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معهد التخطيط القومي



تطبيق استراتيجيات الاقتصاد الأزرق وتحقيق التنمية المستدامة ٢٠٣٠

في جمهورية مصر العربية

The Implementation of Blue Economy Strategies and achieving
Sustainable Development Goals 2030 in the Arab Republic of Egypt

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مستخلص البحث

تطبيق استراتيجيات الاقتصاد الأزرق وتحقيق التنمية المستدامة ٢٠٣٠ في جمهورية مصر العربية
استهدف هذا البحث التعرف على العلاقة بين تطبيق استراتيجيات الاقتصاد الأزرق وتحقيق أهداف التنمية المستدامة ٢٠٣٠ في مصر ، بإستخدام المنهج الوصفي ، وكانت أدوات جمع البيانات وهي الوثائق ودراسة حالة وكما قام الدارس بالاطلاع على محاور خطة استراتيجية التنمية المستدامة مصر ٢٠٣٠ وتقدير البنك الدولي للاقتصاد الأزرق ومحاور الاقتصاد الأزرق وكانت أهم النتائج وجود رابط بين تطبيق استراتيجيات الاقتصاد الأزرق ودرجة تحقيق أهداف التنمية المستدامة مصر ٢٠٣٠ وكما البحث وضح أيضا عدم إدراك الدول النامية ومنها جمهورية مصر العربية مفهوم الاقتصاد الأزرق نتيجة تركيز المؤسسات الدولية على الدول المتقدمة فقط. كما ابرز البحث أهمية ومشكلة التمويل لتطبيق استراتيجيات الاقتصاد الأزرق. كما وضح البحث فوائد تطبيق الاقتصاد الأزرق كالحفاظ علي البيئة و في ذات الوقت خلق فرص عمل جديدة للشباب وخلق فرص استثمارية للقطاع الخاص.

Abstract

The Implementation of Blue Economy Strategies and achieving Sustainable Development in the Arab Republic of Egypt

The research aimed to identify the relationship between the implementation of the blue economy strategies and to achieve SDGs(sustainable development goals): Egypt vision 2030. To this purpose, the concept of the blue economy and sustainable development defined at the global scale were examined, along with their evolution over time and their adaptation to marine and coastal areas. In this research, the descriptive method used. Also, data collection tools were collecting officials' documents and analyzing a case study. The scholar viewed the sustainable development strategy for Egypt 2030 dimensions and the World Bank's report for the blue economy and its pillars. Results were the following: There is a relation between the implementation of the blue economy strategies and achieving the sustainable development goals of Egypt 2030. Besides, It shows a lack of awareness of the concept of the blue economy in third countries, including the Republic of Egypt and the concentration of international institutions in developed countries only. This research also highlighted the financing issue for the implementation of blue economy strategies. Finally, this research also shows the benefits of implementing the blue economy, such as preserving the environment and, at the same time creating new job opportunities for youth and creating investment opportunities for the private sector.

Introduction

“Look deep into nature, and then you will understand everything better.” (Albert Einstein). Our natural environment and surroundings provide us with everything that we ever need. We get air, water, food, and everything else from the environment. “Saving the environment” refers to the practice involved in saving and protecting the environment, ensuring its sustainability. Thus, human destruction of nature is rapidly eroding the world’s capacity to provide food, water, and security to billions of people. Natural resource exploitation has been the main feature of economic development and trade for most of global history. At present, generally, it is accepted that economic growth around the world is leading to the irreversible depletion of natural resources, environmental degradation, and the consequent threat to future generations, which are essential reasons and challenges for rethinking economic patterns. Ecological resources are considered today as economic assets and called “natural capital.” The efficient and sustainable management of natural capital is a critical policy objective for the economic process.

Hence, the concept of “Blue Economy” is recent and originated from the United Nations Conference on Sustainable development held in Rio de Janeiro in 2012. The challenges affecting the Oceans call for shared integrated responses and improved governance, particularly relevant when considering the ever-increasing demands for natural resources and pressures on the marine environment, as well as the continued need for sustainable growth and jobs in marine and maritime sectors and regions. Moreover, the Mediterranean region is considered one of the top biodiversity spots in the world. Indeed, it offers a different topography and a variety of landscapes, and also comprises a vast set of coastal and marine ecosystems that deliver valuable benefits to its coastal inhabitants. The region occupied, and marine and coastal resources have traditionally supported coastal populations and human uses. Today, a third of the entire Mediterranean riparian countries’ population inhabits coastal areas. (UNEP, 2016)

The environment in the Mediterranean forms the basis for the development of the region, and it is crucial to put an end to the environmental degradation that is already giving rise to very high economic and social costs. The region also needs to redirect its development to meet the economic and social needs without increasing the process of environmental degradation. The Strategy, therefore, should focus mainly on the integration of ecological concerns into crucial economic development sectors, while giving due consideration to social and cultural dimensions: sustainable development, a vital necessity to meet developmental challenges in the Mediterranean. In general terms, the environmental problem is one of the most critical. With a degraded environment, the Mediterranean is in grave danger of losing the principal assets, which make it so unique than it was, especially in agriculture and tourism. Continued poor management of scarce natural resources, with particular reference to water, agricultural land, energy, and coastal zones, will compromise

economic development, the quality of life and social stability. Population dynamics and unemployment, together with the entrepreneurial sluggishness and social concerns, will add to these pressures. Moreover, without improved regional cooperation and governance mechanisms, the globalization process might worsen the negative trends. (UNEP,2001).

Over the recent decades have defined tools and mechanisms to achieve a more sustainable development allowing the preservation and sustainable uses of the Mediterranean natural capital due to environmental degradation of the Mediterranean natural wealth. At this stage of economy reframing, a new concept of “Blue Economy” has emerged to foster the shift towards a new, ocean (marine)-based sustainable economy. (UNEP, 2016).

“Blue Economy” is defined as an economy that “comprises a range of economic sectors and related policies that together determine whether the use of ocean resources is sustainable.” It is an essential challenge of the blue economy” to understand and better manage the many aspects of oceanic sustainability, ranging from sustainable fisheries to ecosystem health to preventing pollution.” Secondly, the blue economy challenges us to realize that the sustainable management of ocean resources will require collaboration across borders and sectors through a variety of partnerships, and on a scale that previously achieved. In other words, “Blue Economy “means the integration of ocean economy development with the principles of social inclusion, environmental sustainability, and innovative, dynamic business models. It is a concept by Gunter Pauli to shift society from scarcity to abundance with what is locally available, by tackling issues that cause environmental and related problems in new ways. Small islands have enormous water resources, which gives them an excellent opportunity to promote their economic growth, besides, to address the challenges of development unemployment, food security, and poverty facing Africa. (World Bank and UN DESA 2017).

Here another term is related to the blue economy, which is Sustainable Development. Sustainable Development origins traced to the seventies is in the World Commission on Environment and Development in 1987 that the term is coined and also defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” One of the defining moments for Sustainable Development was the UNCED, known as the “Earth Summit,” held in Rio de Janeiro in 1992 with the agreement by member States to launch a process to develop a set of sustainable development goals (SDGs) that could be a useful tool for pursuing focused and coherent action on sustainable development. (Le Blanc, 2012:1).

The blue economy is envisaged as the integration of ocean economy development with the principles of social inclusion, environmental sustainability, and innovative, dynamic business models. It is founded upon a systems approach, wherein renewable and organic inputs are fed into sustainably designed systems

to fuel blue growth, the original Blue Economy concept by Gunter Pauli was to shift society from scarcity to abundance with what is locally available, by tackling issues that cause environmental and related problems in new ways.

Besides, the blue economy is defined here as a sustainable ocean economy, in which economic wealth is balanced with the health of ocean ecosystems and their natural assets, and is socially sustainable. Coastal and Island developing countries have remained at the forefront of this Blue Economy advocacy, recognizing that the oceans have a significant role to play in humanity's future and that the Blue Economy offers an approach to sustainable development better suited to their circumstances, constraints, and challenges. Urgent attention is required to enable the sound management of ocean resources for the realization of sustainable development due to opening up new realms of opportunity for submarine exploitation, and the High Seas constitute the last global commons (World Bank,2017).

What is the Blue Economy?

The term “Blue Economy” or “Blue Growth” has surged into common policy usage all over the world. For some, Blue Economy means the use of the sea and its resources for sustainable economic development. For others, it merely refers to any economic activity in the maritime sector, whether sustainable or not. (WWF, principles for a sustainable blue economy, 2015)

WWF has developed a set of principles for sustainable: Blue Economy provides social and economic benefits for current and future generations, Restores, protects and maintains the diversity, productivity, resilience, core functions, and intrinsic value of marine ecosystems, Is based on clean technologies, renewable energy, and circular material flows to secure economic and social stability over time while keeping within the limits of one planet. (WWF, principles for a sustainable blue economy,2015)

Despite increasing high-level adoption of the Blue Economy as a concept and as a goal of policy making and investment, there is still no widely accepted definition of the term. To fill this gap in shared understanding about what characterizes a sustainable Blue Economy, and to help ensure that the economic development of the ocean contributes to real prosperity, today and long into the future, WWF has developed a set of principles.

The transition to a blue economy will significantly contribute to achieving sustainability :

Blue economy management achieved by using comprehensive and sustainable management methods based on the active and effective participation of stakeholders informed and preventive. The international community suggested that the “blue economy” concept should seek to promote economic growth, social inclusion, and the

preservation or improvement of livelihoods while at the same time ensuring the environmental sustainability of the oceans and coastal areas. (World Bank,2017)

The blue economy can include established ocean industries such as fisheries and tourism as well as emerging and new activities—such as offshore renewable energy, aquaculture, seabed mining, and marine biotechnology. More significant industries such as coastal development, shipping, and port infrastructure and services also rely on the oceans, seas, and coasts. Underlying the need for diversified economies are demographic trends such as population growth and rapid coastal urbanization, which fuel the search for food and job security and alternative sources of minerals and energy, as well as seaborne trade. At the same time, new technologies can offer significant opportunities to tap into new and previously unexploited resources (UNEP 2015; UN DESA 2014a; Economist Intelligence Unit 2015).

Moreover, the Blue Economy is a developing world initiative pioneered by SIDS (small island developing states) but relevant to all coastal states and countries with interest in waters beyond national jurisdiction. SIDS (small island developing states) has always been highly dependent upon the seas for their well-being. However, the Blue Economy, while encompassing the concept of ocean-based economies, goes far beyond that. The Blue Economy conceptualizes oceans as “Development Spaces,” where spatial planning integrates conservation, sustainable use, oil and mineral wealth extraction, bio prospecting, sustainable energy production, and marine transport. The Blue Economy breaks the mold of the business as usual “brown” development model where the oceans have been perceived as a means of free resource extraction and waste dumping, with costs externalized from economic calculations. The Blue Economy will incorporate ocean values and services into economic modeling and decision-making processes. The Blue Economy paradigm constitutes a sustainable development framework for developing countries addressing equity in access to, development of, and the sharing of benefits from marine resources, offering scope for re-investment in human development, and the alleviation of crippling national debt burdens. (UNEP 2015)

The Blue Economy espouses the same desired outcome as the Rio +20 Green Economy initiative, namely: “improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities” (UNEP 2013). It endorses the same principles of low carbon, resource efficiency, and social inclusion. However, it is grounded in a developing world context and fashioned to reflect the circumstances and needs of countries whose future resource base is marine.

Fundamental to this approach is the principle of equity, ensuring that developing countries:

- Optimize the benefits received from the development of their marine environments, such as fishery agreements, bioprospecting, oil, and mineral extraction.
- Promote social equity, including gender equality, and in particular the generation of inclusive growth and decent jobs for all.

- Have their concerns and interests adequately reflected in the development of seas beyond national jurisdiction, including the refinement of international governance mechanisms and their concerns as States proximate to seabed development. (UNEP,2013).

The mainstreaming of equity at international and national levels offers scope for developing countries to realize more significant revenue from their resources and reinvest in their populace, environmental management, reduce national debt levels and contribute to the eradication of poverty and hunger. (UNEP,2013).

At the core of the blue economy, the concept is the decoupling of socioeconomic development from environmental degradation. To achieve this, the blue economy approach founded upon the assessment and incorporation of the real value of the natural (blue) capital into all aspects of economic activity (conceptualization, planning, infrastructure development, trade, travel, renewable resource exploitation, energy production/consumption). Efficiency and optimization of resource use are paramount while respecting environmental and ecological parameters. It includes sustainable sourcing and usage of local raw materials and utilizing where feasible “blue” low energy options to realize efficiencies and benefits as opposed to the business as usual “brown” scenario of high energy, low employment, and industrialized development models. The Blue Economy approach recognizes and places renewed emphasis on the critical need for the international community to address the sound management of resources in and beneath international waters by the further development and refinement of international law and ocean governance mechanisms effectively. (UNEP,2013).

Every country must take its share of the responsibility to protect the high seas, which cover 64 % of the surface, our oceans, and constitute more than 90% of their volume. (UNEP,2013).

The main challenges for the achievement of a truly sustainable, Blue Economy are detailed as follows:

- Sustainable use of biodiversity linked to food and livelihood provision.
- Food security: focusing on the development of sustainable fisheries or exploitation of wild fish stocks and sustainable and efficient aquaculture industries.
- Climate change and carbon budgets; facilitating the transition towards a low carbon economy and a renewable “blue” energy generation to address the acidification of oceans and pH decrease (CO₂ cycle); and enhance blue carbon cycles or carbon sequestration cycles, linked to the damage of coastal habitats such as mangroves, seagrass meadows or salt marshes;
- Marine and coastal tourism, which continue showing growing patterns despite the global crisis. Increases of greenhouse gas emissions, water demand, sewage, waste generation, loss, and degradation of coastal habitat, biodiversity, and ecosystem services need to be addressed.

- Pollution and marine debris, a growing human population, the intensification of agriculture, and urbanization of coastal areas are at the land-origin of increasing marine pollution. In contrast, shipping and marine resource exploitation (hydrocarbon or mining) are sea-based pollution sources. (BLUE ECONOMY PROJECT,2016).

The development of a blue economy expected to offer opportunities for sustainable growth in many traditional and emerging economic sectors, which considered as Blue Economy key sectors:

- Increasing shipping/ port activities: an opportunity for coastal countries to position themselves while dealing with challenges such as pollution, inefficiency, greenhouse gas emissions, invasive alien species in ballast waters, and hull fouling.
- Fisheries: increased sustainable catches are to be achieved along with low energy use and reduced costs; food security and livelihoods are to be enhanced by restoring overexploited or collapsed fish stocks through the application of the precautionary principle and sound, science-based management of fisheries (e.g., eliminating subsidies).
- Aquaculture: high potential for sustainable development, on condition that sustainable production patterns are met, particularly regarding the proportion of fish in fishmeal.
- Coastal tourism: impacts need to be minimized by introducing the real value of ecosystem services in development planning and by fostering fewer impacting activities (e.g., ecotourism, nature-based tourism).
- “Blue” energy: parallel to the expected increase of deep-water hydrocarbon exploration and exploitation, a high potential exists for the development of renewable energy (wind, wave, tidal, biomass, thermal conversion, and salinity gradients).
- Biotechnology: bio-prospecting, i.e., the sustainable extraction of biological components (such as bacteria, algae) has a high potential for health care, food supplies, environmental remediation, and energy production.
- Submarine mining: new materials (with potential uses in ICTs and renewable energy) explored for potential extraction and commercialization; measures are to develop to ensure the sound management of the seabed natural capital and the procurement of optimal benefits in national EEZs. (BLUE ECONOMY PROJECT,2016).

Furthermore, the World Bank’s report identifies the primary sectors :

- **Fisheries:** The overfished or overexploited fish populations are still depressingly high. Furthermore, fishing quotas have not genuinely contributed to the improvement. The development of the last decade has confirmed their largely ineffective impact on sustainable fishing. 58 percent of the fish population fished, and a third overfished. To sum it up: 90 percent of the fish population is over- or outfished. Therefore, the goals should be to achieve more sustainable catches with low energy consumption and lower costs; to improve food security and livelihoods by restoring over-exploited or collapsed fish stocks, applying the precautionary principle and scientifically based

fisheries management. Sustainable fisheries can be an essential component of a prosperous blue economy, with marine fisheries contributing more than US\$270 billion annually to global GDP (World Bank 2012b). A key source of economic and food security, marine fisheries provide livelihoods for the 300 million people involved in the sector and help meet the nutritional needs of the 3 billion people who rely on fish as an essential source of animal protein, essential micronutrients, and omega-3 fatty acids (FAO 2016).

- **Aquaculture:** The world's population expected to rise to 9.6 billion by 2050, creating considerable demand for food and sources of protein. Today, fish and fish products supply a significant portion of the daily intake of animal protein in many developing countries. As aquaculture supplies 58 percent of fish to global markets (FAO 2016), invigorating this sector can contribute to food security as well as social and economic inclusion for some of the poorest people in the world. Locally, aquaculture can help lessen the need for fish imports and increase employment, as well as contribute to food security and meet nutrition needs.
- **Coastal and Maritime Tourism:** Tourism, fast becoming the most significant global business, employs 1 out of every 11 persons globally. According to the World Travel and Tourism Council, travel and tourism's contribution to world GDP grew for the sixth consecutive year in 2015, rising to a total of 9.8 percent (US\$7.2 trillion) (WTTC 2016). The World Tourism Organization calculated that 2016 was the seventh consecutive year of sustained growth in international arrivals, which grew by 46 million over the previous year to reach 1,235 million. The number of international tourists visiting SIDS destinations increased from 28 million in 2000 to 41 million in 2013. In the same period, exports from tourism grew from US\$26 billion to US\$53 billion (UNWTO, 2014). Tourism can, therefore, be an essential source of foreign exchange and tied to the social, economic, and environmental well-being of many countries
- **Bio prospecting or exploitation of biological resources:** The exceptional biological diversity of the oceans—estimated to range from 700,000 to 1 million eukaryotic species (Appeltans et al. 2012) and millions more prokaryotic (Curtis, Sloan, and Scannell 2002) and viral taxa (Suttle 2013)—is an essential source of novel genes and natural products, with applications in medicine, food, materials, and energy and across a wide array of bio-based industries. Marine biological prospecting includes the discovery from the ocean environment of novel genes and biological compounds that can lead to the commercial development of pharmaceuticals, enzymes, cosmetics, and other products. Because of the low quantities of raw material that must usually be sampled, bioprospecting can generally be considered as having more limited environmental impacts (Hunt and Vincent 2005) and thus be a potential alternative to more-intensive extractive activities.

- **Extractive Industries: Non-Living Resources Offshore** oil and gas exploration and exploitation are already underway off the coasts of many states around the world, and much has already been learned about the need to manage the risks of these activities and some of the measures that are taken to alleviate them. Less clear, however, is the need to balance the focus on these activities as opposed to other uses, which quite often are not compatible. It is ultimately up to the coastal states to weigh the trade-offs between these potentially productive activities and the extent to which they preclude other uses of marine resources, including the sustainable exploitation of marine living resources.
- **Renewable Marine (off-shore) Energy:** Sustainable marine energy can play a vital role in social and economic development, as well as in climate adaptation and mitigation. While offshore wind energy is becoming more common, particularly in Europe, other forms of marine energy extraction are still experimental, and in most cases, have not yet been developed on a commercial scale.
- **Maritime Transport, Ports and Related Services, Shipping, and Shipbuilding:** In 2015, over 80 percent of the volume of international trade in goods transported by sea, and this share is even higher for most developing countries. In value terms, some observers such as Lloyd's List Intelligence have estimated the share of maritime seaborne trade at 55 percent of all international trade in 2013, while other estimates exceed 70 percent (UNCTAD 2016). Globally, shipping provides the principal mode of transport for the supply of raw materials, consumer goods, essential foodstuffs, and energy. It is thus a prime facilitator of global trade and contributor to economic growth and employment, both at sea and ashore. Some estimates indicate that international seaborne trade volumes are expected to double by 2030 (QinetiQ, Lloyd's Register, and Strathclyde University 2013) while, according to the International Transport Forum, port volumes.

Under the UN Blue Economy approach, the key to a successful shift towards a Blue Economy lies in the deployment of international efforts to refine and enforce international law and ocean governance mechanisms in a coordinated manner. Sound management of marine resources is needed within, yet also beyond, national waters (i.e., high seas, international waters) and seabed. Sustainable development based on research criteria allowing setting up technically informed decision-making and adaptive management. (BLUE ECONOMY PROJECT, 2016).

Although not explicitly focusing on oceans or marine environments, in the context of designing and implementing a Blue Economy, it is essential to highlight and consider the principles of the circular economy. This paradigm has progressively become a central item in strategies aiming at achieving sustainable development worldwide. It may have a key, yet indirect, role in achieving a healthy status of coastal and marine ecosystems, notably about marine litter concerns. The general

principles of the circular economy have been embodied directly or indirectly in the central regulatory texts targeting sustainable development, either at international, regional, or local levels. (BLUE ECONOMY PROJECT,2016).

Also, we can apply the circular economy beside blue economy goals in order to reach sustainable development goals. The circular economy represents an alternative to the linear economy, based on the “take-make-consume and dispose of the model,” which relies exclusively on resource extraction and where every product is bound to reach its “end of life” through various stages, namely: raw material extraction, production, distribution, consumption and discard. Valuable materials are used to produce consumer goods or provide energy and are discarded as waste when worn out. A circular economy switches to a model where (part of) wastes are transformed into new resources and are re-injected into the manufacturing circuit. Ideally, it sets up a closed, nature-inspired cycle, where raw materials become new materials at its end, through a more complicated process based on different phases: raw material, design, production or remanufacturing, distribution, consumption (including use, reuse, and repair), collection and recycling to become raw materials again. In practice, it aims at lowering to the maximum extent both inputs (i.e., resources, such as new-first use raw materials, energy or water) and outputs (residual wastes, emissions). (EU,2020).

Several pillars underpin the circular economy: efficient material management, reduction of toxic substances, energy efficiency, and economic incentives. As a result, the model tends towards a zero-waste scenario, where new products made out of secondary raw materials and waste is considered a valuable resource. Goods are reused, refurbished, or dismantled and recycled in a constant circle. In this cycle, eco-design and econ-innovation play a crucial role, allowing recovering wastes and reusing them as raw material. (EU,2020).

The scope of the blue economy varies based on the sectors considered. There are the economic sectors that use oceans and inland waters such as fisheries, aquaculture, tourism, shipping, biotechnology, maritime security, mining, oil and gas, and renewable energy. These have a direct impact on the aquatic ecosystems and the fauna and flora that are sustained by those ecosystems. The aim of an overarching blue economy framework should, therefore, be to assess ways and means of mitigating the cumulative impact of these economic sectors on living marine resources and ecosystem services and of ensuring that development of resources done to minimize potential negative impacts, in numerous coastal developing countries, including several small states, blue economy frameworks adopted to promote food security and decent livelihoods. Such approaches generally cover the traditional ocean-based sectors, such as fisheries, aquaculture, ecosystem services, and marine and coastal tourism, with the potential for the future integration of other important sectors as appropriate. (Ababouch, 2015).

What is Sustainable Development ?

The concept of sustainability appears poised to continue to influence future discourse regarding development science. In the view of Porter and van der Linde (1995), implies that the best choices are likely to remain those that meet the needs of society and are environmentally and economically viable, economically and socially equitable, as well as socially and environmentally bearable.

Sustainable development dimensions As a visionary and forward-looking development paradigm, SD emphasizes a positive transformation trajectory anchored mainly on social, economic, and environmental factors. According to Taylor (2016), the three main issues of sustainable development are economic growth, environmental protection, and social equality. Based on this, it argued that the concept of SD rests fundamentally on three conceptual pillars. These pillars are “economic sustainability,” “social sustainability,” and ‘environmental sustainability.

Economic Sustainability

Economic sustainability implies a system of production that satisfies present consumption levels without compromising future needs (Lobo, Pietriga, & Appert, 2015). Traditionally, economists, assuming that the supply of natural resources was unlimited, placed undue emphasis on the capacity of the market to allocate resources efficiently (Du & Kang, 2016). They also believed that economic growth would be accompanied by the technological advancement to replenish natural resources destroyed in the production process (Cooper & Vargas, 2004). However, it realized that natural resources are not infinite; besides, not all of them can be replenished or are renewable. The growing scale of the economic system has overstretched the natural resource base, prompting a rethink of the traditional economic postulations (Basiago, 1996, 1999; Du & Kang, 2016). It has prompted many academicians to question the feasibility of uncontrolled growth and consumption.

Economies consist of markets where transactions occur. According to Dernbach (1993), there are guiding frameworks by which transactions are evaluated and decisions about economic activities made. Three main activities carried out in an economy are production, distribution, and consumption. However, the accounting framework used to guide and evaluate the economy concerning these activities grossly distorted values, and this does not augur well for society and the environment (Cao, 2017). Allen and Clouth (2012) echo that human life on Earth is supported and maintained by utilizing the limited natural resources found on the Earth. Dernbach (2003) had earlier argued that, due to population growth, human needs like food, clothing, housing increased, but the means and resources available in the world increased to meet the requirements forever. Furthermore, Retchless and Brewer (2016) argue that, as the primary concern seems to be on economic growth, essential cost components like the impact of depletion and pollution, for example, are ignored while increasing demand for goods and services continues to drive markets and infringe destructive effects of the environment (UNSD, 2018c). Economic sustainability, therefore, requires that decisions are made in the most equitable and

fiscally sound way possible while considering the other aspects of sustainability (Zhai & Chang, 2019).

Social Sustainability

Social sustainability encompasses notions of equity, empowerment, accessibility, participation, cultural identity, and institutional stability (Daly, 1992). The concept implies that people matter since development is about people (Benaim & Raftis, 2008). Social sustainability connotes a system of social organization that alleviates poverty (Littig & Grießler, 2005). However, in a more fundamental sense, “social sustainability” relates to the nexus between social conditions such as poverty and environmental destruction (Farazmand, 2016). In this regard, the theory of social sustainability’ posits that the alleviation of poverty should neither entail unwarranted environmental destruction nor economic instability. It should aim to alleviate poverty within the existing environmental and economic resource base of the society (Kumar, Raizada, & Biswas, 2014; Scopelliti et al., 2018).

In Saith’s (2006) opinion, at the social level, sustainability entails fostering the development of people, communities, and cultures to help achieve a meaningful life, drawing on proper healthcare, education, gender equality, peace, and stability across the globe. It argued (Benaim & Raftis, 2008) that social sustainability is not easy to achieve because the social dimension seems complicated and overwhelming. Unlike the environmental and economic systems where flows and cycles are easily observable, the dynamics within the social system are highly intangible and cannot be easily modeled (Benaim & Raftis, 2008; Saner, Yiu, & Nguyen, 2019). As Everest-Phillips (2014) puts it, “the definition of success within the social system is that “people subjected to conditions that undermine their capacity to meet their needs.”

According to Kolk (2016), social sustainability is not about ensuring that everyone’s needs are met. Instead, it aims at providing enabling conditions for everyone to have the capacity to realize their needs if they so desire. Anything that impedes this capacity is considered a barrier and needs to address in order for individuals, organizations, or communities to make progress towards social sustainability (Brodhag & Taliere, 2006; Pierobon, 2019). Understanding the nature of social dynamics and how these structures emerge from a systems perspective is of great importance to social sustainability (Lv, 2018). Above all, in Gray (2010) and Guo’s (2017) views, social sustainability also encompasses many issues such as human rights, gender equity, and equality, public participation, and the rule of law, all of which promote peace and social stability for sustainable development.

Environmental Sustainability

The concept of environmental sustainability is about the natural environment and how it remains productive and resilient to support human life. Environmental sustainability relates to ecosystem integrity and the carrying capacity of the natural environment (Brodhag & Taliere, 2006). It requires that natural capital be sustainably used as a source of economic inputs and as a sink for waste (Goodland & Daly, 1996). The implication is that natural resources harvested no faster than they can be regenerated, while waste emitted no faster than they assimilated by the environment (Diesendorf, 2000; Evers, 2018). Because the earth systems have limits or boundaries within which equilibrium is maintained.

However, the quest for unbridled growth is imposing ever higher demands on the earth system and placing an ever more enormous strain on these limits because technological advancement may fail to support exponential growth. Evidence to support concerns about the sustainability of the environment is increasing (Gilding: ICSU, 2017). The effects of climate change, for instance, provide a convincing argument for the need for environmental sustainability. Climate change refers to significant and long-lasting changes in the climate system caused by natural climate variability or by human activities (Coomer, 1979). These changes include warming of the atmosphere and oceans, diminishing ice levels, rising sea levels, increasing acidification of the oceans, and increasing concentrations of greenhouse gases (Du & Kang, 2016).

Climate change has already shown signs of affecting biodiversity. In particular, Kumar et al. (2014) have observed that higher temperatures tend to affect the timing of reproduction in animal and plant species, migration patterns of animals and species distributions, and population sizes. Ukaga et al. (2011) have argued that while dire predictions abound, the full impacts of global warming are not known. What is advisable, according to Campagnolo et al. (2018), is that, for the sake of sustainability, all societies must adjust to the emerging realities for managing ecosystems and natural limits to growth.

The current rate of biodiversity loss exceeds the natural rate of extinction (UNSD, 2018c). The boundaries of the world's biomes are expected to change with climate change as species are expected to shift to higher latitudes and altitudes and as global vegetation cover changes (Peters & Lovejoy (1992) cited in Kappelle, Van Vuuren & Baas (1999). If species are not able to adjust to unfamiliar geographical distributions, their chances of survival are reduced. It predicted that, by the year 2080, about 20% of coastal wetlands lost due to sea-level rise (UNSD, 2018c). All of these are important issues of environmental sustainability because, as already pointed out, they have implications for how the natural environment remains productively stable and resilient to support human life and development.

Sustainable development implies that economic development is both inclusive and environmentally sound, and to be undertaken in a manner that does not deplete the natural resources that societies depend on in the long term. The need to balance the economic, social, and environmental dimensions of sustainable development concerning oceans is a vital component of the blue economy. It is also a delicate balance to reach in practice, given that ocean resources are limited. The health of the oceans has drastically declined due to human activities—ranging from damage caused by carbon dioxide emissions to nutrient, chemical, and plastics pollution, unsustainable fishing, habitat degradation and destruction, and the spread of invasive species. The scientists and experts who prepared the First Global Integrated Marine Assessment (also known as the World Ocean Assessment) warned that the world's oceans face major pressures simultaneously with such significant impacts that the limits of their carrying capacity reached—or in some cases reached—and that delays in implementing solutions to the problems that have already identified as threatening to degrade the world's oceans will lead, unnecessarily, to higher environmental, social, and economic costs (United Nations 2016).

Moreover, The importance of oceans for sustainable development widely recognized by the international community and embodied in, among others, Agenda 21, the Johannesburg Plan of Implementation, various decisions are taken by the Commission on Sustainable Development, the Rio+20 outcome document The Future We Want, and the 2030 Agenda for Sustainable Development. The 1982 United Nations Convention on the Law of the Sea (UNCLOS), together with its implementing agreements—the 1994 Agreement relating to the implementation of Part XI of UNCLOS and the 1995 United Nations Fish Stocks Agreement—sets out the legal framework within which all activities in the oceans and seas must be carried out and is of strategic importance as the basis for national, regional, and global action and cooperation in the marine sector. (UN DESA 2014).

Also, it includes the conservation and sustainable use of all areas of the oceans and their resources. The concept of a blue economy came out of the 2012 Rio+20 Conference. It emphasized conservation and sustainable management, based on the premise that healthy ocean ecosystems are more productive and form a vital basis for sustainable ocean-based economies (UN DESA 2014).

Reference to the World Bank's report is to implement the blue economy and achieve Sustainable development goals 2030.

There are challenges and obstacles to implement blue economy activities and achieve sustainable development goals in 2030 are :

- 1-Climate Change, and it is related to sea-level rise.
- 2- The spread of harmful human activities, such as backfilling and destruction.
- 3- Destruction of reefs by intentionally cracking by some fishermen and divers.
- 4- The overfishing of some marine species and their extermination and imbalance in marine biodiversity.
- 5-Marine pollution that is emerging from extractive, oil, and gas.
- 6-Marine transportation activities.

Problem Statement:

The scale of human pressures on ecosystems everywhere has increased enormously in the last few decades. Since 1980 the global economy has tripled in size, and the world population has increased by 30 percent. Consumption of everything on the planet has risen – at a cost to our ecosystems. Thus, the UN recognized the importance of protecting the ocean and marine life, then decided to include SDGs for the ocean and marine life. Thus, SDGs, goal 14 Life below water, aims to sustainably manage and protect marine and coastal ecosystems from pollution, as well as address the impacts of ocean acidification. Enhancing conservation and the sustainable use of ocean-based resources through international law will also help mitigate some of the challenges that lead to environmental degradation and affect

future generation resources. It is essential to seek a solution to protect the environment and maintain current and next-generation needs. Thus, in this research, we view the concept of the blue economy as a solution for making between protecting the environment and maintaining generation's needs. Here, this research, we introduced the blue economy as a solution and achieving SDGs facing our oceans. Oceans protect biodiversity, provide jobs, food, drive economic growth, keep the planet cool, and absorb about 30% of global CO₂ emissions. At least 3-5% of global GDP derived from oceans—but their overall health is reaching a tipping point. Close to a third of fish stocks overfished, climate change affects coastal and marine ecosystems, unbridled development in the coastal zone is causing erosion, and marine pollution—mainly from land-based sources—is reaching such a proportion that its impact cannot be accurately measured. Business, as usual, will have high negative environmental and social impacts, which are expected to disproportionately affect vulnerable groups of the population, particularly women and girls. Egyptian environment is facing issues of natural and human reasons.

Objectives

Main Objectives

- To define the concept of the blue economy, and it is applicable in Egypt.

Sub Objectives

- To introduce the concept of the blue economy in Egypt.
- To identify the implementation method of the blue economy strategies and achieve SDGs, goal 14, underwater life, in the Republic of Egypt.

Questions

Main question

- What is the concept of the blue economy, and it is applicable in the Republic of Egypt?

Sub questions

- How to introduce the blue economy in the Republic of Egypt?
- What is required to implement the blue economy and achieve SDGs, goal 14, underwater life, in Egypt?

Methodology:

The research type is descriptive. In this research paper, the content analysis used as a technique for gathering and analyzing the content of official documents. Furthermore, the content analysis method used to determine the research of the concept of the blue economy and how to implement it and achieve SDGs. The content analysis method used in this research by analyzing official documents and open to categorize critical themes and identify patterns. Each theme was analyzed to gain a deeper understanding of perceptions. The scholar collected data on the variables of this research, which are: blue economy, sustainable development, and its analysis, and displaying it in a digital form in a way that provides knowledge and shows its trends and its connections and answering research questions. (Zidan,2013:29).

Data collection method :

In this research ,we make use of the following data collection methodologies :

1. Review of secondary sources as a starting point to identify existing information and specify further research needs. Useful materials include scientific articles, governmental sources such as annual reports from organizations, thesis, as well as annual reports from NGO service providers.
2. Analysis of relevant case studies that reflected the concept of the blue economy and sustainable development used to address the analytical aspect of the study.

In this research ,we review secondary sources as a starting point to identify existing information and specify further research needs. Useful materials include scientific articles, governmental sources such as annual reports from organizations, thesis, as well as annual reports from NGO service providers.

- In table no.1 ,we review different sources such as thesis ,reports ,scientific research and case studies to identify the independent variable which is the blue economy. We found that the scope of this review is limited. Most of the blue economy literature review provides definitions and how to implement for developed countries and islands and achieving SDGs without practical analysis. Furthermore, this review addresses the works of the blue economy and sustainable development as a concept and implementation .In this research ,we reviewed the following :such as the World Bank report, the Fao report and the UNEP report, and others .
- In table no.2,we review different sources such as thesis ,reports ,scientific research and case studies to identify the independent variable which is SDGs .We found that the scope of this review is unlimited. Most of the sustainable development literature review provides definitions and philosophy and how to achieve SDGs. Furthermore, this review addresses the works of sustainable development as a concept and implementation .In this research ,we reviewed the following :such as the SDGs strategy: Egypt vision 2030, study by Tomislav Klarin and others.
- In table no.3 ,the purpose is to determine the research gap, this table will present the objectives of previous literature and their results in comparison with the objectives of the current study and determine the gap between them.

Table No.1 Studies dealing with a variable Blue Economy

No.	Researcher name and Research type	Year	Country	Sample size	Implementation Field	Study Objective	The main results
1	Meg R. Keen, Anne. M. Lyesa, W Scientific production	2018	Australia	3	It reviews reports, academic literature, and regional speeches to develop the Blue Economy conceptual framework. It applied to three case studies from the fisheries sector – small scale fisheries, urban fish markets, and onshore tuna processing.	Towards defining the Blue Economy: Practical lessons from Pacific Ocean governance	The cases illustrate an imbalance in attention paid to critical components of the Blue Economy and missed opportunities for integration across scales, time, and stakeholders with a few noteworthy exceptions. While defining components of the Blue Economy provides a valuable tool for assessing coverage of critical elements of sustainable ocean management, it is less evident that the new label, Blue Economy, significantly advances practice beyond existing sustainable development frameworks.
2	Subrata Sarker a. Aminul Iel. al . Scientific production	2018	Bangladesh	Case study	Coastal and marine resources Harvesting Living Resources, Extraction of Non-living Resources, Other Economic Activities, and Protection of the Sea are the Main Components of the blue economy in Bangladesh.	From science to action: Exploring the potentials of Blue Economy for enhancing economic sustainability in Bangladesh. Ocean & Coastal Management	the paper is an attempt to examine the initiatives taken by different countries around the world to develop Blue Economy and identify valuable lessons that Bangladesh can learn from those experiences. The lessons include formulating a well-articulated Blue Economy plan, developing robust legal and institutional frameworks, emphasizing indigenous

No.	Researcher name and Research type	Year	Country	Sample size	Implementation Field	Study Objective	The main results
							capacity development, prioritizing ocean research and innovation, protecting the ocean environment as well as pursuing 'Blue Diplomacy.' among others The paper is an attempt to examine the initiatives taken by different countries around the world to develop the Blue Economy and identify valuable lessons that Bangladesh can learn from those experiences. The lessons include formulating a well-articulated Blue Economy plan, developing robust legal and institutional frameworks, emphasizing indigenous capacity development, prioritizing ocean research and innovation, protecting ocean environment as well as pursuing 'Blue Diplomacy' among others
3	Stephen J, Ian Davies Scientific production	2018	Scotland	Case study	Scotland coastal	This research is to highlight political support for the adoption of offshore renewable energy, which has increased in order to assist a transition away from carbon-based economies. Also, these drivers have triggered Scotland to construct and implement the world's	As coastal communities continue to increase in size and population, associated marine economies will have to expand in unison. This relationship gives rise to an increase in user – user and user – environment conflicts. Such conflicts demand the implementation of marine spatial planning (MSP) in order to

No.	Researcher name and Research type	Year	Country	Sample size	Implementation Field	Study Objective	The main results
						first sectoral marine plan for tidal energy (SMPTE). As this SMPTE is the first of its kind, it is essential to include a quality assurance element in the planning framework.	manage users and use them within the marine environment effectively. Furthermore, climate change increasingly threatens the integrity of marine ecosystems, thereby affecting the economies of coastal communities
4	Rania Abdel Mohsen Master Thesis	2018	Egypt	One area	the Red Sea coast	To know about the urbanization of coastal areas for sustainable development by using new and renewable energy.	The main results were the following: were reached requirements need to achieve sustainable development of urbanization coastal by using new and renewable energy sources in the Red Sea coast, and from this study, a set of indicators created to measure the possibility of achieving sustainable urban development using new and renewable energy resources, It reached many suggestions on how to use new energy resources and renewable energy, which applied in coastal urbanization of the Red Sea coast. Also, it has capabilities to desalinate seawater to achieve coastal urbanization goals. Besides, measuring several indicators that have not been measured before in Egypt such as to measure achieving sustainable development goals It recommended measuring the

No.	Researcher name and Research type	Year	Country	Sample size	Implementation Field	Study Objective	The main results
							possibility of achieving sustainable development of urbanization coastal using new energy resources and renewable energy in the framework of an integrated management system for new and renewable energy.
5	Abdul Hafeez Maskeen And Rima Zarkot Scientific production	2019	Algeria	Results of fisheries in the world	FAO Report for 2016	The study aims to highlight the importance of the blue economy as a global trend.	This study discussed that the Earth's ecosystem is suffering from irreparable damage that cannot be solved. Thus, it causes the failure to implement blue economy activities and sustain those activities
6	International Bank for Reconstruction and Development/The World Bank	2017	Washington, USA	The small Island Developing States and Coastal Least Developed Countries	World Bank Report for 2017	THE POTENTIAL OF THE BLUE ECONOMY Increasing Long-term Benefits of the Sustainable use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries	This report drafted by a working group of United Nations entities, the World Bank, and other stakeholders to suggest a global definition for the blue economy. Also, it highlighted it to identify critical challenges; and to suggest some broad next steps that are called for in order to ensure its implementation.

Table No 2 Studies dealing with a variable Sustainable development

No.	Researcher name and Research type	Year	Country	Sample size	Implementation Field	Study Objective	The main results
1	Tomislav Klarin Scientific production	2020	Croatia	A study during 1969-2015	Study on concepts	It aimed to know the concept of sustainable development from its inception until now.	The most important results of the study are that sustainable development must provide a solution in terms of providing the essential people needs. Development and environmental protection must be combined, and equality achieved in one equation.
2	Iman Ezzat Mahmoud Mohamed Ahmed Ph.D	2017	Egypt	Case study	Applied to Egypt	The necessity of formulating the criteria of strategic environmental assessment in order to achieve sustainable development goals	The research has achieved three scientific points : drafting criteria for strategic environmental assessment, defining the role of the institutional structure necessary to implement this in Egypt, and finally linking these standards with the main stages of the strategic environmental assessment targeted in Egypt with global sustainable development goals.

No.	Researcher name and Research type	Year	Country	Sample size	Implementation Field	Study Objective	The main results
3	Howaida Mahrez Master Thesis	2015	South Africa	From 2001-2004	South Africa	this study aims to clarify the conceptual framework for sustainable development pillars and to clarify what this concept added to development theory, as well as to identify the different views of the center of sustainable development, and the direction of its movement between the dimensions where strong sustainability (centered on the environment), and weak sustainability (Human-centered),	Sustainable development is the new solution for the development crisis through the implementation of South Africa country, in addition to measuring the extent of the economic pillar of sustainable development achievement in South Africa and the consequent decision-making by more accurate officials, and in which interest for all parties.
4	Khaleel Muhammad Khaleel Ph.D	2014	Egypt	Case Study	Red Sea Governorate	The study aimed to highlight sustainable development and the environment in the Red Sea Governorate.	The results of this study were that the Red Sea governorate is one of the governorates that have the potential to qualify it to be a sustainability-based governorate through its nature, and it needs the optimal use of advancements in comprehensive and beneficial development of the country.

Table No. 3 Research Gap

Literature Review	Research Gap	Present
1. Defining the Blue Economy: Practical lessons from Pacific Ocean governance. 2. Exploring the potentials of Blue Economy for enhancing economic sustainability in Bangladesh. Ocean & Coastal Management. 3. Political support for the adoption of off-shore renewable energy has increased in order to assist a transition away from carbon-based economies. Also, these drivers have triggered Scotland to construct and implement the world's first sectoral marine plan for tidal energy (SMPTE). As this SMPTE is the first of its kind, it is essential to include a quality assurance element in the planning framework. 4. Know about the urbanization of coastal areas for sustainable development by using new and renewable energy. 5. Highlight the importance of the blue economy as a global trend. 6. THE POTENTIAL OF THE BLUE ECONOMY Increasing Long-term Benefits of the Sustainable use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries. 7. Know the concept of sustainable development from its inception until now. 8. Formulating the criteria of strategic environmental assessment in order to achieve sustainable development goals. 9. Clarify the conceptual framework for sustainable development pillars and to clarify what this concept added to development theory, as well as to identify the different views of the center of sustainable development, and the direction of its movement between the dimensions where strong sustainability (centered on the environment), and weak sustainability (Human-centered). 10. Highlight on sustainable development and the environment in the Red Sea Governorate.	1. The scholar found a few previous studies that focus on the implementation of the blue economy and achieving sustainable development goals. 2. Knowing the level of impact of applying blue economy strategies on the dimensions of sustainable development under study. 3. Previous studies did not address the blue economy implementation to achieve the sustainable development goals in Third countries.	• To identify blue economy strategies. • To identify sustainable development dimensions. • To identify the degree of relationship between implementation of the blue economy and achieving sustainable development goals.

In this research ,we reviewed a report issued by the **World Bank, The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island and countries**. In this report ,it is define the concept of the blue economy and its requirements for implementation of the blue economy to achieve sustainable development goals 2030 .The definition is to include all economic sectors with environment and social integration to protect environment , create new investment for private sector and ,jobs creation .This report suggested to focus on the following :

- the management of sustainable fisheries and aquaculture,
- addressing threats posed to ocean health by marine pollution, including litter and plastics, from marine or land-based sources,
- the sustainable development of vital oceanic sectors such as tourism, maritime transport, and off-shore renewable energy and building government capacity to manage marine resources, including nature-based infrastructure such as mangroves, in an integrated way to deliver more and long-lasting benefits to countries and communities

Additionally ,we reviewed **UNEP’s report, Blue Economy-Sharing Success Stories to Inspire Change**. In this report ,it shared success for case studies for the blue economy in different countries. In these case studies, it reflects the preparations for the blue economy implementation .Also, it shows the challenges and how to overcome these challenges . One of the most critical challenges is the lack of coordination between and among the partners. In that case, the public-private partnership is severely hampering the development in particular in the sectors such as trade, shipping, tourism, oil and gas field exploration, fish preservation and marketing, ecosystem services, social welfare related to coastal dwellers. On the other hand, there is a clear cut lack of coordination between public administrations and research institutions, between administrations and private entrepreneurs, business people, between public and private sector agencies. Inter-ministerial coordination is very much vital to bring forward all the relevant developmental issues related to the blue economy.

This report's results answered the main research question that stated: “what is the concept of the blue economy, and it is applicable in the Republic of Egypt. Also, it answered the sub research questions. First, the sub-question is How to introduce the blue economy in the Republic of Egypt? and What is required to implement the blue economy and achieve SDGs, goal 14, underwater life, in Egypt?

Case Study Analysis : Green Star Hotel - Certification for Hotels Egypt (Example of sustainability)

In this research, we did analysis for a successful story it is called Green Star Hotel in the Republic of Egypt ,we will view the details in the following :

Firstly ,Green Hotels are environmentally-friendly properties whose managers are eager to institute programs that save water, save energy and reduce solid waste—while saving money—to help protect our earth . The Green Star Hotel rating system is

based on a certification system where “Green Stars” are awarded according to the level of environmental performance of the hotel. Achieving a Green Star Hotel certification needs commitment.

Background: Green Star is a national brand program recognized by the Global Council for Sustainable Tourism (GSTC). The concept of Green Hotels established in the Republic of Egypt since 2007 to convert hotels to green hotels environment friendly .

There are 76 Green hotels -Certified Hotel in the Republic of Egypt .In table no.4 and figure 1 indicates Green star hotels location and how many in each area. These hotels are located in Cairo, Ain Sokhna, Sharm El Sheikh, Taba, Hurghada and Marsa Alam.

Table No.4

Destination	Green Stars Hotel in Egypt - Percentage
Cairo ,Ain Sokhna	8%
Marsa Matrouh	5%
Hurghada	8 %
South Sinai	29%
Marsa Allam	9%
El Gouna	24 %
Safaga	17 %

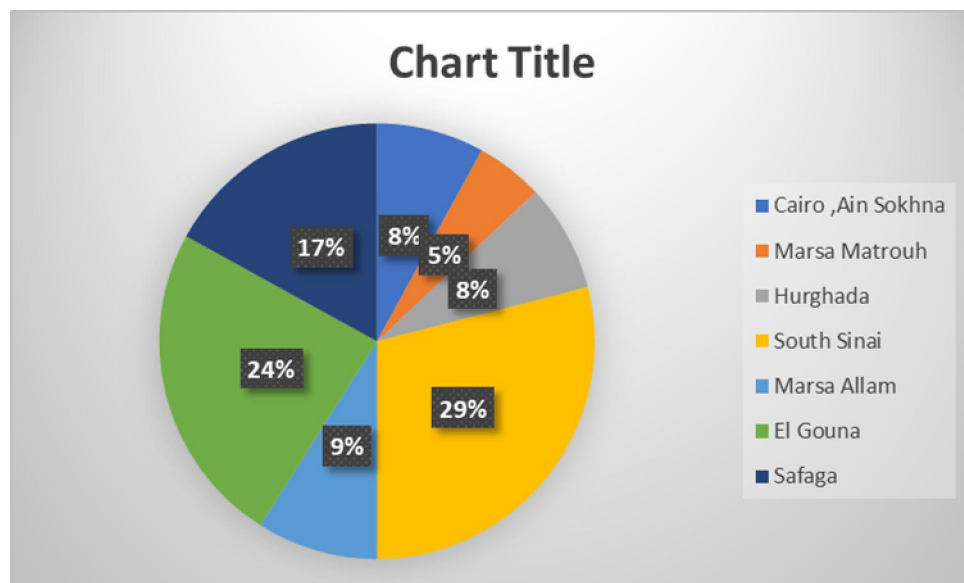


Figure No.1

The main purpose of the Green Star Hotel is to have environment friendly and lower utility costs and consumption of (energy, water and waste management) ,it leads to decrease the cost for its owners and save the environment.

Tourist Nights by Country Groups (2013-2017)

Table No.5

Countries Groups	2019	2018	2017	2016	2015	2014	2013
Arabs	46 637	43 420	30 706	13 560	16 818	19 010	22 800
%	34.5	35.7	36.6	41.5	20.0	19.5	24.1
Europeans	72 481	63 213	42 601	15 098	62 425	73 587	66 178
%	53.5	52.0	50.8	46.2	74.2	75.7	70.1
Americans	7 346	6 529	4 668	1 745	2 271	2 340	2 430
%	5.4	5.4	5.6	5.3	2.7	2.4	2.6
Others	9 808	8 355	5 808	2 309	2 614	2 319	3 002
%	6.6	6.9	6.9	7.1	3.1	2.4	3.2
Total	136 272	121 497	83 783	32 712	84 128	97 256	94 410
%	100	100	100	100	100	100	100

Source Capmas, Tourism, September 2019

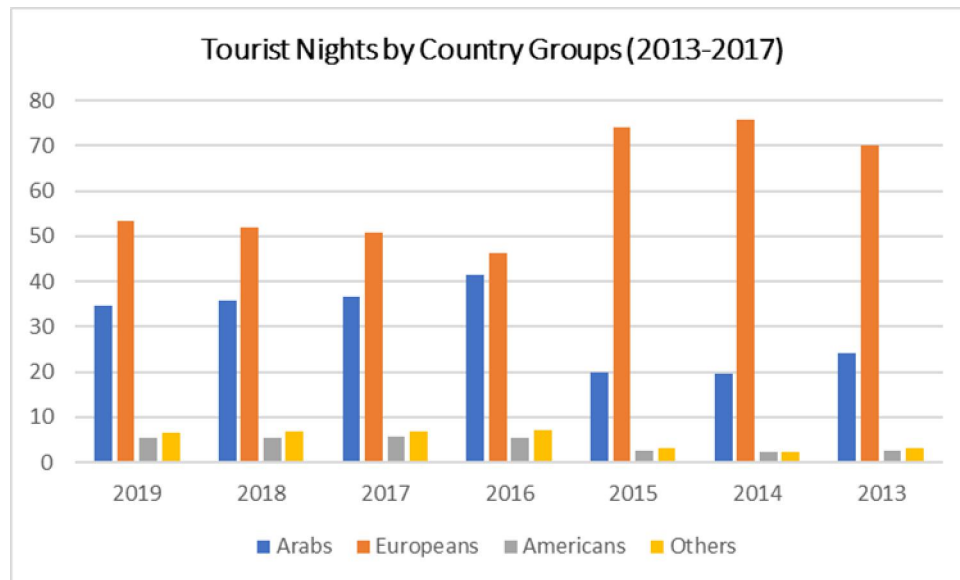


Figure no.2

Source Capmas, Tourism, September 2019

Table no.3 and Figure no.2 indicates that tourist nights increased which reflect tourism sector revenue increased throughout 2013 to 2019 .There is decrease happened in tourism revenue after 2015 due to some factors and then after adopting SDGs in 2016 ,numbers started to increase again.

Egyptian government recognized the importance of the environment and tourism sectors. Thus, Egyptian government started to adopt SDGs philosophy in 2016 and encouraged green tourism. Therefore, tourists' nights reflected how tourism revenue increased after adopting SDGs philosophy and green tourism. These numbers show the high impact of adopting the green and blue economy concept on the tourism sector.

Global Coastal and Maritime Tourism

Tourism, fast becoming the most significant global business, employs 1 out of every 11 persons globally. According to the World Travel and Tourism Council, travel and tourism's contribution to world GDP grew for the sixth consecutive year in 2015, rising to a total of 9.8 percent (US\$7.2 trillion) (WTTC 2016). The World Tourism Organization calculated that 2016 was the seventh consecutive year of sustained growth in international arrivals, which grew by 46 million over the previous year to reach 1,235 million. The number of international tourists visiting SIDS destinations increased from 28 million in 2000 to 41 million in 2013. In the same period, exports from tourism grew from US\$26 billion to US\$53 billion (UNWTO, 2014). Tourism can, therefore, be an essential source of foreign exchange and tied to the social, economic, and environmental well-being of many countries.

Discussion

The analysis results indicated that the Green Star Hotels is an excellent success story for sustainability and the blue economy.

In this research, we did an analysis for a case study of Green Star Hotels - Certified hotels and the results were the following:

We can define the blue economy and introduce the blue economy in the Republic of Egypt as the blue economy means that it balances environmental sustainability with building up social capital, raising income, creating jobs and increasing the use of renewable energy. In this case study, it shows that sustainability is a key objective.

It is essential to focus on the following activities while implementing the blue economy in each sector:

- Solid waste management
- Planning and monitoring tools
- Training and guidance for employees
- Conservation of the biodiversity of marine life.
- Preserve the environment.

The below sectors are sessional to focus on the blue economy to achieve SDGs 2030 which are focus on

- Waste management
- Conservation of biodiversity of marine life
- Tourism
- Renewable energy

There are challenges that the Republic of Egypt can face while implementing the blue economy activities :

- Funding financial issues as the cost of the blue economy activities is expensive.
- The cost of energy is variable from period to another as this one of the operation costs in the Green hotels.
- Adopt non-sustainable industrial production modes polluting the environment.
- Overhunting practices, the failure to implement the law on the prevention of infringements of natural reserves and coastal environments, and the increasing overhunting have led to a negative impact on biodiversity and natural habitats and fish wealth in Egypt, particularly in the recent period, which was marked by security chaos. It is one massive dilemma as there are laws defined for environmental protection: nevertheless, no strict penalties and its implementation.
- There is little support for the scientific research system to achieve environmental sustainability.
- Low retributive policies and economic incentives for encouraging the private sector to reconcile its environmental conditions, this leads to increasing non-sustainable production and consumption patterns. However, if the necessary policies package is available, the private sector can be included as an essential partner in preserving the environment and natural resources. Indeed, in the ongoing Strategy, there are incentives programs for engaging the private sector in the environment field; however, it is essential to mobilize these programs.
- Lack of a community motive for facilitating the operation of the wastes management system, yet there are programs for handling this dispute but need to raise awareness and view case studies for other countries to detect the differences.
- Inability to keep trained personnel in biological diversity and reserves areas; literally, Strategy lacks training programs to train those who are in biological diversity and reserves areas.
- Lack of funding for monitoring biological diversity and reserves management.

In this part ,we will make SWOT analysis, it is a strategic planning technique to identify the strengths, weaknesses ,threats and opportunities for Green Star Hotels :

Table No.6

Strengths	Weaknesses
1-Environment friendly. 2- Training and guidance for employees. 3- Green hotels use their green image and reputation as a marketing tool. 4- Local and international recognition for environmental sensitivity. 5- Local and international recognition for environmental sensitivity. 6- Demonstration of sustainable and social responsibility. 7- Increased operational efficiency (planning and monitoring tools). 8- Preserve the environment /conservation of biodiversity of marine life 9- Higher visibility for environmentally conscious guests and tour operators	1. Employees' resistance for change. 2. High Cost in implementation. 3. Low cooperation between hotels. 4. High fees for getting GSH certification. 5. Complicated procedures. 6. Lack of attention from Egyptian government side to focus on green projects because its impact takes time to be visible.
Threats	Opportunities
1- Adopt non-sustainable industrial production modes polluting the environment. 2- The cost of energy is variable from period to another as this one of the operation costs in the Green hotels. 3- Funding financial issues as the cost of the blue economy activities is expensive. 4- Suddenly some variables emerged such as Covid19 pandemic which has a negative impact . 5- Overhunting practices from humans.	1. Availability of renewable energy such solar and wind energy. 2. Egypt has access to both the Mediterranean Sea and Red sea were full of bounties such as gas, different species of marine creatures. 3. Egypt has oil and gas fields, which are considered low if compared with the other States in the Middle East; however, depending on modern technology, there will be explorations in oil and gas shortly. 4. Egypt has many conservation areas such as Ras Mohamed, Zaraniq, Coast Marshes, and others. 5. Human Resource availability

Impact on Sustainable development

Additionally, Tourism is an indispensable part of the service sector in the blue economy. Thus, the results view a positive impact on social, economic, and environment pillar :

Economic Impact:

- It adds to the national income (the GDP) of the country.
- Transport and communication facilities are improved, especially in the tourist hotspots. Better infrastructure is developed, and attention is paid to cleanliness in order to enhance aesthetic appeal.
- Facing the rising demand on energy and water
- Support to local communities through trading (buying or selling) locally-made and traditionally-designed products.

Social Impact:

- It has enormous potential to create jobs and thus combat widespread unemployment in the country.
- Ecotourism has increased capacity-building programs and employment opportunities for the local communities, inspiring and driving them to battle against
- such as poverty, malnutrition, hunger, and achieving sustainable development goals.
- Protection of Egypt's natural resources and cultural assets
- Creation of green jobs

Environment Impact:

- Ecological tourism increases the stress on the conservation of biodiversity of marine life, which is essential to maintain a balance in the ecosystem.

Therefore, Green Star hotel achieved SDGs goals as the following:

- SDG 8: Decent work and economic growth. (Provide jobs opportunities with green environment work)
- SDG 11: Sustainable Cities & Communities.
- SDG 12: Responsible consumption and production.
- SDG 13: Take urgent action to combat climate change & its impacts.
- SDG 14: Life below water.

Green Star Hotels' story is successful for sustainability. It is essential to introduce this example as to achieving SDGs and try to implement it in other places in Egypt. This case study results answered the main research question that stated: "what is the concept of the blue economy, and it is applicable in the Republic of Egypt. Also, it answered the sub research questions. First, the sub-question is How to introduce the blue economy in the Republic of Egypt? As Green Star Hotels are using being green as a kind of marketing tool to raise awareness.

Conclusion

This research aimed to identify the blue economy concept and its implementation to achieve SDGs 2030 in Egypt. Based on the analysis of the blue economy, it can be concluded that the blue economy is the definition is to include all economic sectors with environment and social integration to protect environment ,create new investment for private sector and ,jobs creation .From research findings, it suggested to focus on the following : the management of sustainable fisheries and aquaculture, addressing threats posed to ocean health by marine pollution, including litter and plastics, from marine or land-based sources and the sustainable development of vital oceanic sectors such as tourism, maritime transport, and off-shore renewable energy and building government capacity to manage marine resources, including nature-based infrastructure such as mangroves, in an integrated way to deliver more and long-lasting benefits to countries and communities. Through viewing a successful case study proved that the blue economy is applicable in the Republic of Egypt and works on one core pillar ,it will reflect on other pillars, then achieve SDGs 2030. Also, in this case study for Green Star Hotel's experience in converting to the blue economy that features actions that have supported and increased social well-being through environmentally sustainable and inclusive, equitable economic development. To this purpose, concepts on blue economies and sustainable development defined at the global scale were examined. Indeed, over the past decades, significant effort has already been put toward defining a comprehensive global agenda to link ecosystem services and the sustainable use and conservation of biodiversity, and thereby achieve food security, human rights, poverty eradication, and sustainable development.

Future work

In light of the findings and conclusions, the scholar would like to introduce the concept and implementation of the blue economy to achieve sustainable development goals in 2030 in Egypt through the following :

- Work on designing a campaign for all sectors that included in the blue economy to raise the awareness of the blue economy as it is vital to achieving SDGs: Egypt 2030.
- Raise the issue that the blue economy must be included in the SDGs: Egypt vision as a separate dimension such as Africa Agenda 2063.
- Start a presidential initiative for the blue economy “blue bond “to raise awareness of the blue economy, make all preparations and base to start the implementation of the blue economy activities and encourage the private sector to participate in blue economy activities as it will have a positive impact on an economic and environmental level. Already the Egyptian government started building the base as the government started the preparation for the green economy as it is the main base for the blue economy.

- Create a steering committee to be responsible for the blue economy pillar. The members of this committee consist of the government, NGOs, academia, labor organizations, and the private sector, the areas of marine biological diversity, and significant sectors within the economy (fisheries, tourism, port authorities, non-renewable energy). This committee's role is to undertake the study for the blue economy.
- Develop/implement policies and standards, including environmental laws and regulations, green procurement for sustainable production and consumption practices.
- Finding financial funds to support blue economy activities implementation.

Finally, the Egyptian government needs to align more with the UN strategy 2030 and Africa agenda 2063. Furthermore, Egypt has to adopt the concept of the blue economy and consider it as a mechanism to achieve sustainable economic development goals 2030 based around an ocean-based economy. Egypt is making a great effort to attain fast economic development through mega projects to meet the Egyptian needs and to attain the UN agenda 2030 and Africa Agenda 2063 for sustainable development goals.

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