

BACKGROUND INFORMATION DOCUMENT

SEA-BASED AQUACULTURE DEVELOPMENT ZONE

ALGOA BAY, EASTERN CAPE

July 2019

Introduction

The Department of Agriculture, Forestry and Fisheries (DAFF), as the lead agent for aquaculture management and development in South Africa, intends to establish and manage a sea-based Aquaculture Development Zone (ADZ) in Algoa Bay in the Eastern Cape. DAFF recently successfully established the first sea-based ADZ in Saldanha Bay in the Western Cape and has received an Environmental Authorisation for a land based ADZ in the Eastern Cape at Qolora. A Sea-based ADZ typically consists of a selection of designated precincts that provide opportunities for existing aquaculture operations to expand and new ones to be established. ADZs are intended to boost investor confidence by providing 'investment ready' platforms with strategic environmental approvals and management policies already in place, allowing commercial aquaculture operations to be set up without the need for lengthy, complex and expensive approval processes. It is anticipated that an ADZ will create incentives for industry growth, provide marine aquaculture services and enhance consumer confidence. An ADZ can provide economic benefits to the local community through job creation and regional economic diversification.

Aquaculture is one of the sectors that form part of Operation Phakisa under the Ocean's Economy in South Africa. Operation Phakisa is an initiative of the South African government which aims to implement priority economic and social

programmes better, faster and more effectively. Operation Phakisa was launched by the President of the Republic in October 2014. The sector offers significant potential for rural development, especially for marginalised coastal communities. The proposed development will provide employment opportunities for the local and regional communities.

In 2009 a Strategic Environmental Assessment (SEA) was undertaken for the entire South African coastline to identify suitable aquaculture precincts. In this assessment the Eastern Cape was highlighted as an area holding potential for the establishment of ADZs. As part of a finer-scale SEA undertaken by DAFF in 2011, two precincts, namely Algoa 1 (original extent near Summerstrand) and 5 (opposite the Addo Elephant National Park) were identified as the most promising options for establishment of an ADZ in this area. Environmental Authorisation (EA) was granted for Algoa 1 Option 1 on 9 July 2014 following a lengthy Environmental Impact Assessment (EIA) process, which was initiated in 2010. During the appeals process that followed the positive decision, a total of twenty-eight (28) substantive appeals were lodged against the decision. In response, the Minister of Environmental Affairs issued a decision on the Appeal suspending the EA to allow for further studies to be undertaken. In the same year, DAFF withdrew the original application for environmental authorisation.

In mid-2016, DAFF commissioned three comparative assessments, including a detailed feasibility study (Britz & Sauer 2016b), a socio-economic assessment (Britz *et al.* 2016) and a marine ecological assessment (Britz & Sauer 2016a) for finfish farming at Algoa 1 and 5 (these three studies have been included as stand-alone documents in Appendix D of this Basic Assessment Report). The economic feasibility study (Britz & Sauer 2016b) found that conditions at Algoa 5 were sub-optimal for economic aquaculture and mitigation measures would be impractical or uneconomic to implement, which renders the proposed site not economically competitive. Furthermore, Algoa 5 was located in the middle of the recently promulgated Addo Marine Protected Area (MPA). For the reasons described above, Algoa 5 was screened out and has not been taken forward as a potential precinct in the current Basic Assessment process.

DAFF intends to submit a new application for the development of the ADZ for which a Basic Assessment process is required in terms of the 2014 EIA Regulations (as amended in 2017) of the National Environmental Management Act (Act 107 of 1998) (this application). DAFF appointed Anchor Research & Monitoring (Pty) Ltd (Anchor) to undertake the Basic Assessment (BA) process.

Aim of this Background Information Document

This BID aims to provide you, as an interested and/or affected party (I&AP), with:

- An overview of the proposed development;
- An overview of the Environmental Impact Assessment process and studies being undertaken to assess the potential impacts, both positive and negative, associated with the proposed project; and
- Details of how to become involved in the process, receive information, or raise issues, which may be of concern and/or interest.

Project description

DAFF intends for the ADZ to accommodate finfish as well as bivalve culture (oysters/mussels) within a combination of precincts (see section on alternatives). DAFF intends to follow a precautionary approach and motivate for a phased production prior to expanding to full scale production.

The precincts considered in this application include one precinct from the previous process (Algoa 1 Option 1– Summerstrand 312 ha), and two new precincts, designated as Algoa 6 (Port Elizabeth Harbour 479 ha) and 7 (Ngqura Harbour 355 ha) (Figure 1).

Algoa 6, situated near the Port Elizabeth Harbour, was identified but screened out in the scoping phase of the original EIA (2010-2014) which focussed only on finfish culture, and is now been put forward as a suitable site for bivalve production in this new (2019) application process. Algoa 7 is a new precinct located directly in front of the Ngqura harbour that has been identified as a potential site for finfish culture. Prior to the start of the project, DAFF undertook a feasibility assessment with key stakeholders in which Algoa 7 was found to be suitable in terms of water depth, shipping traffic, and accessibility (i.e. financial considerations) and position relative to the promulgated Addo MPA (Figure 1). The Addo MPA was promulgated on 23 May 2019. Algoa 7 was included within the controlled zone of the MPA in the original draft gazette notice (published on 3 February 2016) but was excised from the MPA in final version.

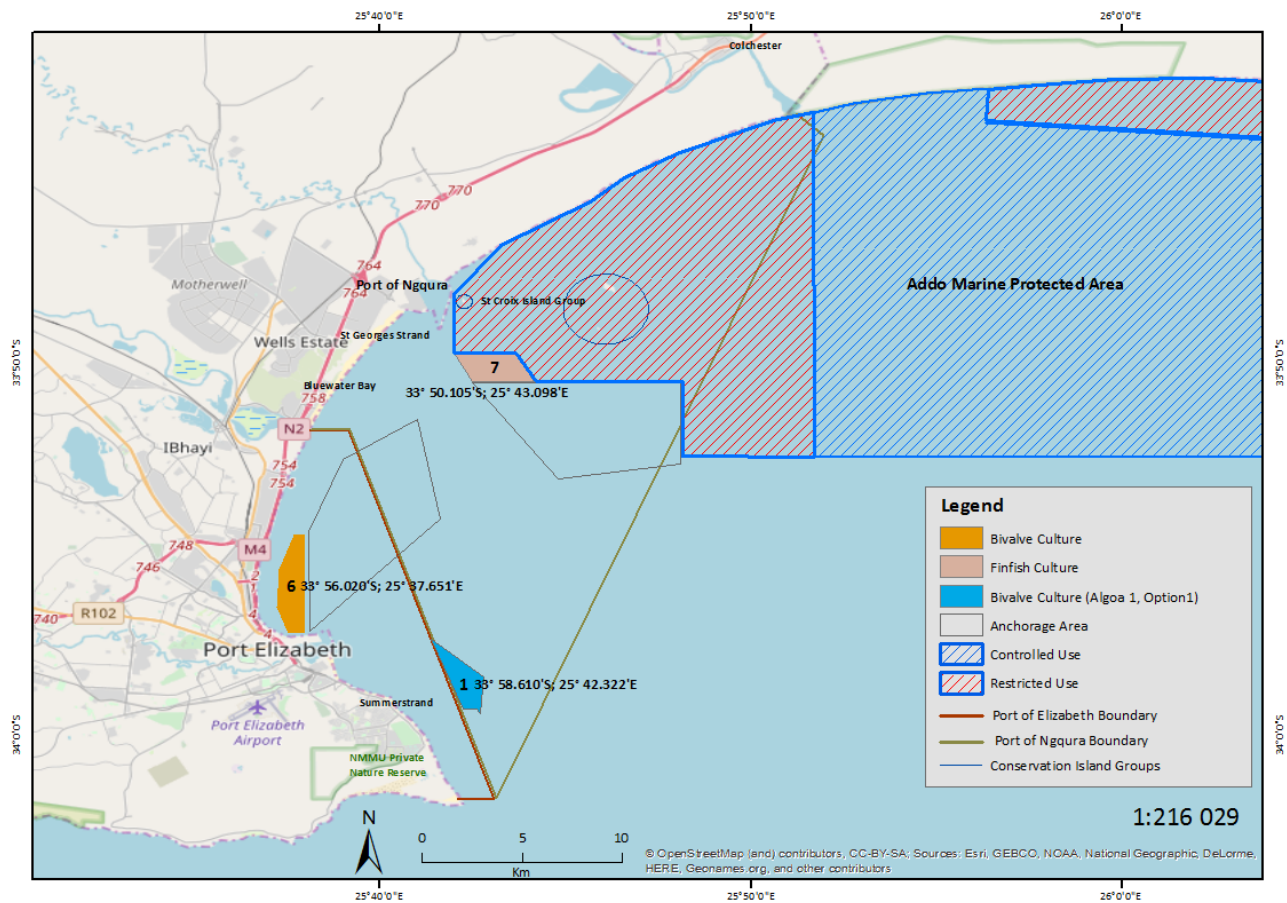


Figure 1: Location of the proposed sea-based Aquaculture Development Zone in Algoa Bay, Eastern Cape.

In this BA process, environmental impacts of finfish culture were assessed for Algoa 1 Option 1 and Algoa 7. Impacts of bivalve culture were assessed for Algoa 1 Option 1 and Algoa 6 (Figure 1).

Should Environmental Authorisation be granted, finfish cages, bivalve long-lines would be installed and run by individual operators. Cages and bivalve long-lines would be moored on the seafloor to prevent drifting. Indigenous finfish species that are considered during the BA process include:

- Yellowtail
- Yellowfin tuna
- Silver Kob
- Dusky Kob
- East Coast Sole
- Geelbek
- Spotted Grunter

- White steenbras
- White stumpnose
- Red roman

The bivalve species under consideration for mariculture in Algoa 1 and Algoa 6 include the Pacific oyster, the Mediterranean mussel, the Pacific oyster and indigenous species such as the Cape rock oyster, as well as brown and black mussels. For most species, the suitability of the species for sea-based culture must be established through research.

Alternatives

It is a requirement of NEMA that feasible and reasonable alternatives (i.e. site, activity, layout, technology, operational aspects) are considered, including the 'No Go' option.

Location, type of activity and farming intensity alternatives constitute alternatives that are taken forward into the Basic Assessment process. It is

important to note that DAFF is seeking to promote farming of both bivalves and finfish in Algoa Bay and therefore the approach to choosing alternatives has changed from considering individual precincts as alternatives to each other to considering combination of precincts as alternative options as shown below.

Option	Algoa 1 Option 1	Algoa 6	Algoa 7
A	Finfish & Bivalve	Bivalve	Finfish
B (DAFF Preferred option)	Bivalve	Bivalve	Finfish
C	X	Bivalve	Finfish
D (No-go option)	X	X	X

The pre-application phase confirmed that finfish farming at Algoa 1 Option 1 could have a high potentially irreversible negative impact on the economy of Port Elizabeth (in the pre-application BAR this impact was rated as ‘medium’ after the implementation of mitigation measures).

In response to the revised impact assessment, DAFF has revised its priorities in respect of mariculture in Algoa Bay and would now like to nominate Option B (bivalve farming at Algoa 1 Option 1, bivalve farming at Algoa 6 and finfish farming at Algoa 7) as the preferred Alternative Option.

It is important to note that the BAR needs to clearly define the applicant’s (DAFF) and EAP’s preferred Alternative Options (these may differ). It follows that although DAFF has revised its priorities in respect of mariculture in Algoa Bay, the Basic Assessment Report assesses all three economically feasible Alternative Options as shown in the table above.

The Environmental Impact Assessment (EIA) Process

Sections 24 and 44 of NEMA make provision for the promulgation of regulations that identify activities which may not commence without an Environmental Authorisation issued by the competent authority, in this case, the National Department of Environmental Affairs (DEA). The 2014 EIA Regulations promulgated in terms of NEMA (as amended by Government Notice R326 in 2017), govern the process, methodologies, and requirements for the undertaking of EIAs in support of EA applications. The EIA Regulations are accompanied by Listing Notices (LN) 1-3 (R327, R325 and R324) that list activities requiring an EA.

The EIA Regulations provide for two alternative authorisation processes depending on the type of activity that is proposed. A Basic Assessment (BA) process is required for projects associated with limited environmental impacts as defined in LN 1

Box 1

The proposed development triggers the following listed activities, as listed in **Listing Notice 1 (GN R.327 of 2017)** for which a **Basic Assessment** process is stipulated:

7. The development and related operation of facilities, infrastructure or structures for aquaculture of sea-based cage culture of finfish, crustaceans, reptiles, amphibians, molluscs, echinoderms and aquatic plants, where the facility, infrastructure or structures will have a production output exceeding 50 000 kg per annum (wet weight).

Note that other listed activities are also triggered by the proposed development. Please refer to Listing Notice 1 and 3 for the full description of all activities triggered.

Listing Notice 1 Activities 15, 17, 19A, 42, 54 and 67;

Listing Notice 3 Activities 13

and 3. In contrast, a Scoping and Environmental Impact Reporting process (S&EIR, also referred to as an EIA) is required to obtain EA for project with large scale, greater environmental impacts (defined in LN 2).

Anchor has determined that the proposed project triggers a number of activities listed in LN1 and LN3 of the 2014 EIA Regulations (as amended) and that an application for EA should follow the **Basic Assessment process**. The key listed activities are presented in Box 1 below. Please refer to Listing Notice 1 and 3 for the full description of all activities triggered, including Listing Notice 1 Activities 7,15,17,19A,42,54 and 67; and Listing Notice 3 Activity 13.

Before commencing with the project, the proponent (DAFF) is required to appoint an independent Environmental Assessment Practitioner (EAP) to undertake a Basic Assessment process and to obtain EA in terms of NEMA from the DEA. Regulations 19 and 20 of the EIA Regulations contain the detailed approach to the BA process. The BA process aims to identify and assess all potential environmental impacts (negative and positive).

The Basic Assessment Report (BAR) recommends how potential negative impacts should be effectively mitigated and how benefits can be enhanced.

Stakeholder consultation, as part of the BA process, is intended to provide all stakeholders with the opportunity to raise issues and concerns that should be addressed in the BA process. Minimum requirements for the stakeholder consultation process are specified in Chapter 6 of the 2014 EIA Regulations. Interested and Affected Parties (I&APs) will be involved throughout the basic assessment process (see Opportunity to participate below).

The 2014 EIA Regulations (as amended in 2017) stipulate that the final Basic Assessment Report (BAR) has to be submitted within 90 days of receipt of the application by the competent authority. Experience has shown that 90 days for the submission of a BA including a public participation process is frequently impossible to achieve. The EIA Regulations (Regulation 40(3)) therefore allow for the EAP to conduct a public participation process before the application has been submitted to the competent authority (pre-application process). Due to the complexity of the proposed development, a pre-application public participation process was completed on the 30 April 2019. Input by stakeholders on the pre-application BAR was carefully considered in the compilation of the Draft BAR. Going forward, DAFF intends to submit the application for Environmental Authorisation for Alternative Option B and the Draft BAR will be made available to the public for an additional 30-day commenting period. Two public meetings will be held as part of this process (details provided at the end of this document).

Potential environmental impacts associated with the project

The physical disturbance footprint on the seafloor will be limited to the anchoring points of the finfish cages and bivalve long-lines. The benthic ecological impact could, however, extend beyond the physical disturbance footprint as faeces and excess food particles sink to decompose on the ocean floor. Organic loading is known to cause anoxic conditions in the sediments and bottom waters and possible hydrogen sulphide production during anaerobic decomposition of organic matter. This results in a change in benthic macrofauna communities under fin fish cages and to a lesser degree underneath bivalve production areas. Nutrient input from the farms may also result in impacts

on the water column by stimulating primary production.

In summary, the following potential impacts associated with this project have been assessed as part of the BA process:

- Impacts on the marine and coastal environment including biodiversity and ecosystem processes;
- Impacts on the visual, scenic, aesthetic and amenity values represented by the natural and the built environment;
- Impacts on the social environment (e.g. employment and job creation, and revenue generation, impacts on the local tourism and fishing industry).
- Impacts on maritime heritage resources may be caused by mooring the finfish cage, oyster long-lines and mussel rafts to the seafloor.

Marine ecological and maritime and underwater cultural heritage specialist studies were undertaken to inform the BAR. A new socio-economic specialist study was not conducted as part of this BA process; however, a very comprehensive impact assessment has been included in the BAR. All impacts have been assessed within the context of existing specialist and comparative studies conducted as part of the 2010-2014 EIA process as well as comparative studies that were conducted in 2016 by the

Rhodes University.

Opportunity to participate

Interested and affected parties (I&APs) are invited to register and provide comments on this project during the public participation process. I&APs must provide their comments together with their name, contact details (preferred method of notification, e.g. e-mail address, fax number or verbal communication) and an indication of any direct business, financial, personal or other interest which they have in the application to the contact person indicated below.

During the upcoming public participation process **two** public meetings will be held in Port Elizabeth:

Date: 31 July 2019

Time: 18:00 - 20:30

Venue: Main Hall/Reception Area, Port Elizabeth Vuyisile Mini Square, Govan Mbeki Ave, Port Elizabeth Central, Port Elizabeth, 6001

Date: 1 August 2019

Time: 18:00 - 20:30

Venue: Motherwell NU2 Community Hall, Chief Poto Street, Motherwell, 6211

For more information contact

Vera Massie, Anchor Research & Monitoring (Pty) Ltd

8 Steenberg House, Silverwood Close, Tokai, 7945

Telephone: 021 701 3420, Fax: 021 7015280

E-mail: info@anchorenvironmental.co.za

<https://anchorenvironmental.co.za>



ANCHOR
research & monitoring



agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA