- Research Article -

[H] THE BLUE ECONOMY AND THE BARCELONA CONVENTION-MEDITERRANEAN SEA REGION "SOME FOOD FOR THOUGHTS"[*]

MAVİ EKONOMİ VE BARSELONA SÖZLEŞMESİ –AKDENİZ BÖLGESİ "FİKRİ BESLEYEN MÜLAHAZALAR"

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ABSTRACT

Oceans, seas and marine resources are vital to achieving the United Nations' Sustainable Development Goals (SDGs) and the 2030 *Agenda for Sustainable Development*. That makes the sustainability of ocean resources a global priority. The Blue Economy issues for sustainable development are not only global, but are also central to the achievement of the SDGs and the 2030 *Agenda* and require global solutions framed in national and regional agendas for oceans and seas and the human race. This is because oceans, seas, lakes and rivers are essential to human life. They promote human well-being and livelihoods, food security, employment, industry, innovation, sustainable communities, health, tourism, disaster protection, and act as carbon sinks.

However, human activities continue to endanger the very oceans, seas, and marine resources they depend on, thereby harming mankind and the planet. Fundamental to these activities is human exploitation of energy from non-sustainable, non-renewable and non-clean fossil sources-termed the Brown Economy Model. Environmentally sustainable ocean and coastal areas are the primary goal of a sustainable Blue Economy-a move away from the Brown Economy. It is argued that the solution to sustainability is concurrent reversal to the Blue Economy offshore and the Green Economy onshore. Both concepts refer to the decoupling of socioeconomic progress from environmental and ecosystem damage: weaning the human race from the current fossil- energy based economic model (the Brown Economy), the principal sources of gases responsible for ozone depletion and, consequently, global warming and climatic change.

The *SDG 14* of the 2030 *Agenda for Sustainable Development* incorporates the Blue Economy concept. Accordingly, the UN *Conference to Support the Implementation of SDG14* calls on all stakeholders to support the promotion and strengthening of sustainable ocean-based economies, which include managed fisheries, eco-tourism, aquaculture, maritime transportation, and renewable energy. However, to this should be added the Green Economy the onshore equivalent of the offshore Blue Economy; a mechanism hitherto omitted from the SDG mention. Nevertheless, the quest for the Blue Economy faces many hurdles mainly from fossil fuel lobbies, challenges of under investment in the renewable and clean energy sources, and underrated problems of the inevitable transition from Brown to Blue and Green Economies, *inter alia.*

This paper focuses on the application of the renewable energy- based Blue and Green Economic Models in the Mediterranean Region against the backdrop of the *Barcelona Convention* and UN related programs, notably the quest for the 2030 *Agenda for Sustainable Development.* The paper argues that without including, and synchronizing with, the Green Economy, the transition from the Brown Economy to the Blue Economy worldwide would be more difficult to achieve as the tow are intertwined. This is more so in the Mediterranean basin where most of the economies and the surrounding areas are heavily dependent on the production, export and usage of fossil fuels (gas and oil)[1].

[1] Of the 13 OPEC Members, 2 (Algeria, Libya) are the Mediterranean and a further 6 (Iran, Iraq, Kuwait, Saudi Arabia, the UAE and Qatar) are within the basin <https://www.opec.org/opec_web/en/about_us/25.htm>; the eastern Mediterranean area/ the Levantine basin, has proven reserves of more than 60 trillion cubic feet of

Acknowledging its disadvantages and other shortcomings, the paper concludes that overall advantages of the Blue and Green Economies far outweigh their drawbacks.

Keywords: Barcelona Convention, Mediterranean Sea Region, Blue Economy, Green Economy, Brown Economy, Sustainable Development Goal 14, Mediterranean Action Plan, Marine Environment, Clean Renewable Energy, Climatic Change, Global Warming.

ÖZ

Okyanuslar, denizler ve deniz kaynakları, Birleşmiş Milletler'in Sürdürülebilir Kalkınma Hedeflerine (SKH) ve *2030 Sürdürülebilir Kalkınma Gündemine* ulaşılması için hayati önem taşımaktadır. Bu da okyanus kaynaklarının sürdürülebilirliğini küresel bir öncelik haline getirmektedir. Sürdürülebilir kalkınma için Mavi Ekonomi konuları hem küreseldir, hem de Sürdürülebilir Kalkınma Hedeflerinin ve *2030 Gündeminin* başarılması için de merkezi bir öneme sahiptir. Mavi Ekonomi sorunları, okyanuslar, denizler ve insan ırkı için ulusal ve bölgesel gündemlerle çerçevelenmiş küresel çözümler gerektirmektedir. Bunun sebebi okyanusların, denizlerin, göllerin ve nehirlerin insan hayatı için mutlaka gerekli olmasıdır. Bu su kaynakları insan refahını ve geçim kaynaklarını, gıda güvenliğini, istihdamı, endüstriyi, yeniliği, sürdürüle-

gas And it is estimated that as much as 122 trillion cubic feet of gas and 1.7 billion barrels of oil lie in the basin; of the top 100 with deposits of or oil and gas producing countries, 17 (Algeria ,Croatia, Greek Cyprus, the Turkish Republic of Northern Cyprus, France, Egypt, Greece, Israel, Italy, Lebanon, Libya, Morocco, Palestine, Spain, Syria, Tunisia and Türkiye) are Mediterranean and a further 9 (Bahrain, Iran, Iraq, Kuwait, Oman, Saudi Arabia, South Sudan, Qatar, and UAE) are within the basin-<https://en.wikipedia.org/wiki/List_of_countries_by_oil_production>.

bilir toplulukları, sağlığı, turizmi, afetten korunmayı destekler ve karbon yutucu görevi görürler.

Ancak, insanlar bağımlı oldukları okyanusları, denizleri ve deniz kaynaklarını faaliyetleri ile tehlikeye atmaya devam etmekte ve böylece insanlığa ve gezegene zarar vermektedir. Bu faaliyetlerin temelinde, insanların, sürdürülebilir olmayan, yenilenemeyen ve temiz olmayan fosil kaynaklardan enerji elde etmesi yatmaktadır ve bu durum Kahverengi Ekonomi Modeli olarak adlandırılmaktadır. Çevresel açıdan sürdürülebilir okyanus ve kıyı alanları, Kahverengi Ekonomiden uzaklaşma niteliğini taşıyan sürdürülebilir bir Mavi Ekonominin birincil hedefidir. Sürdürülebilirliğin sağlanması için çözüm yolunun, denizde Mavi Ekonomiye ve karada Yeşil Ekonomiye eş zamanlı olarak geri dönüş olduğu savunulmaktadır. Her iki kavram da sosyoekonomik gelişimin, çevresel ve ekosistem zararlarından ayrıştırılmasına; insan ırkının, ozon tabakasının incelmesinden ve dolayısıyla küresel ısınma ve iklim değişikliğinden sorumlu başlıca gazların kaynakları olan mevcut fosil enerji temelli ekonomik modelden (Kahverengi Ekonomi) vazgeçirilmesine atıf yapmaktadır.

2030 Sürdürülebilir Kalkınma Gündemi'nin 14. Sürdürülebilir Kalkınma Hedefleri Mavi Ekonomi kavramını içermektedir. Bu doğrultuda, *BM SKH 14'ün Uygulanmasını Destekleme Konferansı*, tüm paydaşları, sürdürülebilir okyanus temelli ekonomileri teşvik etmeye ve bu ekonomilerin güçlendirilmesini desteklemeye çağırmaktadır. Bu okyanus temelli ekonomilerin içerisinde kontrollü balıkçılık, eko-turizm, su ürünleri yetiştiriciliği, deniz taşımacılığı ve yenilenebilir enerji yer

almaktadır. Ancak buna, şimdiye kadar SKH'de söz edilmeyen bir mekanizma olan, denizdeki Mavi Ekonominin kara eşdeğeri olan Yeşil Ekonomi de eklenmelidir. Bununla birlikte, Mavi Ekonomi arayışı, başta fosil yakıt lobileri olmak üzere; yenilenebilir ve temiz enerji kaynaklarına yeterince yatırım yapılmamasından kaynaklanan zorluklar; Kahverengi Ekonomiden Mavi- Yeşil Ekonomilere kaçınılmaz geçişte göz ardı edilen sorunlar gibi pek çok engelle karşı karşıyadır.

Bu makale, *Barselona Sözleşmesi* ve BM'nin ilgili programları, özellikle de *2030 Sürdürülebilir Kalkınma Gündemi* hedefleri çerçevesinde Akdeniz Bölgesi'nde yenilenebilir enerji temelli Mavi ve Yeşil Ekonomik Modellerin uygulanmasına odaklanmaktadır. Bu makale, Mavi Ekonomi ile Yeşil Ekonomi birbiriyle iç içe geçtiği için, Yeşil Ekonomi dahil edilmeden ve Yeşil Ekonomi ile senkronize edilmeden, dünya çapında Kahverengi Ekonomiden Mavi Ekonomiye geçişin başarılmasının daha zor olacağını savunmaktadır. Bu durum, ekonomilerin ve çevre bölgelerin çoğunun fosil yakıtların (gaz ve petrol) üretimine, ihracatına ve kullanımına büyük ölçüde bağımlı olduğu Akdeniz havzasında daha da etkilidir.

Bu çalışma, Mavi ve Yeşil Ekonomilerin dezavantajlarını ve diğer eksikliklerini kabul etmekle beraber, genel avantajlarının dezavantajlarından çok daha ağır bastığı sonucuna varmaktadır.

Anahtar Kelimeler: Barselona Sözleşmesi, Akdeniz Bölgesi, Mavi Ekonomi, Yeşil Ekonomi, Kahverengi Ekonomi, Sürdürülebilir

Kalkınma Hedefi 14, Deniz Çevresi, Temiz Yenilenebilir Enerji, İklim Değişikliği, Küresel Isınma.

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I. INTRODUCTION

This article analyses the Blue Economy, an offshore and water-based economy which takes its name from water of mainly the seas and oceans (associated with the colour blue). It argues that achievement of the Blue Economy would be incomplete without the contribution of and synchronising with the Green Economy. There are many descriptions of the Blue Economy. Its scope of interpretation varies among organizations. However, for the purposes of this article Blue Economy is a term in economics relating to the exploitation, preservation and regeneration of the marine environment. The idea of the Blue Economy was conceived at the *Rio+20 United Nations Conference on Sustainable Development*, held in Rio de Janeiro in June 2012[2]. For those reasons, oceans, seas and marine resources are central to the delivery of the UN's 2030 *Agenda for Sustainable Development*, including the *Sustainable Development Goals* (SDGs)[3]. Nonetheless, in the quest for the Blue Economy, an equally complementary and crucial Green Economy has been omitted.

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[2] 'The Blue Economy: Origin and Concept' (Commonwealth of Learning 2016). <https://www.col.org/news/the-blue-economy-origin-and-concept/#:~:text=The%20idea%20of%20the%20%E2%80%9Cblue,de%20Janeiro%20in%20June%202012> accessed 26 July 2022.

[3] For Details See <https://sdgs.un.org/> accessed 6 November 2021. The Global Goals and the 2030 Agenda for Sustainable Development seek to end poverty and hunger, realise the human rights of all, achieve gender equality and the empower-

Like the Blue Economy, the Green Economy is an economy that aims at reducing environmental risks and ecological scarcities, and for sustainable development without degrading the onshore environment. It takes its name from the colour green for vegetation, the planet's dominant vegetation. It is closely related with ecological economics, but has a more politically applied focus. Both economies are the opposite of the current predominant economy-the Brown Economy. Conversely, the Brown Economy is one in which economic growth is largely dependent on environmentally destructive forms of activity, generating energy from especially fossil fuels like coal, oil, and gas. However, none of those two concepts (Blue and Brown Economy) alone provide for how to effectively transition to themselves from the Brown Economy. Demonstrating the link between the two is among the aims and objectives of this article.

The thesis of the article is that oceans, seas and lakes are essential for the Blue Economy. In a wider context, they support human well-being and livelihoods and underpin poverty eradication, food security, employment, industry, innovation, sustainable communities, health, tourism and protection from natural disasters, and counteract the impacts of climate change as carbon reservoirs. Sustainability of the ocean resources is, therefore, a global priority. But that is easier said than done. Although the challenges of the Blue Economy to achieve sustainable development are global, they will require concerted global solutions framed within national and regional priorities. An ingredient currently lacking from

ment of all women and girls, and ensure the lasting protection of the planet and its natural resources.

global efforts, judgment by the disappointing progress from the most recent COP25 and COP27.

And yet, human activities continue to threaten the oceans, seas and marine resources with long-term adverse effects on humanity and the planet. The paper maintains that, sight should not be lost from the goal that a Sustainable Blue Economy seeks to promote economic growth, responsible production and consumption, social inclusion, and the preservation or improvement of livelihoods while at the same time ensuring environmental sustainability of the ocean and coastal areas, through the circular economy. Furthermore, more that, at its core, it refers to the decoupling of socioeconomic development through ocean-related sectors and activities from environmental and ecosystems degradation. However, the methods of weaning humanity from the Brown Economy are still rather sketchy, to say the least.

As noted, the notion of sustainable Blue Economy is reflected in the 2030 *Agenda for Sustainable Development*. Furthermore, the *Call for Action of the United Nations Conference to Support the Implementation of SDG* 14[4] further recognizes the contribution of the ocean to sustainable development and sustainable ocean-based economies, by calling upon all stakeholders to support the promotion and strengthening of sustainable ocean-based economies, which will, *inter alia*, build on sustainable activities such as: managed fisheries; eco-tourism; aquaculture; maritime transportation; renewable energies; marine biotechnology and

[4] For the official text see <https://oceanconference.un.org/callforaction> accessed 24 July 2022.

seawater desalination as a means to achieve the economic; and social and environmental dimensions of sustainable development, in particular for Small *Island Developing States* (SIDS) and *Least Developed Countries* (LDCs).

It is for those reasons that the perception of the "Blue Economy" has grown in popularity since the twenty-first century. It is an increasingly popular concept as a strategy for safeguarding the world's oceans and water resources (seas, oceans, lakes, rivers, etc.) and consequently human existentialism. Importantly, the concept of the Blue Economy acknowledges the inherent tensions between two discourses: growth and development (Brown Economy) and ocean resource protection (Blue Economy). This is significant because water accounts for 71% of the planet's surface area, while land accounts for 29%. However, (minus forests/deserts/mountains and other uninhabited spaces on land), only 50 % of land (i.e., c15 % of the earth) and its resources is human habitable and usable. Human population explosion to 8b earthlings and the consequential pressures on the dwindling earths' resources is an added to the urgency of the Blue and Green Economies. These issues need to be factored into the planning for the implementation of the SDG 14, Agenda 2030 and accordingly the Blue and Green Economies, especially in the Mediterranean Sea Region.

II. DISCUSSION 1: MATERIALS-BASIS OF THE BLUE ECONOMY IN THE MEDITERRANEAN

Economically, the Mediterranean Sea Region is important for the Blue Economy. The Mediterranean Sea's economic opportunities should therefore be accompanied by an increasing need for management that is respectful of its ecosystems and capable of maintaining and increasing their value over time. As will be apparent below, if the Mediterranean Sea itself was a country economy, it would be the 5th largest in the region (after France, Italy, Spain and Türkiye). Environmentally, the Blue Economy is important for the Mediterranean. Creating a truly sustainable, inclusive Blue Economy requires joined-up thinking from governments across the Mediterranean.

This is when the relevance of the Blue Economy comes in. Since antiquity, the Mediterranean Sea has been vital to the economies of coastal communities and states. But that has been based on the Brown Economy. However, from now on, the future of its inhabitants will depend on the change of course in their life styles. Thus, the Blue Economy sectors are now more than ever an important engine for the region's economy, with enormous potential for innovation and sustainable and inclusive prosperity.

Regrettably, the current worldwide scramble for the seas, marine fossils and marine mineral resources, notably in the Mediterranean Sea Region and the South China Seas, is a cause for concern. Among additional pressures on the planet’s resources is the population explosion currently

standing at 8 billion people[5] and the carbon footprints therein arising from fossil-based energy production. Others are the near exhaustion of onshore based resources and their abundance offshore. However, the focus of the Blue Economy and the key to the survival of the human race is a shift to an alternative clean and renewable energy-based economic model. This is what the inhabitants of the Mediterranean region will have to address.

Also central are the phasing out effects of fossil-based-energy economic model (the Brown Economy- see below) which has resulted into environmental pollution, global warming and climatic change thereby threatening the human race's very survival. The extremity between very hot summers and very wet winters, as has been the case, this year (2022) has driven home the dangers of global warming due largely to fossil energy - based economic model. At current warming rate, it is estimated that the blue planet (earth) will be brown and as dry and uninhabitable as the other rocky planets (Mars, Mercury and Venus) which were also once blue. The remaining planets are gaseous (Jupiter, Saturn, Uranus and Neptune)[6], not suitable for human habitation.

[5] Currently, 7,965,000,000 people in July 2022 (See <https://www.worldometers.info/world-population/> accessed 23 July 2022. In demographics, the world population is the total number of humans currently living, and was estimated to have reached 7,905,000,000 people as of November 2021. It took over 2 million years of human prehistory and history for the world's population to reach 1 billion and only 200 years more to grow to 8 billion.

[6] The gas giants of our solar system are Jupiter, Saturn, Uranus and Neptune. These four large planets, also called jovian planets after Jupiter, reside in the outer part of the solar system past the orbits of Mars and the asteroid belt.

Accordingly, the human race's other survival alternative would be migration to the nearest of other habitable planets (Proxima B),[7] an impossible feat for 8 billion earthlings even by next 1,000 years' scientific development. Thus, the water based Blue Economy and the land based Green Economy are the human race's best, and probably only viable, alternative to its existentialism and extinction. For those and other reasons given below, the Mediterranean Sea Region's inhabitants are among the more at risk than any others. They are also heavily dependent on fossil fuel (Brown Economy) and most are developing countries that will require economic assistance from the international community to transition to the Blue and Green Economies without drastic dislocation of their economies.

III. DISCUSSIONS 2: THE MEDITERRANEAN AND THE BARCELONA CONVENTION

To add to its problems, the southern regions of the Mediterranean is the dry Sahara Desert. For this and the above reasons, the Mediterranean, covered by the *Barcelona Convention*, is one of the most at risk regions of this planet. However, it remains one of the most important regions of the planet. For centuries, the Mediterranean Sea has been the focal point of eastern and western civilization and the bridge between Europe and Asia. It is an area rich in history and has played critical roles in the development of shipping, insurance and trade, as a resource for feeding

[7] This planet in the next star system along is, at just four light-years, by far the closest Earth-like planet known. If Voyager were to travel to Proxima Centauri, at this rate, it would take over 73,000 years to arrive. If humans could travel at the speed of light, an impossibility due to Special Relativity, it would still take 4.22 years to arrive!

growing populations, and as an aid to the spread and mingling of races and cultures. These resources, marine environment and unique characteristic need preserving.

In an attempt to deal with the above outlined threats, the region became home to two major conventions: the *Mediterranean Action Plan* (MAP)[8] which strives to protect the environment and to foster sustainable development in the Mediterranean basin. It was adopted in Barcelona, Spain, in 1975 by 16 Mediterranean States and the EC[9], under the auspices of the *United Nations Environment Programme* (UNEP) and the *Barcelona Convention* 1976 and was the subject of the COP22 Youth Conference (Istanbul 15-16 November 2021) and the COP22 Ministerial Conference (Antalya-dates 7-10 December 2021) hosted by the Republic of Türkiye.

The Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, originally the *Convention for Protection of the Mediterranean Sea against Pollution*, and often simply referred to as the *Barcelona Convention*, is a regional convention adopted in 1976 to prevent and abate pollution[10]. Its main purpose is to "protect the Mediterranean marine and coastal environment while boosting

[8] See the Mediterranean Action Plan (MAP)- The Mediterranean Action Plan (MAP)-Barcelona Convention System works with Contracting Parties and partners to fulfil the vision of a healthy Mediterranean Sea and Coast that underpin sustainable development in the region. <https://www.unep.org/unepmap/> accessed 11 November 2021.

[9] The 22 Contracting Parties to the Barcelona Convention are: Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syrian Arab Republic, Tunisia, Türkiye, and the European Union.

[10] The Barcelona Convention has given rise to seven Protocols addressing specific aspects of Mediterranean environmental conservation: Dumping Protocol (from ships and aircraft) Prevention and Emergency Protocol (pollution from ships and emergency situations) Land-based Sources and Activities Protocol.

regional and national plans to achieve sustainable development". The *Barcelona Convention Region* (BCR) around the Mediterranean covers 46,000km2[11] and is important for various reasons, as the only region containing both the richest (EU) and the poorest countries (in the South, West and East Med) in the world and hosting 480 million inhabitants[12], nearly the size of the EU.

The European Region of the BCR has one of the most advanced and well-funded programs in the world for the *Blued Economy Strategies*[13] and one of the most economically active and industrialized regions with resultant pollution and climatic change consequences. Furthermore, two thirds of the BCR population (320m) are youths and about half (240m)[14] are women, most of who depend on the sea for economic survival and suffer from poor education, unemployment and related problems. Additionally, the Mediterranean is a high-risk region, being a semi-enclosed shallow sea: susceptible to pollution from overuse; discharge of pollutants; and unable to absorb CO2 and clean up the environment compared to larger, open and deeper seas and oceans. Besides, the region is also riddled with conflicts and disputes (e.g., the *Arab-Israeli Conflict*; the

11 See Note 13 below.

12 See <https://worldpopulationreview.com/country-rankings/mediterranean-countries> accessed 11 November 2022.

13 See 'Barcelona Convention Parties Call for a Blue Economy to Safeguard the Mediterranean' <https://sdg.iisd.org/news/barcelona-convention-parties-call-for-a-blue-economy-to-safeguard-the-mediterranean/> accessed 29 July 2022. As far back as 2012, the 17th Ordinary Meeting of the Contracting Parties (COP 17) to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols adopted the Paris Declaration, which calls for a strategic policy framework for a "blue" economy, a version of the Green Economy applying to seas and oceans, to be adopted at Rio+20.

14 See Note 10 above.

Lebanese Crisis; the Libyan political impasse; the Syrian Conflict engulfing most neighbouring states; the *Aegean Sea Dispute*; and the *Cypriot Issue*). The region will therefore need to address these regional security issues before and it embarks on the transition from the Brown to the Blue and Green Economies.

Above all, as indicated above, and more relevant to the Blue Economy debate, the Region is not only dependent on the production and export of oil and gas for foreign earnings but also heavily relies largely on fossil-energy-based economic activities such as tourism and recreational activities, fisheries and aquaculture, maritime civilian transport, military transport, port activities, bioprospecting or exploitation of biological resources, exploitation of energy sources, etc. These activities have, and will not only continue to have, adverse effects on the marine and ecological environment of the Mediterranean Sea but means that it will take at least 50 years to-date to wean these countries off dependency on fossil fuels for foreign earnings and energy generation.

With 46,000 km[15] of coastline and unique marine resources (including in the high sea), the Mediterranean region hosts a Blue Economy with an estimated total value of US$ 5.6 trillion and generates an annual economic value of US$ 450 billion[16]. Sadly, however, several experts see the Blue Economy as a new growth frontier, a kind of Eldorado with an

[15] See 'The Mediterranean Sea Facts' <https://www.memphistours.com/Egypt/Wiki Travel/Tourist-Attractions-Egypt/wiki/The-Mediterranean-Sea> accessed 11 November 2022.

[16] See the UN, 'The Blue Economy in the Mediterranean' <https://www.unep.org/unepmap/resources/factsheets/blue-economy> accessed 12 November 2021; for further statistical data of the Mediterranean Sea Region.

expected tripling of its value added between 2010 and 2030 instead of as a solution to global warming and climatic change. And this in a context of reduced world growth and of the search for sources of economic expansion by many governments. Growth in the region is particularly expected in marine aquaculture, offshore wind energy, fish processing and shipbuilding repair and dismantling. Based on fossil energy profit-led economic models, these forecast economic activities, left unmanaged, will further maintain the region in the high-risk category of global warming and climatic change. The current Russo-Ukranian conflict, with consequences to energy inflation has probably set global and Mediterranean Blue Economy efforts another 50 years' back. Consequently, almost all most major economies have abandoned Blue Economy projects, reopened coalmines and nuclear reactors and reinstated commitments to and investments in fossil fuel investments.

IV. DISCUSSIONS 3: THE MEDITERRANEAN AND THE BLUE AND GREEN ECONOMIES

For the above reasons, the argument that a sustainable and inclusive Blue Economy is more necessary for the region, with low polluting, resource-efficient and circular features is appealing. However, as constantly asserted in this paper, the Mediterranean's energy demand is heavily reliant on fossil fuels: imports account for 40% of the region's energy mix. Furthermore, the implementation of renewable energy and energy efficiency measures could reduce this to less than 25%. Accordingly, it is arguable that a sustainable and inclusive Blue Economy could provide a positive contribution to the development of the Mediterranean region.

Again as indicated, the *UN 2030 Sustainable Development Agenda* includes a *Sustainable Development Goal* 14 on the conservation and sustainable use of oceans, seas and marine resources. Furthermore, the *Mediterranean Strategy for Sustainable Development* (2016-2025) targets the Blue Economy with an Objective 1 (Ensuring sustainable development in marine and coastal areas) and an Objective 5 (Transition towards a Green Economy and Blue economy).

Moreover, a Blue Economy should be considered in relation to international agreements relating to oceans, worldwide e.g., the *United Nations Convention on the Law of the Sea* 1982 (UNCLOS) and regionally e.g., *Barcelona Convention,* and, in relation to international scientific progress on oceans and the Mediterranean.

V. THE MEDITERRANEAN TRANSITION FROM THE BROWN TO THE GREEN AND BLUE ECONOMIES

The concept of the Blue Economy developed as the anti-thesis of, and in reaction to, the *Brown Economy*. As indicated above, Brown growth refers to economic development that is heavily reliant on fossil fuels and ignores the negative environmental consequences of economic production and consumption. A Brown Economy is one in which economic growth is largely dependent on environmentally destructive forms of activity, especially fossil fuels like coal, oil and gas. It is the fossil energy-based economic model which has resulted into climatic change and global warming. The Blue Economy and the Green Economy (see below) is, therefore, seen as a direct reaction to the Brown Economy. It is

therefore that Green growth entails transitioning to a far cleaner energy system that uses energy more efficiently, as well as significantly improved natural resource management, particularly on agricultural lands and in forests. From that viewpoint, it is an option for sustainable economies based on renewable clean energy compared to the non-renewable fossil fuels. On the contrary the current Brown Economy ideas lean towards the defense of economic development, large profit margins, corporate interests and are not a correct depiction of the state of the Blue Economy today.

Although predominantly a water-based economy, the Blue Economy has, however' had different meanings, and limited perspectives to different interests. According to the World Bank,[17] the Blue Economy means a sustainable use of ocean resources for economic growth, improved livelihoods and jobs and ocean ecosystem health. However, in that wider context the Blue Economy key idea should include "sustainability where ecology, social and economy works along". Be that as it may, the Blue Economy approach emphasized that ideas, principles, norms of Blue Economy lend significant contribution towards wider issues such as the eradication of poverty, contributing to food and nutrition security, mitigation and adaptation of climate change and generation of sustainable and inclusive employments and livelihoods. Thus the Blue Economy objectives are wider than anticipated, include both environmental and

[17] The World Bank, 'Blue Economy' (World Bank 2022) <https://www.worldbank.org/en/topic/oceans-fisheries-and-coastal-economies#1> accessed 4 November 2021.

social issues-double tasks not easily achievable in the short span of envisaged time.

Furthermore, the predominantly offshore, Blue Economy has diverse components, including established traditional ocean industries such as fisheries, tourism, and maritime transport, but also new and emerging activities, such as offshore renewable energy, aquaculture, seabed extractive activities, and marine biotechnology and bioprospecting. However, as emphasized above, the central plank of the Blue Economy should and remains the preference for and switch from the polluting non-renewable fossil-based energy economic model to clean the renewable energy-based economic model. Thus, the wider pie in the sky advocacy for the Blue Economy seems to have shifted from its essentials to the periphery.

Unlike the raw-materials-based Brown Economy, the Blue Economy creates green energy while combating climate change. Its construction, maintenance, and administration are all professions that create jobs. Shipping and tourism have the potential to grow and become more environmentally friendly as new technologies emerge. It is contended that renewable energy generation is also cheap and more efficient as it does not involve payments for its freely abundant "raw materials" as mentioned above (solar energy, wind, waves, etc.) nor does it involve large onshore excavations of and polluting of the onshore space. Instead, it relies on application of technology which is getting cheaper by the day.

The Blue Economy is based on clean technologies to secure both economic and ecological health. As already indicated above, it is argued that the Blue Economy will not benefit only the *Small Island Developing States* (SIDS) and *Least Developed Countries* (LDCs)[18], but also the Mediterranean Region countries to sustain the use of marine resources in the long term. However, it has its other advantages too. The Blue Economy and the Green Economy are not just about market opportunities; they also provide for the protection and development of more intangible 'blue' and "green" resources such as traditional ways of life, carbon sequestration, and coastal resilience to help vulnerable states mitigate the often-devastating effects of climate change.

The Blue and Green Economies have their disadvantages and challenges too.

VI. CHALLENGES OF THE MEDITERRANEAN BLUE ECONOMY

The counter argument to the above is that admirable as they appear, improperly managed, the Blue Economy and the Green Economy could still create problems of their own. First and foremost, after over a decade of the concepts there is still no agreed definition of the Blue Economy and the Green Economy. It is argued further that at this rate they remain mere concepts.

[18] World Bank and United Nations Department of Economic and Social Affairs, 'The Potential Of The Blued Economy Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries' (The World Bank, 2017) <https://openknowledge.worldbank.org/bitstream/handle/10986/26843/115545.pdf?sequence=1&isAllowed=y> accessed 27 October 2021.

Furthermore, the Blue Economy and the Green Economy also still only focus on the big actors (the energy giants and the developed countries) and exclude small actors (e.g., small-scale fishermen and poorer countries) despite 'social' benefits being one of their keywords. Besides that, although the Blue Economy and the Green Economy aim to promote the growth of marine protected areas, at the same time it ignores pre-existing components such as the growing of offshore oil and gas drilling activities which harms marine areas. Furthermore, the further developments, construction and generation of Blue and Green Economy energy will still create polluting effects. They are, and remain, the current economic trends that have been rapidly degrading land and ocean resources.

There is also the lack of will and investment in science human capital for employment and development in innovative Blue Economy and Green Economy sectors. In addition to that are the ongoing and inadequate care for marine resources and ecosystem services of the oceans. This was been apparent in the failures of the recent *COP26 Glasgow Conference*[19] and *COP27 Sharm El Sheikh Conference*[20] to come to any concrete decisions. Indeed in the former delegates from the industrialized and most polluting countries avoided any binding commitments and instead re-

[19] Held in partnership with Italy, 31 October-12 November 2021 <https://ukcop 26.org/> accessed 12 November 2021.

[20] The full title is the 2022 United Nations Climate Change Conference, more commonly referred to as Conference of the Parties of the UNFCCC, or COP27, is the 27th United Nations Climate Change conference and is being held from 6 November until 18 November 2022 in Sharm El Sheikh, Egypt.

sorted to what the young Swedish activist, Greta Tomburg, has described as the "*blah blah*"[21] talk.

Everything has its own advantages and disadvantages, the Blue Economy and the Green Economy are no exceptions. This is an inescapable natural principle. This is why the Blue Economy and the Green Economy should not be rejected simply due to its disadvantages. The disadvantages, notwithstanding, for humanity's sake the Blue Economy and the Green Economy should be embraced and improved along the way by filling in the loopholes. It is argued that slowly, a better system and future will be achieved. This argument continues that the Blue Economy and Green Economy are concepts which can be made practical. This is more so as the future will consist of a move away from land-based (especially exhausting its resources) to ocean-based resources. There is some sympathy for this line of though. If there is no system like the Blue Economy and the Green Economy to govern the use of oceans (the 71 %) and on the land (the 29 %), the Earth is unlikely not continue sustaining humanity. Either humanity focuses on the oceans and land without any harms free system, or humanity adopts the Blue Economy and the Green Economy which could help oceans and land sustenance.

The Mediterranean region is neither immune to nor is it different from the general challenges facing the Blue Economy and Green Economy globally. Thus, the region has some challenges to the perspective of Blue Economy and the Green Economy such as frequent floods, marine pollution including ocean acidification and blue carbon, lack of trained per-

[21] See Note 18 above.

sonnel, harmonizing sectoral policies, plans and laws, poor ocean governance and political support.

One of the greatest challenges to the Blue Economy is to wean off the major fossil fuel (gas and oil) of member states of the region whose economies are totally highly dependent thereon. It is the "elephant in the room" solution which might involve extremely large subsidies to enable the transition from the Brown to the Blue Economy and Green Economy. The creation of a fund for that purpose is one alternative solution and will involve large sacrifices from the international community for which, judging from COP26 and COP27 deliberations, there is currently no appetite.

Coupled with that are the rearguard actions from these countries and the powerful oil and gas multinational companies' lobbies prepared to use their powerful wealth and influence to maintain their Brown Economy privileges[22]. There were estimated 400 and 600 delegates from these lobbies at the COP26 and COP27 respectively[23]. No doubt some of those were from the oil and gas producing countries of the Mediterranean region.

Other challenges include the long transition of probably up to 100 years that will be required to transition from the Brown Economy to the Blue Economy and Green Economy. In the course of that global events such

[22] These oil, gas and coal multinational monopolies use all mechanisms available to them including but limited to lobbying and threatening politicians; sponsoring conferences, learned articles and academic institutions; supporting climatic change deniers; sponsoring political parties; using their dominated press and media for propaganda.

[23] BBC World News Report 10 November 2022.

as the current Russian-Ukrainian war has tended to put a break to and a set-back in the momentum for the Blue Economy and the Green Economy. Coupled with all these are lack of the large investments in science and technology required to foster the Blue Economy and the Green Economy.

It is argued to climatic change sceptics, lobbyists and global warming deniers that that the Blue Economy and the Green Economy are just concepts, conspiracies and "fake news" rather than a practical reality. The other side of this argument is that what is happening is alarmist reaction to a cyclic event that has happened for millennia. According this argument is that the bulk of the so called global warming is nothing new.

However, for the above reasons, a contrary argument is put forward by the opposing side. According to the believers in climatic change and the Blue Economy and the Green Economy, what is happening has been scientifically supported by the Intergovernmental *Panel on Climate Change* (IPCC)[24] and is evidence-based practical realities. Although acknowledging its disadvantages and problems in its implementation, this group believes that climatic change and global warming is a reality and accordingly the Blue Economy and Green Economy concepts are sound. Accordingly, that the extreme heat and bush fires of this summer (2022) are evidence of the reality of the current phenomena. Accordingly, as these thoughts have consistently argued, the Blue and Green

[24] The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change <https://www.ipcc.ch/> accessed 10 November 2021.

Economy advantages and benefits far outweigh their disadvantages. Consequently, the Blue Economy and the Green Economy are, therefore, not just economic models, their successes are tied up with the very continued existence of the human race on this planet.

VII. CONCLUDING REMARKS

The above pro and cons arguments, it is the considered view of this article that the Blue Economy and Green Economy have their disadvantages and challenges. In addition to the challenges enumerated above the disadvantages include the lack of investment in human capital for employment and development in innovative Blue Economy and Green Economy sectors and the inadequate care for marine resources and ecosystem services of the oceans.

The article maintains that the Mediterranean Sea Region is not only fragile but that most of the states therein are heavily dependent on fossil fuels for export-earnings and energy generation. They will need a long time to adjust and financial compensation and subsidy to transition from the current Brown Economy to the Green Economy and Blue Economy.

Despite the above disadvantages and challenges, globally, the Blue Economy and the Green Economy remain the human races and the Mediterranean's region inhabitants' only survival chance' because:

(i) They will facilitate the human races' responsivity: sustainable development economic model;

(ii) They will also save and enhance custody of humanity's home planet for future generations;

(iii) There are no other known alternative habitable planets like the human home planet earth; and

(iv) Accordingly, the human race should not sleep-walk to its suicide by extinction.

With respect to the Mediterranean Sea Region, the Blue Economy and the Green Economy are even more important for reasons given above, and more so because of the delicate and fragile environmental position of the economies around it. The Blue Economy and the Green Economy offer the planet generally and the Mediterranean region in particular, possibilities of improved efficiency in the land and ocean management, better treatment and governance of marine ecosystems, a more equitable model of global health standards, lower emissions and resilience against climate change.

The *Barcelona Convention* and its related programs are key to the successful achievement of the Blue Economy and Green Economy in the Mediterranean Sea Region. As in the other SIDS and coastal LDCs, the Convention and its protocols provide the basis to pursue a low-carbon and resource-efficient path to sustainable economic growth and development designed to enhance livelihoods for the poor, create employment opportunities, and reduce poverty in the Mediterranean Sea Region.

Finally, the article agrees with the expressed sentiment that, "The achievement of Blue Economy in the Mediterranean Sea region required

adequate comprehensive legal and policy framework with appropriate management tools and operational strategies, which was translated in the *Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean* and its protocols, the convention has called for a Blue Economy to safeguard and promote a clean, healthy, and productive Mediterranean environment"[25].

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[25] Ministerial Declaration of COP22, Antalya 7-10 December 2021 <https://www. cop22 med-turkey.com/;https://www.cop22med-turkey.com/sayfa/ministerial-declaration> accessed 31 July 2022.

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