediterranean African Countries (funded by the EU-H2020)
- [WES](#) - Water and Environment Support (EU-funded regional support project)
- [MENAWARA](#) - Non-Conventional Water Re-use in Agriculture in Mediterranean countries (funded by the ENI-CBC Med)
- [SPIS-Lab](#) - Promotion of Energy and Water Efficiency through Training and Research on Solar Powered Irrigation Systems (funded by GIZ)
- EO_Time - Earth Observations (funded by the EU-EraNetMed program)
- [WAGRINNOVA](#) - Co-innovations across scales to enhance sustainable intensification, resilience and food and nutritional security in water-managed agricultural systems in West Africa (funded by the LEAP-Agri programme). Some ‘greening’ approaches are developed in this project such as the use of solar energy for agriculture.

In addition, CIHEAM’s four institutes (Bari, Chania, Zaragoza, Montpellier) are participating in the EU’s “Farm to Fork Strategy” activities.

The challenges of Mediterranean food systems in the decade of action



Dr. Alessandro Galli
Director of [Global Footprint Network’s Mediterranean-MENA Program](#)



A handful of reports published over the last few months by UN bodies, NGOs, international organizations and independent experts have all indicated that the relationship between humans and the environment is not only important but downright essential.

These reports converge in showing that human societies are overusing the planet’s resources, destroying its habitats and causing biodiversity to disastrously decline. In this process, the stability of the Earth System is being compromised jeopardizing the very foundations of our health and economies. The unforeseen outbreak of the COVID-19 pandemic has also forced us to experience first-hand how deeply interconnected and dependent upon our planet we are. Among other things, COVID-19 has highlighted the fragilities of our food systems, making us realise that accessing healthy food cannot be taken for granted and that actions are needed now to secure a future where all can thrive within planetary boundaries.

About half of the Earth’s biocapacity is occupied

by food production. The way we produce, distribute, and consume food accounts today for about 70% of freshwater withdrawals while generating 37% of global greenhouse gas emissions - thus representing the dominant Ecological Footprint driver in most world regions. This unfortunately holds true for the Mediterranean. Food constitutes the primary Ecological Footprint driver in the region, ahead of sectors such as transport and housing; accessing food is responsible for nearly 30% of the combined demand for renewable resources and ecological services of an average Mediterranean resident.

Dysfunctionalities characterise each stage of food chains across the world. Remarkable increases in agricultural productivity have been seen across countries driven by an increased use of inorganic chemical fertilizers, pesticides and agricultural machinery. Unfortunately, these have compromised the long-term productivity of natural ecosystems as the worldwide yield of main staple crops are predicted to annually increase by a mere 0.8% during the period 2007-2050 (compared to 1.7% during 1961-2007).

In the Mediterranean, where climate warming is predicted to be occurring faster than the global average, this reduced productivity will likely be more marked, affecting ecosystems and food security. Fast rising temperatures are expected to cause a near 50% reduction in the average maximum fish body weight by 2050 and to alter the climatic conditions of one of the world's most suitable areas for growing durum wheat, already with a 1.5°C increase in average temperature over pre-industrial levels. Such progressive degradation of environmental conditions in the Mediterranean will likely contribute to the increasing abandonment of smallholder agriculture and growing dependence on imports from outside the region.

Food distribution, consumption and disposal also present their own set of challenges. Only about 30% of the world's population manages to source crop-based foods from within 100km. This global trend holds true for residents of all Mediterranean countries except France since they rely on net imports of biocapacity from foreign countries to satisfy their residents' food demand. Italy for example is the largest net importer of food-related biocapacity, primarily importing from France (wheat and meat products), China (meat products, vegetables, fruit, nuts) and Brazil (meat products, cereal grains).

The way we eat – an ultimate indication of our food systems' sustainability – also presents dys-functionalities as dietary choices in most Mediterranean countries have progressively changed: urbanisation, social factors related to city lifestyles, globalisation of food systems and the homogenization of food behaviours have led to a progressive erosion of the traditional Mediterranean diet. Mediterranean residents nowadays have a dietary preference for processed and protein-intensive products such as meat and high-trophic level fish species. Preventing food waste is also essential to lowering our food Footprint as globally, from farm to fork, more than one-third of food produced is lost or wasted.

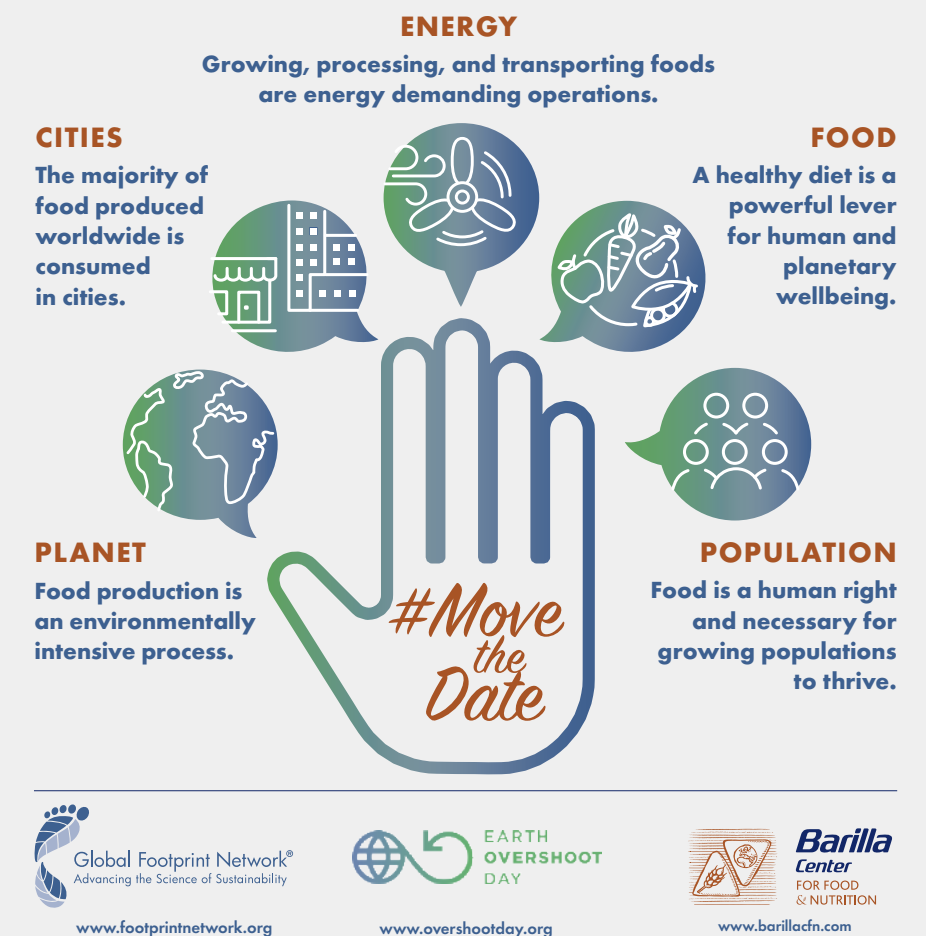
In view of the upcoming Union for the Mediterranean Ministerial Meeting on Environment and Climate Action a radical re-design of the region's food systems is needed to put us on the right track to achieve the UN Sustainable Development Goals for 2030. Within the region, addressing food-related impacts requires increasing resource efficiency, productivity and resilience (e.g. via updating national agricultural policies to evolve towards pro-agroecological systems contributing to decarbonizing food systems). It also requires reducing food losses and waste, while reconnecting producers with consumers (e.g. via favouring short-chain food systems via local communities of practices).

On the consumption side, re-evaluating diets with a view to reducing portions in general and in particular the consumption of meat and other animal products can significantly contribute to a transition towards sustainable food systems. This approach can be launched via introducing sustainability criteria into national dietary guidelines.

The above transformations – necessary to achieve better and climate-resilient agriculture, sustainable value chains and healthy lifestyles in the Mediterranean region – should be at the core of the debate this coming July as youth, small-scale producers, local groups, researchers, private sector representatives, policy leaders and delegates meet in Rome, Italy for the Pre-Summit gathering of the 2021 UN Food Systems Summit.

Last but not least, cities have a key role to play in this transition as they account the lion's share of food demand. They have the power to set, shape and fuel trends. Taking the lead in transitioning to a fair and sustainable Mediterranean food culture may be one goal and responsibility they want to take on as they grapple with post-COVID-19 recovery challenges.

#MoveTheDate WITH FOOD

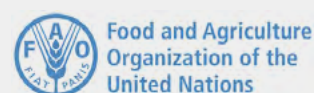


Forests

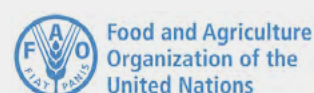
Forests and Climate Change



Dr. Gianbattista de Dato
Expert, FAO, [Silva Mediterranea](#)



Dr. Giovanni di Matteo
Technical and Scientific Assistant, FAO, [Silva Mediterranea](#)



Forests provide numerous services, such as functioning as carbon sinks while also releasing oxygen, being sources of timber and wood, food provision, home to many species, represent hotspots for biodiversity, regulation of micro-climate, soil protection, water regulation, etc.

In 2015, the estimated forest area in Mediterranean countries was over 88 million hectares, rep-

resenting 2.2% of the world total. Despite an increase of 1.8 million hectares between 2010 and 2015 - an effect of urbanisation and decline of rural populations, accompanied by the abandonment of agricultural land and declines in free-range livestock numbers - there are 80 million hectares of degraded land in the Mediterranean, including forests. The region's forest ecosystems are subject to numerous threats such as forest fires, overexploitation, deforestation and degra-

ation. Historically present, these threats, are nowadays accentuated within a context of climate and land-use changes.

These pressures are also differently exerted in the northern and southern basin: while forest cover increases in Mediterranean Europe, in North Africa as well as the south and eastern Mediterranean forests have gradually declined over the last 50 years. This decline is driven by population growth and direct demand for fuelwood, food and fibre, leading to overgrazing, overexploitation and forest clearing. Deforestation proceeds at an annual rate of around 1.1% in the southern and eastern Mediterranean - a higher rate than in tropical countries.

The [5th IPCC Assessment Report](#) predicts by the end of the century, an average temperature increase for the Mediterranean region of about 4-6°C with 20-50% less rainfall during the summer months. Expected climate change will also extend the expansion of Mediterranean-like climate conditions to additional areas. Moreover, increased areas of unmanaged forest in the north and deforestation and overexploitation in the south will increase the level of biotic (pests and diseases) and abiotic (fires, droughts, etc.) risks, reducing the possibilities for adaptation to climate change with potential extended forest die-back and forest cover loss.

Assessment of the vulnerability to climate change of Mediterranean forest ecosystems and forest-dependent communities and their adaptation capacity is critical for making decisions and understanding climate change's impact on social and natural systems.

[Guidi et al. \(2018\)](#) reported several examples where Climate Change Vulnerability Assessment tools in the forest sector have been successfully applied at a national and local scale, covering socio-economic or biophysical or a combination of both issues, with different data availability and accessibility. They provided scientific evidence

for pursuing effective climate change adaptation methods and thus for their implementation by stakeholders.

Moreover, analysing a comprehensive trial network for testing over 150 populations of the circum-Mediterranean Aleppo pine under "moderate" (RCP 4.5) and "pessimistic" (RCP 8.5) carbon dioxide emissions scenario for the period 2071-2100, [Patsiou et al. 2020](#) (but see also [Peterson 2020](#)) revealed expected extensive height-growth reductions for coastal areas of France, Greece, Spain and Northern Africa. Mesic ecotypes currently experiencing more favourable (wetter) climate conditions are at the highest risk, increasingly outperformed by dry-adapted eastern ecotypes, showing higher genetic diversity.

This pattern is contrary to the general expectation that climate change will have the most significant impact in the warmest and driest portion of a species' range. Similar analyses are underway for other Mediterranean key-forest species.

Generally speaking in a climate scenario, a species' capacity to grow and reproduce should decrease from the 'leading-edge' (recently favourable habitats where populations are expanding) to the 'trailing-edge' (whither populations are retreating from recently unsuitable habitats), following a climate gradient. Conversely, these studies suggest considering not only southern Mediterranean forest species to be introduced into latitudes further north but also their intra-specific diversity.

In fact, introducing individuals of higher fitness than residents, thus bringing pre-adapted individuals by assisted gene flow (AGF), might increase the local adaptation in the short and long term, providing greater genetic variation for future evolutionary processes and facilitating the adaptation of forests to climate change.

However, this option should be adopted with caution: an appropriate knowledge of the genet-

ic diversity and the evolutionary forces (natural selection, genetic drift and gene flow) acting on populations need to be assessed by combining classic demographic parameters (density, size, age, etc.) with genetic parameters, as the responses will likely affect the whole forest community in which trees are planted.

These issues have been widely investigated by the scientific community. But the role that the Mediterranean forests can play in the global challenges to fight climate change and reach sustainable development goals requires cooperative research consortia on several topics, including the benefits derived from non-wood forest products, the role of young generations, the control of new pests and diseases, etc., processing big data banks and metadata, capacity building and for exchanging knowledge.

Established in 1948, the Committee of Mediterranean Forestry Questions - *Silva Mediterranea* - is a FAO statutory body, where the Mediterranean member countries of the European Forestry Commission, the [Near East Forestry Commission](#) and the [African Forestry and Wildlife Commission](#) meet, share experiences and establish cooperative programmes. Its role is to insert Mediterranean forest questions into a participatory process, acting as a catalyst for their management, proposing related calls for action, and addressing its six working groups' activities on timely and emerging forest topics.

Where research is needed, the Committee has established cooperative research networks on subjects identified during its sessions. Six working groups have been established on Forest Fires, Forest Genetic Resources, Cork Oak and Non-Timber Forest Products, Urban and Peri-Urban Forestry, Desertification and Restoration of Mediterranean Drylands, Forest Management and Sustainable Development.

The Mediterranean Forest Week (MFW), coordinated by *Silva Mediterranea* is one of the most

important fora where regional issues can be discussed. The 7th Mediterranean Forest Week scheduled for March 2020 was postponed due to the pandemic and new dates and main themes have yet to be announced.

The topic of the 7th MFW was "Mediterranean forests: Enabling new opportunities for young people and rural populations". The general objective was to build a shared vision on the role of young people and rural populations in the sustainable management of Mediterranean forests in a changing world, identifying opportunities offered by forest-based solutions, mobilising stakeholders involved in the management of Mediterranean forests, sharing experiences on innovative forest management for possible replication among countries. The MFW would also promote landscape approaches for Mediterranean forests focusing on restoration and biodiversity conservation, enhancing forests' interaction with other land uses such as agriculture and pastures.

All these themes are intimately related to the tools to reach the goals of the zero-carbon economy and restoring forest ecosystems in which Mediterranean forests and people can play active participatory roles.

There is an urgent need to act to halt land degradation and restore degraded lands. The challenge is to both conserve the main cultural landscapes and restore the most degraded or threatened ecosystems. In view of the global and regional goals and ambitious new national commitments, it is important to identify and properly implement low-cost, long-term strategies for landscape restoration.

The "[Agadir Commitment](#)", adopted on the occasion of the 5th Mediterranean Forest Week in March 2017 was endorsed by ten countries - Algeria, France, Iran, Israel, Lebanon, Morocco, Portugal, Spain, Tunisia, and Turkey - and strongly supported by several international organisa-

tions - CBD Secretariat, FAO, IUCN, WRI, GP-FLR, World Bank, Global Mechanism, Union for the Mediterranean, Plan Bleu, EFIMED, MMFN, CTFC. The Commitment proposed the establishment of a new Regional Mediterranean Initiative on Forest and Landscape Restoration (FLR) aimed to restore at least 8 million hectares by 2030 in the Mediterranean.

The FLR Mechanism of FAO is currently managing a project launched in 2018, financed by the German government and labelled by the Union for the Mediterranean. The project aims to support the restoration of degraded lands to help countries achieve positive climate mitigation and adaptation impacts that will contribute to their Nationally Determined Contributions and other commitments such as the Bonn Challenge on the restoration of degraded and deforested lands and the Aichi targets on biodiversity. The project has three components: one regional Mediterranean component to enhance national capacities to successfully plan, implement and monitor large-scale forest and landscape restoration programmes to achieve countries' NDCs; two national components with activities in pilot sites in Morocco (Maâmora forest) and Lebanon (Shouf Biosphere Reserve, Bkassine forest).

To support the implementation of the forthcoming UN Decade for Ecosystems Restoration, a FAO-led Task Force on Best Practices has been established involving 85 individuals from 32 leading global organisations to lay the ground for efforts on knowledge capitalisation and dissemination. In the Mediterranean, the focus will be on the capitalisation of good restoration practices (to share relevant knowledge between restoration practitioners) and on monitoring the restoration investments and efforts building on innovative monitoring tools/approaches currently developed by FAO.

In view of the key role of forests in regional climate change mitigation and adaptation, the forthcoming Union for the Mediterranean Ministerial Meeting on Environment and Climate Action is invited to pledge strong support to the Regional Initiative as well as to the UN Decade, thus ensuring that mechanisms to deliver needed results are put in place.

Biosphere Reserves

Biosphere Reserves: open laboratories for climate impacts



Ana Luiza Massot Thompson-Flores
Director, [UNESCO Regional Bureau for Science and Culture in Europe](#)



The Mediterranean region has already experienced an increase in average temperature of 1.4°C since the pre-industrial era, 0.4°C more than the global average. Europe and the Mediterranean region suffer each summer from an increasingly warming and drying climate, already causing loss of life and disruptions throughout the region. The Mediterranean, where a large part of the population lives close to the coast, many in coastal sites and cities, is particularly affected.

In South-East Europe and the Mediterranean, UNESCO through its Regional Bureau for Science and Culture in Europe and its scientific programmes - such as the [Intergovernmental Hydrological Programme \(IHP\)](#), [Man and the Biosphere \(MAB\)](#) and [Intergovernmental Oceanographic Commission \(IOC\)](#) - is contributing to discussions on how climate change is affecting the region, notably its water resources and the Mediterranean Sea.

In addition, UNESCO has been working closely with its Member States to study the effects of climate change on UNESCO sites, such as biosphere reserves, Global Geoparks and World Heritage sites - with many situated on the Mediterranean coast threatened by sea level rise - and propose ways for these sites to best adapt to climate change and to the multiplication of extreme weather patterns. UNESCO is also working both at the global and regional levels with youth and promoting education as key to addressing climate change through [Education for Sustainable Development](#) and climate change education.

The regional symposium [“The future of South-East Europe and the Mediterranean in the context of climate change: a UNESCO perspective”](#), organised by the UNESCO Regional Bureau in November 2019 gathered 58 attendees including national and regional authorities, youth activists, experts and scientists, and UNESCO site managers to contribute to a climate-resilient South-East Europe and Mediterranean region.

The symposium explored how UNESCO could more effectively work with UNESCO sites, which are emblematic sites both in terms of nature and culture in the region, to increase their resilience to climate change and extreme events.

Since then, the UNESCO Regional Bureau has been working with its partners around the region to develop concrete projects with partners within the network of UNESCO sites (close to 200), located within the purview of the Bureau's mandate. This large presence on the ground creates an unparalleled opportunity for joint action to tackle the climate crisis, through adaptation and resilience building, and to significantly help contribute to achieving the UN 2030 Agenda for Sustainable Development and the Paris Agreement on climate change. The Bureau has also been active in addressing the effects of climate change on the Mediterranean Sea, in particular as part of the Intergovernmental Oceanographic Commission of UNESCO's global ocean literacy initiative coordinated by its project office based in Venice.

The UNESCO Regional Bureau has been working very closely with managers and experts in UNESCO sites in order to promote best practices for adaptation to climate change. The issue in particular was a key theme in the series of Man and Biosphere (MAB) summer universities organized with MIO-ESCDE over the past 6 years, which have sought to improve the interaction of young students and professionals within UNESCO Biosphere Reserves and exchange knowledge on the impacts of climate change on these sites.

The Regional Bureau is also a partner in EU-funded projects related to climate change and UNESCO sites, notably [SHELTER](#) (Sustainable Historic Environments holistic reconstruction through Technological Enhancement and community-based Resilience) started in 2019. The project aims to bring together the scientific community and heritage managers with the objective of increasing resilience of cultural and natural sites to climate change. The Santa Croce Church in Ravenna, Italy (UNESCO World Heritage Site) is

one of the five Open Labs that steer and validate the SHELTER activities on climate adaptation. Another transboundary Open Lab is the Sava River Basin, a major catchment in South-East Europe, coordinated by UNESCO Regional Bureau together with the International Sava River Basin Commission.

Another important climate-related line of work of the UNESCO Regional Bureau is the [Issue Based Coalition \(IBC\) on Environment and Climate Change](#), made up of 18 UN agencies, led in coordination with UNEP and UNECE. Launched in 2020, the IBC provides a regional platform for UN agencies to support Member States in Europe and Central Asia in their implementation of the 2030 Agenda and the Paris Agreement on climate change. The IBC's main goal is to support Resident Coordinators (RCs) and United Nations Country Teams (UNCTs) in Europe and Central Asia on environmental and climate change issues.

Within this context, in March 2020, UNESCO and UNECE co-led a regional webinar on water and climate change on the occasion of the launch of the [2020 World Water Development Report \(WWDR\)](#) on the same topic. The webinar presented the results of the WWDR and initiated a discussion with RCs and members of UNCTs in the region that are planning, implementing and monitoring water and climate with national authorities. Through activities such as these, the UNESCO Regional Bureau and its partners provide national counterparts with data, tools and recommendations and help assist Member States to effectively and efficiently manage their resources in the climate change era.

Climate change, the 'defining issue of our time' according to António Guterres, UN Secretary-General, is not going away and its effects will be dramatic, notably in the Mediterranean. UNESCO stands ready along with its partners in the region including MIO-ESCDE, to assist its Member States and other key stakeholders such as UNESCO sites, to adapt to this new reality and transform the way we live in order to ensure the health of our planet for future generations.

Cities

Cities and Climate Change: The battle against the climate crisis is being played out in the cities



Josep Canals-Molina
Secretary General,
[MedCities](#)



More than twenty years ago, local authorities began to take measures considered unpopular. In 1991, twelve Mediterranean cities gathered to jointly tackle environmental and climate challenges, giving birth to the MedCities network. Nowadays, many public representatives have realised that working for a healthier, less polluted environment, with less noise and smoke, greener and with more water on public spaces makes a city more liveable, egalitarian and attractive for investment. But, is it too late?

Facing the climate crisis, MedCities promotes both mitigation and adaptation measures among its member cities. The organisation provides support to municipalities by either implementing projects and technical assistance action directly or by connecting them to broader initiatives such as [CES-MED](#), MedCCA or [CLIMA MED](#), all

of them addressed to replicate the Covenant of Mayors model to the Eastern and Southern shore.

Regarding direct implementation in member cities, MedCities promotes the elaboration of Sustainable Urban Mobility Plans (SUMP) in cities, mainly through the [Urban Transports Community](#), an Interreg Med programme. In the field of energy transition, MedCities is implementing the [Rev'Acte project](#) in Tunisia, providing capacity building in seven cities to adopt measures linked to energy efficiency, renewable energy or sustainable construction.

MedCities is also implementing Non-Conventional Water Resources (NCWR) schemes through the ValEUr Gabès project, promoting innovating rainwater harvesting techniques in the Tunisian city of Gabès.

The network promotes global action in the field of biodiversity protection, through the [Biodiversity Protection Community](#) and uses City Development Strategy of Tunis as a planning instrument to build sustainable and liveable urban communities.

Another example is the concrete efforts to reinforce capacities of member cities. MedCities has increased capacity-building activities on these topics, i.e. by providing training modules to respond to climate-change related challenges in cities. Support in access to funding is another significant line within the organisation, by supporting members in building proposals to apply for calls related to this topic, such as the Climate Change Adaptation Grant Programme, Partnership for Cities or the City Climate Finance Gap (EIB).

In order to bring this experience to policy frameworks, MedCities has engaged in related consultations such as the Union for the Mediterranean consultation on the future of the Blue Economy in the Mediterranean region and the EU Consultations on the Climate Change Adaptation Strategy and the Climate Pact under the umbrella of the Green Deal.

Regarding the rising sea levels, MedCities is part of the team developing, through the EU DG REFORM mechanisms, the Strategies for Coastal Protection in southern Spain and the Balearic Islands. Our role is to support and facilitate local stakeholder engagement with special focus on municipal authorities as our member cities of Málaga and Palma with the Nature Based Solutions approach.

In my opening words I wondered whether it was too late. The answer is probably yes, so now we only have time left to act. It is necessary to call out more than certain lobbies do and talk with those advanced, persevering politicians who have a medium-term outlook and to work with alliances to be considered.

Faced with this scenario, local authorities need greater economic resources and political power to be more effective in improving the lives of its citizens. Municipalities are the first ones needing to implement the 2030 Agenda but they need efficient tools to do so. MedCities as other Mediterranean associations, finds its 'raison d'être' in supporting these efforts.

As an example, we work with the Centre for Mediterranean Integration ([CMI](#)) and the Agence Française de Développement ([AFD](#)) in an initiative towards "Enabling Mediterranean Cities to Climate Action - MedCCA", in partnership with [AViTEM](#), and the Union for the Mediterranean, in coordination with EU CLIMA-MED. The overall aim of this intervention is to increase city-level institutional capacity to manage urban climate change risks and develop sustainable climate action plans.

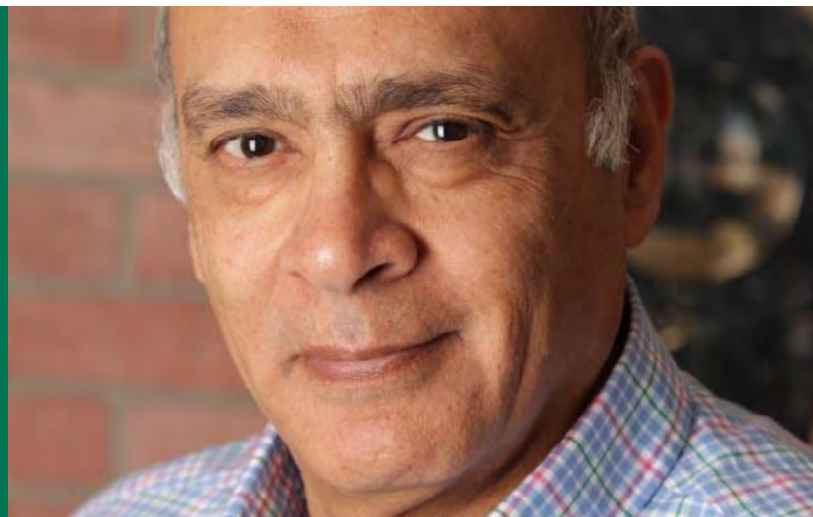
MedCities is also an active stakeholder in the UNEP Mediterranean Action Plan/Barcelona Convention system. In this regard, the association was actively present in COP 21, highlighting the need of counting with local authorities in order for all to thrive in achieving common goals. In COP 22 this aspect will be reinforced. Multilevel governance experiences platforms such as the Mediterranean Cooperation Alliance are the perfect partners to states to ensure implementation of the global and regional agendas.

To conclude, the climate crisis is a pandemic that has been around for a long time and will not be cured by any vaccine but by the perseverance and spirit of millions of people working together to reduce the harm we do to our planet.

And this battle starts where more than 75% of the total world population will live by 2050 - cities.

The voice of civil society

Egypt's Civil Society Climate Change Advocacy



Dr. Emad Adly
General Coordinator, Arab Network for Environment and Development ([RAED](#))



Egypt is highly vulnerable to climate change and faces numerous threats on economic, social and environmental levels, challenges fueled by its rapid increase in population and finite resource base.

Thus, Egyptian CSOs focusing on environmentally sustainable activities have been recently shedding more light on climate action and pushing for more policy changes to better combat the climate change situation. One organisation is the [Egyptian Sustainable Development Forum \(ESDF\)](#) established in July 2012. It has recently increased its focus on facilitating the dialogue

among different stakeholders to determine the policy gaps in relation to legislation, strategies and national planning to achieve sustainability and address what needs to be changed regarding climate change policy and climate security.

More efforts have accordingly been directed towards aligning priority actions with the UN Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction as synergy between these three international commitments is crucial for achieving the desired change. Within the UNFCCC process Egypt met its commitments by submitting its Nationally Determined

Contribution in 2017 and in parallel launched the nation's Sustainable Development Strategy for 2030. Egypt is currently engaged in the internal process stage of developing its revised NDC document by the Ministry of Environment and some other government agencies.

RAED has been one of the most prominent leaders in combating climate change both in Egypt, as well as in the Arab region. It has been active in working on multiple focus areas such as disaster relief, water management, fulfilling SDGs, capacity building and governance, waste management and of course climate change. RAED constantly encourages CSO engagement through developing their capacities. It is one of the founding members of MIO-ECSDE and has participated in implementing projects and activities in collaboration with the Global Network for Disaster Reduction ([GNDR](#)), the Norwegian Refugee Council ([NRC](#)), EU, UNESCO, etc., many of which tackle climate change.

RAED assisted in setting up other entities which also contribute to climate action, such as the above-mentioned ESDF, the Arab Office for Youth and Environment (AOYE), the Nile Basin Discourse ([NBD](#)) and the [Arab Network of National Fora for Sustainable Development](#), recently recognised by the League of Arab States.

During project implementation RAED disseminates much of the related knowledge and information across its wide network of members in the Arab region. This gives it a great advantage in achieving a strong outreach when tackling crucial issues like climate change. In addition, RAED's monthly Newsletter "[Montada Al Biah](#)" contributes to building environmental awareness in the Arab region through its contents relating to environmental issues and events. The publication is widely disseminated electronically among environmental associations, civil society organizations, media agencies and environmental specialists in all Arab countries. "Josoor 2030" is a website launched by RAED which publishes local

and international information about projects and events that contribute to the SDGs.

In addition, RAED takes a broadly-based approach regarding the steps the government should be taking in order to mitigate and adapt to climate change. It advocates for the enforcement of more laws binding emitters to specified carbon targets, for more involvement and consultations with CSOs as well as for developing the capacities of local authorities and concerned actors to better enhance their efficiency when working on climate change related activities.

RAED has also made multiple national contributions such as the Grassroots Socio-economic Programme for Local Communities Development Clusters ([GRASP](#)) Egypt Project (2017-2019) implemented in collaboration with Action Against Hunger. The project supported initiatives on recycling of agricultural and solid waste, energy efficiency, rooftop gardening in addition to capacity building and training on climate change awareness. Another project was implemented on climate-induced displacement in cooperation with the Norwegian Refugee Council (NRC) to identify needs and opportunities to help integrate the implementation of DRR policies related to internally displaced people, to reduce vulnerabilities and improve resilience.

These regional and national achievements have faced some challenges. Knowledge gaps do present themselves during the implementation of projects such as the gap between science and policy. The process of policy-making does not immediately answer to the technical part and so it tends to be slower, hindering the speed of effecting change. Although many Egyptian CSOs work to form meaningful partnerships, there is still more room for more collaborations and partnerships which would ultimately lead to more projects serving climate change action.

In conclusion, a general increase in awareness has recently been observed with a noticeable rise

in national interest concerning the issue. Egypt's President Abdel Fattah Al-Sisi constantly addresses the subject during his speeches highlighting the importance of combating climate change - also mentioned in the 5th objective of Egypt's Vision 2030 under the heading of "Integrated and Sustainable Ecosystem". In addition, the government is working on implementing more sustainable transport systems as well as multiple projects focused on solid waste management. A National Committee has been set up for the reduction of production and consumption of plastics.

These actions have enabled CSOs to contribute more to climate action. However, still more support is needed to allow civic, private and public sectors to interact and collaborate bet-

ter. This calls for the right mix of incentives and private-public-partnerships. An integrated approach is key. In its turn, RAED continues to push for more collaboration between countries in the Arab region to better combat climate change.

This is facilitated through its participation in multiple activities which pave the way for that sort of collective integration. One example is RAED's participation in the UfM's Environment Task Force and the UfM's Working Group on Environment and Climate Change where it represents Arab CSOs. RAED also participated in the UfM Ministerial Meeting on Environment and Climate Change in Athens in May 2014, as well as in the consultations for the formulation of the UfM's post-2020 Environment agenda: the 2030 GreenerMed Agenda.



Photo Credits: Unsplash

Croatia's uneven progress towards greener energy



Vjeran Pirsic
President, [EKO KVARNER](#),
Croatia



EKO KVARNER has been active in public discussions with government organizations and in advisory institutions on topics of climate change since 2014. We are a member of the Croatian Climate Change Panel. In recent years our NGO helped to publish and promote some books on climate change, we organised public awareness activities such as lectures in universities and local communities.

EKO KVARNER coordinated a team of experts to develop several green plans for the sustainable development of municipalities and counties. We actively participated in the revision of Croatia's Nationally Determined Contribution within the UNFCCC process. However, Croatian policies and national inventory reports are deficient (according to experts) and lacking best practice recommendations.

Indeed, while Croatian civil society is formally very much involved in decision making, in reality public hearings are often announced late, e-consultation is sometimes only open for six days while comments are only considered if propos-

als have already been tabled ahead of the start of the consultation. Thus, the democratic process is simulated; there is no real significant impact of civil society. An additional aggravating circumstance of the environmental advocacy situation in Croatia is the fact that a separate Ministry of Environmental Protection no longer exists, since its functions have been taken over by the Ministry of Economy and Sustainable Development.

Despite Croatia's major renewable energies potential there remains a very strong pro-fossil fuels lobby. Although its own coal mines are exhausted, it now imports coal from South Africa as well as electricity generated by fossil fuels-based power plants located in Bosnia and Serbia. In 2009 the government exaggerated future energy demand to prove the need for more power stations, while limiting the expansion of renewable energies. There is also strong interest and local research work on technologies such as Carbon Capture and Storage.

The government continues to pretend it wants to "go green" while favouring continuing fossil fu-

els dependence. The Low-Carbon Development Strategy drawn up in 2015 remains a dead letter.

The new 2021-2030 National Energy Strategy, posited on strong economic growth, is totally neo-liberal, with a heavy focus on gas as well as other fossil-based energies and nuclear. The pressure from the US and Russia shaping the strategy is notable, including for a large offshore liquid natural gas (LNG) terminal and regasification unit on Krk island (an EU Project of Common Interest and a priority project of the Central and South Eastern Europe Connectivity Initiative) originally planned to be onshore. This was strongly opposed by EKO KVARNER and like-minded organisations as well as by the island authorities.

Speaking at the terminal's inauguration on 29 January 2021, the Director of the Innovation and Networks Executive Agency ([INEA](#)), Dirk Beckers, said: *"The Krk LNG terminal is of strategic importance for the security and diversification of natural gas supply in Central and South-Eastern Europe. It will also ensure the effective integration of other key natural gas infrastructure projects into the regional gas market and overall it will enhance the competitiveness of the region"*.

However, last year's positive changes in Croatia's National Energy Strategy included a clearer opportunity for energy independence, including substantial funding and support for the construction of renewable energy installations. Until 2018 applications for rooftop photovoltaics required 66 separate documents, but this has now been reduced to three. This was achieved also thanks to persistent pressure from EKO KVARNER and similar organisations, which made an important contribution through the years pointing out the problems needing correction. In June 2020 the government approved new targets allowing up to 1 GW photovoltaic installations and 1 GW wind power.

EKO KVARNER has been particularly active in promoting climate change mitigation in Croatia's

largest island, Krk (408 km²) where it is based and for the last nine years has organised the annual "Island Krk Energy Conference". The island's population of 20,000 increases up to 120,000 during the summer, leading to high stress on its infrastructure. The high cost of importing energy from the mainland and seasonality creates increasing problems. The local authority and community have shown ambition in climate adaptation by adopting energy sustainability measures, waste management and electric vehicles infrastructure. A network of local stakeholders has also been set up with the same goal, through its Strategy for Zero GHG emissions created in 2012. Krk island not only intends to become energy independent but also CO₂ neutral by 2030.

EKO KVARNER is also a sponsor of the first Croatian energy cooperative ["Energetska zadruga Otok Krk"](#) to mobilise prosumers to benefit from jointly negotiating equipment prices, but also from competing on the energy market, investing in the communal project of the island's first large solar power plant and in creating a virtual power plant in the future.

EKO KVARNER leads community building on three levels:

- policy formulation with local authorities
- civil society activities oriented towards citizens (educational, workshops...)
- cooperation with experts (universities and energy providers)

As the main coordinator of most of the island's energy transition activities, EKO KVARNER is under contract with [EUKI](#) as operative IKRE project leader and energy transition optimization manager. Its mission is to create as many RES projects as possible, in order to minimize and then eliminate the use of fossil fuels. A permanent information office will be set up on Krk to advise citizens on solar systems, but also on circular

economy and sustainable tourism, to show that carbon neutrality and tourism need not be mutually exclusive.

In 2020 the Clean Energy Secretariat of the EU Islands ranked Krk among the top ten best practices in the whole of Europe related to energy transition.

EKO KVARNER is currently developing renewable energy projects based on prosumers and on-site energy production. A challenge is how to implement the large-scale penetration of mostly variable renewables into the power grid. Our next steps will be to search for best solutions for a climate-wise energy grid optimization solution, arid planning and consumption scheduling suggestions.

The future vision of Krk includes the use of electric vehicles, solar, wind power and biogas to produce electricity; smart grid and blockchain technology; self-sufficient households and on-site production as the new normal. Krk adopted an updated version of the “Zero Emissions Development Strategy” in 2018 as an impetus for integrated and sustainable island development and has an energy cooperative set up since 2012 and two energy transition management companies. Island Krk Energy coordinates the construction process as well as the production and transmission of clean, solar energy from the future 5W solar power plant (Barbičin). The plant will come on line this year with co-ownership in this project and facility available to all islanders, or companies incorporated in the island. Smart Island Krk was subsequently established to focus on smart processes and digitization.

The use of LED technologies has reduced electricity consumption from 1.02 million kWh in 2010 to 734,864 kWh in 2018. With transport emissions accounting for 53% of its total, an electromobility programme was developed by building 12 EV charging stations for vehicles, and more recently eight charging stations for 80 electric

bikes, which should soon come into use through a bike-sharing system.

The current strategy for the island envisages about 36.8 MWP generated by new photovoltaic installations (on roofs), as well as an additional 4 MWP of ground-based photovoltaic installations in the near future. In addition, the plan also aims at installing 25.2 MWP of wind power and 250 KWP of biogas plants. This investment, estimated at 89.65 million euros, is expected to make Krk completely energy independent in the coming decades.

As regards the planned UfM Ministerial Meeting we urge a key focus on the energy transition and green transport. Currently the development of renewable energies in the Mediterranean is not harmonised among countries. What is needed is the exchange of knowledge and best practices, as well as enabling cross-border energy trade (according to the optimal regional meteorological situation). As regards transport, fossil fuels continue to dominate air and road transport, while the potential of increased maritime transport in the Mediterranean is increasingly neglected. A return to traditional maritime transport and the strengthening of Mediterranean connections in contrast to the dominant transport methods would contribute to reducing CO₂ emissions.



EKO KVARNER



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Morocco's climate change commitments



Prof. Mohamed Ftouhi
President, Club Marocain
pour l'environnement et le
Développement ([CMED](#))



Located in northwest Africa and on the southern shore of the Mediterranean, a crossroads of diverse civilizations, Morocco is experiencing economic development and significant demographic and urban dynamics within a context of climate change.

This is characterized by a worrying pressure on its natural resources, forest ecosystems and on agricultural development due to the alternation of years of drought and the scarcity of water resources. Thus, the average annual per capita water supply has declined from over 2,500m³ in the 1960s to about 700m³ today.

As part of its initial Nationally Determined Contribution, Morocco committed to reduce its GHG emissions by 42% by 2030 with 25% as a conditional target and 17% as an unconditional one, requiring an estimated total investment of \$50 billion by 2030. Under its revised NDC this target has been increased to 44.2% by 2030, of which 18.5% unconditional.

The NDC revision process took place under a

participatory and concerted approach involving economic sectors, the private sector, the scientific community, networks of environmental NGOs, such as the Moroccan Alliance for Climate and Sustainable Development (AMCDD) in which the Moroccan Club for Environment and Development coordinates the Sustainable Development Goals commission.

The NDC commitment will be honoured by the implementation of adaptation and mitigation measures according to an integrated, participatory and responsible approach. The investment mentioned above will be oriented towards the financing of adaptation and mitigation actions, by means of a transition to a new mode of development no longer based on carbon and fossil fuels but on decarbonisation through innovation, an energy transition to renewable energy (solar, wind, hydropower) and the encouragement of green investment by public and private companies. This concerns in particular the energy, agriculture, water resources sectors, the preservation and sustainable management of forests, integrated coastal management, recovery of household

and similar waste, improvement of sanitation, liquid and wastewater treatment, encouraging clean transport (extension of tram lines in major cities such as Rabat and Casablanca).

Morocco's commitment to the fight against climate change and the preservation of the environment is embodied in its 2011 constitution which establishes Sustainable Development as a civil right. A framework law containing the national charter for the environment and sustainable development was issued in 2014. It clearly recognizes the inherent rights and duties to the environment and sustainable development relating to both individuals and legal entities.

In 2019, Morocco published its National Climate Plan 2030. It created the "National Commission for Climate Change", as well as working to improve intersectoral coordination and involve non-governmental organizations in decision making on climate change implementation and monitoring of its climate strategy.

Morocco's energy action was to achieve an ambitious target of 42% of its installed capacity from renewable energy by 2020, currently at 37%. The target for renewable energy would be to reach 52% by 2030. The National Energy Efficiency Strategy, meanwhile, aims for energy savings across all sectors, of around 20% by 2030.

For the implementation of this charter, Morocco developed the [National Strategy for Sustainable Development \(SNDD\)](#) 2016-2030, issued in July 2019, which through its seven strategic issues converges with the UN Sustainable Development Goals. It also integrates the "climate change" dimension into public policies and development plans and projects initiated by state and local authorities as well as by the private sector.

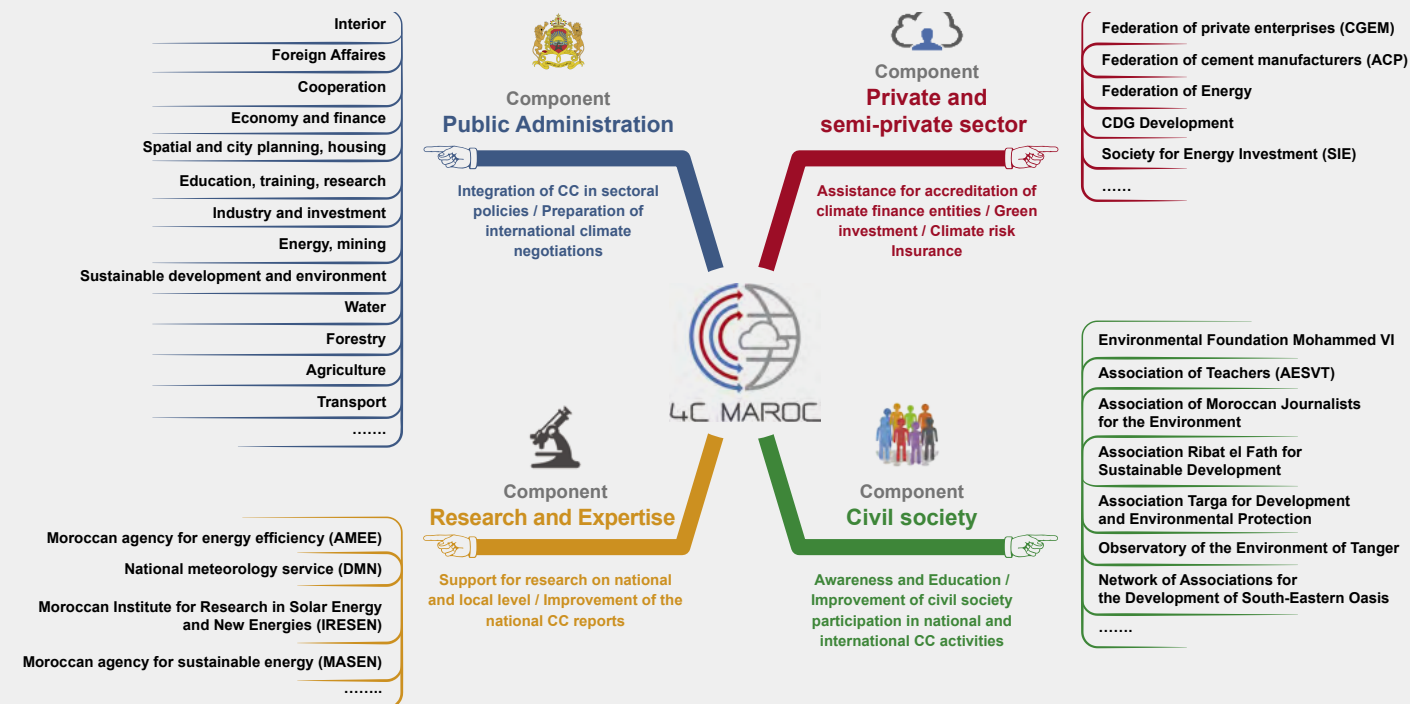
Implementation of the NDC is affected through 21 integrated sectoral action plans for sustainable development as well as by a horizontal national action plan reflecting state responsibility

in the areas of water, energy, waste, and transport management.

One of the SNDD's seven major axes relates to climate action by means of the implementation of the national policy for combating climate change at the territorial level (the elaboration of territorial climate plans), as well as through the financing of investment projects related to adaptation measures, climate change mitigation, carried out by public and private economic actors.

Furthermore, it should be emphasised that Morocco ensures that the involvement of public institutional actors is complemented and strengthened by the mobilisation of actors concerned with climate action and sustainable development, including the scientific community, local authorities, the financial sector, the private sector and civil society. These actors are represented in the National Commission on Climate Change, which is responsible for proposing all measures that may revise and implement national policy on combating climate change, including the periodic review of the NDC and the preparation of periodic reports on the implementation of the results of the UNFCCC and the Paris Agreement.

To achieve this involvement, a participatory entity was created, with the main mission to encourage and exchange information and strengthen the capacity of stakeholders involved in the fight against climate change. This entity, [Morocco's Climate Change Competence Centre](#), is open to the African continent as part of South-South Climate Cooperation. This was decided at the Africa Action Summit, which brought together some 30 African countries on the side-lines of the COP 22 in Marrakech in 2016.



Centre de Compétences Changement Climatique du Maroc

Source: <https://www.giz.de/en/downloads/giz2018-en-schema-Mitglieder-morocco.pdf>

In this regard, Morocco's role is focused on capacity building and mobilisation of funding to support African countries in their efforts to combat climate change. To this end, a Climate Investment Plan (PIC-Climate) has been developed and will be implemented through the three Climate Regional Commissions, created at the Summit of Heads of State in Marrakech in 2016:

- The Congo Basin Climate Commission, chaired by Congo;
- The Sahel Climate Commission chaired by Niger;
- The Climate Commission for African Island Areas chaired by Seychelles.

According to the 2020 annual report of the independent international scientific organization: Climate Action Tracker (CAT), Morocco is successfully continuing its progress in climate policies and could, as one of the few developing countries to do so, be able to reduce its emissions by 2030 as planned by its revised Nationally Determined Contribution as the expansion of renewable energies continues. The share of these clean energies now represents nearly 20% of electricity produced (in MWh) and 37% of the installed renewable energy capacity (in MW).

The trends in GHG emissions indicate that the measures taken by Morocco respect its climate commitment and they are compatible with the Paris Agreement which aims to stabilize global warming at 1.5°C.

translated from the original French by the guest editor



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Spain's Nationally Determined Contribution falls short of needed policies



Cristina Alonso Saavedra
Climate Justice Lead,
[Friends of the Earth Spain](#)



Spain's Nationally Determined Contribution is contained in three legislative texts: i) the Integrated National Energy and Climate Plan ([PNIEC 2021–2030](#)) which sets out measures to reduce GHG emissions as well as to increase the role of energy efficiency and renewable energies; ii) the Long-Term Strategy ([ELP](#)), the roadmap to achieving carbon neutrality by 2050 at the latest and; iii) the Climate Change and Energy Transition Law ([LCCyTE](#)), the legal framework guaranteeing the economy's orderly transition towards a low-carbon and climate-resilient economy in the medium and long term.

Friends of the Earth Spain considers that all of them suffer from a lack of ambition in terms of scientific recommendations and fail to support climate justice, since they do not address Spain's historic responsibility as a developed country.

The scientific community calls for a global annual reduction in emissions of at least 7.6%, or a total of 45% over 2010 levels by 2030, which should

enable climate neutrality by 2040. The PNIEC presented by Spain to the European Commission in 2020 establishes an emissions reduction target of 23% by 2030 compared to 1990. The ELP is based on climate neutrality by 2050. Together with many other environmental NGOs, Friends of the Earth Spain insists on the imperative need for greater ambition in the light of the current climate emergency. We demand a 55% reduction by Spain by 2030 over 1990 levels and climate neutrality in 2040.

The PNIEC's 2030 goals are to achieve a 42% share of renewable energies in final energy use and 74% in electricity generation. Environmental organizations demand a 100% penetration of renewable energy sources in final energy consumption by 2040 and a 100% renewable system by 2030.

According to MITECO (Ministry for the Ecological Transition and Demographic Challenge), in 2018 renewable energy represented 13.9% of total pri-

mary energy, ranking third as an energy source behind petroleum products (44.05%) and natural gas (21.2%). However, [BP's "Statistical Review of World Energy 2020"](#) indicates that, although renewables represented 16.9% of energy consumption in Spain in 2020 oil and gas exceeded 70%.

For this reason, direct and indirect subsidies for fossil fuels must be eliminated and the funds involved redirected to promote renewable energy, energy efficiency as well as to measures necessary to ensure a just transition out of fossil fuels. However, while the challenge of a 100% renewable energy electricity system by 2030 is a palpable reality, ways of getting there remain to be defined. Most of the projects approved and projected are large-scale in terms of power and are implemented by large energy companies or investment funds without any social, environmental or economic benefits for businesses or communities.

On the contrary, they further accentuate the perverse rural-urban relationship whereby rural areas supply the urban ones, while at the same time functioning as carbon dioxide sinks. In this regard our [Community Energy campaign](#) demands the government's formal commitment to the energy transition in line with European Directives, to focus on decentralized systems allowing greater resilience, greater democratization of the system, with citizen participation as a sine qua non.

The Climate Change and Energy Transition Law is currently close to approval. Long-awaited and necessary, we consider it to be both insufficient and obsolete. The agreement so far to reduce emissions by 23% by 2030 compared to 1990, coinciding with what is established in the PNIEC, is insufficient and does not support the countries of the Global South and is thus also obsolete from the outset.

Furthermore, this law does not include citizen participation in the energy transition and there is currently the danger that the government will

succumb to the pressures of the fossil industry allowing the introduction of concepts such as "technological neutrality" and "net-emissions". Concepts that would serve to further open the door to false solutions of unsustainable technologies such as carbon capture and storage or fossil gas, making it difficult to decarbonize the economy while continuing on a fossil-dependent pathway, contrary to the Paris Agreement.

In this regard, COP 26 is a decisive milestone in achieving significant progress in complying with the Paris Agreement and limiting the global temperature increase to less than 1.5°C. Its success will depend on whether the Parties arrive with commitments on mitigation and adaptation, finance and technology transfer as well as compensation for loss and damage. This acquires special relevance in the specific case of the Mediterranean area given its high vulnerability to climate change, as well as in terms of geo-strategic considerations.

For this reason, it is very important that the forthcoming Union for the Mediterranean Ministerial Meeting on Environment and Climate Action should endorse urgent climate commitments which can be presented at COP 26 and not just an exchange of information as has been the case at previous events.

A Mediterranean strategy comprising ambitious commitments based on science, international cooperation and citizen participation is essential.

translation from the original Spanish by the guest editor

Mediterranean Youth in Climate Action



Hajar Khamlichi
President, Mediterranean Youth Climate Network (MYCN)



Anna Rizzo
Board Member, MYCN



The Mediterranean Youth Climate Network was founded in 2016 by seven associations and youth climate movements active in 22 Mediterranean countries - of which four in Europe - France, Italy, Albania and Greece.

Our main mission is to strengthen the regional integration of initiatives led by Mediterranean youth and support the emergence of new actions at local and regional levels - while increasing the number and improving awareness raising techniques, positively influencing inter-

national, national and local climate-related policies and promoting youth engagement and active participation in climate negotiations and other decision-making processes. Our activities include participation in conferences and high-level groups, written proposals, roundtables and other appropriate means allowing transfer of skills and media visibility.

MYCN has recently expanded its network with the aim of spreading the voice of young people. Our ambition is to create an ever-wider network

of youth associations in the Mediterranean region so that there can be an exchange of ideas, challenges and good practices.

However, in order to ensure inter- and intra-generational sustainability and social justice, young people need to be able to understand and participate in public policy consultations. To this end, MYCN intends to continue its work at international level, by participating in high-level meetings such as those of the COP and COY.

At the same time MYCN intends to continue with a place-based approach, aiming to communicate more and more with local youth organisations such as Fridays For Future, in order to act as a bridge between civil society, and in particular young people in the Mediterranean regions. We call for mechanisms leading to the convergence of the various integration efforts within the framework of the Euro-Med partnership in order to meet the urgent needs of the region.

A focus on young people is crucial given their vulnerability to COVID-19- related impacts on employment and their role as the generation that will primarily work in the green jobs of the future. Young people can be meaningfully engaged in, and drive forward a just transition towards net-zero emissions. The search for innovative solutions to face the challenges of climate change is an opportunity to create new jobs, in particular for those who are still excluded from the labour market.

A culture of inclusiveness and environmental responsibility is much needed; the capacity of youth in climate change mitigation and adaptation efforts must be strengthened by establishing and investing in climate change and environmental education to also meet marginalised youth. Key levers, barriers and best practice examples to support greater alignment of action for youth empowerment policies must be identified, setting up a Multi-Stakeholder Task Force to assess local and regional regulatory barriers

and the needed technologies to unleash renewable energies and their transmission by means of strong grid storage.

We look forward to a more advanced climate action agenda emerging from the forthcoming Union for the Mediterranean Ministerial Meeting. Much is to be done to support a circular economy, a just transition, biodiversity protection and green jobs with a focus on youth and women and aligned with the UN Sustainable Development Goals. The region must be positioned as a clean energy source in partnership with advanced countries for technology transfer.

Therefore, projects such as the proposed East Mediterranean gas pipeline do not represent added value to the region due to the resulting tremendous increase in greenhouse gas emissions which would deflect the clean energy transition and low-emissions pathway - besides being a source of potential conflict in the region, which has already begun on a verbal level.

MYCN has been involved in side events at COPs 23, 24 and 25 and will participate in COP 26 alongside the global youth movement. It also participated in the 'Climate Change, Water and Sustainable Development' panel with the representatives of the European Commission's DG CLIMA and DG ENV and the Union for the Mediterranean at the annual forum of the [FEMISE network](#) in Brussels, Belgium (June 2019).

However, MYCN believes that the voice of young people is not yet fully heard in policy-making processes as it is not so easy for youth to be consulted by governments. Youth is increasingly demanding action towards a more just, equitable, and climate-resilient society. It is making its voice heard by media campaigns and demonstrations. However, current COVID-19 pandemic complicates the organisation of such events.

Youth organisations, therefore, can find their strength within local and regional governments

that have a focus on place-based strategies, building on the strengths of their territories, in order to turn challenges into opportunities. Indeed, to achieve the climate neutrality objective by 2050 outlined in the European Green Deal, a local approach is crucial.

An initiative highlighting the vulnerabilities of the Mediterranean sub-regions, and their crucial role in achieving climate and energy goals is the [RegionsAct! initiative](#) of the Conference of Peripheral Maritime Regions – CPMR. It pays special attention to the involvement of stakeholders (from both shores of the Mediterranean region) in the drafting and implementation of climate-related strategies.

The [European Climate Pact](#), launched last December by the European Commission provides an open space for young people, communities and

organisations for climate action. Both young people and adults can become Climate Pact Ambassadors to spur and support climate action in their own communities and networks.

The Union for the Mediterranean is playing an important role in building and maintaining the multilevel dialogue between civil society, youth organizations like the MYCN and local and national governments. The Union's support is valuable, promoting the credibility of the youth organizations vis à vis their local governments as well as contributing to regional youth empowerment. MYCN's involvement in the UfM's climate change and environment activities have given us an overview of the regional and domestic policies as well as the opportunity to connect with some regional stakeholders.



Global Climate Strikes Milano, Italy / Photo Credits: Unsplash

Box 5

CAN Europe and CAN Arab World NGOs appeal to UfM Energy Ministers

Ahead of the UfM Ministerial Conference on Environment and Climate Action later this year, Energy Ministers adopted a [Declaration](#) at their 14th June virtual meeting hosted by EU President, Portugal and co-chaired by the UfM Co-President, Jordan. CAN Europe and CAN Arab World networks had previously issued their concerns in a joint letter to ministers dated 10th June.

Dear Energy Ministers,

[CAN Europe](#) is Europe's leading NGO coalition fighting dangerous climate change in Europe, representing over 180 organisations in more than 30 European countries. [CAN Arab World](#) is a network of more than 120 organisations in 17 countries coordinating the efforts of civil society in the Arab world to promote climate protection and renewable energy, in addition to developing strategies to reduce carbon emissions from facilities across the region. Both coalitions include many members in the Mediterranean region, including your countries. We have recently learnt about the Draft Ministerial Declaration on Energy suggested for the Third Ministerial Conference on Energy of the Ministers of the Union for the Mediterranean (UfM) in charge of Energy to be adopted in its next meeting in Lisbon, on June 14th.

We welcome the efforts in moving forward the partnership, regional dialogue and cooperation

between the different Mediterranean countries to advance towards just, climate-neutral energy systems in the region. This is notably important for an area that is particularly vulnerable to climate change and to different environmental pressures that can severely affect the access to water and food. Reliance on sound and well accepted scientific information is key for understanding what is at stake. For this reason we encourage the energy ministers of the Union for the Mediterranean (UfM) to include a mention to the MEDECC report (endorsed by UfM) in their resolution, to put climate change adaptation and mitigation at the core of the Mediterranean energy policies.

As foreseen by IRENA (the International Renewable Energy Agency) and other studies, the Mediterranean region has abundant potential for the massive development of solar energy and onshore wind; the Mediterranean Sea has as well potential for far greater deployment of offshore wind turbines and ocean renewable technologies. The release of this potential should ensure the opportunity for citizens and local communities to engage in the energy transition and go hand in hand with biodiversity protection. This is particularly important in less resourced areas, populated by communities with less access to education and infrastructure. These communities need to be included in the planning process from a very early stage, avoiding impositions -particularly when

talking about big scale projects- and clearly prioritizing their population in terms of jobs, infrastructures and other economic and non economic benefits (education, projects...). Environmental integrity needs to be ensured when planning these developments, paying attention to impact risk to local resources, particularly effects on water availability for the construction and maintenance of these projects.

While we welcome, with the above considerations, the mention of the increase of these energy developments in the draft Resolution, we are deeply worried about the role fossil fuels still play in the future energy plans, particularly fossil gas. The suggested draft Ministerial Declaration on Energy oddly grants this fuel an outstanding role in the clean energy transition of energy production and consumption modes. This is simply not in line not only with science or the Paris Agreement, but also with the latest revealing forecasts made by the International Energy Agency (IEA) in its recently launched benchmark report "Net zero to 2050" urging for immediate and permanent cancellation of all new fossil fuel investments worldwide, whether in exploration or infrastructure. This clearly means new gas developments, and particularly mega-projects like the proposed East Med pipeline will be totally unnecessary and if built, become stranded assets with unacceptable environmental, social and economic damages, while hindering the sustainable energy transition at regional and global level.

These updated [IEA findings](#) must necessarily be reflected in the region's energy scenarios. For the above stated reasons we urge the Energy ministers to delete from the declaration those sentences recognizing "the major role of Southern and Eastern Mediterranean countries as (...) as stable suppliers of natural gas, including LNG; The role that natural gas plays in the clean energy transition of energy production and consumption modes (...)" or "the transitory role of lower-emission fossil fuels such as

LNG and CNG, in particular when blended with bio-methane or e-gas and provided methane emissions are minimised".

Fossil gas cannot anymore be part of the long-term energy scenarios. The Med region needs to rapidly move away from fossil fuels and incorporate a "Just Transition" concept to support countries, regions and local communities through - inter alia - financial support to deploy renewable technologies, capacity building and technical know-how sharing.

Lastly, we would like to show our deep concern about the prominent role granted in the draft declaration to organisations like the "Observatoire Méditerranéen de l'Energie" (OME) which includes only public and private Mediterranean energy utilities, in particular all the oil and gas majors operating in the region. We raise our concerns around the conflict of interest due to their influence on UfM Energy policies, statements and scenario developments. Of particular concern is OME's exclusive and thus dominant role in managing the UfM Gas Platform, contrary to the arrangements for the other two UfM energy platforms, managed as far as we can ascertain by the UfM secretariat.

OME's current control of the Gas Platform guarantees a strong tilt towards continued UfM-sponsored fossil fuel expansion in the Mediterranean, contrary to the IEA's and MEDECC warnings already mentioned above. This intrusive role in what is supposed to be the secretariat of a multilateral, intergovernmental organisation, must be terminated without delay.

Fatima Ahouli
Regional Coordinator, CAN Arab World

Wendel Trio
Director, CAN Europe



Epilogue

No doubt, progress has been made, at many levels, in addressing the climate change crisis. Important policies are in place or in the pipeline and significant resources have been mobilised, as it becomes evident also from the present Sustainable Mediterranean issue.

Nevertheless, MIO-ECSDE would like to draw the attention of policy makers and all stakeholders, including its membership, the Circles it facilitates and the wider public, on three major, difficult open questions and issues, particularly relevant for the Mediterranean. These include controversies and policy inconsistencies that in our point of view require urgent and serious consideration, comprehensive study and transparent dialogue so as to be answered and resolved:

1. How can the EU and global target for net-zero carbon by 2050 be met when further fossil fuel extraction projects are supported globally and in the Mediterranean?

As it is known, two North African Mediterranean countries are major fossil fuel producers and exporters on which they base a considerable part of their GDP; their production and exports are expected to continue. Furthermore, it is noteworthy that the Eastern Mediterranean is home to a very large, mostly unexploited, deep water hydrocarbon reservoir. If the order of the gas reserves reported by the energy consulting firm Wood MacKenzie is realistic (around 3.5 trillion cubic meters - TCM), this represents almost Europe's total gas reserves (3.9 TCM). Their exploitation may be seen as a major "game changer" in the entire region and beyond and they cannot be a priori excluded, given their very significant

geo-strategic, political and socioeconomic consequences. On the other hand, apart from the direct negative impact of such a project on climate change, the off-shore hydrocarbon extraction infrastructures and operations entail serious dangers of large-scale marine pollution and significant problems for other economic activities, such as fisheries, aquaculture and particularly tourism. The latter may be damaged by the presence of extraction infrastructures even at a long distance through their impact on the landscape.

2. The Mediterranean is known for its significant solar, wind and geothermal potential, in other words for the huge opportunities to develop and obtain affordable energy from renewable energy sources. However, most of them pose threats to biodiversity, particularly for avifauna and the many migratory bird routes in the region, or the environment of fragile small island ecosystems, while they may also harm the aesthetics of the landscapes.

Therefore, their operation and the scheduled wide expansion, frequently meets strong public opposition and are in conflict with important economic activities and in particular with tourism. Two significant EU policies reflecting also the relevant Global Sustainable Development goals for the protection of biodiversity and promotion of renewable energies in mitigating climate change seem to become mutually incompatible or even conflicting in many cases in the Mediterranean.

3. The most important Mediterranean "capital" is nature, its blue oligotrophic sea waters, its amazing coastal and mountainous landscapes and its rich tangible and intangible cultural heritage.

Tourism is based on this capital and has become the region's "heavy industry". Tourism strives to survive and adapt to the climate change induced heatwaves and other environmental consequences of climate change, by adopting in some cases inappropriate adaptation practices, backfiring on climate change mitigation efforts. Such practices include increased air-conditioning for cooling in summer or use of snow cannons for artificial snow in winter. Furthermore, tourism is critically connected to mobility either through cruise ships that are becoming ever bigger, or through increasing numbers of regular and chartered flights - reaching even small islands directly, and expansions of existing airports or construction of new ones.

This is crucial as an 85% reduction of tourism has been observed this year due to the COVID-19 pandemic in a sector contributing significantly to the regional GDP and employment. Despite the EU economic packages and recovery plans for 2021-2027 for the transition to a green and digital tourism - with emphasis on public awareness and education - and without underestimating the policies regarding the transition from "volume-based" towards "value-based" tourism and "tourism of tomorrow", the transformation of tourism in the region is a challenge. This is because tourism in the region is expected to grow after the COVID-19 pandemic by 4-6% annually, particularly after 2023, with increasing numbers of visitors from India, China and other emerging economies.

Assuming that tourism itself, particularly in the EU Mediterranean countries will manage to become fully sustainable, there are still significant challenges:

a) how and under what conditions will the tourism industry in non-EU Mediterranean countries become equally sustainable? and most importantly, b) how can we reconcile the considerable discharges of GHG emissions from

the mobility needed to maintain Mediterranean tourism as a key economic activity for the development of the region, with the efforts to meet the net-zero carbon target?

Learning to calculate easily our environmental footprint for alternative travel options in a way similar to what we do when we calculate the corresponding costs and make our choices accordingly (e.g. by favouring maritime over air transport when feasible) could address to some extent this challenge until the use of renewable energies is generalised in all types of travelling.

We do hope that the present publication offers something useful in the struggle of the people and the countries of the region to address the climate crisis, not only for our Mediterranean homelands and our common sea, but for the entire planet.

Because if the planet is not well, the Mediterranean will suffer most!

Prof. Michael Scoullas,
Chairman of MIO-ECSDE





Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE)

Who we are

We are a non-profit Federation of 133 Non-Governmental Organizations (NGOs) working in the fields of environment and development in 28 countries of the Euro-Mediterranean area.

Our mission

To protect the natural environment and cultural heritage and promote Sustainable Development in a peaceful Mediterranean by bringing together the efforts NGOs, governments, international organisations, other socio-economic partners and networks.

What we do

We act as a technical and political platform furthering synergies and strengthening public participation on resources and waste, nature and biodiversity, cultural diversity, climate change, health and environment as well as on horizontal and cross-cutting issues.

A network of networks

We facilitate the work of four other networks of major Mediterranean stakeholders:

- MEdIES, the Mediterranean Education Initiative for Environment and Sustainability
- COMPSUD, the Circle of Mediterranean Parliamentarians for Sustainable Development
- COMJESD, the Circle of Mediterranean Journalists for Environment and Sustainable Development
- MedUnNet, the Mediterranean Universities Network for Education for Sustainable Development.

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