Government of Western Australia
Department of Fisheries

MID WEST AQUACULTURE DEVELOPMENT ZONE

MANAGEMENT POLICY

Draft as at 3 May 2016

CONTENTS

1 FOREWORD

1.1 Introduction

A strategic planning approach to aquaculture development is regarded as best regulatory practice and a key method of providing for industry growth while achieving ecologically sustainable development outcomes.[1] Some Australian states have established significant marine aquaculture industries using a regional zone methodology in their strategic planning.

The Western Australian Government is committed to the development of a sustainable marine aquaculture industry and, to further this commitment, the Minister for Fisheries (Minister) announced a funding package to enable the establishment of two such zones: one in the Kimberley and one in the Mid West region of the State.

The Department of Fisheries (Department) is managing the creation of these two zones on behalf of the Minister.

The Mid West Aquaculture Development Zone (zone) is located within the southern part of the Abrolhos Islands Fish Habitat Protection Area (FHPA), between the Pelsaert and Easter groups of the Abrolhos archipelago, approximately 65 km west of Geraldton.[2] This is the second aquaculture zone to be established in Western Australia, the Kimberley Aquaculture Development Zone being declared by the Minister on 22 August 2014. The Mid West zone is located in a part of the Western Australian coast where there is a confluence of both temperate and tropical sea life, forming one of the State's unique marine areas. This presents a rare opportunity for the development of any of a range of marine finfish aquaculture species that occur naturally within the West Coast Region of the State.[3]

The zone has been created through a process that principally involves environmental assessment of the zone as a **strategic proposal** under Part IV of the *Environmental Protection Act 1986* (EP Act).

Approval of this strategic proposal will create opportunities for existing and future aquaculture operators to refer project proposals to the Environmental Protection Authority (EPA) as **derived proposals**. The desired outcome is a more streamlined zone assessment and regulation process. This will be achieved through the early consideration of the identified potential environmental impacts and additional cumulative impacts associated with the project proposals, and of the relevant management measures designed to control these.

The establishment of commercial marine finfish aquaculture projects within the zone is not expected to cause a significant environmental impact. This assessment of the likely environmental impacts is due not only to the zone's physical characteristics, in particular the high rates of flushing or water exchange in the Zeewijk Channel that is sufficient to dilute

[1] *Best practice framework of regulatory arrangements for aquaculture in Australia* [Primary Industries Ministerial Council – 2005].

[2] Fish Habitat Protection Areas are created by the Minister under the provisions of Part 11, Division 1 of the *Fish Resources Management Act 1994*.

[3] *West Coast Region* is defined in Regulation 3 *Terms used* of the Fish Resources Management Regulations 1995 as:

(a) all land in the State; and

(b) all WA waters,

that are south of 27^0 00' south latitude, excluding the South Coast Region;

nutrients before they are assimilated by the ecosystem, but also to the adaptive management controls and environmental monitoring framework the Department (in conjunction with the EPA) has developed for the zone, and the individual proposals within it, through the strategic assessment process.

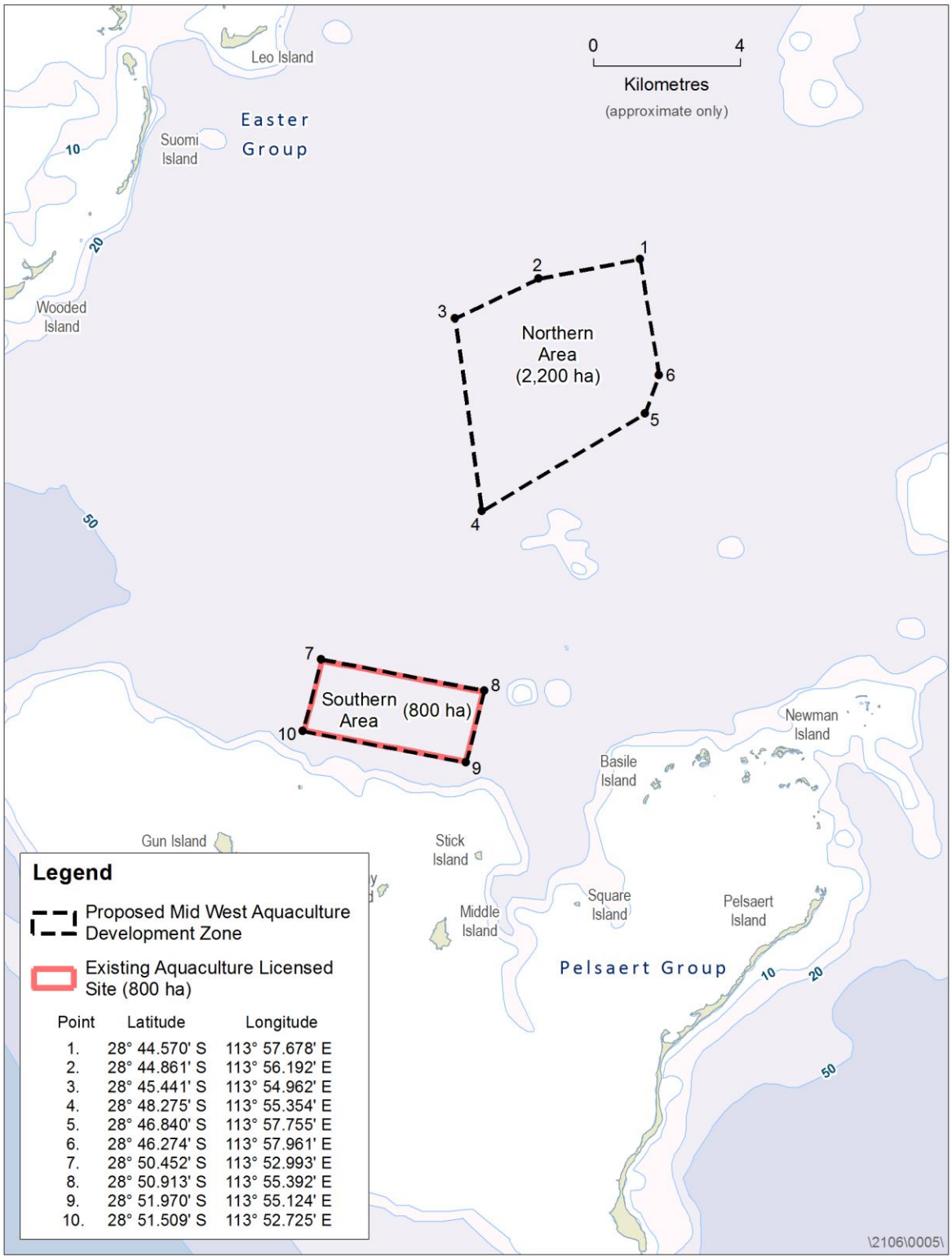
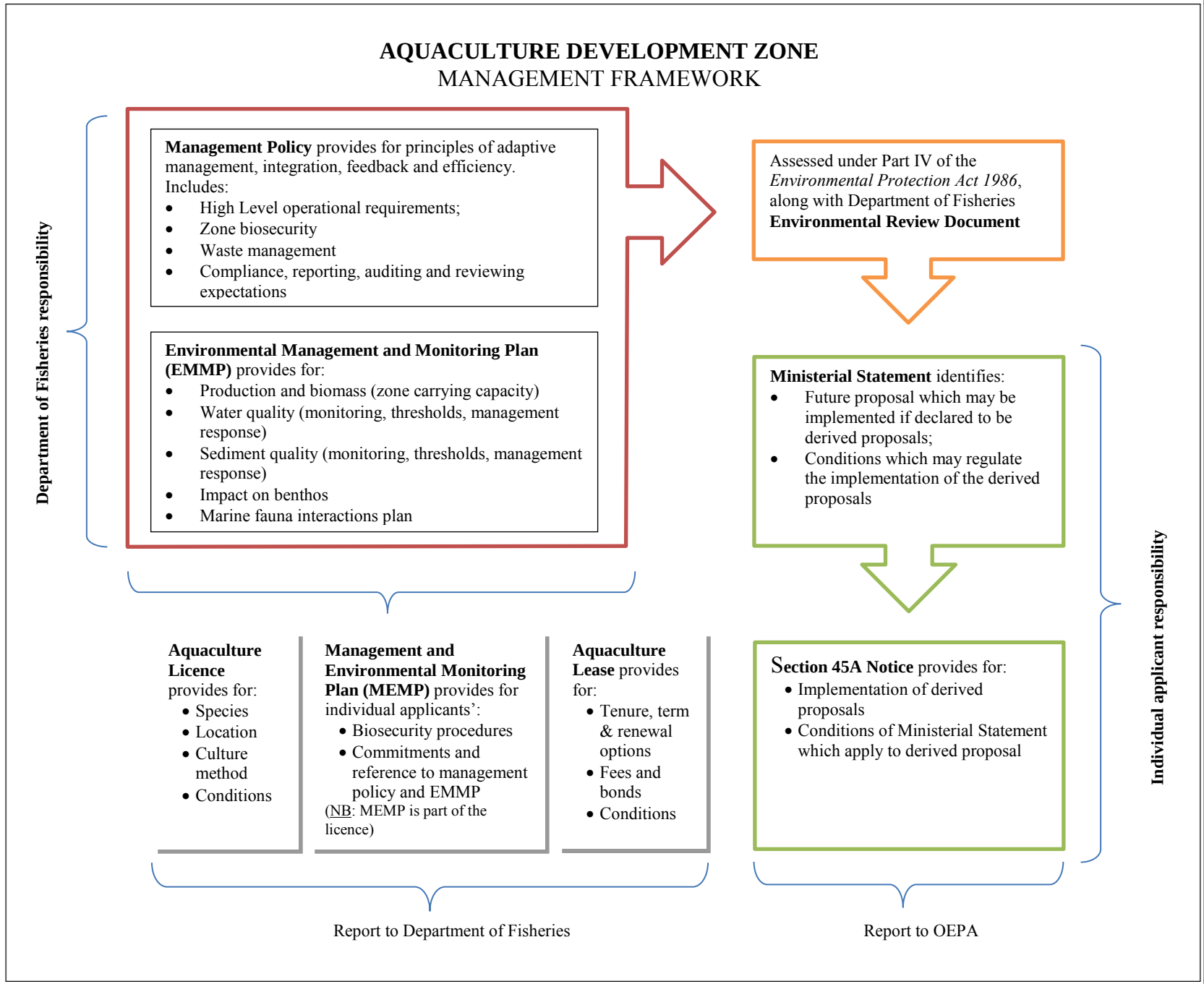


Figure 1: Location of the Mid West Aquaculture Development Zone.

Figure 2


AQUACULTURE DEVELOPMENT ZONE
MANAGEMENT FRAMEWORK
Department of Fisheries responsibility
Management Policy provides for principles of adaptive management, integration, feedback and efficiency. Includes:
High Level operational requirements;
Zone biosecurity
Waste management
Compliance, reporting, auditing and reviewing expectations
Environmental Management and Monitoring Plan (EMMP) provides for:
Production and biomass (zone carrying capacity)
Water quality (monitoring, thresholds, management response)
Sediment quality (monitoring, thresholds, management response)
Impact on benthos
Marine fauna interactions plan
Assessed under Part IV of the Environmental Protection Act 1986, along with Department of Fisheries Environmental Review Document
Ministerial Statement identifies:
Future proposal which may be implemented if declared to be derived proposals;
Conditions which may regulate the implementation of the derived proposals
Section 45A Notice provides for:
Implementation of derived proposals
Conditions of Ministerial Statement which apply to derived proposal
Individual applicant responsibility
Aquaculture Licence provides for:
Species
Location
Culture method
Conditions
Management and Environmental Monitoring Plan (MEMP) provides for individual applicants':
Biosecurity procedures
Commitments and reference to management policy and EMMP
(NB: MEMP is part of the licence)
Aquaculture Lease provides for:
Tenure, term & renewal options
Fees and bonds
Conditions
Report to Department of Fisheries
Report to OEPA
INDUSTRY CODES (Non-Regulatory)
ACWA Code of Practice provides for:
Operations and risk management
Minimising environmental impact
Water quality and waste management
Third Party Certification

2 POLICY STATEMENT AND PURPOSE

2.1 The Management Framework

The Department will manage the zone within an integrated management framework. **Figure 2** provides details of this overarching management framework, its main elements and their inter-relationships.

The management framework comprises the zone management policy (management policy) and several associated instruments and documents.

In relation to the zone, the purpose of the management framework is to:

- establish an overarching, integrated structure for managing the aquaculture activities;
- provide clear, efficient and effective processes for monitoring, evaluating and reporting;
- continuously improve the approach being used to manage the zone;
- guide the development of marine finfish aquaculture; and
- ensure adaptive management occurs as part of a process of continuous improvement.

2.2 The Management Policy

The management policy fits within, and comprises the core of, the overarching management framework for the zone.

Essentially, the purpose of the management policy is to guide the ecologically-sustainable development of marine finfish aquaculture within the zone. It does this through streamlined assessment and planning processes and a feedback mechanism that continuously improves the efficiency of monitoring and management activities.

The management policy deals with strategic issues likely to remain unchanged in the medium term. Other instruments and documents associated with the management policy are more suitable for providing for adaptive management in the shorter term. This adaptive management approach provides a structured, iterative process for decision making where uncertainties may exist. It also provides the opportunity to take advantage of emerging or new knowledge as it becomes available. The aim is to reduce the level of uncertainty over time through a continuous cycle of system monitoring, reporting, evaluating and implementing any necessary enhancements. In this way, decision making simultaneously meets both current resource management objectives and actively accrues information needed to improve future management.

The management policy is designed to be generic, non-prescriptive and provide broad principles for management of the zone. It is integrated with, and supported by, a separate set of companion documents and instruments, which provide greater detail on the legislative, regulatory, monitoring and reporting requirements. These associated documents and instruments are the:

- **Ministerial Statement** issued under Part IV of the EP Act approving the establishment of the zone as a strategic proposal under that Act;[4]
- **environmental monitoring and management plan** (EMMP) ensuring environmental quality and ecological integrity are maintained within acceptable limits;[5]
- **aquaculture licence** authorising the aquaculture activity;
- **aquaculture lease** providing suitable tenure;
- **management and environmental monitoring plan** (MEMP) giving effect (under the FRMA) to the requirements of the management policy and the EMMP;[6]
- **notice(s)** (issued under section 45A of the EP Act approving the implementation of derived proposals); and
- *Environmental* ***Code of Practice*** *for the Sustainable Management of Western Australia's Marine Finfish Aquaculture Industry* [Aquaculture Council of Western Australia (ACWA)] describing aquaculture "best practice".

Collectively, these documents and instruments:

- regulate the aquaculture proposals within the zone; and
- guide specific approaches to management, monitoring and evaluation that are within the broader bounds of the management policy.

Of necessity, there is some overlap between these various documents. However, they are designed to be consistent with each other and to provide capacity for adaptive management.

The principles contained within the management policy, together with a comprehensive environmental management and monitoring program, have been developed to ensure the industry is ecologically sustainable and that its potential cumulative environmental impacts are understood and well managed.[7]

2.3 Code of Practice

The Aquaculture Council of Western Australia has developed an updated *Environmental Code of Practice for the Sustainable Management of Western Australia's Marine Finfish Aquaculture Industry* (ACWA CoP).

[4] Refer to the EPA website at http://epa.wa.gov.au/peia/approvalstatements/Pages/default.aspx?cat=Ministerial%20Approval%20Statements&url=peia/approvalstatements

[5] Refer to the zone Environmental Monitoring and Management Plan (EMMP) at http://www.fish.wa.gov.au/Fishing-and-Aquaculture/Aquaculture/Aquaculture%20Zones/Pages/Mid-West-Aquaculture-Zone.aspx

[6] Unless the applicant is exempt under subsection 92A(4) of the FRMA, an application for an aquaculture licence must be accompanied by a MEMP identifying how the applicant will manage any risks to the environment and public safety in relation to the proposed activity for which the licence is sought.

[7] One of the principles adopted in the management policy is adaptive management. This approach recognises that adaption occurs through the management processes and is given effect through the feedback loop of monitoring and reporting. The key elements of the adaptive management process used in the zone are:

- production scale and assimilative capacity of the environment;
- collection and use of information generated;
- information and risk management;
- monitoring and evaluation; and
- community engagement.

An industry initiative, the ACWA CoP builds on the June 2009 Fisheries Management Paper No. 233: *Finfish Aquaculture in Western Australia: Final ESD Management Report for Marine Finfish Aquaculture*, published by the Department.[8]

The ACWA CoP focuses on best practice through a documented environmental management system. It recommends a continual improvement requirement by the business through periodic reviews and evaluations to identify and implement opportunities for improvement.

Among its other objectives, the ACWA CoP provides a mechanism for environmental self-regulation of the marine finfish aquaculture sector as a valuable alternative to detailed regulation of every aspect of the industry's activity. It could also lead to the development of a system of environmental accreditation.

While the ACWA CoP is associated with the management policy, it is not a requirement under legislation. Compliance with it is voluntary, not mandatory. Therefore, it is considered to be outside (but supportive of) the legislative management framework.

3 LEGISLATIVE FRAMEWORK

Section 101A (2A) of the *Fish Resources Management Act 1994* (FRMA) provides the power for the Minister to declare an area of Western Australian waters to be an aquaculture development zone.

Prior to the Minister making the declaration for the Mid West zone, the Department, on the Minister's behalf, referred the proposal to the EPA as a strategic proposal under Part IV of the EP Act. The EPA assessed the proposal and recommended the Minister for the Environment accept it as a strategic proposal. Further detail in relation to the environmental assessment and authorisations under the EP Act is provided below under item 4 "*Environmental Assessment and Authorisations*".

Section 92 of the FRMA provides the power for the Chief Executive Officer (CEO) of the Department to grant an aquaculture licence, which authorises the licence holder to conduct aquaculture in Western Australia.

As a result of amendments to the FRMA, there is a requirement that applicants for aquaculture licences demonstrate they have, or will have, appropriate tenure over the area proposed for the aquaculture activity. In most cases, tenure over State waters may be granted through an aquaculture lease, issued under section 97 of the FRMA. In the zone, both an aquaculture lease and an aquaculture licence will be required for establishing and undertaking aquaculture.

An aquaculture licence authorises the specific aquaculture **activity** undertaken within a defined site, whereas a lease provides **tenure** for the specified area of land or water. There is a nexus between the aquaculture licence and the aquaculture lease under the FRMA. For example, under:

[8] The Department supports the development of Codes of Practice for industry sectors and, where possible, will support these codes through licensing conditions or regulations.

- s.99(1), an aquaculture lease does not authorise the use of the leased area without an aquaculture licence;
- s.99(2), if an aquaculture licence authorising the activity being carried out in the leased area is cancelled or not renewed, the lease is terminated; and
- s.99(3), if an aquaculture lease is terminated or expires, an aquaculture licence authorising the activity being carried out in the leased area is cancelled.

The main purpose of this interrelationship is to prevent speculation or investment at a particular site for a purpose other than aquaculture.

The legislative framework also allows for adaptive management to achieve the best management outcomes. Licence and lease conditions may be imposed. For example, the CEO has the power to add a condition to an existing aquaculture licence to set initial carrying capacity or stocking density limits. Conditions may also extend to matters such as applying performance criteria to address any instances of unjustified non-use of aquaculture leases.

The FRMA also establishes an environmental management and monitoring framework for all sectors of aquaculture. Under the provisions of section 92A of the FRMA, unless exempt under section 92A(4), applications for an aquaculture licence must be accompanied by a MEMP. The MEMP is the principal instrument by which the Department gives effect to this environmental management and monitoring framework. It relates to and is attached to the aquaculture licence.

Aquaculture activities inside an aquaculture zone require a Category 1 MEMP.[9] As these activities are subject to the provisions of the strategic proposal approval for the zone (see below), a Category 1 MEMP must incorporate (and refer to) the requirements specified in the following documents:

- Ministerial Statement/notice (issued by the Minister for Environment)
- Department of Fisheries EMMP for the zone
- Department of Fisheries management policy for the zone

Contravention of a MEMP or condition of an aquaculture licence or lease is an offence under the FRMA and penalties may apply. Further, the FRMA provides the power for the CEO to cancel, suspend or not renew an aquaculture licence.

4 ENVIRONMENTAL ASSESSMENT AND AUTHORISATIONS

The EPA assessed the zone as a **strategic proposal** under Part IV of the EP Act. Three documents are considered for the purposes of finalising this assessment, the zone:

- **Public Environmental Review (PER) document**;
- **EMMP**; and
- **Management Policy** (i.e. this policy).

The EPA forwards its assessment of the proposal in a report to the Minister for Environment.

[9] The methodology for determining the appropriate category of MEMP is outlined in the Department's MEMP Policy document. This may be accessed at http://www.fish.wa.gov.au/Fishing-and-Aquaculture/Aquaculture/Aquaculture-Management/Pages/default.aspx.

In turn, that Minister confers with other relevant decision-making authorities before issuing a statement (Ministerial Statement) in relation to the implementation of future proposals (i.e. aquaculture proposals) identified in the zone.
This statement includes conditions which apply to the implementation of those future proposals if referred to, and declared by, the EPA to be a **derived proposal**.

The Ministerial Statement identifies the proposals which may be implemented in the zone; and the conditions that will apply to those proposals.

In addition to the licence and lease required under the FRMA, applicants wanting to implement aquaculture proposals in the zone will need to refer that proposal to the EPA; along with a request that the proposal be declared a derived proposal and an explanation as to why such a declaration should be made. Their request to the EPA must include a statement (and, if necessary, supporting documentation) demonstrating that the referred proposal includes the implementation of the EMMP.

Upon receipt of this referral and request, the EPA considers whether to declare the referred proposal a derived proposal having regard to the provisions in section 39B of the EP Act. Applicants should use EPA's *Environmental Protection Bulletin No. 17 "Strategic and derived proposals"* for guidance when referring an aquaculture proposal and request to the EPA.

If the EPA recommends to the Minister for Environment that a referred proposal be a derived proposal that Minister issues a **notice** (under section 45A of the EP Act) declaring the proposal is a derived proposal. The Minister may also specify which of the conditions of the strategic proposal (i.e. the Mid West Aquaculture Development Zone) will apply to implementing the declared derived proposal. It is an offence under the EP Act to fail to implement a proposal other than in accordance with the implementation conditions.

While unlikely, there may also be a requirement for assessment under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.* This could occur should aquaculture activities within the zone set off any of the environmental 'triggers' (e.g. unacceptable interactions with rare and endangered species) applicable to that legislation.

5 ENVIRONMENTAL MONITORING AND MANAGEMENT

Environmental impacts within the zone are principally managed through implementing the requirements of the EMMP for the zone; and supported by the requirements outlined in the zone management policy.

In addition to compliance with the conditions of any notice issued under the EP Act (see above), licence holders must comply with the environmental monitoring requirements specified in the EMMP.

It is the responsibility of each licence holder to manage their lease area within the environmental quality guidelines and standards outlined in the EMMP. For the avoidance of any doubt, the EMMP requirements are also reflected in the approved MEMP. Licence holders must ensure competency in environmental sampling, timely reporting of results and appropriate training of staff.

Should multiple licence holders be operating within the zone, it may be in their interest to co-operate and share in environmental monitoring and reporting activities to avoid duplication of effort and the associated cost. This could be achieved by monitoring the reference sites closest to the individual lease areas.

Licence holders should be familiar with the ACWA CoP, and operate in accordance with its recommendations.

6 ZONE SPECIFICATIONS

The Mid West zone comprises of two locations (northern and southern areas) that cover waters with a total area of approximately 3,000 hectares. Within this figure, the northern area covers approximately 2,200 hectares and the southern area covers approximately 800 hectares. The zone boundaries are defined in **Figure 1**.

Average water depth is approximately 40 metres, over mostly sandy bottom.

6.1 Zone Manager

On behalf of the Minister for Fisheries, the Department is the zone manager for the Mid West Aquaculture Development Zone. Among other responsibilities within the zone, the Department is responsible for:

- the grant of aquaculture licences and administration of leases within the zone (leases are granted by the Minister for Fisheries);[10]
- adaptive management through licence conditions or the MEMP, as appropriate;
- ensuring lease/licence holders comply with the EMMP for the zone;
- ensuring compliance with this management policy; and
- ensuring the reporting requirements specified in Ministerial Statement and any subsequent s. 45A notices (under the EP Act) are met.

The Department works in conjunction with the Office of the Environmental Protection Authority to ensure compliance with authorisations, such as the strategic and derived proposal approvals, provided under the EP Act.

6.2 Site Separation

Within the zone, the minimum spatial separation distance between leases owned by different companies or other legal entities is one kilometre. This requirement is principally aimed at reducing any potential biosecurity risks for operators.

While necessary, this minimum spatial separation distance can impact on the area within the zone that is available for lease. The more proponents for aquaculture sites inside the zone, the greater the percentage area of the zone that could potentially be taken up by lease separation "buffers" and therefore unavailable for lease and subsequent aquaculture production.

[10] The zone Site Allocation Policy will assist in determining the number, size and location of leases that may be established within the zone (refer the Department's website at www.fish.wa.gov.au).

As the zone area is a finite resource (i.e. 3,000 hectares maximum), this factor will need to be considered when determining the total number of proponents offered an aquaculture lease within the zone.

Licence holders granted leases are able to locate aquaculture gear, including sea cages, anywhere within their lease. This facilitates aquaculture best-practice techniques, including fallowing.[11]

7 OPERATIONAL REQUIREMENTS

7.1 Species

In accordance with the likely conditions of the Ministerial Statement, only marine finfish of a species that occurs naturally within the West Coast region of Western Australia are permitted to be cultured within the zone.[12]

Genetically modified fish (excluding triploids) must not be farmed.[13]

7.2 Sea Cages

The only culture method in the zone permitted under the strategic environmental approval will be floating sea cages. The size of the sea cages may be determined by the licence holder. All sea cages must be:

- constructed of net or mesh of a size, type and quality that will reliably provide a complete barrier that will retain the fish stocked in the cage;
- constructed so fish cannot escape by jumping out of the sea cages (i.e. "jump" nets are incorporated in the construction of the cage);
- fitted with effective "predator" barriers or their equivalent to prevent predator damage to sea cages that could result in fish escapes;
- positioned to have at least a two metre clearance between the bottom of the cage and the sea floor at the lowest astronomical tide at all times; and
- be securely fastened to anchorage and mooring infrastructure that is used in such a way as not to physically damage any reef or coral habitat.

All 'aquaculture gear' must be located within the lease boundary.[14]

[11] Fallowing is the interval between operational periods when sea cages are empty. Fallowing can be used to allow recovery of the site from benthic impacts and reduce the likelihood of their occurrence. During fallowing, sea cages can be left on-site or moved to another location.

[12] As defined in Regulation 3 of the *Fish Resources Management Regulations 1995*.

[13] Genetically modified organisms (GMOs) can be defined as organisms in which the genetic material (DNA) has been altered in a way that does not occur naturally.

[14] As defined in Part 1, section 4 of the FRMA;

"***aquaculture gear*** *means any equipment, implement, device, apparatus or other thing used or designed for use for, or in connection with, aquaculture —*

(a) whether the gear contains fish or not; and

(b) whether the gear is used for aquaculture or for navigational lighting or marking as a part of aquaculture safety,

and includes gear used to delineate the area of an aquaculture licence, temporary aquaculture permit or aquaculture lease".

Fallowing or movement of sea cages to minimise impact directly under the sea cages is permitted within lease areas. Movement outside lease areas, but within the zone, is subject to a lease variation application.

All aquaculture gear such as grids and nets must be:

- kept taut (and without excess ropes or mesh) in order to minimise the risk of entanglement with marine fauna;
- free from holes/gaps so as to prevent the escape of fish; and
- kept clean of sediment/biofouling such as to not impede or reduce water flow through the grids/nets to the extent that the risks to fish health and gear breakage/loss are unnecessarily increased.

Regular inspections and maintenance should be carried out to ensure the functions of aquaculture gear are not inhibited and the risk of marine fauna interactions is minimised.

The use of copper-based or tributyltin (TBT) containing anti-foulants on aquaculture gear is prohibited.

7.3 Standing Fish Stock Biomass Limits and Production Capacity

This management policy manages the standing stock biomass limit of 24,000 tonnes of marine finfish at any one time for the zone, as set by the strategic environmental approval. For each licence holder, this zone biomass limit translates to an individual biomass limit proportional to the licence holder's total lease area within the zone. In other words, on the basis of a 24,000 tonne zone biomass limit, the maximum permissible biomass limit of marine finfish (based on number and live weight of fish) for each individual operator is a total of eight tonnes per hectare, averaged over that licence holder's total lease area within the zone. For example, a 6,000 tonne standing biomass operation requires a minimum lease area of 750 hectares.

However, consistent with the principles of adaptive management and as additional fish health and environmental monitoring data are generated, it is possible that the standing biomass limits allowed within individual lease sites may be modified (up or down) through a new or varied licence condition. The purpose of any such adjustment made is to maintain the total zone production potential, while avoiding environmental triggers and complying with environmental standards.

Stocking densities must be consistent with industry best practice for the species being farmed.

In terms of the total fish production capacity of the zone, there are no specified limits. Rather, the production capacity of both the zone and the individual lease sites within it is determined by the efficiency with which individual operators convert their respective standing stock biomass limits into harvested fish production. This approach promotes innovation and efficiency in fish farming operations, while providing management flexibility and a framework that is protective of the supporting marine environment.

The following operational data must also be collected by each licence holder quarterly and submitted annually to the Department in an agreed format. This may extend to inclusion in the annual compliance assessment report required for derived proposals under the EP Act.

Parameter	Data required
Location	GPS coordinates
Depth of water	metres
Total standing biomass	kilograms for each species per sea cage
Standing stock densities	kilograms per metre^3
Total feed inputs	kilograms for each species per sea cage
Feed type	make and specification
Feed/waste ratio	ratio
Stock growth rates	grams per day
Treatment pharmaceuticals (if any) administered to stock	type and quantity

7.4 Feed Inputs

Only certified (AS/NZS ISO 9001:2008) commercial pellet feeds that meet the strict regulations of the Australian Quarantine and Inspection Service are permitted.[15] The use of alternative feeds will be assessed on a case-by-case basis and in accordance with best practice farming techniques for the species of interest.

Contemporary feeding technologies and practices should be used, where practicable, in order to minimise feed wastage and environmental impact.

7.5 Brood Stock and Juveniles

Movements of fish (brood stock and juveniles) into commercial aquaculture systems are likely to be subject to translocation approval (see 8.3 below) however this is dependent upon the individual circumstances and the potential biosecurity risks involved.

Juvenile seed stocks must be sourced from licensed hatcheries or other approved source and must be certified disease-free to the satisfaction of the Principal Research Scientist in the Department's Fish Health Unit.[16]

7.6 Marking and Lighting

The lease area must be marked with approved buoys, markers, lights and signage in accordance with the "*Guidance Statement for Evaluating and Determining Categories of Marking and Lighting for Aquaculture and Pearling Leases/Licences (2010)*".

[15] ISO 9001:2008 specifies requirements for a quality management system where an organization needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements, and aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements. All requirements of ISO 9001:2008 are generic and are intended to be applicable to all organizations, regardless of type, size and product provided.

[16] A reference to the Principal Research Scientist includes reference to an accredited pathologist or epidemiologist.

This Statement can be accessed at the Department's website (www.fish.wa.gov.au/Documents/aquaculture_licencing/marking_and_lighting_guidance_statement.pdf). These requirements will be a condition on the aquaculture licence.

7.7 Non-Exclusive Access

The use of State waters for aquaculture does not confer an exclusive access right. Persons other than aquaculture licence holders may enter the zone and lease areas, although they are not permitted to interfere in any way with aquaculture gear. A person who interferes with aquaculture gear or removes fish from such gear commits an offence under the FRMA.[17]

7.8 Performance Criteria

Performance criteria are associated with aquaculture licences to ensure appropriate use of waters within the zone. Where licence holders do not comply with conditions such as performance criteria, the licence may not be renewed, the lease terminated and that site within the zone reallocated.[18]

8 ZONE BIOSECURITY

The zone is treated as one biosecurity unit due to the relative close proximity of aquaculture operations and the physical environment within the Zeewijk Channel.

Fisheries legislation requires all aquaculture licence holders [unless exempt under section 92A(4)] to have a MEMP, which includes biosecurity procedures. All licence holders operating within the zone will be required to have an approved MEMP for their operation that has been developed in accordance with the "*Aquaculture Management and Environmental Monitoring Plan (MEMP) Guidance Statement*" (www.fish.wa.gov.au/Documents/Aquaculture/memp_guidance_statement.pdf) that is available on the Department's website at www.fish.wa.gov.au.

In addition to the biosecurity principles outlined in this management policy, the biosecurity procedures must include, but are not limited to:

- record keeping (such as translocation approvals, health certificates, disease management records, fish escape reports, unusual mortality reports, internal and external stock transfers, facility and stock inspections, facility access records for staff and visitors);
- aquaculture gear and vessels used (such as maintenance, disinfection and inspections);
- biosecurity emergency procedures;
- disposal of waste (such as dead fish, diseased, contaminated or infected fish stocks);

[17] Section 172 of the FRMA provides:
"*A person must not —*
(a) remove fish from any fishing or aquaculture gear; or
(b) interfere with any fishing or aquaculture gear,
unless the person is the owner of the gear or is acting with the authority of the owner or has some other lawful excuse.
Penalty: In the case of an individual, $25,000 and imprisonment for 12 months. In the case of a body corporate, $50,000."

[18] Under the provisions of the FRMA, if an aquaculture licence is not renewed the associated aquaculture lease for that area is terminated.

- disease testing protocols and quarantine; and
- management of fish escapes.

8.1 Disease Management

Disease prevention, rather than treatment, is vital in any aquaculture operation; but even more so in an aquaculture zone where aquaculture operations may be located in close proximity to one another.

The following management strategies will be implemented to minimise the risk of a fish disease outbreak. In addition to the procedures and protocols outlined in individual MEMPs, licence holders must comply with the following minimum requirements:

- stock (fish) must be marine finfish of a species that occurs naturally within the Mid West region (a condition of the Ministerial Statement);
- all stock, other than brood stock sourced under permit from the wild and taken in the Mid West region, must be certified disease-free and accompanied by a health certificate issued by the Department before being moved into the zone;
- a stock health surveillance program and quarantine procedures must be implemented; and
- a biosecurity manager for each operation must be appointed and responsible for ensuring biosecurity measures are implemented.

In the event of a disease outbreak:

- the licence holder must report the outbreak according to section 8.2 below;
- any pharmaceuticals such as antibiotics that are used must be prescribed by a veterinarian or approved by the Australian Pesticides and Veterinary Medicines Authority and administered in accordance with the recommended dosages;
- stock must not be moved without the written approval of the Principal Research Scientist in the Department's Fish Health Unit;
- vessel movements between individual sites will also be restricted in accordance with the advice of the Principal Research Scientist in the Department's Fish Health Unit;
- disinfection of equipment, vessels and barges down to and including the waterline should be done prior to movement and in accordance with the ACWA CoP; and
- any other aquaculture operators within the zone must be informed immediately.

8.2 Disease Incident Reporting

Disease reporting requirements are stipulated in Regulation 69(d), (e), (f), (g) and (h) of the *Fish Resources Management Regulations 1995* (FRMR). All employees of operators within the zone must be aware of these regulations, which are intended to provide for adequate monitoring and adaptive management of any emerging disease risks.

Under Regulation 69, aquaculture licence holders must notify the CEO of the Department in writing within 24 hours of becoming aware or suspecting that fish may be affected by any disease. Any material, significant or unusually high fish mortalities must be reported, as they may be caused by disease. To minimise the interval between the CEO first being notified of suspected disease outbreaks and the CEO giving directions appropriate to each incident in response, aquaculture licence holders must provide details of the disease outbreak, or

suspected disease, as soon as possible (but within the prescribed timeframes) by e-mail to each of the following:

- fishhealth1@fish.wa.gov.au; **and**
- aquaculture@fish.wa.gov.au; **and**
- biosecurity@fish.wa.gov.au

The e-mails should have the subject heading: "NOTIFICATION TO CEO UNDER REG 69."

E-mail notifications to each of these three addresses within the prescribed timeframes meets the requirements of both this management policy and those of Regulation 69.

8.3 Translocation

Movement of fish (brood stock and juvenile seed stock) for commercial aquaculture purposes are subject to translocation approval dependent upon the circumstances in each instance and the potential biosecurity risks involved. For example, juvenile seed stock produced in a Geraldton hatchery from adult brood stock originating from Mid West region wild stock would not require translocation approval (only disease-free certification); whereas juvenile seed stock produced in (say) a hatchery located in the eastern states from adult brood stock originating from other than the Mid West region would require translocation approval (in addition to the disease-free certification).

Licence holders should refer to the "*Policy for Managing Translocation of Live Fish into and within Western Australia*" (www.fish.wa.gov.au/Documents/biosecurity/dof_translocation_policy.pdf) and contact the Translocation Officer at the Department of Fisheries (by e-mail to translocation@fish.wa.gov.au) prior to translocating fish.

This document, and additional information, is available on the Department of Fisheries website at www.fish.wa.gov.au.

8.4 Fish Escapes

Any suspected escape of a significant number (i.e. greater than 100) of fish from aquaculture gear subject to an aquaculture licence within the zone, or circumstances which gives rise to a significant risk of escape, must be reported to the CEO of the Department by e-mail to aquaculture@fish.wa.gov.au and biosecurity@fish.wa.gov.au within 24 hours.

9 MARINE FAUNA INTERACTIONS

To address potential interaction between operators and infrastructure in the Mid West Aquaculture Development Zone, a stand-alone Marine Fauna Interaction Management Plan (MFIMP) has been developed. This MFIMP focuses primarily on managing potential impacts to marine mammals, marine reptiles and marine avifauna. Specifically, this MFIMP:

- provides an overview of the potential impacts that may occur to marine fauna during the installation process and operational activities;

- outlines management measures and actions adopted to mitigate potential impacts to marine fauna during the sea cage installation process and during operational activities;
- outlines the monitoring requirements/programs required to be serviced by operators within the MWADZ; and
- outlines the marine fauna incident reporting and response strategies required of operators within the MWADZ.

The primary aim of this MFIMP is to ensure that activities conducted within the MWADZ do not cause any significant disturbance to marine fauna within the Abrolhos Islands Fish Habitat Protection Area (FHPA).

The objectives of this plan include minimising:

- human interactions with marine fauna;
- any potential injuries or fatalities to marine fauna that may result from collision with vessels or entanglement;
- noise and vibration disturbance to marine fauna;
- potential impacts to marine fauna from artificial light;
- potential impacts posed to marine fauna by aquaculture infrastructure; and
- adverse effects of fish farming activities within the proposed MWADZ on marine fauna.

For further details of the marine fauna interaction management requirements for operators within the zone, refer to the *Mid West Aquaculture Development Zone Marine Fauna Interaction Management Plan.* This document is available on the Department of Fisheries website at www.fish.wa.gov.au.

10 WASTE MANAGEMENT

Waste material (such as empty feed bags, staff domestic waste, old ropes, net mesh and other discarded equipment) must be placed in sealed waste containers and, or, securely stowed on board the vessel and disposed of at a port on the mainland.

Marine debris can be harmful to the environment and farm staff must ensure it is disposed of correctly. Similarly, if marine debris is sighted within or around the aquaculture operation, its collection and disposal is an environmental responsibility to be met by all operators.

Removal of marine fouling from sea cages may be undertaken *in situ* using physical or mechanical methods; or achieved by removing the nets and drying/cleaning on the mainland.

Dead fish must be placed in silage bins or other sealed containers, transported back to a port on the mainland and reused or disposed of in accordance with Local Government Authority by-laws.

No fish processing is permitted at sea except for harvesting, slaughtering, bleeding, washing and chilling of fish. Harvest bins must be watertight and sealed to ensure blood water is contained.

Sewage must be either:

- treated, using a sewage disposal system approved by the Department of Health, prior to disposal at sea in accordance with the Department of Transport's *Strategy for Management of Sewage Discharge from Vessels into the Marine Environment*; or
- stored in tanks on the vessel and disposed of on land at a licensed disposal site in accordance with Local Government Authority by-laws.

To reduce the potential for oil and oily wastes (including fuel) generated through vessel operations to enter the environment, any used oil or oil-soaked absorbents must be securely stored and then properly disposed of at an appropriate oil recycling facility (available at most ports).

If oil or oily waste is discharged into the marine environment, licence holders must immediately report the marine oil spill to the Department of Transport (DoT) on (08) 9480 9924 (24-hour reporting number) or e-mail (marine.pollution@transport.wa.gov.au.). Do not pour anything onto the oil. If a marine oil spill kit is on hand it may be possible to mop up the spill with absorbent pads and contain it.

Refer to the DoT website (http://www.transport.wa.gov.au/imarine/report-marine-pollution-and-oil-spills.asp) for further information regarding requirements for oil spill or pollution situations.[19]

For further details of the waste management requirements for operators within the zone, refer to the *Mid West Aquaculture Development Zone Waste Management Plan*. This document is available on the Department of Fisheries website at www.fish.wa.gov.au.

11 COMPLIANCE AND REPORTING

Licence holders must comply with the arrangements outlined in this management policy, licence conditions, MEMPs and any other management controls imposed by any relevant statutory or government authority from time to time in relation to the licence holder's activities in the zone. This includes the relevant requirements specified in those instruments and documents provided for under the EP Act (e.g. Ministerial Statement and Section 45A Notice/s). In the event of any breaches of lease conditions or management controls in relation to the leases in the zone, the lease holder (whether also the licence holder or not) is responsible.[20]

Importantly, it is the licence/lease holder and not the Department that is liable for any of the abovementioned breaches. The Department's role is one of a manager, regulator and (if necessary) enforcer of the zone.

In summary, the e-mail contacts for the relevant reporting procedures are:

Disease, suspected disease and unusual mortalities:

fishhealth1@fish.wa.gov.au and

[19] Noting the zone is located within State Waters, Western Australian legislation will apply in the first instance.
[20] Refer to *Part 8 – Aquaculture* of the FRMA.

aquaculture@fish.wa.gov.au and
biosecurity@fish.wa.gov.au

Fish escapes, suspected escapes or circumstances that may give rise to an escape:

aquaculture@fish.wa.gov.au and
biosecurity@fish.wa.gov.au

MEMP report and exceedance of an environmental monitoring trigger value:

aquaculture@fish.wa.gov.au

12 AUDITS AND REVIEWS

Licence holders should have their internal audit mechanisms documented and conduct regular internal audits to ensure compliance with the requirements of this policy. Independent audits are more robust and are the recommended approach.

Periodic inspections of aquaculture licenced sites are undertaken by Fisheries Officers to ensure adherence to licence and lease conditions. The number and type of inspections undertaken is usually dependent on the outcomes of compliance risk assessments that take into account a range of issues, including the likelihood and consequence of events such as:

- stock disease outbreaks;
- stock escapes;
- interactions with commercial, recreational and customary fishers;
- failures to comply with site marking and lighting provisions; and
- non-compliance with environmental monitoring requirements.

The Department will periodically review this management policy to ensure it is up-to-date and meets Government requirements and community expectations.

13 GLOSSARY

ACWA – Aquaculture Council of Western Australia
CoP – Code of Practice
Department – Department of Fisheries
EMMP – Environmental Monitoring and Management Plan
EPA – Environmental Protection Authority
EP Act - *Environmental Protection Act 1986*
ESD – Ecologically Sustainable Development
FRMA – *Fish Resources Management Act 1994*
FRMR - *Fish Resources Management Regulations 1995*
management policy – Mid West Aquaculture Development Zone Management Policy
MEMP – Management and Environmental Monitoring Plan
zone – Mid West Aquaculture Development Zone

14 REFERENCES

Aquaculture Management and Environmental Monitoring Plan (MEMP) Guidance Statement [Department of Fisheries]
AS/NZS ISO 9001:2008 Quality Management Systems [Standards Australia]
Best practice framework of regulatory arrangements for aquaculture in Australia [Primary Industries Ministerial Council – 2005].
Draft *Aquaculture Management and Environmental Monitoring Plan (MEMP) Policy*
Environment Protection and Biodiversity Conservation Act 1999
Environmental Code of Practice for the Sustainable Management of Western Australia's Marine Finfish Aquaculture Industry [Aquaculture Council of Western Australia - 2013]
Environmental Protection Act 1986
Environmental Protection Bulletin No. 17 "Strategic and derived proposals" [Environmental Protection Authority]
Finfish Aquaculture in Western Australia: Final ESD Management Report for Marine Finfish Aquaculture [Fisheries Management Paper No. 233 - June 2009]
Fish Resources Management Act 1994
Fish Resources Management Regulations 1995
Guidance Statement for Evaluating and Determining Categories of Marking and Lighting for Aquaculture and Pearling Leases/Licences [Department of Fisheries – 2010]
Mid West Aquaculture Development Zone Environmental Monitoring and Management Plan (Draft)
Mid West Aquaculture Development Zone Marine Fauna Interaction Plan [Department of Fisheries]
Mid West Aquaculture Development Zone Waste Management Plan [Department of Fisheries]
Policy for Managing Translocation of Live Fish into and within Western Australia [Department of Fisheries]
Strategy for Management of Sewage Discharge from Vessels into the Marine Environment [Department of Transport]