PART 4

DECISION SUPPORT FRAMEWORK

CONTENTS

PART 4. DECISION SUPPORT FRAMEWORK 2

SECTION 4.1 INTRODUCTION 2

SECTION 4.2 AUTHORISATION REQUIREMENTS FOR AQUACULTURE 2

4.2.1 Marine 2

4.2.2 Freshwater 2

SECTION 4.3 INTEGRATED APPLICATION AND AUTHORISATION PROCESS 7

4.3.1 Step 1 - Application for a license to engage in aquaculture 7

4.3.2 Step 2 - Application for permits to exercise an aquaculture license 8

SECTION 4.4 PROPOSED AQUACULTURE DEVELOPMENT ZONES 9

4.4.1 The requirement for Environmental Authorisation 9

4.4.2 The development or adoption of standards for marine and freshwater aquaculture 9

SECTION 4.5 FURTHER RECOMMENDATIONS FROM THE SEA 9

FIGURES

Figure 4-1: Illustration of the current environmental requirements for marine aquaculture authorisations; Step 1 – Application for a right to engage in marine aquaculture 4

Figure 4-2: Illustration of the current environmental requirements for marine aquaculture authorisations; Step 2 – Application for permits to exercise the marine aquaculture right. 5

Figure 4-3: Illustration of the current environmental requirements for freshwater aquaculture authorisation. 6

PART 4. DECISION SUPPORT FRAMEWORK

Section 4.1 Introduction

A key objective of the SEA is to recommend options for potential streamlining and integration of environmental approvals and permits, in order to facilitate more efficient and effective decision-making. This objective is in line with the aim of Operation Phakisa to promote and fast-track the responsible development of marine and freshwater aquaculture.

Based on a review of the existing regulatory system for marine and freshwater aquaculture, together with discussions with DEA and DAFF (now DEFF) and other stakeholders through the course of the SEA, two approaches have been conceptualized. These approaches are proposed in order to potentially reduce complexity and eliminate duplication of legal requirements under different Departments, and to possibly integrate and streamline the environmental regulatory process applying to marine and freshwater aquaculture development and operations.

The two approaches proposed to streamline the authorisation of aquaculture development projects are:

- An **integrated aquaculture application and authorisation system** for projects wherever they are located in South Africa (Section 4.3); and
- A **facilitated authorisation process** for projects located within proposed aquaculture development zones (ADZs) where environmental sensitivities have been pre-assessed in this SEA (Section 4.4).

Before presenting these two proposals, a brief overview is provided of the current authorisation and decision-making context for marine and freshwater aquaculture activities in South Africa.

Section 4.2 Authorisation Requirements for Aquaculture

4.2.1 Marine

The current regulatory requirements for authorisation to engage in marine aquaculture activities are summarised in Figure 4-1 and Figure 4-2.

Step 1 in the authorisation process is the application for a right to engage in marine aquaculture (Figure 4-1).

At national level, DEFF administers the Marine Living Resources Act, Act No. 18 of 1998 (MLRA). A 'right' to engage in commercial-scale marine aquaculture is allocated in terms of Section 18 of the MLRA and when granted valid for 15 years, subject to compliance audit on application for renewal. In the absence of a rights allocation process, an Applicant may be granted an 'Exemption' in terms of Section 81 of the MLRA.

In support of the right application, the Applicant is required to also submit documentation relating to the Applicant's identity and entity (e.g. company registration, business plan, contact details, tax clearance, and valid lease agreement or title deed), as well as site maps and facility layouts.

Also at national level, DEFF administers the following Acts that are relevant to marine aquaculture authorisations, such approvals that are also required in support of a right application:

- NEMA – In terms of the National Environmental Management Act, Act No. 107 of 1998 and the Environmental Impact Assessment (EIA) Regulations of 2014, as amended, an Applicant is required to obtain **Environmental Authorisation** for a marine aquaculture development. This requires a Basic Assessment (BA) or full Scoping/EIA process be undertaken, where applicable, with the development of an Environmental Management Plan and a Biomonitoring and Control Programme.
- NEM:ICMA – In terms of the National Environmental Management: Integrated Coastal Management Act, Act No. 24 of 2008, an Applicant is required to apply for a **Coastal Waters Discharge Permit** to discharge effluent from a source located on land into coastal waters. Instead, the Minister may issue a General Discharge Authorisation (GDA), which first would need to be gazetted, only in instances where the predetermined gazetted requirements of the general discharge authorisation are met.
- NEM:BA – In terms of the National Environmental Biodiversity Act, Act No. 10 of 2004 and the Alien and Invasive Species (A&IS) Regulations of 2014, GN R598 and the A&IS Lists of 2016, GN R864, an Applicant is required to apply for an **Alien and Invasive Species Permit** to engage in any restricted activity involving an alien or declared invasive species. Also, in terms of section 14 of these A&IS Regulations, a **biodiversity risk and benefit assessment** is and must accompany an application for an A&IS permit.
- NEM:BA – In terms of the National Environmental Biodiversity Act, Act No. 10 of 2004 and the Threatened or Protected Marine Species (TOPMS) Regulations of 2017, GN R477 and the TOPMS Lists of 2017, GN R476, an Applicant is required to apply for a **Threatened or Protected Marine Species Permit** to engage in any restricted activity involving a threatened or protected marine species.

At a local level, the provincial agricultural authorities administer the Conservation of Agricultural Resources Act, Act No. 43 of 1983 (CARA), while local municipalities administer and apply municipal by-laws that determine zoning and land use planning where applicable to aquaculture.

Step 2 is the application for a permit to exercise the allocated marine aquaculture right (Figure 4-2).

Permits to exercise the right and to engage in marine aquaculture activities are currently granted in terms of the MLRA. Until recently, a suit of 12 different marine aquaculture permits were required depending on the intended activity which requires authorisation. However, in line with the objectives of Operation Phakisa, DAFF has consolidated five of these permits into one integrated grow-out permit application covering aquaculture operations including collection of broodstock, operating a fish processing establishment and a vessel and transport permit. Two more permits were combined into an integrated marine aquaculture hatchery permit which authorises the possession of broodstock and the operation of a hatchery. The other permits remain as individual applications, and include the following:

- Permit to transport marine aquaculture product(s);
- Permit to process marine aquaculture product(s);
- Permit to dive in banned areas;
- Permit to possess and sell undersized cultured abalone obtained from a marine aquaculture Right Holder;
- Permit to possess and sell undersized cultured kob obtained from a marine aquaculture Right Holder;
- Permit for marine aquaculture scientific investigations and practical experiments;
- Permit to import marine aquaculture fish and fish product(s); and
- Permit to export marine aquaculture fish and fish product(s).

DEFF currently aims to grant marine aquaculture permits within seven (7) working days of receiving the applications, though it can take up to 30 days to process. Each permit is valid for a period of 12 months and is renewable subject to a compliance audit. In terms of general permitting conditions, DEFF also requires regular reporting on aspects such as water quality, production values, grow-out and biomass statistics, transport requirements, import and export volumes, and annual income generated. Apart from permits for import, export and processing of marine aquaculture fish and fish products, the issuing of all other permits are dependent on an Applicant being a marine aquaculture Right Holder first.

4.2.2 Freshwater

The current regulatory requirements for authorisation to engage in freshwater aquaculture activities apply at a national, provincial and local authority level, and are summarised in Figure 4-3.

At national level, DEFF aims to create an enabling regulatory environment required to optimize the opportunities of the freshwater aquaculture

sector. This is currently achieved through the National Aquaculture Policy Framework, NEMA, NEM:BA and its respective regulations. Both existing and new freshwater aquaculture facility and hatchery operations are required to register with the national DEFF and provide regular reporting on aspects such as water quality, production values, grow-out and biomass statistics, transport requirements, import and export volumes, and annual income generated.

Also at national level, DEFF administers the following Acts that are relevant to freshwater aquaculture authorisations:

- NEMA – In terms of the National Environmental Management Act, Act No. 107 of 1998 and the Environmental Impact Assessment (EIA) Regulations of 2014, as amended, an Applicant is required to obtain **Environmental Authorisation** for a freshwater aquaculture development. This requires a Basic Assessment (BA) or full Scoping/EIA process be undertaken, where applicable, with the development of an Environmental Management Plan and a Biomonitoring and Control Programme.
- NEM:BA – In terms of the National Environmental Biodiversity Act, Act No. 10 of 2004 and the Alien and Invasive Species (A&IS) Regulations of 2014, GN R598 and the A&IS Lists of 2016, GN R864, an Applicant is required to apply for an **Alien and Invasive Species Permit** to engage in any restricted activity involving an alien or declared invasive species. Also, in terms of section 14 of these A&IS Regulations, a **biodiversity risk and benefit assessment** is and must accompany an application for an A&IS permit.
- NEM:BA – In terms of the National Environmental Biodiversity Act, Act No. 10 of 2004 and the Threatened or Protected Species (TOPS) Regulations of 2015, GN R255 and the TOPS Lists of 2015, GN R256, an Applicant is required to apply for a **Threatened or Protected Species Permit** to engage in any restricted activity involving a threatened or protected freshwater species.

Further at a national level, the Department of Human Settlements, Water and Sanitation (DHSWS) administers the National Water Act, Act No. 36 of 1998 (NWA). Water uses associated with freshwater aquaculture development and operation require an application for a **General Water Use Authorisation** (GA), should the water uses fall within the thresholds of a GA, or a **Water Use License** (WUL) in terms of section 21 of the NWA. The processing and allocation of a GA usually takes about 30 days, whereas a WUL application process can take up to 300 days.

At a provincial level, permits to engage in freshwater aquaculture activities are issued by the different environmental and nature conservation authorities, administered under various Provincial Acts and Ordinances, and across all nine provinces. Application forms and processing procedures for freshwater aquaculture permits vary largely from province to province, although many activities that require authorisation are similar in nature. Each freshwater aquaculture permit that is granted in terms of the relevant provincial legislation is renewable and valid for a period of 12 months subject to a compliance audit.

At a local level, the same requirements relating to zoning and land use planning apply in terms of relevant municipal by-laws as for marine aquaculture.

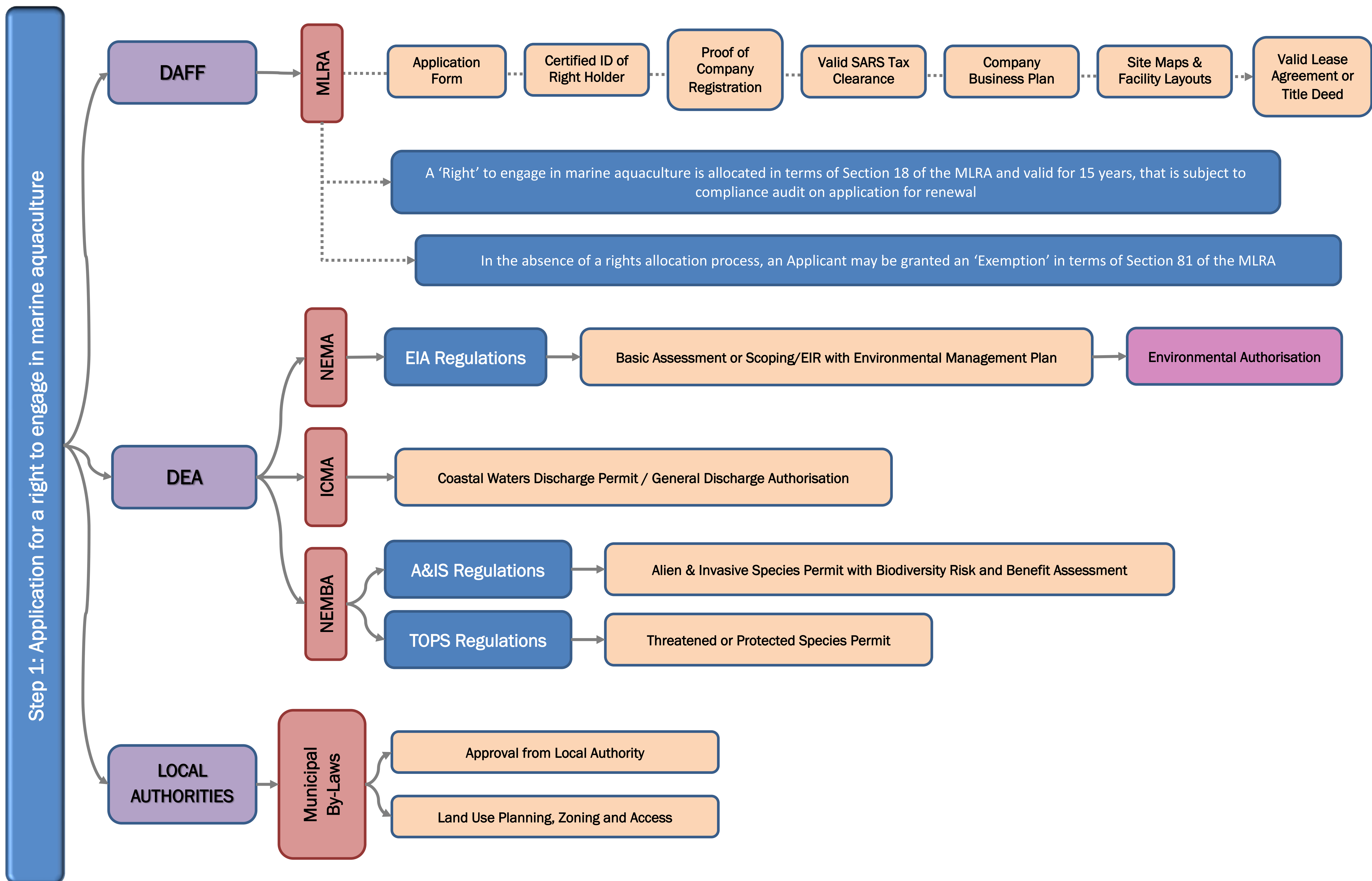

Figure 4-1: Illustration of the current environmental requirements for marine aquaculture authorisations; Step 1 – Application for a right to engage in marine aquaculture

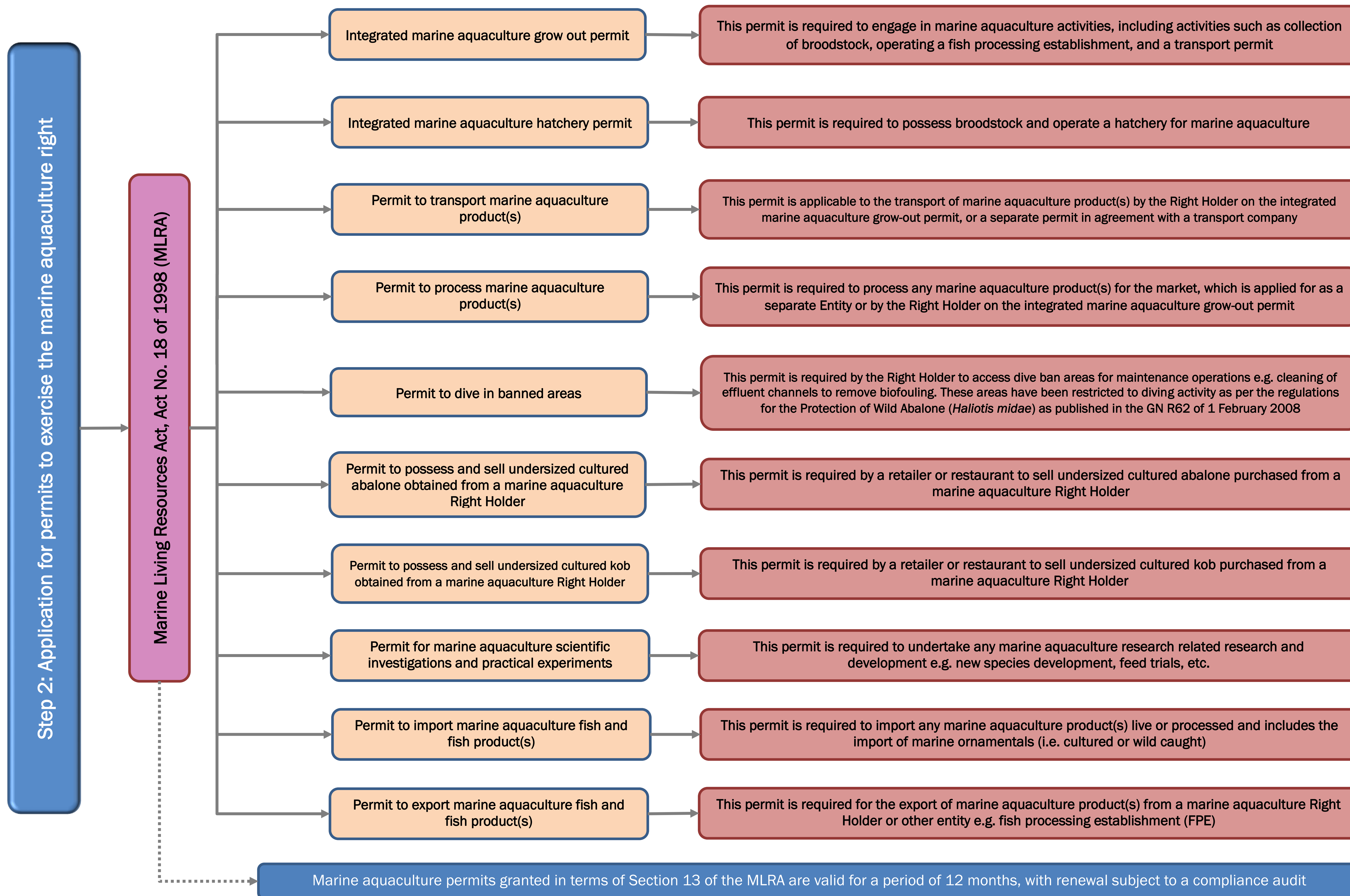

Figure 4-2: Illustration of the current environmental requirements for marine aquaculture authorisations; Step 2 – Application for permits to exercise the marine aquaculture right.

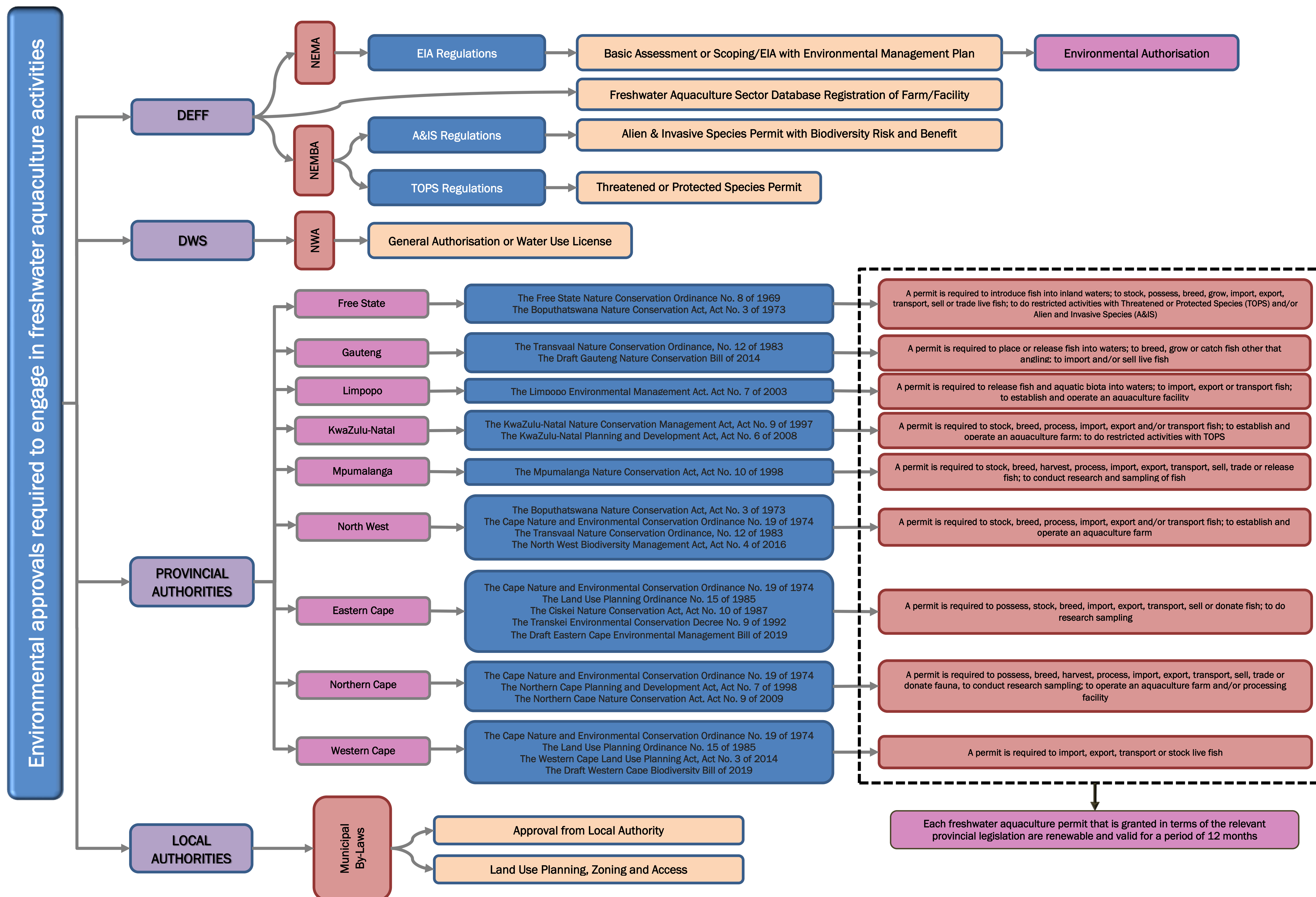

Figure 4-3: Illustration of the current environmental requirements for freshwater aquaculture authorisation.

Section 4.3 Integrated Application and Authorisation Process

An examination of the current regulatory requirements for authorisation to engage in marine and freshwater aquaculture activities has revealed a degree of overlap between various authorisation processes across multiple levels of authority, as well as some duplication in terms of information requirements and approvals required under for example the Marine Living Resources Act, 1998 (MLRA), the National Environmental Management Act, 1998 (NEMA), the NEM: Biodiversity Act, 2004 (NEM:BA), the NEM: Integrated Coastal Management Act, 2008 (NEM:ICMA), and the National Water Act, 1998 (NWA), as well as an array of provincial legislation (refer to Section 4.2).

To address these legislative barriers and potentially reduce the compliance complexities, the SEA strongly recommends the development of an **integrated and intergovernmental decision-making platform** for marine and freshwater aquaculture that is administered at a national level by the now Department of Environment, Forestry and Fisheries (DEFF) in terms of the – to be gazetted – Aquaculture Development Act and its regulations (hereafter the Act), as two key objectives of the current Aquaculture Development Bill is to establish an Intergovernmental Authorisations Committee (IAC) consisting of all decision-making authorities relevant to marine and freshwater aquaculture, and to provide for integrated aquaculture authorisations. In the interim, this integration and possible alignment of permitting requirements could be achieved in terms of section 24(k) of the National Environmental Management Act, 1998 (NEMA) which provides for consultation between competent authorities and consideration of legislative compliance requirements of other organs of state having relevant jurisdiction.

From the SEA, it is recommended that ideally this integrated decision-making platform should be facilitated through the development and coordination of a **centralised integrated aquaculture application and authorisation system** that is preferably internet-based (on-line) and housed in the applicable Fisheries Branch within the national DEFF. Through this integration of the regulatory requirements, information gathering and public participation processes could be streamlined for Applicants thus avoiding unnecessary duplication in providing information to the authorities. Although an Applicant would follow this integrated application process, the different organs of state with relevant decision-making mandates such as the national DHSWS would still be able to consider their respective section/s of the integrated aquaculture application separately and issue their decisions independently, if needed.

The SEA recommends that the integrated aquaculture application and authorisation system be characterized by the following two-step process:

4.3.1 Step 1 - Application for a license to engage in aquaculture

In terms of the Act, each prospective Applicant would be required to apply for a license that is issued by the relevant licensing authority to engage in marine or freshwater aquaculture activities. The licensing authority in this respect would be the Minister or a person to whom that authority has been delegated by the Minister, preferably at a national level with provincial and local level organs of state acting as commenting authorities on each application. This license application process would be applicable to all prospective commercial and small-scale aquaculture developers and operators, including persons who want to (i) undertake pilot scale aquaculture in order to assess the financial, economic, technical, social or environmental viability of an aquaculture project at a specific place, with the intent to later convert it to a commercial aquaculture operation, (ii) operate an aquaculture research facility, or (iii) operate an aquaculture (fish) processing establishment (FPE).

The Applicant would be required to submit information in the prescribed manner that relates to the Applicant's business entity, farm location, brief description of the facility, production system to be used, species to be cultured and activities planned including site maps and technical layouts. Additional information that could be required as part of the license application process, if relevant in terms of the respective applicable environmental legislation, would typically include the following:

a) **Environmental Authorisation** – In terms of section 24 of the National Environmental Management Act, Act No. 107 of 1998 (NEMA) and the Environmental Impact Assessment (EIA) Regulations of 2014, as amended, an Applicant is required to obtain Environmental Authorisation should any of the listed activities triggers the need for a Basic Assessment (BA) or Scoping & EIA process, where applicable, including a site-specific Environmental Management Plan and a Biomonitoring and Control Programme. This requirement applies to both marine and freshwater aquaculture activities.

b) **Coastal Waters Discharge Authorisation** – In terms of section 69 of the National Environmental Management: Integrated Coastal Management Act, Act No. 24 of 2008 (NEM: ICMA), an Applicant is required to apply for a Coastal Waters Discharge Permit to discharge effluent from a source located on land into coastal (and estuarine) waters as a result of aquaculture activities. However, the Minister may issue the Applicant with a General Discharge Authorisation only in instances where the predetermined gazetted effluent standards of the General Discharge Authorisation are met. The draft General Discharge Authorisation (GN 1089) in terms of section 69(2) of the NEM: ICMA was gazetted on 23 August 2019 for public comment. This requirement would apply to marine and freshwater (using desalinated water) aquaculture activities.

c) **Water Use Authorisation** – In terms of section 21 of the National Water Act, Act No. 36 of 1998 (NWA), the Applicant is required to apply for water use authorisation should any of the listed activities triggers the need for a Water Use License as a result of aquaculture activities. However, the Minister may issue the Applicant with a General Water Use Authorisation only in instances where the predetermined gazetted water use thresholds of the relevant General Water Use Authorisation (i.e. GN 665 of 06 September 2013, GN 509 of 26 August 2016 and GN 538 of 02 September 2016) are met. This requirement mainly applies to freshwater aquaculture activities. In addition, the SEA strongly recommends that the options provided for in section 22(3) and section 22(4) of the NWA, 1998 rather be considered: "(3) A responsible issuing authority may dispense with the requirement for a license for water use if it is satisfied that the purpose of this Act will be met by the grant of a license, permit or other authorisation under any law; and (4) In the interests of co-operative governance, a responsible issuing authority may promote arrangements with other organs of state to combine their respective license requirements into a single license requirement." More specifically, it is thus recommended that the now Department of Human Settlements, Water and Sanitation, in terms of section 22(4) of the NWA, agrees to not follow a separate regulatory process, but become part of the proposed integrated application and authorisation process for marine and freshwater aquaculture development administered under DEFF and in terms of the Aquaculture Development Act and its regulations, when gazetted.

The SEA further recommends that each aquaculture License Holder be required to inform the licensing authority of any changes to licensing information such as company, contact or culture species details on an annual basis as prescribed by the licensing authority. However, should any project-specific information relating to the License Holder's Environmental Authorisation, Coastal Waters Discharge Authorisation or Water Use Authorisation change and/or require amendment, there are existing legislated amendment processes provided under NEMA and the EIA Regulations (with set timeframes), the NEM:ICMA and the NWA for processing such amendments. The License Holder will thus be required to follow the applicable amendment process where relevant, after which the license can be updated accordingly by the licensing authority.

An aquaculture license for commercial and small-scale operations would be valid for 30 years, whereas a pilot scale aquaculture license would be valid for up to 10 years and a license to operate an aquaculture research facility would be valid for a period of up to five years. Renewal of these aquaculture licenses would be subject to a compliance audit. License Holders, in accordance with their permitting conditions, would also be required to provide the licensing authority with regular reporting on aspects such as water quality data, production values, grow-out and biomass statistics, transport requirements, import and export volumes, and annual income generated. This information will enable the national DEFF to annually report to the Food and Agricultural Organization (FAO) of the United Nations about the South African aquaculture industry. Note that an aquaculture License Holder would only be able to exercise their license to engage in aquaculture related activities if authorised by the relevant aquaculture permits (see Section 4.3.2).

Persons who would not require an aquaculture license or permit in terms of the Act but must register their activities in the prescribed manner with the relevant licensing authority include the following prospective entities who want to:

- keep aquatic organisms in an exhibition facility only for display purposes;
- keep, buy or sell aquatic organisms for non-consumptive or display purposes;
- undertake subsistence aquaculture; and
- undertake recreational aquaculture activities involving indigenous aquatic organisms.

It is recommended that these entities also be required to inform the licensing authority of any changes to registration information such as company, contact or culture species details on an annual basis.

Additionally, the SEA recommends that the DEFF affords all existing and currently operational aquaculture facilities a **grace period** of 24 months to **register** their facilities with the applicable Fisheries Branch within the national DEFF to assist in updating the national inventory for aquaculture facilities in South Africa. This recommendation applies specifically to freshwater aquaculture operations – that are presently regulated under different provincial legislation – which had not needed to apply for a marine right such as the current requirements are for mariculture facilities under the MLRA, 1998. Note that whether this would only constitute a registration process, as all existing and currently operational aquaculture facilities could potentially be considered exempted from the requirement to apply for an aquaculture license in terms of the Act, is yet to be determined. Also, it is unclear at this stage whether existing marine Right Holders would be required to apply for an aquaculture license in terms of the Act once their current right has expired. However, each existing registered aquaculture facility including current marine Right Holders would still be required to apply for applicable permits that are issued by the relevant licensing authority to engage in marine or freshwater aquaculture activities in terms of the Act (see Section 4.3.2).

4.3.2 Step 2 - Application for permits to exercise an aquaculture license

In terms of the Act, each prospective License Holder including existing aquaculture facilities registered with national DEFF would be required to apply for applicable <u>permits</u> that are issued by the relevant licensing authority to engage in marine or freshwater aquaculture activities. The licensing authority in this respect would be the Minister or a person to whom that authority has been delegated by the Minister, preferably at a <u>national level</u>.

From the SEA, it is strongly recommended that the array of aquaculture related permit application forms, currently required on national (marine) and provincial (freshwater) level, be consolidated into a national level **standardised integrated aquaculture application form.** This form should allow the Applicant to select the activities relevant to his/her specific type of aquaculture operations, having the Applicant then complete only the respective sections of the application form according to each of the activities selected for which authorisation is sought in the prescribed manner. Each application would be considered by the Intergovernmental Authorisations Committee and the relevant permits issued to the Applicant by the relevant licensing authority.

Based on a review of existing permits, typified of marine and freshwater aquaculture activities that are being issued in terms of the MLRA, 1998 and various Provincial Acts and Ordinances (refer to Figure 4-3), the SEA recommends that permits would be granted in terms of the Act for the following activities, where applicable:

<u>Marine</u>

a) Aquaculture License Holders / Existing Marine Right Holders
- Integrated permit to collect and possess broodstock, breed, grow-out, process, trading and transport.
- Integrated permit to possess broodstock and operate a hatchery.
- Permit to dive in banned areas for maintenance operations.
- Permit to operate a scientific research and development facility.
- Permit to import any marine aquaculture products live or processed, including the import of marine ornamentals (i.e. cultured or wild caught).
- Permit to export marine aquaculture products from an aquaculture License Holder or existing marine Right Holder, or other entity e.g. fish processing establishment.

b) Retailers / Restaurants
- Integrated permit to possess and sell / trade undersized cultured indigenous species (e.g. Abalone and kob) purchased from an aquaculture License Holder.
- Permit to import any marine aquaculture products live or processed.

c) Transport Companies
- Permit to transport marine aquaculture products in agreement with an aquaculture License Holder.

d) Fish Processing Establishments (FPE)
- Permit to process marine aquaculture products.

<u>Freshwater</u>

a) Aquaculture License Holders / Existing Registered Aquaculture Facilities
- Integrated permit to establish and operate an aquaculture facility, including the placing or releasing of live fish into inland waters, stocking, breeding, growing, harvesting, processing, trading and transport.
- Integrated permit to collect and possess broodstock, and operate a hatchery.
- Permit to import any freshwater aquaculture products live or processed, including the import of freshwater ornamentals (i.e. cultured or wild caught).
- Permit to export freshwater aquaculture products from an aquaculture License Holder or existing registered aquaculture facility, or other entity e.g. fish processing establishment.
- Permit to sample fish for aquaculture research and to operate a scientific research and development facility.

b) Fish Processing Establishments (FPE)
- Permit to process freshwater aquaculture products.

The SEA further recommends that the validity period of these permits be <u>increased</u> from the current 12 months to **24 months** in terms of the Act, with subsequent renewal of a permit subject to a compliance audit.

In addition to the aforementioned permits, an aquaculture License Holder including existing marine Right Holders and registered freshwater aquaculture facilities would be required to apply for permits in terms of the National Environmental Management: Biodiversity Act, Act No. 10 of 2004 (NEM:BA) as follow:

a) Alien and/or Invasive Species

- In terms of NEM:BA, 2004 and the Alien and Invasive Species (A&IS) Regulations of 2014, GN R598 and the A&IS Lists of 2016, GN R864, an Applicant is required to apply for a permit to engage in any restricted activity involving an alien or declared invasive species. Also, in terms of section 14 of these A&IS Regulations, a biodiversity risk and benefit assessment is required and must accompany an application for an A&IS permit. The SEA further recommends that the generic biodiversity risk and benefit assessments reviewed and updated during this SEA for selected alien and/or invasive species be finalised and gazetted (refer to Appendix C-1 to this SEA Report), with only a project-level, site-specific risk component required as a permitting condition.

b) Threatened or Protected Species

- In terms of NEM:BA, 2004 and the Threatened or Protected Species (TOPS) Regulations of 2015, GN R255 and the TOPS Lists of 2015, GN R256, an Applicant is required to apply for a permit to engage in any restricted activity involving a threatened or protected species.

Finally, from this SEA it is recommended that implementation of the integrated aquaculture application and authorisation system proposed in terms of the Aquaculture Development Act and its regulations, will stipulate in detail the specific mandates, the prescribed regulatory process, and the roles and responsibilities that each of the various governing authorities will assume in this system. For example, detail such as the responsibility for monitoring of effluent and the regularity of disease monitoring as well as the required reporting process and access to research laboratories and veterinary services should be stipulated. Providing this level of detail would be of great benefit to all aquaculture stakeholders and support a common understanding of delegated roles and responsibilities in the sector.

Section 4.4 Proposed Aquaculture Development Zones

It is important to note that the recommendation for an integrated aquaculture application and authorisation process as described in Section 4.3 above, would apply to marine and freshwater aquaculture activities both inside and outside of the proposed aquaculture development zones (ADZs) identified through this SEA. The gazetting process of ADZs could be facilitated in terms of the Aquaculture Development Act that would provide for the establishment of aquaculture development zones, or possibly in terms of section 24(2)(b) and (c) of the National Environmental Management Act, 1998 (NEMA) which provide for the identification of geographical areas of strategic importance.

4.4.1 The requirement for Environmental Authorisation

In addition to the recommendation for an integrated aquaculture application and authorisation process, the SEA proposes a possible further streamlining of the regulatory process, that could potentially be facilitated through the formation of regulations in terms of section 24(5)(a) and (b) of NEMA, 1998 relating specifically to the need for an Environmental Authorisation required in terms of section 24 of the NEMA, 1998 and the EIA Regulations of 2014, as amended, for marine and freshwater aquaculture activities to be developed inside a geographical area of strategic importance such as a declared ADZ where environmental sensitivities have been pre-assessed through this SEA.

Thus, from the SEA the proposed implication would be that should a prospective marine or freshwater aquaculture development trigger any activity in terms of Listing Notice (LN) 1 (GN R327), LN 2 (GN R 325) or LN 3 (GN R324) of the EIA Regulations of 2014, as amended, the Applicant would only be required to undertake a **Basic Assessment** (BA) process that includes the provision of supporting documentation relating to site plans, technical drawings of facility layout, title deed and/or valid lease agreement, as well as the benefit of a reduced decision-making timeframe.

Further to this, section 24(3) of the NEMA, 1998 makes provision for the compilation of information and maps that specify the attributes of the environment in particular identified geographical areas, including the sensitivity, extent, interrelationship and significance of such attributes which must be taken into account by every relevant competent authority. Thus, the SEA recommends that should a proposed marine or freshwater aquaculture development be sited in an identified and confirmed area of **low** sensitivity within an ADZ as identified through the SEA, the BA process is to include a site-specific verification by relevant specialists each producing only a compliance statement confirming low sensitivity of the proposed development site, opposed to conducting a specialist study and applying the impact assessment conventions. This recommendation could potentially also apply to areas of confirmed medium sensitivity should the relevant specialists be able to confirm that the impact after mitigation remains low. Also, in terms of section 24(4) of NEMA, 1998 public participation would be a minimum requirement in these areas as part of the BA process.

Should a proposed marine or freshwater aquaculture development be sited in areas of confirmed **medium, high** and **very high** sensitivity identified through this SEA, and where the impact after mitigation remains medium, high or very high, the BA process is to include a site-specific verification by the relevant specialists to confirm the identified sensitivity and then to undertake a specialist study using the impact assessment conventions. Also, in terms of section 24(4) of the NEMA, 1998 public participation would be a minimum requirement in these areas as part of the BA process.

Specialist impact assessments are required in terms of section 24(1) of NEMA, 1998 as prescribed according to Appendix 6 of the EIA Regulations of 2014, as amended, and noting that for some specialist studies an Assessment Protocol may have been gazetted under NEMA that replaces the requirements of Appendix 6 of the EIA Regulations. The SEA envisages that the following specialist impact assessments, as a minimum requirement, would be likely to be conducted as part of the BA process and broadly include, where and when applicable:

Marine (i.e. offshore, nearshore and land-based)

- Maritime Archaeology and Cultural Heritage Impact;
- Marine Biodiversity and Ecology Impact (physical and biological);
- Socio-Economic Impact;
- Terrestrial Biodiversity and Ecology Impact (physical and biological); and
- Visual / Landscape Impact.

Freshwater (i.e. instream and land-based)

- Aquatic Biodiversity and Ecology Impact (physical and biological);
- Archaeology, Palaeontology and Cultural Heritage Impact;
- Hydrology (including groundwater);
- Socio-Economic Impact;
- Terrestrial Biodiversity and Ecology Impact (physical and biological); and
- Visual / Landscape Impact.

4.4.2 The development or adoption of standards for marine and freshwater aquaculture

Further to the recommendations put forward from the SEA in the aforementioned Section 4.4.1, the SEA also recommends that aquaculture related activities, that may be excluded from the requirement to obtain an environmental authorisation but must comply with any standards that will be developed and gazetted, be identified in terms of section 24(2)(d) of NEMA, 1998. The development or adoption of such standards for a listed activity or specified activity (e.g. a specific aquaculture species and/or production system) contemplated in section 24(2)(a) and (b) of the NEMA, 1998, as well as for specific geographical areas (e.g. identified ADZs) or any combination of listed activities, specified activities, aquaculture sub-sectors or geographical areas could be facilitated in terms of section 24(10) of the NEMA, 1998. It is important to note that one of the objectives of the current Aquaculture Development Bill is to provide for the development of standards for marine and freshwater aquaculture. Therefore, the SEA recommends that consultation between the relevant competent authorities be undertaken to consider the implications for legislative compliance requirements under the different Acts as it is presently unclear how the development of such standards will be facilitated through the Aquaculture Development Act, when gazetted. Standards are typically applicable when the type of activity has been authorized and implemented several times and the associated impacts and management actions are reasonably well understood.

On 06 May 2016, a draft National Standard for land-based abalone aquaculture (GN 503) was gazetted for public comment in terms of section 24(10)(a) as read with section 24(10)(d) of the NEMA, 1998. The SEA recommends that this Standard be finalised and gazetted for implementation, especially within the proposed ADZs identified through the SEA where land-based abalone aquaculture are promoted.

Similarly, on 02 March 2018 the Gauteng Provincial Environmental Management Framework (EMF) Standard and exclusion of associated activities from the requirement to obtain an Environmental Authorisation in terms of section 24(2)(d) and section 24(10)(a) as read with section 24(10)(d) of the NEMA, 1998 for the implementation of the Gauteng Provincial EMF was gazetted in GN 164. The provisions of the Standard are applicable to activities excluded from acquiring an Environmental Authorisation, when undertaken within Zone 1 or Zone 5 of the Gauteng Province, as contemplated in Appendix 1 to the Standard. According to Appendix 1 of the Standard, Applicants who trigger Activity 6 for Listing Notice 1 of the EIA Regulations of 2014, as amended i.e. the development and related operation of facilities, infrastructure or structures for aquaculture of — (i) finfish, crustaceans, reptiles or amphibians, where such facility, infrastructure or structures will have a production output exceeding 20 000 kg per annum (wet weight); (ii) molluscs and echinoderms, where such facility, infrastructure or structures will have a production output exceeding 30 000 kg per annum (wet weight); or (iii) aquatic plants, where such facility, infrastructure or structures will have a production output exceeding 60 000 kg per annum (wet weight); but excluding where the development of such facilities, infrastructure or structures is for purposes of sea-based cage culture, are excluded from the requirement to obtain Environmental Authorisation within Zone 1 and Zone 5 of the Gauteng Province.

Section 4.5 Further Recommendations from the SEA

In addition to the aforementioned recommendations from the SEA contained in Section 4.3 and Section 4.4, the SEA further recommends the following:

a) South Africa has a long history of stocking inland waters with fish species from government and private hatcheries in order to promote recreational and consumptive fisheries, aquaculture and the

conservation of threatened aquatic species. Government hatcheries ceased stocking public waters with alien fish species in the 1980s due to a policy change to focus on the conservation of indigenous fish biodiversity. The trout recreational fishery is largely based on the stocking of cultured fish from private hatcheries and generates substantial value through its linkage to the tourism value chain in rural areas. On 22 June 2018, the Draft National Inland Fisheries Policy Framework for South Africa was published for public comment. The stated purpose of the draft policy framework is to guide the sustainable utilisation and development of inland fisheries in South Africa and to align inland fishery governance with Constitutional requirements for a sustainable development approach to natural resource utilisation for the benefit of all citizens. From the SEA, it is thus recommended that existing **state-owned hatcheries** could be revitalized or further developed to provide the necessary support to develop a viable culture-based fishery, where applicable, to promote aquaculture.

b) The SEA was undertaken as a **strategic** level assessment that aimed at a high level, to identify focus areas where aquaculture development can be promoted. The SEA has clearly highlighted the **limitations** experienced in terms of sourcing the complete, correct and most recent biodiversity and environmental spatial data, as well as the strategic level of assessment that was undertaken, to map environmental sensitivity of the identified focus areas i.e. proposed ADZs. Important to note that the SEA was a desktop-based study that was informed by specialist and stakeholder input. Therefore, it is strongly recommended that more detailed available **provincial level and/or site-specific, preferably ground-truthed information** is sourced and further assessment of the focus areas is required, in addition to applying layers such as the South African modified land cover, detailed provincial fish species data and the latest most updated biodiversity data published after 2018 (e.g. from the National Biodiversity Assessment, published in October 2019), to verify and adjust environmental sensitivity in each of the proposed ADZs prior to being gazetted. This will also aid in refining the delineation of the proposed ADZ boundaries as to ensure that highly sensitive environments such as Ramsar wetlands and vulnerable estuaries and coastlines (e.g. from the National Coastal Assessment) are potentially declared no-go zones for aquaculture development within each province.

c) To facilitate a more detailed assessment of environmental sensitivity in each proposed ADZ, the SEA strongly recommends that **further stakeholder engagement** between the relevant national and provincial authorities, specialists and key role players in the marine and freshwater aquaculture industry be undertaken prior to having the proposed ADZs gazetted. Following from a refined and verified sensitivity analysis of each proposed ADZ, proper guidance could be given as to which species and production systems are appropriate in each sensitivity area based on the outcome of the risk assessment undertaken in the SEA. The SEA thus recommends that the risk areas identified within each ADZ be checked against more detailed available provincial or project-level information.

d) The SEA provided a detailed risk assessment that is based on a combination of the sensitivity of the receiving environment, the freshwater or marine species being farmed and the production system. This is a complex analysis based on a desktop level assessment and available spatial information at the time. For example, the SEA provides an interactive on-line tool that allows interested parties to **interrogate sensitivity data** for a particular area to see which particular environmental variables or rated criteria are driving the assessed ratings of low, medium, high and very high sensitivity, respectively. This information could inform actions around how to **reduce assessed risk** in any of the strategic aquaculture focus areas depending on the specific species and/or production system to be used. The interactive tool, which has only been developed for the nine freshwater ADZs, can be accessed via the following link: https://www.smsgis.co.za/sea-for-aquaculture-in-rsa/. It is therefore recommended that further stakeholder consultation be conducted to refine these multiple outcomes from the risk assessment into an interpretive, user-friendly decision-making framework that would take into account the potential for reduced risk and guide authorities in approving proposed projects. This framework, building on the best practice management guidelines for selected species and production systems provided in the SEA, could then enable a uniform approach across the sector to developing standardised, species specific and site-specific environmental management plans for marine and freshwater aquaculture operations within habitats of different sensitivity.

e) Finally, based on environmental and technical suitability, the SEA has initially selected with stakeholder input certain key aquaculture species and production systems for pre-assessment in each of the proposed ADZs. However, during the SEA comments were received to include **additional species** for promotion such as Nile and Mozambique tilapia, as well as African sharptooth catfish for e.g. the proposed Western Cape freshwater ADZ as these species could potentially be farmed in heated recirculating aquaculture systems (RAS), even in some sensitive habitats, as RAS generally pose a fairly low risk to the receiving environment. The SEA recommends that proposed focus areas are revisited with the aquaculture industry and relevant regulators to ensure that each proposed ADZ does include species that could be sustainably farmed in such zones.