

**BACKGROUND INFORMATION DOCUMENT**

# **SEA-BASED AQUACULTURE DEVELOPMENT ZONE**

## **ALGOA BAY, EASTERN CAPE**

**March 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. 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 provides 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 (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 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 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 Algoa 1 and 5 (these three studies have been included as stand-alone documents in

Appendix D of the Basic Assessment Report). The economic feasibility study (Britz and 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 is located in the middle of the Addo Marine Protected Area (MPA), which was recently approved by cabinet. For the reasons described above, Algoa 5 was screened out and has not taken forward as a potential precinct in the current Basic Assessment process.

DAFF has since withdrawn the original application for environmental authorisation and 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**

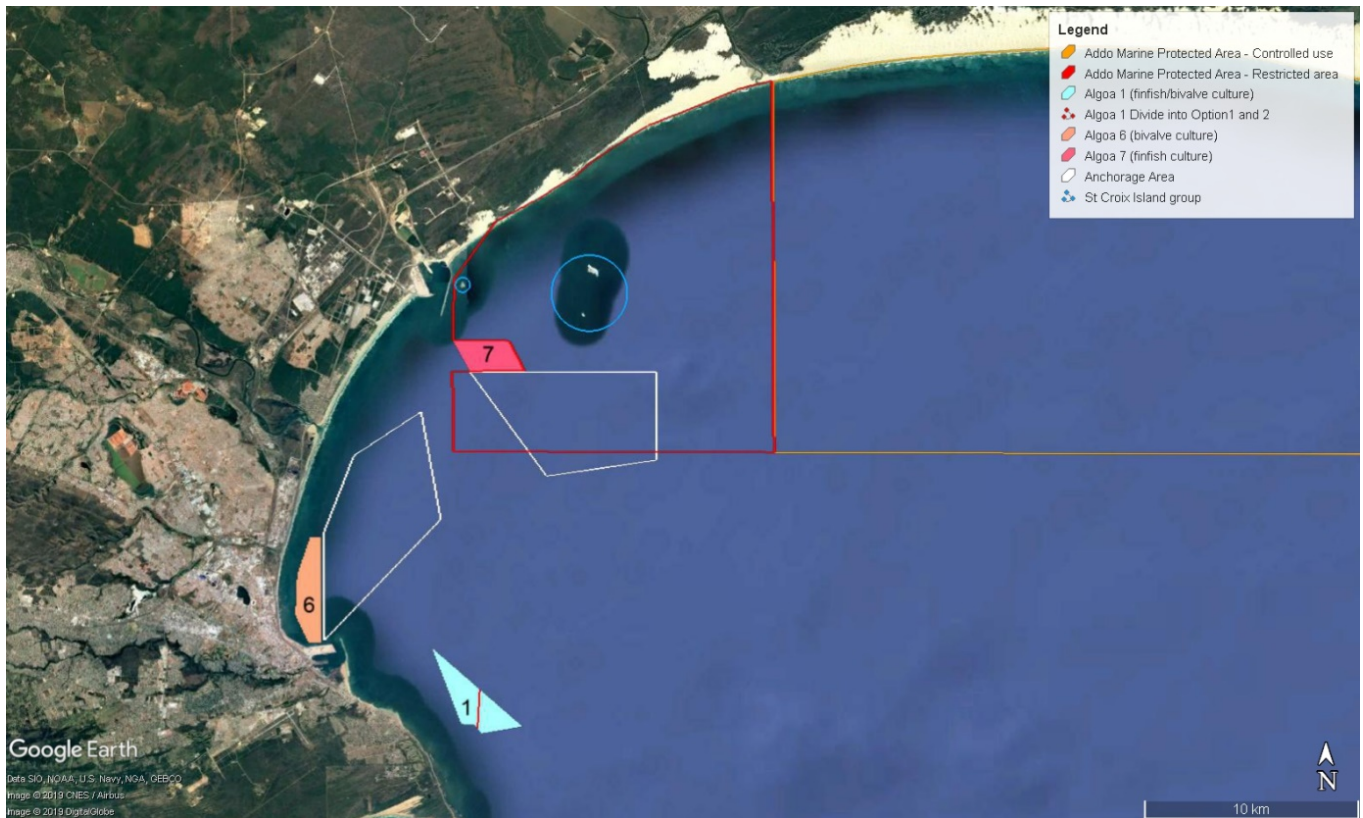
This BID aims to provide you, as an interested and/or affected party (I&AP), with:

- 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 alternatives). DAFF intends to motivate for an initial pilot phase prior to proceeding with full scale production.

The precincts considered in this application include one precinct from the previous process (Algoa 1 – Summerstrand 522 ha), and two new precincts, designated as Algoa 6 (Port Elizabeth Harbour 470 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. This site has undergone an internal feasibility assessment in which it was found to be suitable in terms water depth, shipping traffic, and accessibility (i.e. financial considerations). This site overlaps with the recently approved Addo Marine Protected Area (MPA) but the Department of Environmental Affairs Branch Oceans and Coasts has indicated that the affected portion of this site could potentially be excised should Environmental Authorisation be granted for this precinct. Thus, in this application process, two sites, Algoa 1 and 7, are being put forward for finfish culture , while one of these, Algoa 1, along with a third site, Algoa6, is being put forward for bivalve culture (Figure 1).



**Figure 1: Proposed sea-based Aquaculture Development Zone in Algoa Bay, Eastern Cape.**

Finfish cages, bivalve long-lines and/or mussel rafts will be installed and run by individual operators. Cages, long-lines and mussel rafts will be moored on the seafloor to prevent drifting. Indigenous finfish species that will be 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

indigenous Cape rock oyster and indigenous mussels such as brown mussel and black mussel.

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 (i.e. the previous process chose Algoa 5 as an alternative to Algoa 1) to considering

combination of precincts as alternative options as shown below.

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

### 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 in LN 1 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).

#### 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

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 will be conducted.

### **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, oyster long-lines and mussel rafts. 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 were identified:

- 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. All impacts have been assessed within the context of existing specialist and comparative studies for Algoa 1 (and 5) and form part of the Basic Assessment Report.

### 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.

#### For more information contact

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