

THE TICKING CLOCK OF THE CLIMATE AGENDA

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The annual Israeli meeting of the Israeli-European Policy Network (IEPN) in Tel Aviv focused on the challenges and opportunities of the relations between the EU and Israel to jointly advance the green and climate agenda in the Euro-Mediterranean region. In addition, it explored the financing opportunities for Israel under the framework of the Green Deal and the New Agenda for the Mediterranean, and how a closer collaboration with the EU can therefore contribute to the improvement of Israel's climate governance.

Background

The Mediterranean region is nowadays one of the main climate change hotspots in the world, and its vast negative impacts are already triggering environmental challenges that pose significant risks for natural ecosystems but also to human well-being on both shores of the Mediterranean Sea. Against this background, the European Green Deal presents itself as the EU's new growth strategy until 2050 which puts the environment and climate change at the heart of the EU's domestic and external agenda. Specifically, the EU Green Deal has a strong external dimension which will be key to underpinning future financial aid and external cooperation with neighbouring regions. In this context, Israel's vast energy, natural, and biodiversity potential make the country a key partner to develop and implement sustainable solutions. Building up on this, the recently launched Agenda for the Mediterranean frames the commitment of the European Commission to mobilize up to 7 billion euros from the EU budget under the

Neighbourhood, Development, and International Cooperation Instrument (NDICI), together with up to 30 billion in guarantee and blending schemes, on external financial aid supporting climate objectives and sustainable development in the region.

Excelling in innovation aimed at the provision of solutions for global challenges, the so-called "Start-Up Israeli nation" has nowadays more than 1.200 climate innovation enterprises and start-ups operating in strategic sectors such as sustainable agriculture and water management technologies, clean energy provision, climate-neutral transport, or smart farming. In this context, the Israeli Greentech sector offers an array of cooperation opportunities at all levels between the EU and Israel to advance the joint green and digital transitions, while transiting together to more modern, resource-efficient, and competitive economies. For instance, the recently signed EU-Israeli Horizon Europe agreement is intended to boost innovation and research between both parties with the aim of advancing the sustainable development agenda in the next period 2021-2027. Moreover, the Israeli case could serve as a successful example to scale up similar joint transformations in the Mediterranean region.

However, the clock is ticking for the region to meet climate and environment-related goals of the 2030 Agenda and the Paris Agreement. Countries whose economies depend mainly on oil and gas exports could be severely affected by the shift to cleaner forms of energy in the next years to come. The effects of climate change, combined with demographics, recent conflicts in the region and Europe (Ukraine), as well as subsequent trade disruptions are indisputably putting a strain on energy, water, and food security in the

region, which are central to sustainable development. In this panorama, regional cooperation between the EU and Mediterranean countries, in particular Israel, Egypt, and Jordan, is crucial to achieving resource availability, efficiency, productivity, and sustainability. Cooperation in these fields would also enhance regional integration and sustainable co-development while complementarily supporting the region's green transition and energy resource diversification.

Minutes and Conclusions from the Conference

Three sessions were held during the conference. The first session was about the external dimension of the EU Green Deal, dealing with the financial opportunities for stronger EU-Israel cooperation in the fight against Climate Change. The second session dealt with the goal of meeting Water-Energy-Food needs through regional cooperation in the Mediterranean Region. The third and last session focused on the ways for advancing the green and digital transitions through GreenTech promotion and cooperation in the Mediterranean Region.

The European Perspective:

The EU's response to the UN 2030 Agenda for Sustainable Development and its Sustainable Development Goals of 2015 was the New EU Consensus on Development in 2017. It sets out strategic approaches to improve the EU's impact on sustainability. By 2020 the EU dropped 31% of its emissions from 2015. At that time the EU was the 3rd largest GHG emitter after China and the US. A big step towards reaching sustainability was the European Green Deal at the end of 2019. It sets the goal to reduce greenhouse gas (GHG) emissions in Europe to zero by 2050 and to be the first climate-neutral continent in the world. The European Green Deal contains supporting programs and regulations. Hereby, the EU Climate Law binds the 55% reduction

target legally. Furthermore, there are due diligence requirements along value chains and mandatory sustainability reporting requirements. The Sustainable Investment Funding Plan, European Investment Bank, Research and Development, and Innovation Support Programs are also instruments and drivers contributing to the green transition in the EU.

The key funding program for research and innovation in the EU is the Horizon Europe 2021 – 2027. With a budget of € 95.5 billion, it tackles climate change, helps achieve the UN's Sustainable Development Goals, and boosts the EU's competitiveness and growth. It includes green partnerships between public-private actors across different sectors and a green mission supporting the Green Deal.

In the frame of the Green Deal, the EU has put forward the Carbon Border Adjustment Mechanism (CBAM). The CBAM, which sets into action at the beginning of 2023, includes carbon pricing and will help reduce the risk of carbon leakage by encouraging producers in non-EU countries to green their production processes.

Additionally, the EU development policies provide a general framework and background that justifies a Nexus approach and methodology. The Water-Energy-Food (WEF) nexus aims to detect the connections between the three resources and to manage them in an integrated manner. It does not focus on the sectors themselves but rather their interlinkages to maximize synergies and minimize trade-offs among sectors. Hereby, the challenges are primarily related to gaps in integrated data, holistic information, and knowledge related to the most critical inter-linkages and their dynamics. The WEF Nexus Index allows to quantify and monitor the WEF nexus interlinkages at a national level. Exploring different pathways for achieving an integrated WEF nexus governance framework is needed. Some of the Consensus Policy

Statements point to concrete actions that can be entry points for facilitating the implementation of a WEF Nexus approach at a strategic level.

The Israeli Perspective:

Israel's National Implementation Plan for 2021 includes 30 action plans, which cover all aspects of life and economic activity. The focus areas of 2021-2022 regarding climate change include recycling, the transition to a circular economy, conserving and restoring natural systems, and strengthening environmental standards considering the international standards. Currently, Israel produces 8.8 ton/pc GHG emissions. The sector with the highest GHG emissions is the electricity sector with 44%, followed by the transportation, industry, and waste sector. The main elements of the Mitigation Action Plan corresponding with the EU policy and the Green Deal involve energy, buildings, transportation, and industry. A step towards a successful cooperation and recycling revolution and transition to a circular economy is the Twinning Project. The Twinning Project is a cooperation with the EU concerning waste management in Israel, encouraging the EU – Israel relationship. To strengthen environmental standards and their alignment with international standards the Israeli government approved the Environmental Licensing Reform (IPCC). It is an alignment with the EU IED Directive, based on two Twinning projects. The Climate Adaption Action Plan provides economy-wide measures, nature-based systems, urban systems, and educational systems.

The Israeli government decides to promote climate innovation - NIS 3 billion by 2026 – by resolving international action to promote joint research on climate innovation, financing start-up companies in the fields of climate tech, and establishing a technological incubator to promote climate technology projects. To improve environmental conditions among the Arab population, Israel strengthens the social dimension by

investing NIS 550 million in waste infrastructure, urban nature surveys, climate education, and adaption. In addition, the Israeli treatment strategy adopted EU principles. The main elements are a comprehensive legislation, separation at source, public awareness, waste treatment infrastructures, and recycling plants.

Since 2021 Israel is fully associated with Horizon Europe. Therefore, it can participate in the program for research and innovation on equal terms with entities from the EU Member States.

Furthermore, the Mediterranean region could be considered a WEF nexus hotspot. As the demand for resources increases, the nexus interlinkages intensify as well as direct competitions or trade-offs between sectors, limiting countries' ability to meet the growing demand in a sustainable manner. To face the challenges of WEF holistic knowledge systems and integrated and transversal approaches to resources management should be developed. Additionally, mainstreaming climate change into the WEF nexus, decoupling water, energy, and food production from fossil fuels, and developing sustainable WEF intra-regional and regional cooperation or integration models based on the principle of comparative advantages. An important tool for scaling up nexus solutions emerging from research and innovation across the region is represented by the Mediterranean WEF Nexus Community of Practice (NCoP). In the Mediterranean region, WEF policy has been largely supply-oriented, in silos, and disconnected from climate change policy. Therefore, the Mediterranean region needs to establish intra-regional and regional WEF Nexus Framework, bearing in mind their respective comparative advantages.

An Integrative Perspective:

The EU New Agenda for the Mediterranean aims to relaunch and strengthen the strategic partnership between the European Union and its

Southern Neighborhood partners. With its economic and investment plan for the southern neighbors, it offers opportunities for new partnerships on strategic priorities of green transition and spurs the long-term socio-economic recovery in the Southern Neighborhood. Under the new EU's Neighborhood, Development, and International Cooperation Instrument (NDICI), up to €7 billion for the period 2021-2027 would be allocated to its implementation, which could mobilize up to €30 billion in private and public investment in the region in the next decade.

The New Agenda proposes to join forces in fighting climate change. It speeds up the twin - green and digital - transition and harnesses the potential, to renew the commitment to shared values and to strengthen the unity and resolve of the EU and neighborhood partners in promoting peace and security in the Mediterranean region. To reach the climate goals and secure competitiveness in the global world, it is necessary to accelerate the twin transition. EU's Green Deal and Israel's innovative drive make the two parties natural partners in the efforts to transform into modern, resource-efficient, and competitive economies.

As regards Israel, limited funding from the NDICI will be available, since Israel is an OECD member. Most of the bilateral cooperation under the European Neighborhood Policy will continue to be done through institutional twinning projects to share EU best practices in a number of areas. For the former programming period, these projects focused on water, waste management, and energy, among others. They should be continued and strengthened as they allow a legislative and regulatory convergence on these topics.

Decarbonizing the energy system is a priority of the European Green Deal and this goes inevitably through the development of clean renewable energy. However, in Israel, the development of renewable energies is relatively slow compared to the EU where

it makes up to 18% of the energy mix currently. Currently, renewables make 6% of the electricity mix of Israel while the objective is to reach 30% by 2030. Intensify the cooperation on renewables was one of the messages sent by the European Commission president von der Leyen during her last visit to Israel. In that sense, the EU is a natural partner, through notably the EIB, which already contributed to financing the Negev Ashalim and the Megalim Solar Power Plants. The EIB has also been a partner to finance other key infrastructures such as desalination plants.

Taking into consideration the comparative advantages at the country level, there is the idea to create an integrated Euro-Mediterranean WEF system that enables the maximization of positive externalities through the creation of a sustainable circuit, powered by bidirectional flows of technology, know-how, capital, clean energy, and virtual water exchanges.

With this kind of collaboration, win-win opportunities for the EU and Israel result. The collaboration leads to success by strengthening diplomatic ties, enhancing scientific cooperation, boosting innovation capacity, transferring know-how, and accelerating breakthroughs in climate change, digital transformation, sustainable transportation, circular economy, and bioeconomy. This win-win cooperation for the climate could be accelerated after convening the EU-Israel Association Council.

The Ticking Clock of the Climate Agenda – Cooperation Opportunities between the EU and Israel to Advance the Green and Digital Transitions in the Mediterranean

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Executive Summary

The transformation of the economies and societies of the EU and Israel towards sustainability is one of the most important challenges of our century. It is essential to take the lead on climate change considering the increasing environmental and water crises, energy security concerns, loss of biodiversity, and climate-induced migration. The European Union (EU) has taken the first major step in this direction, by clearly articulating its goal to make Europe the first climate-neutral continent on the planet by 2050, supported by a package of proposed actions known as the European Green Deal.

The European Green Deal

The year 2021 was a game-changer for climate action in Europe. Under the so-called European Green Deal, the EU made climate neutrality, the goal of zero net emissions by 2050, legally binding in the EU, and it set an interim target of 55% emission reduction by 2030. As such, the European Green Deal became the most ambitious agenda to tackle climate change in a systemic and socially inclusive way for European countries. The Green Deal's agenda also has a significant impact on the EU's cooperation with its international partners. The European Green Deal comprises a series of action plans at the sectoral level, legislative packages to ensure commitment and compliance, and targeted financial support. All the interventions of the Green Deal are meant to achieve deep decarbonization of the most polluting

industrial sectors and to also make global supply chains associated with European trade in goods and services more sustainable.

To finance such systemic transformation, the investment plan associated with European Green Deal also comprises multi-dimensional actions. Specifically, the European Investment Bank has been designated as European Climate Bank, requiring sustainability criteria in its investment programs.

Research and innovation programs are at the core of the agenda of the European Green Deal to accelerate and shape the necessary transformations, deploying, demonstrating, and de-risking solutions, and engaging citizens in social innovation. Horizon Europe is the EU's largest research and innovation program for the period 2021-2027, having been closely designed to support the European Green Deal.

Horizon Europe is one of the main tools to implement Europe's strategy for international cooperation. As such, the program is open to researchers and innovators from around the globe to encourage collaboration with EU partners. Association to Horizon Europe is the closest form of cooperation with non-EU countries, allowing participation in program actions on equal terms with entities of EU countries.

Israel's engagement in European sustainability research and innovation programs

The EU and Israel have a long history of successful scientific and technological cooperation. Known as the start-up nation, Israel's excellence in research and innovation has opened various venues for cooperation with EU countries, leading to a range of novel products and services in advanced manufacturing, food, and biotechnology, health, information and communication technologies, as well as energy and environmental technologies.

Here, the great importance of the Horizon Program can be highlighted. Israel has experienced high rates

of success in the Horizon 2020 programs. Between 2014 and 2020, 2045 researchers, companies, and other entities were awarded 1666 grants amounting to approximately 1.3 billion euros (Council for Higher Education, 2022). Overall, Israel ranked 3rd in the Horizon 2020 program, when it comes to associated countries (after Switzerland and Norway) (European Commission, 2015).

The active and effective participation of Israel in the Horizon program enabled Israeli companies to access European partners to jointly address environmental and social challenges and has promoted collaboration with researchers and industry.

Opportunities for further EU-Israel engagement

There are a lot of opportunities for further EU-Israel engagement. For one thing, there is vast potential for deepening the partnership, especially in green transformation and digitalization. Due to a vibrant research community in both the EU and Israel, engagements through framework programs such as Horizon emerge often organically, especially in areas with strong expertise. Furthermore, mutual benefits can be harnessed by closely aligning Israel's national strategies and policies to the European Green Deal. The external dimension of the European Green Deal is about the EU mobilizing its neighbors to share the same ambitions. Through institutional twinning projects, this offers the opportunity for the EU to share best practices in various areas with Israel.

Israel is lagging in environmental policies, waste management, and circular economy, the European Green Deal strategies and legislative packages have already set the goals for Israel's policymakers. Israel further advancing its national institutional framework and programs in these areas could enable further opportunities for collaboration.

The current focus of Israel on natural gas may offer opportunities in the short- and medium-term. While natural gas may help achieve energy security and

reduce GHG emissions in the mid-term by replacing oil and coal in the energy mix, it may lead Israel into a carbon lock-in that will make the alignment of its energy policy with climate goals difficult and costly and can jeopardize deep decarbonization. Moreover, investments in gas infrastructures can become stranded assets. Therefore, closer aligning of Israeli targets with the EU in terms of renewables could open vast opportunities for collaboration, investment, and partnerships across the Mediterranean. To reduce any long-term negative effects, a focus on decarbonizing natural gas power plants could offer important areas for technology collaboration, recently stressed by the recent memorandum of understanding between the EU and Israel.

Trade-offs between green and digital transitions are another area in which EU-Israel collaborations could be enhanced. The EU and Israel believe in the digital transition as a key enabler of the green transition. Yet, little emphasis is placed on the environmental consequences of digital transformation across sectors. Such a digital transformation is also likely to lead to a global race for raw materials and the difficulties associated with waste management. Technological solutions can help in combating climate change, but there is also the need for a holistic approach that accounts for our digital carbon footprint, clearly reflected in national and sectoral strategic long-term visions and action plans such as the European Green Deal. Therefore, vast opportunities for collaboration to advance these agendas exist, which could be supported through EU-Israel collaboration.

For the full-text article: shorturl.at/fNOP9



EU-Israel Trends and Challenges

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Executive Summary

Israel is renowned for its high levels of venture capital, high numbers of start-ups, and high rates of scientists and tech professionals. As a result, Israel functions as a strong trading partner to the European Union, being an active participant in the research and development programs of the EU. However, due to setbacks such as political conflicts, this strong economic relationship faces difficulties that must be overcome.

EU-Israel background relationship

There is a long history of interdependence and cooperation between the European Union and Israel. The two share the same values of democracy, freedom, and the rule of law, as well as a commitment to a market-based open international economic system. Israeli politics, industry, commerce, and science leaders maintain close ties with their European counterparts. Accordingly, Trade, cultural exchange, political cooperation, and an established system of agreements strengthened over the past five decades.

The relationship between the European Union and Israel has significantly expanded since the Delegation of the European Union to Israel opened in 1981. As of 2000, the EU-Israel Association Agreement provides the legal basis for these relations. The framework enables regular political dialogue, freedom of establishment and liberalization of services, free movement of capital and competition rules, as well as a strengthening of economic and social cooperation.

As part of the European Neighborhood Policy, the 2005 Action Plan governs relations between the EU and Israel. Israeli participation in Horizon 2020 was agreed upon in June 2014, enabling Israeli

researchers and innovators to participate on equal terms with entities from the EU Member States in the EU's research and innovation funding programs, worth €95.5 billion.

As one of the world's most competitive economies regarding innovation activities, Israel is one of the world's most innovative nations. Like the EU, one of its primary strengths is its ability to innovate at a world-class level. To further promote innovation, boost sustainable growth, and create jobs, Israel and the EU have a strong mutual interest in expanding bilateral business relations and integrating the markets.

Working with start-ups in the EU and Israel: strengths and weaknesses

Foreign start-ups can benefit from Israel in several ways: First, through the cultural aspect of sharing knowledge and a sense of community. Second, through the global aspect, which includes more than 350 multinational companies, venture capital firms, and firms, which invest, accelerate, and do their research in Israel. Third, Israel is regarded as a hotbed of pioneering technologies, mentors, and talent.

Europe offers three main benefits: First, a market for scaling, Proof of Concepts, and Living Labs. Second, Europe has developed advanced regulation in the form of guidance and know-how. Third, Europe provides access to co-funding and mentors, as well as geographical proximity, which is an advantage. The limitations of Europe are its fragmented and decentralized market, as well as its traditional entrepreneurial culture.

Challenges facing the EU-Israel relationship

The Israeli start-ups are unaware that Europe has a wide and progressive market, and that scaling to Europe is not intimidating in terms of regulation and establishing their intellectual property there thanks to progressive and comprehensive methods. It is because much of the European public information is not clear

and/or does not appear in English, which makes it difficult for foreigners to comprehend.

Most commonly, in Israel, it is customary to reach out directly to the individual you wish to connect with and express your need or question. With a population of less than 10 million, Israel is a small country, making it easier to meet and form relationships. Contrary to this, in Europe, due to the lack of proximity and the difference in cultures and languages, it is difficult to communicate and connect with each other, as well as to seek assistance or collaboration.

While Israelis often perceive Europe as a highly conservative market that lacks flexibility and is indifferent to new ideas and products, in reality, it is the complete opposite. In the fields of climate and energy, Europe is very open to new sustainable ideas and is much more advanced than the leading ecosystems in the world. Many Europeans tend to assume that Israel is primarily concerned with security, safety, and military technologies when discussing Israel. However, Israel has a cross-vertical approach to investment and innovation, with a number of leading sectors such as digital health, construction, food, and more.

The European market competes with one of the world's largest and most developed ecosystems, the US market. Regarding the relationship with Israel, Israeli start-ups tend to 'follow the money', while in the US, you can hear about large rounds of investments, high salaries, and excellent working conditions. This creates intense competition for Europe to compete and achieve a comparable position.

An analysis of the EU-Israel relationship's trends

The number of Israeli companies and venture capital firms investing in European talent and technology is on the rise. Currently, 912 Israeli companies are operating in the EU, employing 24,223 EU citizens. Because of the presence of multinational corporations in Israel, European start-ups consider

the country as a gateway to the global market. In the period 2010-2020, there was a massive growth in the number of multinational companies opening offices in Israel, with the number currently standing at 362 from the US, Asia, and Europe. Intel, Amazon, and Facebook have established offices, R&D divisions, and investment arms in Israel, demonstrating the quality of human capital in the country. Israel's start-ups tend to focus on growing in the US market rather than in Europe. Though, several Israeli start-ups, such as those involved in climate and energy, are increasingly looking toward the European market as a potential growth market.

It appears that the two countries are becoming closer and closer. A brighter future appears to be ahead, and even pandemics and wars cannot stop this ever-evolving connection.

For the full-text article: shorturl.at/hpwT3



On the quest for solutions to achieve a 'virtuous' WEF nexus in the Mediterranean region

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Executive Summary

Providing water, energy, and food to all, while staying within the limits of 'planetary boundaries' is an awareness that has led a significant body of literature to consider water, energy, and food systems as intricately linked and to be understood and managed in conjunction, through the so-called water-energy and food (WEF) nexus approach. The Mediterranean region could be considered both a water, energy, and food (WEF) nexus and a climate change 'hotspot' (Mohtar and Daher, 2014; Id., 2016; Dubreuil et al., 2013; Saif et al., 2014; Magazzino and Cerulli, 2019). So far, Mediterranean countries' approach to WEF policy and decision-making has been largely supply-oriented, in silos, and completely disconnected from climate change issues, triggering an inefficient circle that has favored trade-offs rather than synergies across resources, sectors, and societal and environmental goals.

The WEF nexus is often presented as the evolution and improvement of the existing integrated water resources management (IWRM) as it promotes a multi-centric approach connecting water, energy, and food policy objectives. It has no clear definition and no agreed conceptual framework for implementation.

The term 'Nexus' describes a discourse, a conceptual governance framework, and a mix of analytical tools (Harwood, 2018; Nhamo et al., 2019). The logic behind the nexus comes from the awareness that WEF resources are closely intertwined and interdependent since there is no energy production without water, no water supply without energy, and no food production without water and energy.

An additional rationale for adopting the WEF nexus

is that it is a mechanism for achieving the relevant sector-related Sustainable Development Goals (SDGs), i.e. SDGs 2 (zero hunger).

While the WEF nexus has tremendous potential for increasing efficiency, reducing trade-offs, building synergies, and improving governance across sectors, the application and diffusion of such a framework face several challenges, particularly with respect to migrating from its theory and modeling to real-life applications. A first step in transitioning an integrated WEF nexus program from concept to action in the Mediterranean region is to fill the gap in integrated data, holistic information, and knowledge related to the most critical inter-linkages and their dynamics. To this end, the WEF Nexus Index represents an effective tool to assess and quantify constraints and opportunities at the regional and country levels and a first step to achieving a 'virtuous' WEF nexus in the Mediterranean.

In the Mediterranean region, water, energy, and food are perhaps more closely connected than in any other region of the world. As WEF resources become increasingly scarce due to climate change, demographic pressure and economic growth, political instability, and forced migration, not only do the nexus interlinkages intensify, but also direct competitions or trade-offs between sectors increase, limiting countries' ability to meet the growing demand in a sustainable manner (Markantonis et al., 2019).

So far, in the Mediterranean countries, water, energy, and food challenges are mainly addressed within the sectors concerned. The responsibility for water, food, and energy domains is often assigned to different ministries, which hampers the close communication and coordination that is needed to deal with the WEF nexus. The lack of coordination, dialogue, and collaboration among sectors significantly affects the efficiency and effectiveness of policies and prevents appropriate measures from being taken (Giordano and Quagliarotti, 2020).

Climate change drives a series of phenomena that have negative effects on water, energy, and food security, exacerbating nexus conflicts within the region: rising temperatures, changes in precipitation patterns, extreme weather events, and sea-level rise may gradually alter the balance between the nexus resources, and even the nature of their interactions (Cramer et al., 2018). While some sector-oriented mitigation and adaptation measures may have the potential to trigger synergistic ‘win-win’ opportunities across one or more of the other sectors in the nexus, other measures, such as hydro power, first-generation biofuels, the shift to non-conventional water resources, and agricultural intensification, are not always nexus-smart. At the same time, water, energy, and food production may increase GHG emissions contributing to climate change.

At the outset, it is necessary to add to the WEF nexus the climatic dimension. Mainstreaming climate change into the nexus involves identifying and quantifying the bidirectional interactions between WEF resources and climate change and adopting nexus-based mitigation and adaptation approaches, which integrate a nexus perspective into climate change policy and strategies. In this regard, a critical role can be played by technology and innovation. Since the WEF nexus includes the main drivers of climate change and the main sectors affected by the impact of global warming, energy represents both a critical input along different stages of the water and food supply chain as well as the largest source of GHG. Thus, renewable energy technologies should be considered the first step towards sustainable integrated solutions, able to enhance security and sustainability across sectors, while supporting global climate ambitions. In the Mediterranean countries, projects based on a nexus approach are still at their early stages of development. This is due to the need for large capital investment, lack of know-how, and

of enabling environment for innovation.

To enhance the transition towards a mix of renewable energy and non-conventional water, several measures and actions should be undertaken, such as promoting cross-sectoral projects and incorporating the key principles of the green and circular economy into the WEF nexus through multi-functional production systems and cross-resources and cross-sector recycling.

Given the variability in the distribution of WEF resources in the region as well as the ever-increasing pressures on them, and since WEF solutions found at the local level can often transcend regional and national borders, it is of great significance that the Mediterranean countries enhance their cooperation to face these challenges in a complementary manner. However, there is a low level of cooperation between countries, which often express different goals, agendas, and priorities in addressing the complex nexus between WEF sectors.

Nevertheless, in the last decade, key regional and sub-regional institutions have addressed or expressed an interest in exploring the Nexus approach, including the European Union (EU), the Regional Cooperation Council (RCC), the League of Arab States (LAS), the Union for the Mediterranean (UfM), and the Barcelona Convention (MAP/UNEP). Even though their plans generally follow the same silo thinking within the different sectors, many of their objectives may present an opportunity for improving cooperation between Mediterranean states in a nexus approach.

In the Mediterranean region, the WEF nexus represents a growing challenge mainly driven by the changing demand for resource patterns, rapid urbanization, population growth, inefficient production systems, and climate change (Zhang et al., 2018). Applying a WEF nexus approach in the Mediterranean countries would provide an opportunity for innovation and learning to minimize

security risks and maximize opportunities, enhancing resource efficiency and equity.

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