



The Sustainable Development of the South African Ocean Economy

1. Introduction

Our oceans and coasts are important parts of our environment; they are urgently in need of our protection. Oceans and seas support the livelihoods of entire communities, providing nutritious food and potential prosperity for hundreds of millions of people around the world. Covering a majority of the surface of our planet, oceans and seas provide half of the world's oxygen, absorb carbon dioxide, and serve as home to an incredible amount of life on earth. Without the oceans and their resources, the wealth and well-being enjoyed by much of the world's population would not exist. Alarming, the future of this unique ecosystem faces a grave threat at the present time.

2. Roundtable Discussion

The CPLO ended the month of May by hosting a roundtable discussion on *The Sustainable Development of the South African Ocean Economy*. The speakers were Mr Kishan Sankar from the Aquaculture and Economic Development Office in the Department of Agriculture Forestry and Fisheries; Associate Professor Moenieba Isaacs of the Institute for Poverty, Land, and Agrarian Studies (PLAAS), University of the Western Cape; and Mr Ruben Saul, representing the Doringbaai Development Trust. The speakers shared their wide range of knowledge and experiences in relation to government's Operation Phakisa and the general state of marine resources.

The discussion dealt with diverse points relating to sustainable growth of the ocean economy, including the following:

- Promoting aquaculture in order to maximise socio-economic benefits, especially for different fishing communities, while ensuring adequate ocean environmental protection;
- The Aquaculture Development Bill, which is currently with NEDLAC;
- Different spaces must be created to engage various groups within fishing communities. Information should be packaged in a way that will fully engage communities.
- Best practices must fit into the context of the fishing community involved.
- Commercial aquaculture has had limited success, in that only the commercial types of species such as abalone are succeeding. Even then, the farming of these species is capital intensive, with returns only visible after some years.
- The focus in aquaculture is currently on exporting; there needs to be more concentration on nutritious fish in aid of increasing food security in South Africa.
- The fisheries system in relation to small scale fishers is problematic;

- artisanal fishers who were excluded from receiving Individual Transferable Quotas (ITQ) can catch seafood,
- but they are prohibited to sell and gain an income therefrom.¹
- An acceptable way of treating all creatures needs to be established when considering what animals (including fish) are fed when farmed; we must refrain from viewing other creatures as merely objects for our disposal.
- It is said that jobs in the fishing industry are linked to quotas; however the industry is highly mechanised. Also, there are not enough fish in the sea, leading to controversial marine protected areas being formed, which compromise the livelihoods of the people in those areas when the harm is actually being done by the big trawlers in the deep ocean. It was argued that fishing rights are human rights; and that women-led customary practice ought to be afforded protection.
- Sustainability in the ocean economy will be achieved if the development of the sector lowers the reliance on technology and involves more people going out to sea.

3. Operation Phakisa

Operation Phakisa was launched in July 2014 by President Jacob Zuma, following a state visit to Malaysia where he was introduced to Malaysia's 'Big Fast Results' methodology, which that country used successfully to achieve rapid economic transformation. This initiative represents a different, faster-moving spirit in meeting government's targets. The SA government's starting point appears to be that the country is surrounded by a vast ocean and that we have not fully taken advantage of the immense potential of this untapped resource with regard to growing our activities in marine transport and manufacturing, and offshore oil and gas exploration. Operation Phakisa concentrates on optimising the economic potential of South Africa's oceans, focusing on six priority growth areas: Marine Transport and Manufacturing; Offshore Oil and Gas Exploration; Aquaculture;

Marine Protection Services and Ocean Governance; Small Harbours Development; and Coastal and Marine Tourism.²

The Council for Scientific and Industrial Research (CSIR) has been commissioned to implement the Oceans and Coasts Information Management System (OCIMS). This system forms part of the Department of Environmental Affairs' (DEA) Phakisa Oceans Economy Programme, initiative six of which aims to implement an overarching and integrated ocean governance framework for sustainable growth of the oceans economy, while ensuring adequate protection of the ocean environment. The fundamental focus of OCIMS is to apply satellite remote sensing and geo-spatial information; provide operational wide area monitoring; and avail information products to support and enhance decision making for the governance of South African oceans, our exclusive economic zone, and the country's coasts.³

4. Sustainability

Of the 17 Sustainable Development Goals (SDGs) adopted by 193 Member States of the United Nations on 25 September 2015, no. 14 is devoted to the ocean. This goal aims to conserve and sustainably use the oceans, seas and marine resources. Indicators under this goal address challenges such as habitat destruction, overfishing, illegal fishing and marine pollution. Reaching this goal will require significant efforts toward institutional co-operation in order to carry out the necessary national, regional, and global action plans which implement community-based models for sustainable management.

SDG 14 clearly illustrates the crucial role marine life plays in relation to human health, as well as the welfare of our planet. International recognition of the importance of conserving our ocean resources is helping build global momentum around this matter. However, SDG 14 goes far beyond conservation, focusing on the coastal communities, particularly those in developing countries and island states, who greatly rely on marine resources. Oceans and the resources they contain are particularly crucial for coastal communities (who represented 37% of the global population in 2010). In these communities, oceans provide livelihoods and tourism opportunities, in addition to subsistence and income. Millions of jobs are sustained by the fisheries and aquaculture

sectors, with generational traditions and knowledge often passed down. Generating approximately \$145 billion annually, fish is among the most widely traded food commodities;

and 60% of the volume of fish traded originates from developing countries. Indeed, healthy oceans and seas are more important than ever because fish has the potential to help meet the demand for nutritious food for the nearly 10 billion people anticipated to be inhabiting earth in 2050.⁴

5. Threats

The ancient principle of the freedom of the seas, which grants everyone boundless access to the ocean and its resources, has led to overfishing, the loss of biodiversity, and ocean pollution. The world is surrounded by the ocean, yet there is no supreme international authority that is truly responsible for the protection of the entire ocean. This has resulted in fragmented jurisdictions, inadequate laws, and loopholes enabling industrial ships equipped with modern technologies like echolocation, reconnaissance planes, and gigantic nets, to exhaust traditional fishing grounds. Formidable fishing corporations have global operations and search for the most profitable fishing areas, such as those off the coast of West Africa, where there is little state regulation – meaning that these big ships can easily outcompete the local fishers. Many developing countries are especially dependent on fishing, particularly when it is the primary economic activity. There are millions of small-scale fishermen globally, compared to industrial fisheries which employ less than half a million but which, as a result of their technologically advanced processes, take out many times more fish than the small artisanal fishers pull from the sea with their nets.⁵

The main marine pollution sources include:

1) Land Based Discharges – approximately 80-100% of pollution in coastal and marine environments is from land-based sources;

2) Dumping - all ports must be scoured for safe vessel navigation and development; contaminants found in the dredged material are then transferred to disposal sites further out to sea;

3) Maritime Transport - anti-fouling coatings, including tons of copper, chemicals and other toxins are leaking into coastal waters as a result of vessel traffic. South Africa is witness to an increasing number of vessels calling at or passing its ports annually;

4) Atmospheric Pollution - atmospheric particles in smoke and smog are eventually deposited in the sea;

5) Pollution Hotspots - estuarine and marine pollution hotspots are associated with cities, where alarming volumes of wastewater are discharged directly or indirectly into the sea each day.⁶

6. Emerging Solutions

6.1. *The Code of Conduct for Responsible Fisheries*

For over 20 years, the Code of Conduct for Responsible Fisheries has guided countries implementing sustainable fisheries management policies. The Code provides principles and standards applicable to the conservation, management and development of all fisheries, including: the requirements of international instruments; implementation and monitoring; the needs of developing countries; fisheries management; fishing operations; aquaculture development; coastal area management; post-harvest activities; trade; and fisheries research.⁷ The Code takes cognisance of the state of world fisheries and aquaculture, and proposes actions towards implementing fundamental changes within the fisheries sector to encourage the rational and sustainable utilisation of fisheries and aquaculture. It is a voluntary instrument, rather than a legally binding international agreement, and was approved by the South African Cabinet on 23 January 2002.

Government now plans to work with all stakeholders (large scale industry; small scale and artisanal fisheries; NGOs) to facilitate structural adjustments and changes in fisheries and fishing communities that promote voluntary compliance in order to ensure the long-term sustainable use of fisheries resources. A necessary step is for the Marine Living Resources Act 18 of 1998 to be revised to adequately encapsulate the following

key elements of the Code, and to be in line with the country's marine fisheries policy:

- Prevention of excess fishing capacity;
- Development and application of safe and selective fishing gear practices;
- Maintenance of the nutritional value and quality of harvested products;
- Protection and rehabilitation of critical fisheries habitats;
- Promotion of awareness of conservation and management principles and the need for responsible fishing practices;
- Promotion of culture-based fisheries.⁸

6.2. Monitoring technology

Illegal fishing is estimated to account for 11% to 19% of the global catch, and this has seen the use of satellite technology being piloted over the past few years in an effort to combat illegal fishing and poaching of marine resources. Instead of having to blindly patrol the expansive sea, a notification system alerts authorities to suspected pirate vessels, and coastguard vessels then use the satellite intelligence to target their search. The system relies on anti-collision transponders which are detectable by satellite and installed on nearly all ocean carriers as a maritime law requirement. A statistical model is used to recognise vessels whose transponders have been intentionally shut off; other data detects stationary fishing boats in risk areas, like national maritime boundaries. The identification of suspiciously acting ships is based on factors including the vessel's history and movement and whether its transmitter has been purposefully disabled. As much as these ships appear invisible (if their transponder is switched off), they inadvertently draw attention to

themselves as avoiding surveillance, and as a risk factor.⁹

6.3. Legislation

The Draft Marine Spatial Planning Bill¹⁰ has been fashioned to offer a framework for marine spatial planning in South Africa; to provide for the development of marine spatial plans; and to provide for institutional arrangements for the implementation of marine spatial plans, and for the governance of the use of the ocean by multiple sectors. In April 2017, this Bill was tabled before the National Assembly, where it is currently under consideration.

7. Conclusion

We find ourselves at the dawn of the industrialization of the oceans, with ample changes still to come as seafood consumption in wealthy nations has soared in recent decades, with increasing reliance on imports. The demand for natural resources and energy from the deep sea is large and will only grow in the future. It is thus vital for developing nations such as South Africa to explore approaches for sustainably growing the ocean economy which will maximise socio-economic benefits while ensuring adequate ocean environmental protection. The key assumption is that growth is the solution to our issues of unemployment, poverty eradication and many others; however, caution is necessary in enabling the marine sector to develop in a manner that is beneficial to the whole population. Oceans are too important to our future as a people for us to ignore best practices and let corporates pull the proverbial wool of greed over our eyes.

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- ¹ Isaacs, M. 2011. *Individual transferable quotas, poverty alleviation and challenges for small-country fisheries policy in South Africa*. *Maritime Studies* 10(2): 63–84.
- ² President Jacob Zuma to Launch Operation Phakisa: Press Release – 14 June 2014
https://www.environment.gov.za/mediarelease/presidentjacobzuma_launchoperationphakisa
- ³ CSIR <https://www.csir.co.za/csir-implementing-oceans-and-coasts-information-management-system>
- ⁴ FAO Working for SDG 14: *Healthy Oceans for Food Security, Nutrition and Resilient Communities*.
- ⁵ Heinrich Böll Foundation Schleswig-Holstein Ocean Atlas – May 2017
- ⁶ Council for Scientific and Industrial Research (CSIR) Presentation by Brent Newman at Parliamentary Colloquium on Ocean Economy (20/06/2017). <https://pmg.org.za/committee-meeting/24653/>
- ⁷ FAO Working for SDG 14: *Healthy Oceans for Food Security, Nutrition and Resilient Communities*.
- ⁸ National Department of Agriculture - Code of Conduct for Responsible Fisheries.
http://www.nda.agric.za/doaDev/sideMenu/fisheries/05_internationalObligationsANDagreements/international/code_of_conduct_responsible_fisheries.html
- ⁹ *Satellite Surveillance to Reel in Illegal Fishing*. The Australian - June 27, 2017.
<https://pasifik.news/satellite-surveillance-reel-illegal-fishing/>
- ¹⁰ South Africa, Department of Environmental Affairs, Draft Marine Spatial Planning Bill 2016,
http://www.gov.za/sites/www.gov.za/files/39847_gon347.pdf, (accessed 4 May 2017).

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