

Towards a Blue Economy

Harnessing Namibia's Coastal Resources Sustainably

By Dietrich Remmert





About the Author

Dietrich Remmert is an IPPR Research Associate and has worked intermittently for the institute on a range of research projects since 2004. He holds a Master's degree in Peace Studies and International Politics from the Eberhard Karls University in Tübingen, Germany. He has over a decade of wide-ranging experience in the public sector, predominantly in the field of health and communication, education, as well as foreign and public policy analysis. He has worked for the Namibian government, donor and civil-society organisations.

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Institute for Public Policy Research (IPPR)

House of Democracy
70-72 Dr. Frans Indongo Street
PO Box 6566
Windhoek, Namibia
Tel: +264 61 240514
info@ippr.org.na
<http://www.ippr.org.na>

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Hanns Seidel Foundation Namibia

House of Democracy
70-72 Dr. Frans Indongo Street
PO Box 90912
Windhoek Namibia
info@hsf.org.na
<http://www.hss.de/namibia/en/home.html>

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Introduction

This research study aim is to provide an overview of Namibia's coastal regions with regards to their current and future socio-economic development. Existing and potential developments are analysed through the lens of sustainability - a concept that rightfully is gaining evermore relevance both in the international and national spheres. It has to be acknowledged that the subject matter includes a broad range of themes each of which are complex in themselves and deserving of greater attention and further research beyond the scope of this report.

Regional and local documentation is available for most of the themes and sectors that are addressed in this report such as tourism, mining and fishing. However, not much data appears to be available regarding how the different sectors relate to each other. However, deeper understanding and improved coordination among different sectors is necessary to address a host of cross-cutting issues, such as water and energy security, to ensure long-term sustainable development in Namibia's coastal regions. This study is then primarily intended to serve as a discussion paper, to inform and hopefully engender a wider and more informed debate on sustainable development in Namibia's coastal regions.

The report's content is on an extensive review of documentation including among others scientific studies, government policies and reports by international governance organisations (IGOs). Furthermore, a total of 20 people were interviewed in Windhoek, Walvis Bay and Swakopmund representing three areas: governance, environment and economy. Interviewees were asked a wide range of questions based on their respective expertise and the study's overarching aim. Due to time constraints the number of people interviewed had to be limited. While this study primarily looks at industry sectors, the research is not simply focused on economic aspects but also on broader social, environmental and governance issues.

International threat of ocean degradation & climate change

Why undertake broad and seemingly diffuse research on Namibia's coastal regions – moreover with the attempt of linking various complex themes and sectors? In essences there are two key arguments that speak strongly for such an undertaking.

Firstly, there are widespread concerns regarding the impact of human activity on the natural environment in coastal areas and the world's oceans. Internationally, over recent years evidence and awareness has grown of both the importance of the ocean for earth's climate and weather and its extensive social-economic benefits for humankind. Thus, for example, around 3 billion people across the world depend on fish for a significant amount of their nutritional needs.¹ The ocean also plays a limiting role as regards the effects of climate change on the earth's surface by absorbing large quantities of greenhouse gases in the earth's atmosphere.² Conversely, much of the ocean's resources have been callously exploited by humans for decades. A 2017 analysis of this issue in The Economist magazine observes that:

“Humans have long assumed that the ocean's size allowed them to put anything they wanted into it and take anything they wanted out. Changing temperatures and chemistry, overfishing and pollution have stressed its ecosystems for decades. ... The ocean nurtures humanity. Humanity treats it with contempt.”³

The ocean cannot be looked at in isolation – the environment of coastal regions are closely linked to it

¹ The Economist, “Leaders: Deep trouble”, May 27 – June 2, 2017. 9

² Heinrich Böll Foundation & University of Kiel's Future Ocean Cluster of Excellence, Ocean Atlas: Facts and Figures on the Threats to Our Marine Ecosystems, 2017. 22.

³ The Economist, “Leaders: Deep trouble”, 9.

and what happens here also affects the sea and vice versa. For example if not managed properly land-based agricultural and industrial activities can lead to significant pollution of coastal areas as rivers wash manure, fertilizer and industrial effluent into the ocean. This phenomenon has created so called ‘dead zones’ – ocean areas that are oxygen-deprived and hence devoid of marine life. Dead zones are a serious environmental concern and are found around the world.⁴ The extensive absorption of CO₂ by the world’s ocean, while positive in slowing climate change effects overall, is leading to a range of severe changes within the oceans’ ecosystems. Not all of these changes are properly understood and it is difficult to predict with certainty what impacts they will have in the long-term on the world’s climate and natural environment. Scientific evidence however points to a number of consequences which will also affect people and their livelihoods. CO₂ absorption is leading towards the slow warming and acidification of the sea. This is leading to an increase in sea level rise, increased risk of flooding and storms in coastal regions and negative impacts on much marine life.⁵

Not all marine life will be affected equally from ocean warming and acidification and some will likely benefit; however important seafood stock such as tuna, cod and oysters could significantly decrease. In fact ocean acidification has already led to the loss of marine life and livelihoods. For example in 2005 the thriving oyster industry in California collapsed, the upwelling, nourishing deep water in the coastal areas had become too acidic for the survival of oyster larva.⁶ In summary on-top of existing, unsustainable exploitation of the ocean’s natural resources the effects of climate change will disruptively change the natural make-up of the earth’s ocean in decades to come.⁷

Internationally, regionally and at state level there have been various attempts and initiatives over the last decades to establish and strengthen governance frameworks for environmental protection and natural resources. Such initiatives have also focused on ocean and coastal regions thus for example the introduction by many countries of a quota system for the management of national fish stocks.⁸ However, such efforts fall far short of what is required. Recent concern around the accumulation of industrial waste, particularly plastic, in the sea as well as on shorelines is a case in point. Scepticism has also been voiced from various quarters regarding the long-term effectiveness of existing fishing quota systems with regards to environmental protection.⁹ ¹⁰ International agreements on, for example, shipping and fishing do exist but they are fragmented. Furthermore, there is a lack of implementation when it comes to “agreed-upon rules and goals”.¹¹

Yet on the back of a rising global population and with it the need for more food, energy and minerals humans are bound to accelerate the exploitation of the ocean’s and coastal regions in the coming decades.¹² Therefore, the overall environmental health of oceans and coastal areas needs to become a crucial consideration for socio-economic development plans and activities of coastal states.

Secondly, the past years have seen growing interest on a global scale by governments and the private sector in expanding the ocean economy – industry activities centred in or near the sea and based on the use of natural resources. The reasons for this are multiple, nations with coastlines hope to expand existing and stimulate new economic activity to create employment and development; businesses are enticed by promising investment opportunities and profits particular in emerging industries such as “deep seabed mining and marine biotechnology”.¹³ This convergence and amplification of interest by a range of stakeholders in primarily the economic growth potential of ocean and coastal regions has led to the rise of the concept of ‘blue economy’.

The important difference between the term ‘blue economy’ and the idea of the traditional ocean economy is that the former emphasises that any economic development taking place within the ocean and coastal regions should do so in a way that is both environmentally sustainable and improves the wellbeing of coastal communities. The idea of blue economy or also blue growth is closely linked to the “broader green

⁴ Heinrich Böll Foundation & University of Kiel’s Future Ocean Cluster of Excellence, 14-6.

⁵ *Ibid.*, 22.

⁶ *Ibid.*, 28-9.

⁷ *The Economist*, “Briefing: Ocean fishing”, May 27 – June 2, 2017. 16.

⁸ Barbesgaard Mads, Blue growth: savior or ocean grabbing?, *The Journal of Peasant Studies*, 2018, 45:1. 137.

⁹ *The Economist*, “Briefing: Ocean fishing”, 16-7.

¹⁰ Barbesgaard, 139.

¹¹ Heinrich Böll Foundation & University of Kiel’s Future Ocean Cluster of Excellence, 44.

¹² *The Economist Intelligence Unit*, *The blue economy: Growth, opportunity and a sustainable ocean economy*, 2015. 9.

¹³ *Ibid.*

movement” and increased global evidence and awareness of the damage caused by human activities to the oceans’ environment.¹⁴ In essence, one can argue that the blue economy approach is an attempt to create a holistic socio-economic development framework that seeks to meet the interest of environmental protection, economic development and social upliftment.

Namibia possesses an extensive coastline and ocean area under its jurisdiction and boasts considerable if concentrated economic activity in these areas including mining, fishing, aquaculture and tourism. Furthermore, the government is acutely aware of the societal need for a more prosperous and equitable society. Thus, government has repeatedly emphasised its commitment to “growing the economy in a sustainable inclusive manner and through the creation of decent employment opportunities”.¹⁵ This clarion call for national equitable, economic growth is clearly evident in the Harambee Prosperity Plan (HPP) launched in April 2016. Neither is the country ignorant of the necessity of ensuring overall sustainable development with the clear aim of environmental protection; the protection of Namibia’s natural ecosystems and the sustainable utilisation of natural resources is enshrined in the Constitution under Article 95. Since independence the state has established a legal and regulatory framework for environmental protection.¹⁶ Nevertheless, instances of tension between economic interests and environmental protection resulting in disagreements, conflict and legal action are a regular occurrence. For example, over recent years human wildlife conflict has become a divisive public topic - oftentimes such conflicts are caused by increased use and exploitation of natural resources by humans. Concerning Namibia’s coastal environment, controversy has raged over recent years around an industry proposal to mine phosphate from the ocean floor. Proponents of the seabed mining project emphasised the importance of job creation and the generation of tax revenue, opponents cited concern of potential negative environmental impacts on marine life and harm to the country’s fishing industry.¹⁷

The drive towards increased and diversified economic development coupled with clearly necessary attempts to mitigate and contain environmental degradation of coastal regions and oceans are therefore pertinent arguments for this research report.

Namibia’s ocean and coastal areas: a brief description

Namibia possesses a remarkable coastline that is dominated by the Namib desert and while this arid landscape offers habitats for a few remarkable specialised organisms they are part of a landscape that offers great natural beauty and remains largely untouched.¹⁸ In contrast, the ocean off the country’s coast forms part of the Benguela Current Large Marine Ecosystem (BCLME) and constitutes “an important centre of marine biodiversity and marine food production” and “one of the most productive ocean areas in the world.”¹⁹ Namibia’s coastline extends for 1,570 kilometres (km) and is bordered to the north by the Kunene river and in the south by the Orange river (see Map of Namibia’s ocean and coastline).²⁰

The cold Benguela current flows northwards through the ocean adjacent to the country’s coast and is rich in inorganic nutrients which are distributed along the coast and fed on by microscopic plants or phytoplankton. These plants form the foundation of Namibia’s plentiful marine life including anchovy, pilchard, hake and monkfish, mammals such as seals, and seabirds.²¹ Namibia’s coastal zone is broadly defined by the ‘National Policy on Coastal Management for Namibia’ from 2012. According to the policy, the country’s coastal zone encompasses on the seaward side Namibia’s Exclusive Economic Zone (EEZ) and on the landward side “an eastern boundary falling where the fog belt reaches between 11-25 days per year”.²²

¹⁴ Ibid., 5.

¹⁵ GRN, Harambee Prosperity Plan 2016/17 – 2019/20. 7.

¹⁶ Ruppel Oliver C., Environmental law in Namibia: an overview, in Environmental Law and Policy in Namibia. Ruppel Oliver C., and Ruppel-Schlichting Katharina (Eds). Third edition 2016. 30 -1.

¹⁷ See for example: Iikela Sakeus, “Civil society applauds phosphate suspension”, The Namibian. June 22, 2018. <https://www.namibian.com.na/178752/archive-read/Civil-society-applauds-phosphate-suspension> and Thlage Ogone, “Govt urged to unban phosphate mining”, Namibian Sun. May 3, 2018.

¹⁸ Robertson Tony, Jarvis Alice, Mendelson John, and Swart Roger, Namibia’s Coast: ocean riches and desert treasures, 2012. 2..

¹⁹ BCLME, Transboundary Diagnostic Analysis, November 1999. 3.

²⁰ Robertson, et al. 2.

²¹ Garrard Svenja, Heyns Piet, Pfaffenthaler Michelle, and Schneider Gabi, Environmental Awareness for Sustainable Development: a resource book for Namibia, 2017. 48-9.

²² MET, National Policy on Coastal Management for Namibia, November 2012. 9-11.

Map of Namibia's ocean and coastline²³



²³ This map was produced and kindly provided by Dierkes Katharina from The Maproom.

The inland coastal zone border is thus roughly a line stretching from the Kunene river and the settlement of Orupembe, through the towns of Uis and Aus to the mining town of Rosh Pinah – close to Namibia's southern border with South Africa.²⁴ This roughly defined area will be utilised as the study focus of this report and referred to as Namibia's ocean and coastal regions or area. Unlike the BCLME, Namibia's coastal areas are dominated by the Namib Desert, offering very little of use for the country's inhabitants in terms of agriculture. Desert conditions have also meant that there is a severe lack of freshwater in the coastal regions – one of the main reasons why the country's coastline is only sparsely populated and most citizens living at the coast do so in one of five urban centres Henties Bay, Swakopmund, Walvis Bay, Lüderitz and Oranjemund.²⁵

Namibia is rich in minerals and many of these deposits are located in the coastal regions. Uranium is mined extensively in the Erongo region close to the coastal towns of Swakopmund and Walvis Bay while valuable diamonds are found in the south of the country near Lüderitz and Oranjemund. Most diamond-mining activities have moved offshore as deposits on land have been depleted. While much of the country's coastline is protected, mining activities have caused environmental degradation in localised areas.²⁶ Nevertheless, the mining industry in the ocean and coastal regions of Namibia constitutes an important economic sector.

Unlike the coastal regions, Namibia's ocean and marine life has not been well protected in policy and law - particularly prior to independence. While it is a contentious and disputed subject, there is evidence that at least some Namibian fish stocks are under pressure if not overfished.²⁷ However, since independence the Namibian government has placed restrictions on where and how and what type of fishing activity (for example recreational or commercial) can take place in the country's EEZ. Thus for example commercial trawling and longline fishing activity is prohibited in waters shallower than 200 meters.²⁸ The country also proclaimed a large Island Marine Protected Area (MPA) in 2009 with the aim of protecting sea and birdlife near a host of small islands off the country's coast.²⁹

Blue Economy: a broad and diffuse concept

As outlined earlier in this report, the concept of the blue economy is an international approach aiming to significantly increase and harness the economic value of the ocean in an environmentally sustainable manner. Also known as blue growth, the term has globally gained considerable traction given both its overarching attractive premise – economic growth & environmental protection – and its aggressive promotion among others by international environmental non-governmental organisations (ENGOs), multinational corporations and financial institutions. Indeed, the blue economy concept has been adopted in various iterations by a range of international governing organisations (IGOs) such as the World Bank (WB) and various United Nations (UN) agencies including the Food and Agriculture Organisation (FAO) and the UN Development Programme (UNDP).³⁰ States themselves have begun to formulate and put in place strategies and policies that endorse or at a minimum speak to the blue economy term - for example the US, Norway, Canada, South Africa and China.³¹ However, there are considerable differences as to how these various actors characterise the blue economy and what components they emphasise. Given the multitude of actors and interests in blue growth this is hardly surprising. It does, however, necessitate a closer and critical look at the various discourses and how they differ around the blue economy concept – as local and international policies will be affected by whichever understanding of the blue economy becomes dominant.

²⁴ Ibid., 10.

²⁵ Robertson Tony, et al. 9.

²⁶ Ibid., 12.

²⁷ See: Remmert Dietrich, "So long and thanks for the fish", in Insight Namibia, September 2016. 17-9.

²⁸ Interview with Bartholomae Chris, Kreiner Anja, Kainge Paul & Tjizoo Beau, National Marine Information and Research Centre, MFMR. Interviewed in their private capacity. Swakopmund. September 23, 2018.

²⁹ Cloete Luqman, "First Namibian Island Marine Protected Areas launched", The Namibian, July 9, 2009. <https://www.namibian.com.na/index.php?id=55345&page=archive-read>

³⁰ Barbesgaard Mads, 130, 3-34.

³¹ The Economist Intelligence Unit, 10-1 & 3.

Mads Barbesgaard, referencing Silver and co-authors, identifies four different, competing narratives on a global scale that are currently shaping the debate on the blue economy. Importantly, these narratives do not just propose a particular definition of blue growth but respectively advance a “specific set of problems, solutions and governance actors” with regards to the oceans environmental degradation and governance challenge.³² The narratives are briefly summarised below:

1. The ‘natural capital’ idea has roots in the financial sector and argues that the value of the ocean’s ecosystem is insufficiently calculated. Thus a comprehensive value analysis of “ecosystem services” would quantify their value, underline their importance and would enable actors to design appropriate measures to both protect and rehabilitate the ecosystem. Stakeholders of such an approach are IGOs, ENGOs, governments, relevant experts and investors.
2. The ‘good business’ narrative is very much a private sector perspective and holds that industries’ past ocean and coastal activities are not sustainable and that states are unable to govern such a complex system themselves. The solution therefore lies in closer cooperation between governments and the private sector by offering incentives to the latter and forming public-private partnerships (PPPs). Key players are businesses, multinationals, industry coalitions and governments.
3. The third and fourth narratives are similar and are thus combined here. This idea broadly holds that international political and economic systems are skewed and unequal with regards to governing, utilising and developing ocean and coastal resources and often disenfranchise poorer communities such as people involved in small-scale fishing. This approach highlights the significant socio-economic importance that ocean resources hold for small island developing states (SIDS) and coastal communities depending on small-scale fishing activities for subsistence and income generation. Solutions focus on a human rights approach to fisheries, enforcement of international agreements, and empowerment of affected communities. For this paper this approach is termed the ‘livelihoods’ narrative.³³

It is clear from the narratives above that to date there is no clear, concise and globally agreed definition of the blue economy. What then can be made of the confusing and oftentimes contradictory approaches underlining blue growth? From international literature focusing on the blue economy there appears to be a number of broad responses. This report identifies three of these efforts to formulate policy out of the blue economy concept. It should be noted that these policy efforts are only roughly defined here and do not constitute a complete list. The policy responses can be titled as: business as usual, partnership for sustainable development, and islands approach.

Business as Usual

For many policymakers from various IGOs and nation states it appears that a blue economy approach is first and foremost an undertaking to increase the economic benefits derived from industry activities based on the ocean and coastal zones. Environmental protection, sustainable development, and curtailing the continuous degradation of the oceans’ ecosystems are of secondary importance or not a priority objective. For example, the blue growth strategy of the European Commission (EC) deems the ocean economy primarily as an opportunity to revitalise flagging European economies.³⁴

³² Barbesgaard, 132.

³³ Ibid., 132-3.

³⁴ The Economist Intelligence Unit, 10.

Partnership for Sustainable Development

This response is being championed particularly by IGOs including UN agencies and the World Bank as well as ENGOs such as the World Wide Fund for Nature (WWF). In essence, these actors envision a comprehensive and holistic regulatory framework that aims to include a broad range of narratives around the blue economy.³⁵ For example a recent collaborative report by the WB and UN Department of Economic and Social Affairs (UNDESA) states that:

“In a blue economy, the environmental risks of and ecological damage from economic activity are mitigated or significantly reduced. ... It is generally understood to be a long-term strategy aimed at supporting sustainable economic growth through oceans-related sectors and activities, while at the same time improving human well-being and social equity and preserving the environment.”³⁶

Besides seeking to incorporate a multitude of economic, social and environmental aspects, this approach emphasises two further crucial objectives to achieve its version of blue growth. Firstly, it advocates for the adoption and comprehensive implementation of an international ocean governance framework starting with the 1982 UN Convention on the Law of the Sea (UNCLOS).³⁷ Secondly, proponents of this broad policy response stress that the blue economy can only be realised through building and strengthening partnerships among all stakeholders. Partnerships are very broadly defined and should include multilateral initiatives and agreements,³⁸ regional organisations and private sector coalitions and local communities.³⁹

Islands Approach

A number of nations have begun to strengthen and reform their ocean and coastal areas governance frameworks to better balance concerns around socio-economic development, environmental degradation and promote sustainability.⁴⁰ In addition, there are a number of developing nations that have forged ahead by actively developing their own, national versions and policies for a blue economy. Small Island states in the Caribbean including Grenada and the Bahamas as well as in the Indian Ocean such as Mauritius have made considerable progress in developing a blue growth orientated regulatory framework.⁴¹

In the African context the Island nations of Mauritius and the Seychelles are particularly notable in that they have begun to implement their respective blue economy regulations and plans. The latter has initiated work on a finance mechanism to fund “marine conservation and climate adaptation activities”⁴² while the former has boosted aquaculture production.⁴³ It is evident that Mauritius and the Seychelles have invested considerable effort and resources in developing a blue economy vision that is not only detailed but shaped by each country's specific interests and existing marine economy. While both states undoubtedly receive support from IGOs in formulating and implementing their respective blue growth policies, they have demonstrated ownership of the process and have thus placed emphasis on specific themes and are charting their own national vision of a blue economy.

Industries in the Blue Economy

Globally, there appears to be a better consensus regarding what industry activities form part of ocean and coastal economies as opposed to defining the blue economy. As highlighted already – the wide range of existing and emerging economic activities centred on the oceans and coastal regions worldwide justifies

³⁵ Barbesgaard, 133-4.

³⁶ WB & UNDESA, *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*, 2017. 5.

³⁷ *Ibid.*, ix.

³⁸ Rustomjee Cyrus, *Operationalizing the Blue Economy in Small States: Lessons from the Early Movers*, September 2017. 5.

³⁹ WB & UNDESA, x.

⁴⁰ The Economist Intelligence Unit, 13-4.

⁴¹ Rustomjee Cyrus, September 2017. 3.

⁴² WB & UNDESA, 27..

⁴³ Rustomjee Cyrus, *Green Shoots for the African Blue Economy?* May 2018. 3.

increased interest as well as concern from relevant stakeholders such as businesses, investors, coastal states and environmentalists. Indeed, the collection of increasingly sophisticated and detailed data around natural marine resources has become a major subject matter over recent years and various IGOs, ENGOs, governments, donor institutions and the private sector spend considerable efforts and resources on this endeavour.⁴⁴

The results of increased and improved data are twofold. Firstly, from an economic perspective better data would provide a clearer picture of the value of natural ocean and coastal resources and related services. This information would be highly beneficial to stakeholders, for example governments could make more informed decisions about planned infrastructure while businesses would be able to target their investments better. Secondly, from an environmental view, comprehensive data could improve conservation, environmental protection and importantly could determine what would constitute sustainable utilisation for a given resource. Particularly, IGOs emphasise the indispensable role of throughout information in the formulation of blue economy strategies, ocean and coastal developments overall. One of the key messages for future actions in the WB & UNDESA report states:

“Investment in, and use of the best available science, data, and technology is critical to underpinning governance reforms and shaping management decisions to enact long-term change.”⁴⁵

While the increased focus on establishing and improving data collection, analysis and research output and quality is commendable; it also indicates that many developing countries in Africa and continue making governance decisions based on insufficient data at best⁴⁶ a condition that is also found in SIDS.⁴⁷ Besides the lack of appropriate data a further challenge is that measurements of ocean and coastal regions’ activities are difficult. For example what constitutes ocean or land industry activity is oftentimes not clear and national economic statistics are not disaggregated. Finally, it has proven challenging to calculate values for “non-market” goods and services such as carbon sequestration, coastal protection, culture and recreation.⁴⁸

Apart from the general lists of economic activities mentioned in most blue growth documentation, a number of stakeholders have sought to present a structured overview of activities often differing considerably in depth and breadth of data and analysis. For the purpose of this report a fairly simple table was drafted to present an overview of components of blue growth, based on similar examples in the literature (See Table 1). It should be noted that the table includes activities specifically related to Namibia such as mining area rehabilitation. However most components are generic and could apply to a wide range of coastal states. As can be seen from Table 1 the economic activities that can be subsumed under the blue economy make up a considerable number of activities and sub-activities and hence a wide range of industries. All of the industries are directly or indirectly linked to the natural resources of the ocean and coastal regions.

Besides the wide range of industries there are two further aspects that should be mentioned. Firstly, the ocean economy hosts not only established industries such as fishing and shipping but furthermore a respectable number of emerging and new industries with the potential of generating considerable new economic activity and wealth such as coastal- and ocean-based renewable energy generation facilities. Clearly, this is one of the aspects that makes the blue economy concept attractive to investors, businesses and coastal states looking to boost their economies. The second aspect that should be highlighted is more sobering. As shown in Table 1 there are five industry activities that can contribute towards the restoration of the oceans’ ecosystems. There are other business activities which can be deemed to be more environmen-

⁴⁴ Chevallier Romy, *Integrated Marine and Coastal Management in the Western Indian Ocean*, May 2017. 29-30.

⁴⁵ WB & UNDESA, ix.

⁴⁶ Rustomjee Cyrus, May 2018. 5.

⁴⁷ FAO, *Natural Resource Management and the environment in Small Island Developing States*, 2014. 7.

⁴⁸ The Economist Intelligence Unit, 9.

tally sustainable, for example eco-tourism. However, these still have negative impacts – albeit intentionally limited to a specified level – on the ocean and coastal zones.

Thus, where numerous entities focused on economic growth see significant opportunities for development, job and wealth creation; many others such as environmentalists, civil-society organisations and community activists see grave threats to an already overexploited ocean which outweigh the limited benefits of industries activities.

Table 1: Components of the Blue Economy⁴⁹			
Type of activity	Sector sub-activity	Established industries	Emerging & new industries
Harvesting of living resources	Seafood	Fisheries	Sustainable fisheries
	Marine bio-tech		Aquaculture
	Coastal biological resources	Seaweed, kelp & guano	Pharmaceuticals, chemicals
Extraction & use of non-living resources; generation of new resources	Minerals	Seabed, onshore & coastal area mining	Deep-sea mining
	Energy	Oil & gas	Renewables
	Freshwater		Desalination
Commerce & trade in and around the ocean	Transport and trade	Shipping & logistics	
		Port infrastructure & services	
	Tourism and recreation	Tourism	Eco-tourism
	Coastal development	Construction & services	Green construction
		Manufacturing	
Responses to ocean health challenges	Ocean monitoring and surveillance		Technology & R&D
	Carbon sequestration		Blue carbon
	Coastal protection	Habitat protection, restoration & mining area rehabilitation	
	Waste disposal	Wastewater treatment & solid waste disposal	Recycling, assimilation of nutrients from waste

Note: Activities in light blue can contribute to restoring ocean and coastal areas' health

Concerns about ocean and coastal regions' environmental degradation are further heightened since most of the activities that are responses to ocean health challenges are emerging or new industries. They are thus neither established nor widespread and their contribution towards restoring ocean health is hence limited. Most of these activities are cast as non-market goods or services – hence their monetary value has not been determined and there is no established market for them; in other words investing in such activities does not yield a profit and there are no established clients who would be able and willing to pay for such services and goods.

⁴⁹ Table adapted from The Economist Intelligence Unit, 6 and WB & UNDESA, vii-viii.

Internationally, there are considerable efforts by IGOs but also ENGOs to create a market around these activities to attract investments ideally resulting in economic opportunities and growth while restoring and preserving the environment.⁵⁰ One measure for example is the creation of ‘finance mechanisms’ to secure funds for non-market activities such as the issuing of bonds by US municipalities to fund waste water infrastructure.⁵¹

There is much that is attractive about this concept of “market-based environmentalism”. Namibia’s own programme of Community Based Natural Resource Management (CBNRM) can be seen as such an undertaking. Nevertheless, this approach is not above criticism or fault. For example, for most non-market activities it remains to be seen if the creation of a market and finance mechanism is viable and will result in adequate environmental restoration and protection. A 2015 report on the blue economy by the Economist Intelligence Unit (EIU) notes that private sector investors “remain cautious” and that most funding for ocean health activities has come from public institutions and international donor organisations.⁵² Furthermore, most new industries seeking to address ocean health challenges have yet to prove their viability. Barbesgaard, for example, cites a range of studies that analyse and consequently dispute the effectiveness of blue carbon projects that can also impact negatively on local communities.⁵³

Activities which restore ocean health could also be financed in other ways. Thus for example the health of the environment could be seen as a public good – crucial for human wellbeing. Securing such vital public goods it can be argued, should thus not be dependent on fickle market forces which are governed by economic considerations as opposed to what is in the interest of the general public.

Taken further – this view would see a greater involvement of the state in controlling, managing and utilising a country’s natural resources to ensure a more equitable and broad-based socio-economic development for society at large. Such an approach, encapsulated in the idea of building a democratic developmental state, has been advocated for Namibia by Herbert Jauch and Ellison Tjirera.⁵⁴

Many economists and business people however reject an overt involvement of the state in economic affairs. Primarily it is argued that government is highly ineffective in conducting business affairs and growing the economy and should rather seek to act as a restrained regulator and focus on creating good conditions to attract investment. Such an argument reflects the good business narrative.

Industries like mining do acknowledge concern around environmental impacts and sustainability and as a response have formed their own self-regulatory entities that advocate for and enforce specific environmental protection standards which members from the industry agree to adhere to. It is argued that this system is better in maintaining certain environmental standards across an industry and is also more cost effective than overt monitoring and regulation by government. The Namibian Uranium Association (NUA), it has been argued, could be such a self-regulatory entity in Namibia.⁵⁵

These governance issues, which essentially are two opposing takes on how states should be governed, go beyond the blue economy. However, such discussions are relevant given both the economic importance as well as environmental fragility of oceans and coastal regions.

Namibia’s ocean economy: an attempt at an outline

As can be deduced from Table 1 – Namibia already boasts an established ocean and coastal economy. Echoing limitations found in most developing states with coastlines, the country lacks “systematic survey data on economic activity” specifically related to ocean and coastal industry activities.⁵⁶ Thus for example Namibia’s

⁵⁰ Barbesgaard, 140-1.

⁵¹ The Economist Intelligence Unit, 17.

⁵² Ibid.

⁵³ Barbesgaard, 141-2.

⁵⁴ See: Jauch Herbert & Tjirera Ellison, *The Need for a Development State Intervention in Namibia*, in *Towards a Democratic Developmental States in Southern Africa*, Kanyenze Godfrey, Jauch Herbert, Kanengoni Alice D., Madzwamuse Masego & Muchena Deprose (eds.). 2017.

⁵⁵ Garrard Svenja, et al. 123 & 77.

⁵⁶ Barnes Jonathan I. and Alberts Moira, *Sustainable tourism options for the coastal zone of Namibia*, October 2008. 7.

national accounts do not disaggregate statistical information by region, including those with considerable economic activities centred on the coast and sea specifically the Erongo and Karas regions. In addition, Namibia's official labour statistics lump together the numbers of people employed in the agriculture, forestry and fishing sectors.⁵⁷

Nevertheless, the national data that is available does give an indication of the size and importance of the country's ocean economy. Furthermore, various efforts often driven by partnerships between national institutions, IGOs and international donor organisations over the years, have sought to fill the knowledge and data gaps regarding the socio-economic and environmental make-up and developments of Namibia's coastal and ocean areas. For example there are a number of sector specific studies that focus on or components of the tourism and fishing industries. It can be argued that coastal and ocean industry activities in Namibia are dominated by three sectors – fishing, tourism and mining. However, manufacturing as well as transport and storage are undoubtedly also important sectors that are perhaps not emphasised as much as they should. Official government statistics give a rough idea of the contribution to the national economy of these sectors, although tourism is unfortunately not captured as such in Namibia's national accounts - instead recent data presented by the World Travel & Tourism Council (WTTC) will be utilised.

These five sectors combined contributed 31 percent to the country's total Gross Domestic Product (GDP) in 2017 (see Table 2). These figures are attributable to the whole country. There is national accounts data available for some sector activities that are primarily concentrated in Namibia's ocean territory and coastal regions.

Mining for diamond and uranium takes place exclusively in coastal and ocean regions while marine fisheries accounts for the bulk of total fisheries landings⁵⁸ - thus validating the use of the 'fishing and fish processing on board' indicator to approximate the value of marine fisheries. Uranium and diamond mining and fishing and fish processing accounted for 10.9 percent of GDP in 2017. In monetary terms these three industries contributed N\$19,323 million or just over N\$19 billion towards Namibia's economy with diamond mining being by far the most important of the three as shown in Table 2.⁵⁹ The latter GDP calculation gives a strong if very basic indication of the importance of Namibia's ocean economy based alone on primary industries.

Table 2: Namibia's ocean and coastal Activities by Industry & Relevance 2017⁶⁰				
	Relevant activities % of GDP	Specific activities % of GDP	Relevant activities N\$ millions	Specific activities N\$ millions
Primary Industries				
Mining and Quarrying	12.1	-	21,377	-
Diamond mining	-	7.7		13,615
Uranium mining	-	0.7		1,236
Fishing and fish processing on board	2.5	2.5	4,472	4,472
Secondary Industries				
Manufacturing	10.8	-	19,088	-
Tertiary Industries				
Transport	2.1	-	3,788	-
Storage	0.6	-	985	-
Tourism	2.9		4,938	-
Total	31	10.9	54,648	19,323

⁵⁷ NSA, The Namibia Labour Force Survey 2016 Report, 2017. 44.

⁵⁸ Sherbourne Robin, Guide to the Namibian Economy 2017, October 2016. 137.

⁵⁹ NSA, Annual National Accounts 2017, n. d. 25-6.

⁶⁰ Table based on info taken from NSA Annual National Accounts 2017, 25-6.

Over the past years the continued growth of Namibia's tourism industry in the face of overall national economic slowdown has been very positive. From a measurement perspective, tourism is a difficult industry to assess since it involves a variety of activities and services which in turn are not exclusively utilised by tourists – such as restaurants and hotels. Since 2007 the National Tourism Board (NTB) has taken the initiative to undertake tourism satellite accounts (TSAs) - an international method to more accurately assess the economic contribution of tourism.⁶¹ The latest NTB TSA for Namibia that could be sourced covers 2015. However, this study will primarily make use of the more current WTTC publication from 2018. WTTC makes use of the TSA method but expands on it to capture tourism's "indirect and induced impacts".

WTTC quantifies tourism's direct annual contribution to GDP at 2.9 percent in 2017⁶² (see Table 2), slightly lower than the NTB TSA which put it at 3.5 percent in 2015.⁶³ Information on the size and make-up of the tourism sector in Namibia's coastal regions is unfortunately limited. There are a number of detailed sector studies but most of these are severely outdated with most being nearly a decade old. An assessment by the Namibian Coast Conservation and Management (NACOMA) project estimated that in 2011 11,202 people were directly employed in coastal tourism activities and that this sector had seen considerable employment growth in the past years.⁶⁴ If NTB TSA figures are considered – it would mean that more than half of all employees in the tourism sector in 2011 would have been located at the coast.⁶⁵

Finally, it is notable that the WTTC states that the total direct, indirect and induced value of Namibia's tourism sector stood at N\$23,775 million or 13.8 percent of GDP in 2017.⁶⁶ That places the worth of tourism to the country's economy above the extractive mining sector.

Namibia's manufacturing industries are concentrated in the Khomas region, with Windhoek hosting 305 manufacturing businesses. As Namibia has a total of around 500 manufacturing firms the sector can be deemed as severely underdeveloped in the rest of the country.⁶⁷ According to information collated from the Namibia Manufacturers Association's Manufacturing and Processing Directory 2015/16, Erongo region comes a distant second to Khomas with 65 operating in this coastal region or just under 13 percent of all manufacturing businesses in the country. Karas has a meagre six manufacturing companies while the manufacturing industries in Kunene and Hardap regions are small and are not considered in this report since they do not have any major settlements situated near or on the coastline.⁶⁸

In 2013 the manufacturing industry in Erongo employed around 8,100 people constituting around 44 percent of the total number of employees in the sector countrywide.⁶⁹ This sizable proportion compared to the percentage of manufacturing firms present at the coast is likely due to the fact that some of these specific operations are sizable and require significant human resources such as fish processing factories. Erongo therefore has a small base of manufacturing industries, contributing towards the country's ocean economy. Overall Namibia's manufacturing sector has failed to meet government expectations of providing significant economic growth and employment opportunities since independence.⁷⁰ While the manufacturing industries still provided around 10 of GDP annually this figure has stagnated over the past years.⁷¹

In terms of transport and logistics Namibia's two ports of Walvis Bay and Luderitz constitute important trading routes for goods and commodities for export, import as well as re-export. According to statistics provided on the website of the Namibian Ports Authority (NamPort), both ports combined shipped over one and a-half million tons of cargo in a 12-month period between April 2016 and March 2017. The ports also process a large amount of containers, measured in Twenty-foot Equivalent Units (TEUs). Over the same 12-month period, the harbours in Walvis Bay and Luderitz landed, shipped and transhipped a combined

⁶¹ Sherbourne, 347.

⁶² WTTC, *Travel & Tourism: economic impact 2018 Namibia*, March 2018. 1-2.

⁶³ NTB, *Namibia: Tourism Satellite Account*, n. d. 5.

⁶⁴ Barnes Jonathan I. and Alberts Moira, *Final Report: Assessment of people's engagement in sustainable use activities in the coastal zone of Namibia*, 2011. 13 & 18.

⁶⁵ Sherbourne, 137.

⁶⁶ WTTC, 1.

⁶⁷ Insight Namibia, "Waiting to Launch", April 2016. 27.

⁶⁸ Personal communication, Nangolo Martha, Statistics based on NMA Directory and compiled by Hope Chris, November 13, 2018.

⁶⁹ Insight Namibia, "Waiting to Launch", 27.

⁷⁰ Sherbourne, 271 & 78.

⁷¹ NSA, *Annual National Accounts 2017*, 26.

amount of 205,991 TEUs. Prior to Namibia's current recession the ports handled considerably more containers with a record of 337,134 TEUs being processed from September 2010 to August 2011.⁷²

Shipping is also the preferred method for transporting the country's exports, taking precedence over the air and road options. In 2017 the value of goods export via ships constituted 44 percent worth around N\$ 27 billion.⁷³ Given the significant amount of cargo handled by Namibia's two ports it is reasonable to include the sub-sector of storage in this analysis which makes up 0.6 percent of GDP in 2017. In the same year transport of goods and services contributed 2.1 percent to the country's GDP as shown in table 2.⁷⁴

Growth potential of Namibia's ocean and coastal economy

Besides the established industry activities Namibia holds significant promise in expanding economic opportunities and growth based on the substantial natural resources base of the EEZ and the coastal regions. The potential expansion of economic activities concerns both established as well as new industries and some projects have already been initiated while other investments are being explored. With reference to Table 1, the country could realistically further expand seabed mining activities, aquaculture, renewable energy, desalination as well as technology and research and development (R&D). In addition Namibia could build upon strong established industries to further economic growth particular transport and trade, tourism and fisheries. The government has already prioritised the stimulation and development of some of these industries. Thus for example the expansion of the cargo handling facilities at the port of Walvis Bay is being undertaken to realise government's ambition to establish Namibia as a regional "logistics and distribution hub" by 2030.⁷⁵

Government has also acknowledged the country's significant potential with regards to energy generation from renewables and on paper has prioritised the development of solar and wind energy projects.⁷⁶ Coastal climate conditions in Namibia are particularly suited for wind energy generation and Namibia's first wind farm, Ombepo near Lüderitz with a capacity of 5 MW, has been generating power since August 2017.⁷⁷ Another sizable wind energy project based near Luderitz the 44 MW Diaz wind park is slated for development in 2019.⁷⁸ Other recent investments in the country's ocean economy include the completion and inauguration of two fish processing factories in Walvis Bay⁷⁹ and expansion of an existing aquaculture farm in Lüderitz growing abalone shellfish. The acquisition and subsequent expansion of the abalone farm's operation is an undertaking by the local Ohlthaver & List Group (O&L). According to a newspaper article, the Executive Chairman of O&L Sven Thieme, noted that Namibia should diversify its industries and not just depend on established business sectors like tourism and mining.⁸⁰

Namibia's coastal regions, from a Southern Africa perspective, are also fairly well positioned in terms of providing a 'gateway' for cross-border trade. With effective port facilities coupled with rail and road infrastructure which reach into the interior of the country and beyond to neighbouring nations; there is significant opportunity for Namibia to gain and benefit from an increased share of regional trade.

Thus, for example, Namibia via its transport corridors and port in Walvis Bay already facilitates the export of commodities from neighbouring countries such as copper from Zambia.⁸¹

⁷² http://www.omalaetisupport.com/namport/files/files/Stats%202016_2017.pdf

⁷³ NSA, Annual Trade Statistics Bulletin 2017, n. d. 22.

⁷⁴ NSA, Annual National Accounts 2017, 26.

⁷⁵ GRN, Harambee Prosperity Plan 2016/17 – 2019/20, 52.

⁷⁶ *Ibid.*, 49.

⁷⁷ Schwoge Milena, "Zwischen Abriss und Neubau" Allgemeine Zeitung, September 7, 2017. <https://www.az.com.na/nachrichten/zwischen-abriss-und-neubau>

⁷⁸ New Era, "NamPower signs N\$1.5 billion, 25-yr deal with Diaz Wind Power", January 24, 2018. <https://neweralive.na/posts/nampower-signs-n1-5-billion-25-yr-deal-with-diaz-wind-power>

⁷⁹ Hartman Adam, "N\$130m for value-addition in fishing sector", The Namibian, September 17, 2018. [https://www.namibian.com.na/181429/archive-read/N\\$130m-for-value-addition-in-fishing-sector](https://www.namibian.com.na/181429/archive-read/N$130m-for-value-addition-in-fishing-sector)

⁸⁰ Shapwanale Ndapewoshali, "Hangana Abalone promises growth in aquaculture", The Namibian, September 10, 2018. <https://www.namibian.com.na/181240/archive-read/Hangana-Abalone-promises-growth-in-aquaculture>

⁸¹ NSA, Annual Trade Statistics Bulletin 2017, n. d. 18.

The nation's ambition and efforts to become a significant trade conduit for the Southern African region should also be a boon to the manufacturing sector. Therefore, improvements in Namibia's ocean economy with regards to logistics and transport should also benefit manufacturing businesses located at the coast in terms of better access to markets as well as raw materials required for manufactured goods. Evidence of this synergy effect in practice is the example of one of the two recently completed seafood factories in Walvis Bay – which processes and packages squid from Argentina for sale to local and international markets.⁸² Such manufacturing and food processing undertakings depend greatly on a well-functioning transport sector.

A competitive transport and logistics sector among others can also attract new manufacturing businesses and foreign investors. Thus as overall conditions such as infrastructure, utility services and governance improve in coastal regions they become more attractive for investments from various sectors including fishing, tourism and manufacturing. A case in point with regards to Namibia's coastal regions is the recent decision by the car manufacturer Groupe PSA to establish a car assembly plant in Walvis Bay in 2018. It is planned that the plant will assemble Opel and Peugeot vehicles for the Southern African Customs Union (SACU) market.⁸³

Examples of controversial industry activities

The example above illustrates how different industries and their development are interlinked with each other and the development of an ocean economy. Improvements in one sector can result in growth for other industries and such affects can be utilised strategically by governments to grow their respective blue economy. However, not all industries and developments are beneficially to each other. Increased mining activity for example could negatively impinge on tourism.

Much has been made of the possibilities of finding significant crude oil deposits in Namibia's EEZ. Numerous offshore oil wells have been drilled over the past years and seismic surveys have been conducted to map the geological makeup of the ocean floor. Nevertheless, to date no commercially viable oil deposits have been located. Oil exploration can be characterised as a risky and speculative business undertaking since exploration activities are very costly and the chance of actually locating oil is limited.⁸⁴ Discovery and exploitation of offshore commercial oil could transform Namibia's ocean economy and generate significant wealth as well as tax revenue that government could utilise to fund vital public goods. However, oil is not a sustainable resource and both exploration and extraction activities effect other ocean industry sectors negatively particularly fishing.⁸⁵

There are also more publicly controversial economic proposals such as the long muted development of the Kudu gas field located in Namibia's EEZ and a complementary onshore gas power plant. But this project is effectively shelved due to financial considerations and an inability to reconcile stakeholders, including private businesses, SOEs and government's diverging agendas⁸⁶ Many observers are critical of the Kudu project seeing it as an overly expensive energy option compared to other technologies such as solar energy.

Far more public and environmental concern where raised with regards to the proposal to mine phosphate of Namibia's coast. In 2011 the Ministry of Mines and Energy (MME) issued mining licences to two companies for the exploitation of phosphate from the ocean's seafloor, depending on the finalisation and approval of environmental impact assessments (EIA). Significant mineral deposits of phosphate were discovered off Namibia's coastline prior to independence. Globally, the mineral has become an important component of fertilizer for agriculture production.⁸⁷ Concern about this mining activity is based on the potential severely harmful effect on marine life that could result in the removal of the seafloor as well as the disposal of part of this sediment back into the ocean. This mining process could result in the dispersal of harmful toxins into the sea and the creation of vast underwater sediment plumes which would disorientate marine

⁸² Hartman Adam, "N\$130m for value-addition in fishing sector".

⁸³ <https://media.groupe-psa.com/en/groupe-psa-will-assemble-opel-and-peugeot-vehicles-namibia-2018>

⁸⁴ Sherbourne, 225, 7 & 8.

⁸⁵ Heinrich Böll Foundation & University of Kiel's Future Ocean Cluster of Excellence, 17.

⁸⁶ Sherbourne, 317.

⁸⁷ Benkenstein Alex, Seabed Mining: Lessons from the Namibian Experience, April 2014. 2-3.

life. Scientists and environmentalists stress that very little is known about the potential harmful impact of seafloor mining and therefore any such project should be strictly limited or outright disallowed before their impact on the ocean hasn't been properly assessed. Government has placed a moratorium on offshore phosphate mining while the potential environmental impacts are assessed.⁸⁸ The issue is also being disputed in court by various stakeholders.⁸⁹

The overfishing of the country's commercial fish species is disputed and government representatives mostly state that this situation only applied to the pre-independence period. While Namibia has certainly done better in managing existing fish stocks there are serious reservations, from a number of scientists and environmentalists, regarding the long-term sustainability of fishing activities. The fishing sector is also arguably highly politicised which can make it difficult to apply sound, scientific stock management mechanisms.⁹⁰ The 2018 'State of Worlds Fisheries and Aquaculture' published by FAO states that in the Southern Atlantic "68 percent of the assessed stocks were fished within biologically sustainable levels in 2015." This signifies that almost a third of assessed fish species are exploited unsustainably.⁹¹

The examples above indicate that environmental protection and sustainability should be key concerns within any blue economy vision. This consideration is especially pertinent given the global concerns around ocean health.

Namibia's current steps towards a Blue Economy framework

Namibia, like many fellow African nations, has yet to develop a blue economy policy or similar national strategic document. Such an endeavour could be construed as being an undertaking forced upon the country's policymakers by a broad coalition of IGOs, financial institutions and various ENGOs – the same loose group that is portrayed under the policy response partnership for sustainable development earlier in this report. Nevertheless, African states unanimously endorsed the blue economy as an important catalyst for socio-economic development in the African Union's (AU) Agenda 2063.⁹² While the concept originated outside the continent Africa's leaders, at least in the international sphere, have recognised its usefulness and have incorporated it into their developmental agenda. Thus the Agenda 2063 document states that the blue economy:

“...shall be a major contributor to continental transformation and growth, through knowledge on marine and aquatic biotechnology, the growth of an Africa-wide shipping industry, the development of sea, river and lake transport and fishing; and exploitation and beneficiation of deep sea mineral and other resources.”⁹³

It is notable that in this characterisation blue growth is clearly seen as an economic engine for growth and therefore echoes the narrative of business as usual. The document does however pronounce itself on Africa's natural resources overall stating that the continent's ecosystems should be “healthy, valued and protected”.⁹⁴ It can thus be argued that Africa's vision for the future socio-economic development of the continent makes ample provision for environmental protection and sustainable use of natural resources. Under the auspice of the AU member states have also drafted and subscribed to a continent wide blue economy strategy named the 2050 Africa's Integrated Maritime

⁸⁸ Levin Lisa A., Mengerink Kathryn, Gjerde Kristina, Rowden Ashley A., Van Dover Cindy Lee, Clark Malcolm R., Ramirez-Llodra Eva, Currie Bronwen, Smith Craig R., Sato Kirk N., Gallo Natalya, Sweetman Andrew K., Lily Hannah, Armstrong Claire W., and Bridler Joseph, Defining “serious harm” to the marine environment in the context of deepseabed mining, in Marine Policy, December 2016. 256.

⁸⁹ Ikelia Sakeus, “Civil society applauds phosphate suspension”, June 22, 2018. <https://www.namibian.com.na/178752/archive-read/Civil-society-applauds-phosphate-suspension>

⁹⁰ Benkenstein Alex, Rents, Rights and Restructuring: Namibia's Lessons for the Governance of Africa's Fisheries, December 2014. 19-20.

⁹¹ FAO, State of Worlds Fisheries and Aquaculture 2018: Meeting the sustainable development goals, 2018. 44.

⁹² UNECA, The Blue Economy, November 2016. 31.

⁹³ AU, Agenda 2063: The Africa We Want, May 2016. 4.

⁹⁴ Ibid., 3.

Strategy (AIMS). The strategy envisions cooperation mechanisms for nation states on maritime safety and security and a joint strategy to foster skills necessary for a blue economy.⁹⁵

On a continental level then African states have established and committed themselves to a comprehensive, multi-layered and long-term vision of the blue economy concept. The AMIS is particularly ambitious listing no less than 12 overarching strategic objectives which are in turn tied into actions such as the initiation of regional maritime headquarters and a working group made up of representatives of member states' navies and coast guards.⁹⁶ Moreover, other actions are more general - for example encouraging African states to pursue sustainable aquaculture and "expand coastal surveillance systems".⁹⁷

Namibia as well as other African states can and should be guided by Agenda 2063, AIMS and additional relevant international and regional agreements in formulating their own detailed blue economy policy. IGOs and other stakeholders have and continue to provide technical and financial assistance to African nations regarding a wide range of themes related to ocean and coastal governance, environmental protection and sustainable development. Furthermore, South Africa, the Seychelles and Mauritius provide positive and practical examples on the development and implementation of such a policy. Namibia's government as well as relevant local stakeholders should have ample support in organising and drafting a blue economy policy and related strategic plan or implementation road map.

Although Namibia has demonstrated progress in developing an overarching ocean and coastal governance framework, efforts have been mostly sector specific such as regulations tailored exclusively to mining or fishing activities. Since independence the country has also put in place a host of legislation and policies that address environmental issues (in addition to pre-independence laws inherited from South Africa), with the aim to ensure the sustainable use and management of Namibia's natural resources.⁹⁸ However, the country has to date made only very limited progress in formulating its national blue growth vision.

The term blue economy has only recently found itself becoming part of official government terminology. The concept is for example neither mentioned in Namibia's National Fourth Development Plan (NDP4) nor in the HPP. It is only the current plan – National Fifth Development Plan (NDP5), running from 2017/18 to 2021/22, which explicitly utilises the blue economy concept. NDP5 then commits government to formulate, approve and implement a blue economy policy coupled with an appropriate regulatory framework. According to the NDP5 the government aims to achieve the following outcome:

"By 2022, Namibia will have implemented a Blue Economy governance and management system that sustainably maximizes economic benefits from marine resources and ensures equitable marine wealth distribution to all Namibians."⁹⁹

Table 3: Blue Economy Plans in NDP5 ¹⁰⁰						
Indicator	Baseline	Targets over the NDP5 Period				
		2017/18	2018/19	2019/20	2020/21	2021/22
Blue Economy governance framework in place	None	Blue Economy policy and regulatory framework harmonized	Blue Economy policy and regulatory framework developed	Blue Economy governance structure in place	Blue economy baseline indicators developed	Blue economy performance monitored

⁹⁵ Rustomjee Cyrus, May 2018. 1-2.

⁹⁶ Ibid., 3.

⁹⁷ Ibid., 22 & 19.

⁹⁸ Ruppel Oliver C., 41.

⁹⁹ GRN, Namibia's 5th National Development Plan (NDP5): Working together towards prosperity 2017/18 – 2021/22, May 2017. 24.

¹⁰⁰ Ibid.

To realize this goal NDP5 sets a specific target for each year of the plan's implementation (See Table 3), these targets indicate processes and structures that need to be undertaken or established to realise the desired, final outcome. There are a number of important implications that can be drawn from the information and targets for blue growth named in NDP5. Naturally, a short 2-page brief in a large, multiyear development plan cannot capture all considerations and issues that should be encompassed in a blue economy policy. But it does provide some tentative indications on what aspects government intends to place particular emphasis regarding the national blue economy vision.

1. Superficially at least Namibia's government characterises blue growth first and foremost as a mechanism for economic growth and wealth creation. Conservation and environmental protection is not mentioned in the brief, neither is the growing global evidence of severe ocean health degradation caused by human activity.
2. The description does mention the need for sustainable growth and makes specific reference to "strengthening marine biodiversity and resource management".
3. It is planned that the above point will be enabled by using tools such as Marine Spatial Planning (MPS) and the identification of Ecologically or Biologically Significant Marine Areas (EBSAs).
4. Emphasis is placed on ensuring that the economic wealth generated from the blue economy is equitable distributed to all Namibians.
5. Existing sector specific policies and legislation relevant for blue growth should be harmonised under the blue economy governance and regulatory framework.¹⁰¹

To summarise the points above it can be cautiously argued that the Namibian government envisions a blue economy that prioritises economic growth coupled with equitable wealth distribution and guided by modern marine planning tools and aspects of sustainability. In terms of narratives listed by Barbesgaard as well as international policy responses discussed earlier in this report; it is difficult to infer which if any of these have a bearing on Namibia's eventual blue economy policy. It could possibly be said that elements of the livelihoods narrative as well as the business as usual policy response are evident in NDP5's short outline. However, there is simply too little information, thus the five points listed above are arguably the only clear indications of policy elements that might underpin Namibia's eventual blue economy strategy.

Discussion

As can be summarised from the previous sections in this report the current blue economy concept constitutes a useful but complex and unclear reference framework for the future development of Namibia's ocean and coastal economy. Furthermore, defining such an economy and its components is challenging and the range and scope of industry activities (see Table 1) within this economy are hard to grasp and place within a single frame. Invariably, discussions around the utility of the blue growth concept and the economic potential of the country's ocean economy can be related back to the narratives and policy responses listed and detailed at the start of this study.

¹⁰¹ Ibid., 24-5.

Discussions with Namibian environmentalists, business, marine scientists and government representatives touch upon and emphasise various issues and opportunities of the country's blue economy, which illustrates positively that people are aware of environmental and socio-economic challenges facing the ocean economy. However, due to their complexity not all these discussions can be reflected here. This section will therefore highlight a number of pertinent points and issues made by respondents interviewed as part of this study.

Overall there were a number of positive takeaways from respondents regarding Namibia's blue growth prospects and realising these in an environmental sustainable manner.

- Thus, most respondents felt that Namibia's ocean and coastal regions were important in the country's economy and had the potential to drive significant economic growth – particularly so within the Erongo region.
- It is positive to note that no respondent interviewed as part of this report felt that Namibia's policy response should be business as usual (as discussed in the section - Blue Economy: a broad and diffuse concept).
- A majority of respondents, including environmentalists, acknowledged the need for broad-based, economic development in Namibia especially with regards to creating jobs and creating opportunities for investments. However, views diverged significantly how this development should be guided and which stakeholders should drive it.
- No respondent insisted that environmental considerations and protection should take precedence regardless of the type of socio-economic development envisioned. Nevertheless, there was a broad consensus among interviewees that unfettered economic activity should not be allowed.
- A number of marine scientists and business representatives felt that overall fish stocks have been managed in a mostly sustainable and appropriate manner since independence. However, this opinion was not shared by some environmentalists and economists who expressed concern about the adequate monitoring of fish stocks and lack of publicly available data.
- Most respondents noted that Namibia had fairly comprehensive environmental policies and legislation in place. Concern was raised regarding the proper implementation of these. Environmentalists also expressed their concern that key government ministries such as MET and MME lacked resources and capacity to properly monitor industry activities and relied too much on information provided by companies without verifying such data.
- Some government representatives and environmentalists felt that private sector entities and investors accrued excessive profits from fishing, mining and tourism activities stating that more economic wealth should flow to local communities.
- Business representatives and economists were in favour of establishing self-regulatory mechanisms for industries such as mining in an effort to guarantee specific standards with regards to environmental monitoring and protection. This would, it was argued, promote good business practice among industry and assist governance.

- Economists and business representatives as well as some environmentalists argued that more efforts and incentives should be concentrated on encouraging the exploration of innovative technology and methods to market Namibian products better. Thus, for example, tourism should place more weight on marketing the country as a sustainable travel destination.
- Business people and economists stressed that economic activities should strictly adhere to environmental legislation including the undertaking of EIAs. Environmentalists, however, voiced their concern that EIA processes were flawed and questioned government's ability to ensure environmental compliance in many industry activities.
- All economists and business representatives were concerned about the lack of a competitive business environment in the country which in their eyes acted as a major disincentive to investors.
- Most environmentalist as well as economists expressed concern regarding a lack of relevant data and also barriers to data access.

Specific Issues hampering or threatening sustainable economic development

Climate Change – the Unknown Factor

A factor that could severely impact negatively on Namibia's blue growth prospects is the issue of global climate change and its impact on the ocean's ecosystems, as described earlier in this report. Of particular concern, especially for the fishing industry, should be the fact that marine scientists as yet have little understanding of the specific changes that the Benguela current will undergo as seawater continues to warm.¹⁰² Effects on fish stocks can vary and it is difficult to predict how various species might react to different changes of the current's temperature, nutrition content and pH level. However, it is possible that many fish stocks would react adversely to such changes by migrating to other ocean areas and propagating less for example.¹⁰³ A 2015 study looking at the limited available data to discern possible ocean changes for Southern Africa predicts that Namibia's coastal waters will see a rise in sea surface temperature changes as well as a significant increase in ocean acidity by 2050.¹⁰⁴ The Benguela Current Commission (BCC) is currently conducting a multi-year project to get a better understanding of possible ocean changes due to climate change. Both the fishing industry as well as government should take note of any eventual findings.

Water & Energy

The private sector has long been concerned regarding government's ability to ensure uninterrupted and affordable supplies of freshwater and electricity. These concerns are justified since the country continues to greatly rely on costly energy imports from South Africa,¹⁰⁵ itself no stranger to energy shortfalls. Possible limits on water supply at the coast are of considerable concern for the mining industry located there, which requires a significant amount of water especially the uranium operations. The lack of meaningful investment in bulk water infrastructure since independence by government is a particular concern that hampers economic growth and investments. The desalination plant located in Erongo and owned by AREVA has been able to cover demands from the mining industry.

¹⁰² Potts Waren Mason, Götz Albrecht & James Nicola C., Review of the projected impacts of climate change on coastal fishes in southern Africa, in *Reviews in Fish Biology and Fisheries*. September 2015. n. p.

¹⁰³ The Economist, "Briefing: Ocean fishing", 17.

¹⁰⁴ Potts Waren Mason, et al. n. p.

¹⁰⁵ Sherbourne, 294.

However, mines pay a very high premium for this water¹⁰⁶ which might be a boon to the plant's owners and the intermediate supplier, NamWater, but not for industries and the prospects of further growth for example in the food processing and manufacturing sectors. Conversely, it is not improbable that the coastline with its high potential for renewable energy coupled with desalination plants that intentionally cap charges could provide plentiful of cheap energy and affordable water for various business undertaking. This would however require significant investment, less bureaucracy and increased political will.

Lack of stakeholder coordination

Coordination among stakeholders to manage ocean and coastal areas remains a significant concern in Namibia and a number of interviewees voiced criticism in this regard. This issue not only concerned communication between government institutions, private sector and the public but also coordination between key stakeholders concerned with natural resource management. It was noted that the tourism sector was especially negatively influenced by poor coordination among the key ministries to open up new opportunities for the sector's expansion; while a local government representative was concerned about the poor communication and lack of pro-active management displayed by line ministries in order to manage and monitor environmental impacts together with municipalities around the towns of Walvis Bay and Swakopmund.

Conclusions

Namibia's blue economy plans Pros & Cons

Pros

- Existing, fairly comprehensive regulatory framework for environmental protection and sustainable development
- The majority of the country's coastal areas are protected, national parks and significant areas of the EEZ have restrictions in place regarding access to and the use of natural marine resources
- Existing structures and procedures to monitor and limit if necessary industry activities and exploitation of natural marine and coastal resources
- Developments with likely environmental impacts and which require an environmental clearance certificate need to undertake an EIA
- On-going investments by government in critical infrastructure necessary to economic growth such as port facilities and the road and railway network

Cons

- Due to its extent and cross-sectoral nature environmental legislation is fragmented posing challenges particularly for administration and enforcement
- Mandates over the control and management of ocean and coastal natural resources remain split and unclarified among key government ministries
- Lack of data and data accessibility on natural resources
- Government institutions lack capacity and resources in enforcing environmental regulations
- There is limited investment in crucial infrastructure particularly energy and water

¹⁰⁶ McGregor Robert, Emvula Cherly & Brown Roland, Beneficiation in Namibia: Impacts, Constrains and Options, November 2017. 39.

In many aspects Namibia possess a unique ocean and coastal economy that is based upon a sparsely populated coastline of large protected national parks, abundant mineral and natural resources. It is also positive to observe that despite significant primary industry activity such as mining and fishing large tracts of the coastal and ocean environment remain in overall good health. Most commercial industry and service activity has also little negative impact on local communities, an issue affecting many other nations. Furthermore, for a developing country Namibia has in place a fairly well established governance framework for environmental protection and natural resource management. Moreover, a host of stakeholders besides government institutions such as ENGOs, community activists but also private sector entities are increasingly conscious of the importance of conservation efforts and sustainable development. Finally, recent economic activities at the coast in spite of the prevailing negative economic climate such as the expansion of Walvis Bay's port and the establishment of a car assembly plant indicate that the coast is seen as an area attractive for business and the creation of economic growth.

Namibia's ocean and coastal economy is thus fairly well placed for actively driving a holistic blue economy vision that provides for strong, inclusive socio-economic development which is centred on environmental sustainability and the sensible management of natural resources.

It also needs to be recognised that the country suffers from a number of governance deficits. Stakeholders from the business community are frustrated with the slow pace of key policies and laws such as a comprehensive PPP framework, crucially underperforming SOEs such as TransNamib and concerns about rising utility costs and supply security of energy and water. In turn, environmentalists express serious reservations regarding the capacity of government institutions to evaluate EIAs, conduct environmental monitoring, and show the appropriate political will in penalising businesses that flout environmental laws. Economists fret that too little attention is given by government to improving the country's overall investment attractiveness and that well-thought out sectoral strategies are missing to address for example transport and logistics deficits and skill shortfalls. Various respondents also noted with concern that coordination among crucial stakeholders (such as MME, MET, MFMR and local authorities in terms of natural resource management and addressing environmental damage) is lacking - thereby placing at risk gains made in recent years.

There is clearly a need to clarify conflicting mandates with regards to natural resource management among the key ministries tasked with governing Namibia's natural marine and coastal resources and to improve overall coordination and information sharing. Notably, NDP5 does acknowledge this shortcoming with regards to an envisioned blue economy policy and explicitly sets a target for harmonising the relevant, fragmented legislation.¹⁰⁷ The work on this is on-going yet little information on the status of Namibia's blue economy exists. However, given the complexity of the subject it is highly questionable if the responsible authorities will be able to meet the target deadlines shown in Table 3.

Finally, the issue of limited, scientific and other relevant environmental and economic data is a significant concern given the importance attached to information when developing a comprehensive blue economy strategy or road map. There are two concerns here, firstly a dearth of relevant and public available data in guiding planning and policy decisions with regards to ocean and coastal developments. Secondly, there is a lack of transparency regarding what data is available and from which stakeholder. Business and governance representatives argued that data, including from regular environmental monitoring of possible impacts from industrial activities, should be made available to relevant authorities. It was further stated that information could be accessed from government such as fish stock data from the MFMR if appropriately requested. Many environmentalists as well as economists however felt that all data concerning Namibia's natural resources should be made available publicly without having need for specific requests. It was argued that information as contained in EIAs for example were of interest to the public at large as well as the local and scientific community and should not be restricted.

¹⁰⁷ GRN, Namibia's 5th National Development Plan (NDP5): Working together towards prosperity 2017/18 – 2021/22, 24.

This report has sought to give an overview of the blue economy concept, the contradictory narratives around it, and considerations with regards to this concept's application to Namibia's ocean and coastal economy.

The core issue that needs to be addressed by Namibian policymakers and officials is the idea that significant socio-economic development can be achieved while guaranteeing environmental sustainability. Internationally, it seems that the narrative of natural capital and good business as well as the policy response of partnership for sustainable development is driving forward the blue economy concept. It remains to be seen if extensive socio-economic growth can be realised while guaranteeing overall environmental sustainability particularly if this growth is dependent on an already overexploited natural environment like the ocean. Barbesgaard is especially sceptical of this approach, observing that:

“Rather than seeing opposing interests and contradictory dynamics between the search for growth and economic profit on the one hand and conservation and restoration of ocean resources in order to tackle and mitigate climate change on the other hand, blue growth envisions ‘triple-benefit’ solutions, where everybody supposedly wins: coastal communities, the environment and investors.”¹⁰⁸

While this view is being pushed, particularly by private sector and entities and stakeholders falling under the partnership for sustainable development response, scepticism towards its realisation is not necessarily misplaced as can be seen from a host of scientific evidence documenting the poor health of ocean and coastal ecosystems around the world. Policymakers, stakeholders and the general Namibian public would do well to keep in mind contrary narratives around blue growth while formulating the country's own blue economy vision.

Perhaps an exemplary route to follow for Namibia when developing its own blue economy strategy is the process followed by the island approach – particularly the Seychelles. This country has sought to develop a comprehensive blue economy vision that not only takes into account global research and best practice but has also sought to tailor make its blue growth vision so that it is inclusive and speaks to the country's make up, concerns and development aims. Rustomjee states that:

“The Seychelles has developed a blue economy vision, focusing on preserving the marine environment, targeting fisheries sector reforms, integrating ocean-based technologies in the country's energy strategy and modernising port infrastructure to secure participation in emerging blue economy supply chains; and a national blue economy road map and a dedicated ministerial portfolio for the blue economy have been established.”¹⁰⁹

Developing a sustainable Blue Economy strategy: the way forward

- The targets set in NDP5 are a good start, particularly the harmonizing of the existing regulatory framework. However, the NDP5 targets timeline seems ambitious for such a complex subject. Given that the attainment of a blue economy is seen as a long-term goal, Namibian policymakers would do well to undertake a thorough, data driven, self-critical and consultative process to realise the NDP 5 targets.

¹⁰⁸ Barbesgaard, 130..

¹⁰⁹ Rustomjee Cyrus, September 2017. 3.

- Namibia should make use of approaches used by other African states, such as the Seychelles and Mauritius, in formulating its own comprehensive and country-specific blue economy plan. In addition, the country should choose as a departure point Namibia's existing framework of environmental legislation as well as relevant policies such as the National Policy on Coastal Management for Namibia.
- Efforts should be directed towards collecting further data, especially regarding Namibia's natural resources and the possible impacts of climate change on Namibia's ocean economy. Furthermore, it is crucial that information databases and their collection methods by government, as well as private institutions, should become more accessible and transparent to scientists and the public alike.
- Coastal settlements and towns have a vital role to play in Namibia's ocean economy but local authorities lack capacity, resources and strong mandates to address issues of urbanisation, proper urban planning, local environmental management, waste treatment and so forth. There is an urgent need to rectify these deficiencies – perhaps by giving more attention to the neglected policy of decentralisation.
- Namibia's blue economy plans should place more emphasis on environmental protection, monitoring and rehabilitation. As environmental degradation and economic growth become more and more relevant, Namibia's state and society needs to deepen and widen the discussion around what constitutes sustainable development, how it should be measured and how can it be secured in the long-term.
- Regardless of whether Namibia's future economic trajectory becomes more state driven or is heavily dependent on private sector initiatives – the state needs to improve its overall capacity regarding policymaking, coordination, delivering effective and efficient services to the public and the monitoring and enforcement of regulations – particularly those concerned with environmental protection.

Table 4: List of Interviewees	
Name & Surname	Organisation
Peter Tarr & John Pallet	Southern African Institute for Environmental Assessment
Timo Mufeti	Former Namibian Coast Conservation and Management project
Kaatri Brumfitt	Ecosol Environment Solutions
Klaus Schade	Independent Economist
Gabi Schneider	Namibian Uranium Institute
Steve Galloway	Former Investment Banker
Anett Kötting	Hospitality Association of Namibia
David Uushona	Municipality of Walvis Bay
Clive Smith	Walvis Bay Corridor Group
Roman Grynberg	University of Namibia
Hashali Hamukuaya & Ben van Zyl	Benguela Current Commission
Anja Kreiner, Chris Bartholomae, Paul Kainge & Beau Tjizoo	Ministry of Fisheries and Marine Resources (interviewed in their private capacity)
John & Martin Mendelsohn	Research and Information Services of Namibia

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