



Department of
Primary Industries and
Regional Development

Protect
Grow
Innovate

Houtman Abrolhos Islands Fish Habitat Protection Area

Management Plan 2022 – 2032



Front cover image: Fringing reef drop off, Wooded Island, Easter Group. Credit: DPIRD, N. Moore.



Image 1- Commercial rock lobster fishing infrastructure, Pelsaert Group. Credit: DPIRD, N. Moore.

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Introduction

The Houtman Abrolhos Islands Fish Habitat Protection Area (the Abrolhos FHPA) includes the breathtaking marine environment surrounding the Houtman Abrolhos Islands, located 65-90 kilometres off Geraldton in Western Australia's Midwest region. The island chain is approximately 90 kilometres long and includes over 200 islands and associated reefs. Pristine waters, a rich biodiversity of marine and other wildlife, significant historic shipwrecks and rock lobster fishing and aquaculture industries are all part of the magic that is the Abrolhos Islands. Visitors come from far and wide to enjoy the remoteness and beauty of this world class destination, and to undertake a range of activities in the marine environment.

The marine-based fishing and non-fishing activities, and infrastructure located within the Abrolhos FHPA are managed by the Department of Primary Industries and Regional Development (DPIRD).

In October 2017, the Western Australian State Government made a commitment to develop a new whole-of-government approach to better protect the Abrolhos Islands. The creation of the Houtman Abrolhos Islands National Park (the National Park) in July 2019, together with the State Government's ***Houtman Abrolhos Islands Strategic Direction 2020 – 2024***¹ (Strategic Direction) in 2020, signals the State Government's intention to better position the Abrolhos Islands and surrounding waters as a sustainable, nature-based tourism destination and support for regional economic growth.

The National Park is managed by the Department of Biodiversity, Conservation and Attractions (DBCA) under the *Conservation and Land Management Act 1984* (CALM Act), on behalf of the Conservation and Parks Commission. The National Park includes the land of all uninhabited islands and uninhabited portions of islands to the high-water mark.

The land located within the Houtman Abrolhos Class A Reserve (the Abrolhos Reserve) is managed by DPIRD. Most of the Abrolhos Reserve land is leased to the owners of 'camps' who are operating pursuant to commercial rock lobster and aquaculture licences in waters surrounding the Abrolhos Islands. The Abrolhos Reserve also includes the intertidal areas around all islands, except for two locations at East Wallabi and Beacon Islands. The Abrolhos Reserve and FHPA therefore overlap between the high and low-water marks.

The Strategic Direction shares State Government's vision and key initiatives that will inform future management of the Abrolhos across the land and water, i.e., the National Park, the Abrolhos Reserve and the Abrolhos FHPA.

State Government's Strategic Direction provides a clear vision for the Abrolhos:

To provide a world-class sustainable tourism experience and create new jobs and economic opportunities in the Mid-West Region, while protecting the unique natural, cultural heritage, fishing and community values of the Abrolhos.

Houtman Abrolhos Islands Strategic Direction 2020-24

¹ www.dbca.wa.gov.au/parks-and-wildlife-service/plan-for-our-parks/houtman-abrolhos-islands-national-park

DPIRD's strategic intent² and goals to protect, grow and innovate align with State Government's aspirations for the Abrolhos Islands. DPIRD is committed to working with relevant government agencies and stakeholders to achieve effective outcomes on behalf of the broader Western Australian community. Our purpose is to create enduring prosperity for all Western Australians by ensuring that primary industries and regions are key contributors to the Government's agenda for economic growth and diversification, job creation, strong communities and better places³.

The ***Houtman Abrolhos Islands Fish Habitat Protection Area Management Plan 2022 – 2032*** (this management plan) supports State Government's aspirations for the waters of the Abrolhos FHPA. It seeks to address both current and emerging pressures facing the marine environment surrounding the Abrolhos Islands, and to better manage both the current and potential growth in marine-based tourism. It also identifies marine - based tourism growth and development opportunities that will be considered during the life of the plan through further engagement with partner agencies and stakeholders.

DPIRD's management objectives for the Abrolhos FHPA are aimed at achieving outcomes for the following key initiatives:

1. Nature conservation and protection
2. Cultural heritage protection
3. Sustainable fisheries and aquaculture
4. Marine tourism and recreation
5. Abrolhos community
6. Governance

First and foremost, the potential impacts on key marine natural values in the Abrolhos FHPA must be identified and carefully managed to ensure the stunning natural seascapes of the Abrolhos Islands are enjoyed by all, and for generations to come.

Ultimately, this management plan aims to achieve an appropriate balance between the needs of nature, visitors, and workers. DPIRD will continue to focus on managing sustainable aquatic resources and supporting the commercial activities of the fishing and aquaculture industries operating in the Abrolhos FHPA. A low impact and light touch approach to marine-based tourism and recreation will be supported, with a view to complement visitor experiences at the islands.

This management plan should be read together with the following documents:

1. *Houtman Abrolhos Islands Strategic Direction 2020 – 2024*
2. *Houtman Abrolhos Islands Reserve Management Plan 2022 - 2032*
3. *Houtman Abrolhos Islands National Park Management Plan 2022.*

² <https://www.wa.gov.au/organisation/department-of-primary-industries-and-regional-development/about-the-department-of-primary-industries-and-regional-development#strategic-intent>

³ <https://www.wa.gov.au/government/publications/primary-industries-plan-2020-2024>

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Image 2- Coral reef fringing Jackson Island, Pelsaert Group. Credit: DPIRD, N. Moore

1. General Overview

1.2. Planning area and use

The Abrolhos FHPA includes all state waters (as defined under section 7 of the *Seas and Submerged Lands Act 1973*) from the high-water mark of the Abrolhos Islands out to three nautical miles, an area of almost 2,500 square kilometres (**Figure 1**). The FHPA extends in a north westerly to south easterly direction for approximately 100 kilometres (km) and is around 40 km at its widest point.

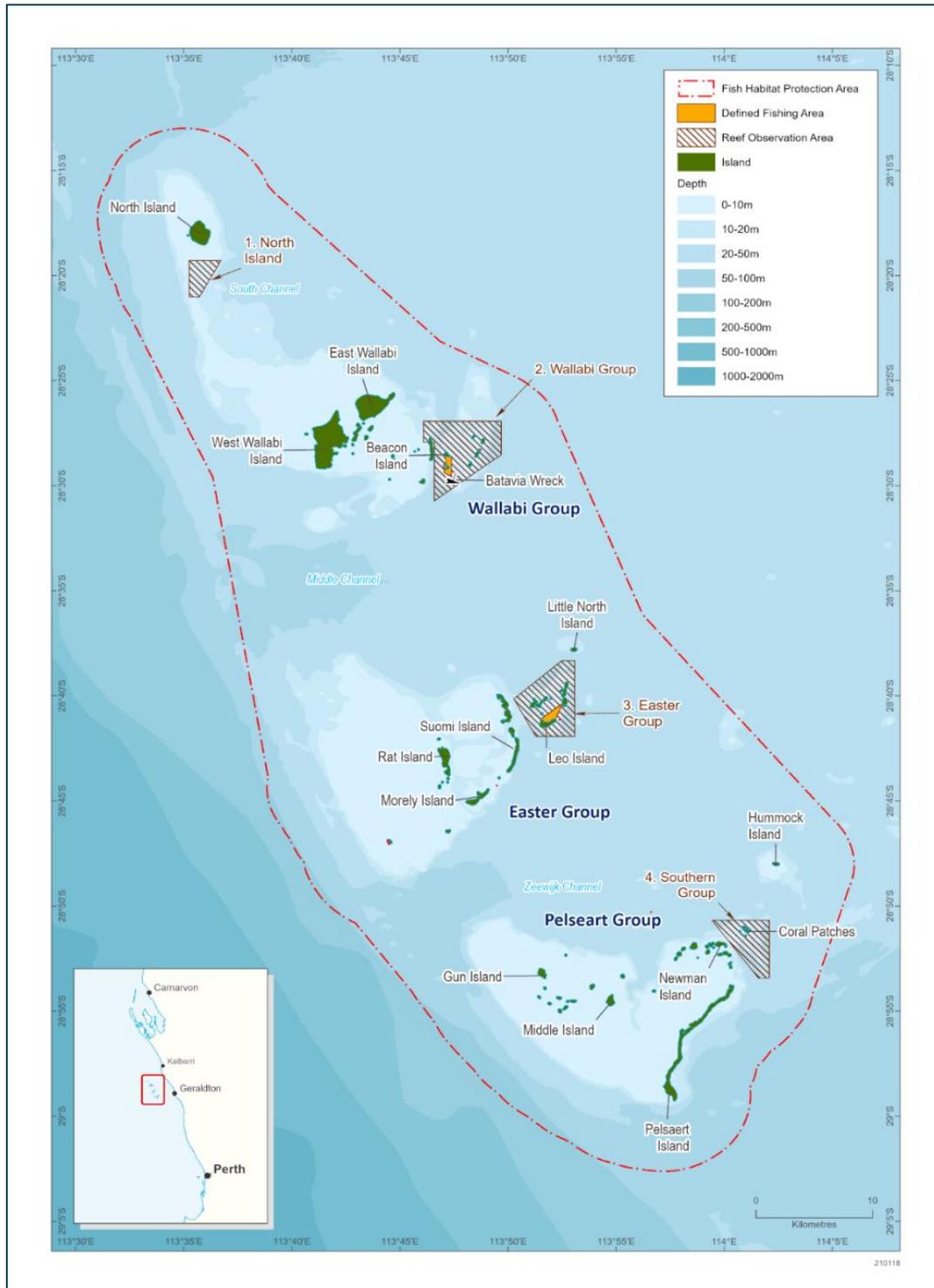


Figure 1- Abrolhos Islands Fish Habitat Protection Area

Current industry snapshot

Commercial fishing

Commercial fishing in the Abrolhos FHPA makes a valuable contribution to Western Australia's economy through employment and supporting regional businesses, and the supply of local, sustainable, and high-quality seafood to the community. Commercial fishing in the Abrolhos FHPA is strictly regulated and operators must be licensed.

Section 2.3 Sustainable Fisheries and Aquaculture provides further information relating to the management of commercial fishing in the Abrolhos FHPA.

Charter fishing

The fishing tour operator (charter fishing) industry provides visitors with an opportunity to enjoy world-renowned fishing-based activities in the Abrolhos FHPA. Fishing tour operators in Western Australia (WA) provide a high level of fishing expertise, using large vessels equipped with modern, state-of-the-art fishing equipment, to fee-paying clients (Telfer 2010).

The holder of a fishing tour operator's licence or a restricted fishing tour operator's licence for the West Coast Zone of the WA Fishing Tour Operator Industry is currently permitted to operate in the Abrolhos FHPA. Many licenced fishing tour operators also offer eco-tourism activities to diversify their itinerary and to seek a broader range of clients.

Section 2.3 Sustainable Fisheries and Aquaculture provides further information relating to the management of fishing tour operations in the Abrolhos FHPA.

Aquaculture

Most aquaculture sites in the Abrolhos FHPA are used for the growout of species such as coral, live rock, shellfish, seaweed and finfish. Currently, a person can apply for a new aquaculture licence and tenure for a site in the Abrolhos FHPA or transfer an existing licence.

Section 2.3 Sustainable Fisheries and Aquaculture provides further information relating to the management of aquaculture in the Abrolhos FHPA.

Aquatic eco-tourism

Aquatic eco-tourism (non-fishing) commercial operators provide the platform for many visitors to experience a wide range of extraordinary world-class marine-based tourism activities in the Abrolhos FHPA that they may not otherwise have the resources to experience.

Marine-based activities such as surfing, kitesurfing, windsurfing, paddleboarding, snorkelling, diving and kayaking are popular. Other experiences include visiting cultural heritage sites in the FHPA and National Park and wildlife watching (e.g., birds, sealions, dolphins, whales and turtles). Visitors also appreciate the remote beauty and wilderness and gaining knowledge of the local residents and their industries.

Section 2.4 Marine Tourism and Recreation provides further information relating to commercial aquatic eco-tourism management.

Privately owned commercial marine infrastructure

Commercial fishers and aquaculture licensees operating in the Abrolhos FHPA can apply to install commercial marine infrastructure to support their operations such as moorings and jetties, and other fixed, floating infrastructure such as pontoons and holding cages.

Section 2.5 *Abrolhos Community* provides further information relating to the management of marine-based infrastructure owned by commercial fishers and aquaculture operators.

Commercial marine tour operators (e.g., fishing tour operators and aquatic eco-tour operators) are permitted to apply for moorings and jetties, and other fixed, floating infrastructure such as day use pontoons, and platforms for overnight accommodation to support their business operations in the FHPA.

Section 2.4 *Marine Tourism and Recreation* provides further information relating to the management of marine-based infrastructure owned by commercial marine tour operators.

Land-based infrastructure

Commercial fishers who operate in Zone A of the West Coast Rock Lobster Managed Fishery, and aquaculture licensees with a site in the FHPA, can apply to own operational bases ('camps') on the Abrolhos Reserve to support their business operations. Other commercial fishers and commercial tour operators do not currently own operational infrastructure on the Reserve.

Please refer to the *Houtman Abrolhos Islands Reserve Management Plan 2022 – 2032* for further information relating to the management of land-based infrastructure in the Reserve.

Employment and supporting services

The businesses that operate in the Abrolhos FHPA employ hundreds of local staff. They also rely on several mainland regional services that provide bait, fishing gear and equipment, vessel repairs and maintenance.

Marine tourism and recreational visitation trends

Currently, most recreational visitors to the Abrolhos FHPA arrive by, and reside on, boats during their stay. Some visitors arrive by aircraft via airstrips in the National Park (located on North, East Wallabi and Rat Islands) and join a marine tourism operation or private recreational boat.

There is a regulatory requirement to notify DPIRD before entering the Abrolhos FHPA by boat⁴ using an online form⁵ located on the DPIRD Fisheries WA website. The form requests information regarding the master, vessel, number of passengers, an emergency contact and basic data relating to destination and tourism and recreational activities. The online notification requirement provides DPIRD with valuable information that can be used in medical emergencies, provision of evacuation advice, assessing aquatic biosecurity risks, and for compliance, planning and educative purposes.

⁴ Marine aircraft such as seaplanes and boat planes are included in the definition of 'boat' in the *Fish Resources Management Act 1994*.

⁵ <http://www.fish.wa.gov.au/Sustainability-and-Environment/Abrolhos-Islands/Pages/Visitor-information.aspx>

Most visitors to the Abrolhos FHPA are local (WA based) private recreational boat owners who are undertaking a range of activities including recreational fishing, surfing, diving and snorkelling. A handful of private recreational boats visit the Abrolhos FHPA from interstate or overseas. The online notification database indicates that August-September and February to June remain the most popular for visiting the Abrolhos FHPA, while October to January continue to be the lowest visitation months due to unfavourable wind conditions making for an uncomfortable recreational visit via boat.

For the past three years, an analysis of visitor trends indicates that a significant number of boat-based trips to the Abrolhos FHPA were made by local private recreational boat owners to the Pelsaert (Southern) Group (see Figure 1) on boats up to 10 metres (m) in length (33 feet).

Visitor trends indicate that the number of boat-based trips to the Abrolhos FHPA by private recreational boat owners, licenced fishing tour (charter) operators and eco-tourism operators has increased over the past five years.

There are numerous commercial aquatic eco-tour and licensed fishing tour operators currently operating annually. International, interstate and local expedition and small domestic cruise ship interest and visitation is increasing but is still currently operating at relatively low levels. There is interest in offering a visitation service to the Abrolhos FHPA via marine aircraft such as sea planes and boat planes.

For further detail regarding marine tourism and recreation values, activities and management please refer to [Section 2.4 Marine Tourism and Recreation](#).

Public marine infrastructure

DPIRD maintains 36 public moorings at key locations across the Abrolhos FHPA (refer to **Figures 2-5** below) that are known to be popular visitor areas, with some containing priority benthic habitat at risk of damage from anchoring. Most moorings also provide shelter from wind and swell in varying weather conditions. Currently, the public moorings are free courtesy moorings for both day and night use and are occupied on a 'first in best dressed' basis. The public mooring at Fish Point AI-05 (off Turtle Bay, East Wallabi Island, refer Figure 3) has been removed.

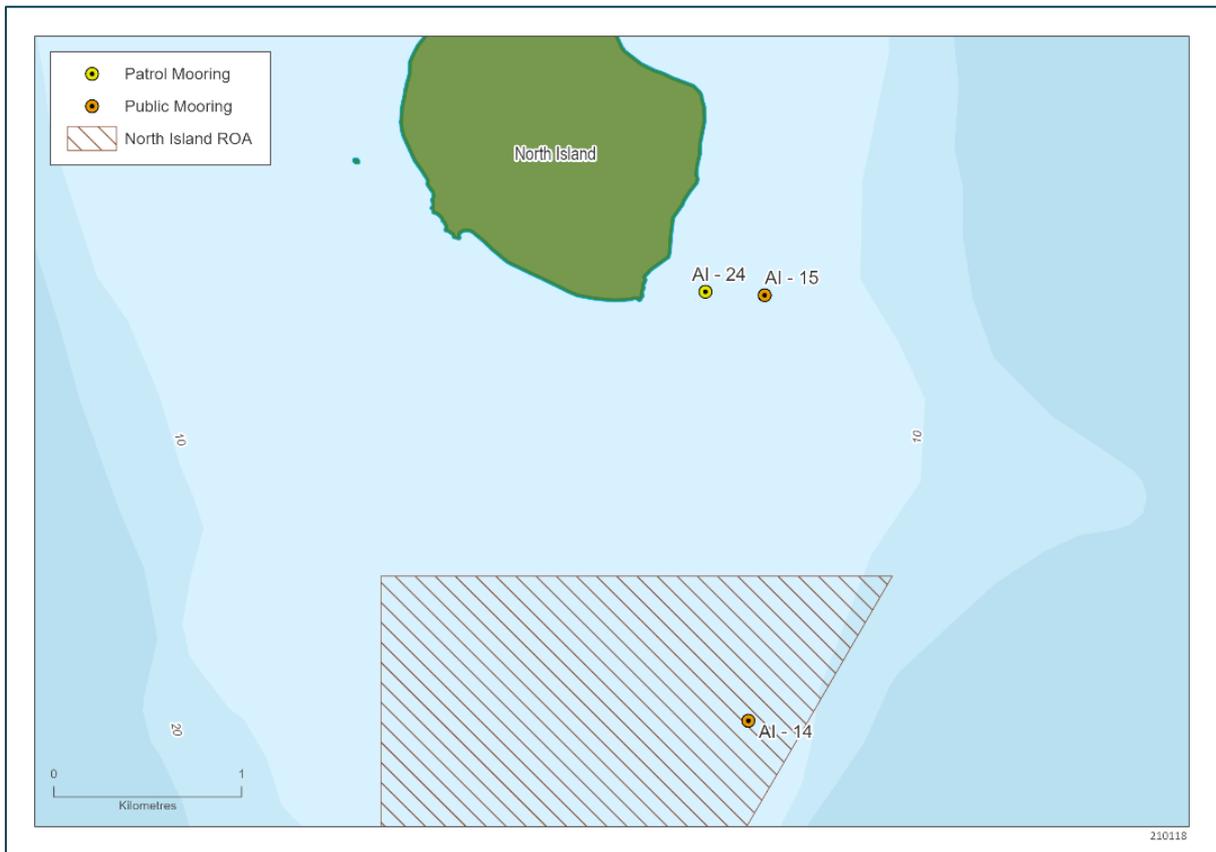


Figure 2 - North Island Public Moorings

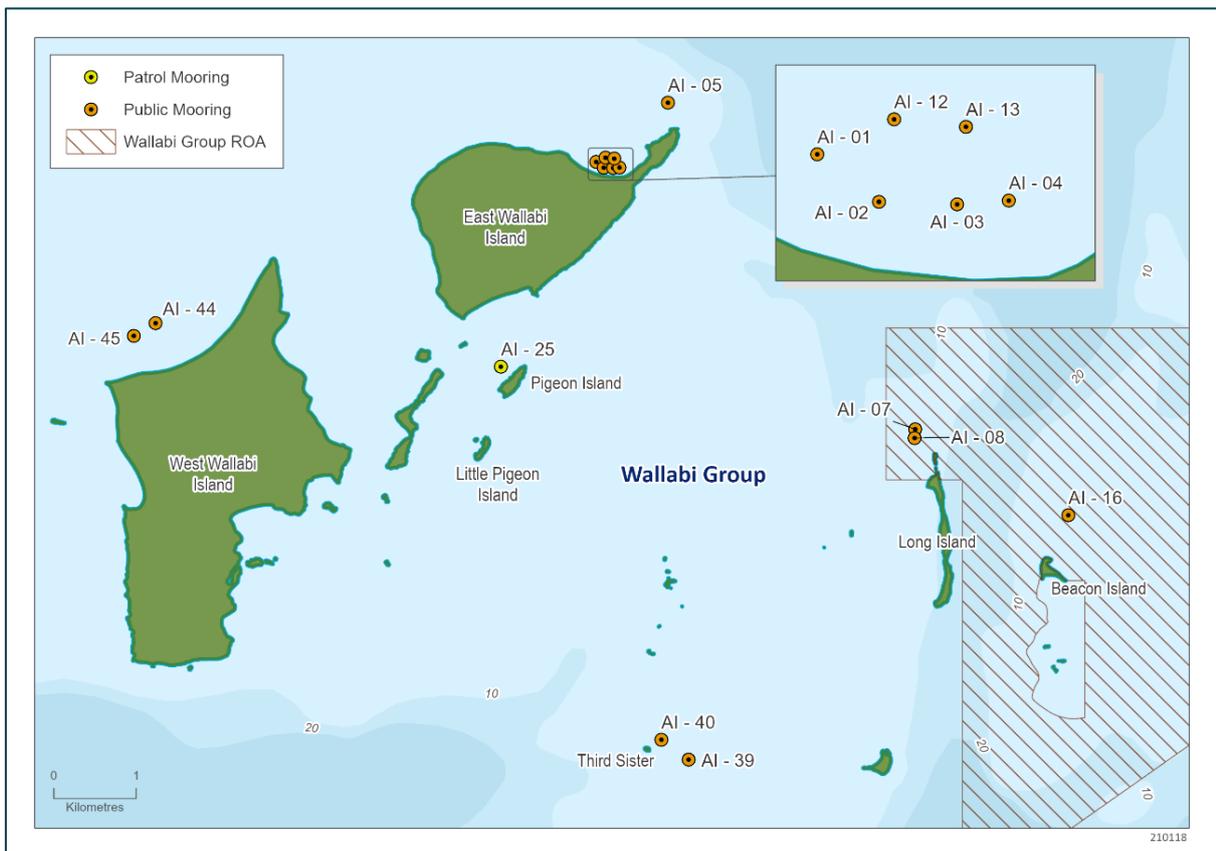


Figure 3 - Wallabi Group Public Moorings



Figure 4 - Easter Group Public Moorings

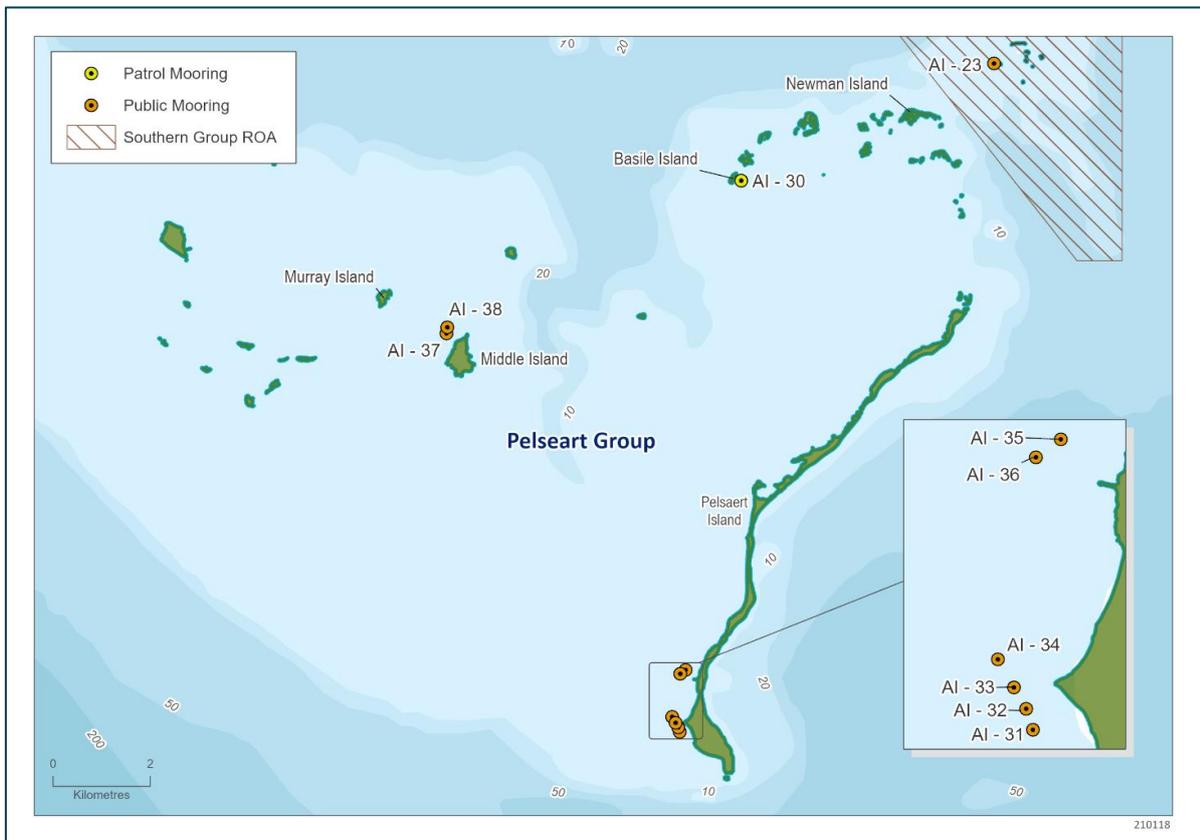


Figure 5 - Pelsaert Group Public Moorings

Each mooring is rated for vessels up to 25 m (82 feet) in length and up to 40 tonnes (t) in weight, in wind conditions under 30 knots. Vessels that cannot access a public mooring due to their size or mooring occupation must anchor.

DBCA constructed two new jetties at East Wallabi and Beacon islands in early 2022 to allow safer access for fishers, commercial tour operators and visitors. Vessels up to 20 m (65 feet) in length can access the East Wallabi Island jetty and smaller vessels, up to 7 m (22 feet) in length can use the Beacon Island jetty.

For further detail regarding public marine infrastructure and management please refer to [Section 2.4 Marine Tourism and Recreation](#).



Image 3- Recreational boats on public moorings at Morley Island, Easter Group. Credit: DPIRD.

1.3. Abrolhos FHPA management context

This management plan applies to the State waters surrounding the Abrolhos Islands that have special status as a gazetted FHPA. It does not provide detailed information on biology, stock structure and status and management arrangements of species, fisheries, industries, or broader aquatic resources. This information can be found in the annual *Status Reports of the Fisheries and Aquatic Resources of Western Australia*⁶ (State of the Fisheries report).

This management plan does not cover the activities and management of the Abrolhos Reserve. Please refer to the Abrolhos Islands Reserve Management Plan 2022 – 2032 for further information regarding Abrolhos Reserve land management.

Background

The *Abrolhos Islands Planning Strategy* (1989) and *A Representative Marine Reserve System for Western Australia* (1992) (Wilson Report) both identified the marine environment of the Abrolhos Islands as a unique biological representation of habitat diversity and species richness that deserve greater conservation and protection. Areas identified in the Wilson Report included Beacon Island and Morning Reef in the Wallabi Group, the eastern reef complex of the Easter Group and the north-eastern portion of the lagoon and back reef of the Pelsaert Group (Wilson, 1992). Other locations of note included ‘the Maze’ coral reef complex in the Easter Group and the lagoon west of Pelsaert Island.

The natural marine values of the Abrolhos Islands were formally recognised in 1994 with the creation of four reef observation areas (ROAs) under section 43 of the FRMA. The existing ROAs were originally identified in locations that (1) consist of high priority coral reef habitat and diverse marine ecosystems within the FHPA, and (2) are known to be high use areas for marine tourism and recreation.

*It is important to note that the ROAs were created under fisheries legislation and are **not** sanctuary zones or ‘no take’ areas. The take of fish in ROAs is currently prohibited except for commercial rock lobster potting and recreational rock lobster potting or diving.*

ROAs have an important role to play in protecting priority areas of marine benthic habitat from risks associated with marine-based activities and infrastructure (refer to [Section 2.1 Nature Conservation and Protection](#)), and as a refuge for resident demersal fish species.

Additionally, ROAs also provide for other non-fishing activities relating to the appreciation of maritime cultural heritage (refer to [Section 2.2 Cultural Heritage](#)) and the appreciation and observation of fish and their habitats (refer to [Section 2.4 Marine Tourism and Recreation](#)).

Maps of each of the four ROAs are provided in **Figures 6-9** below.

⁶ <http://www.fish.wa.gov.au/About-Us/Publications/Pages/State-of-the-Fisheries-report.aspx>

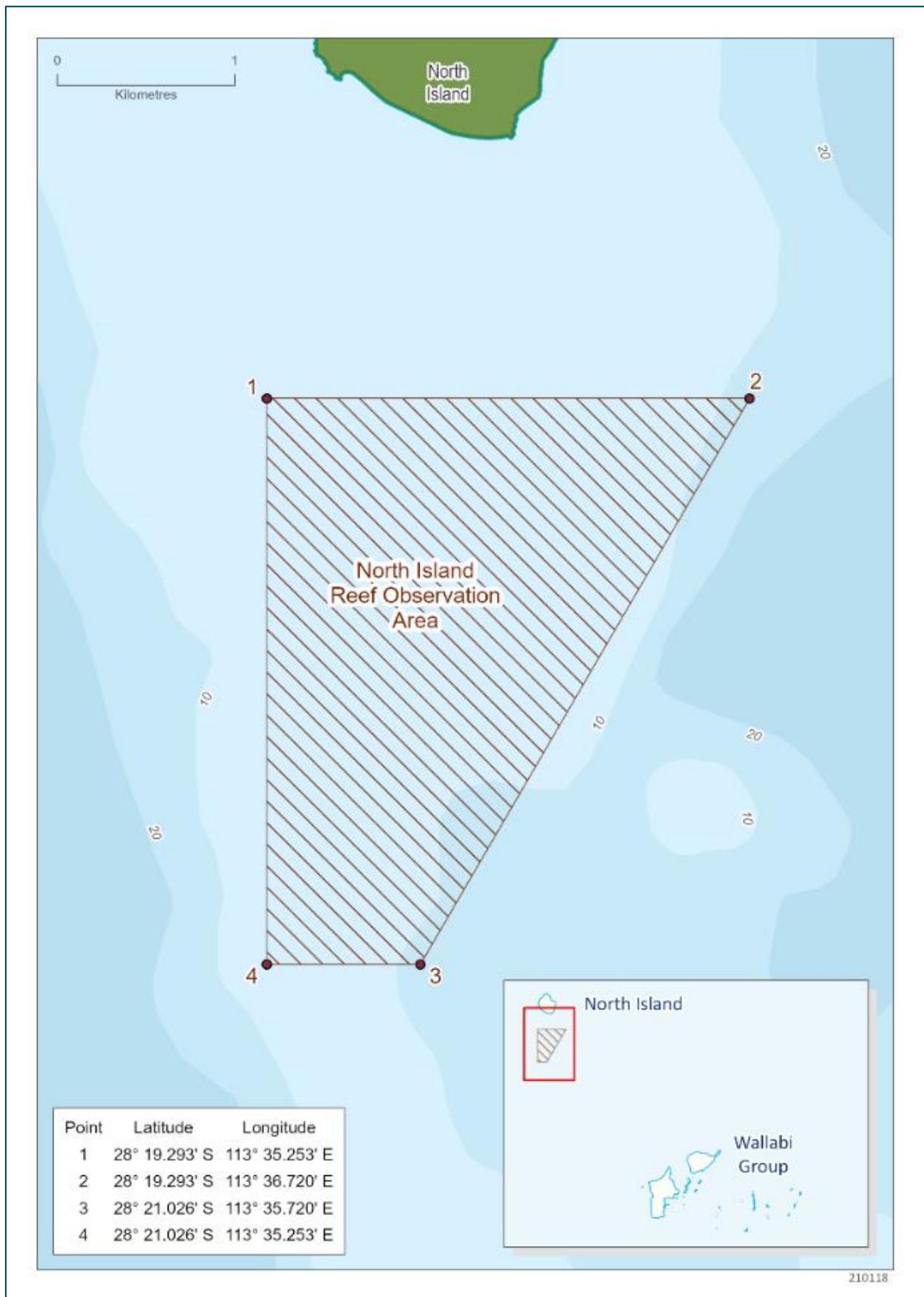


Figure 6- North Island ROA

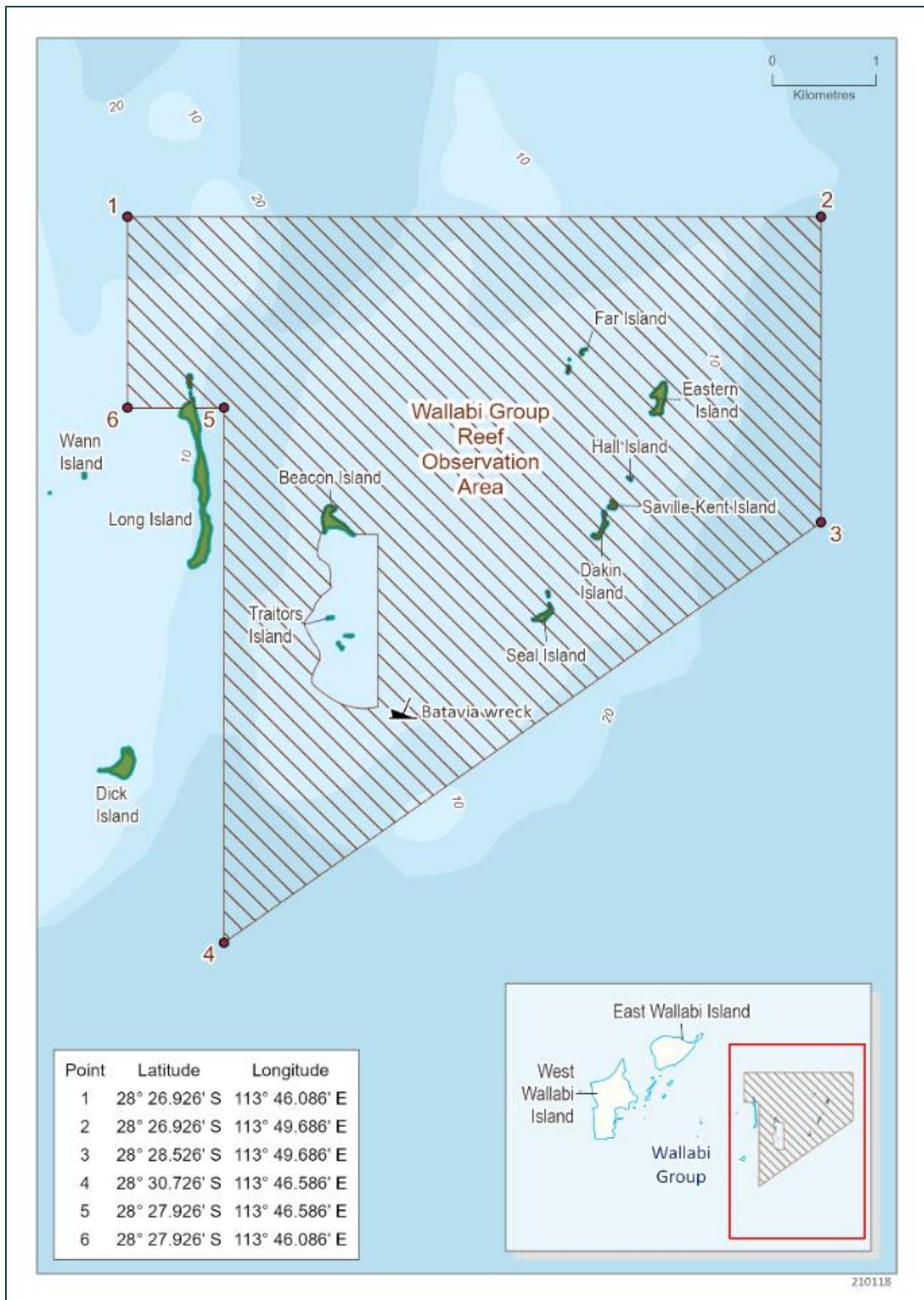


Figure 7- Beacon Island ROA (Wallabi Group)

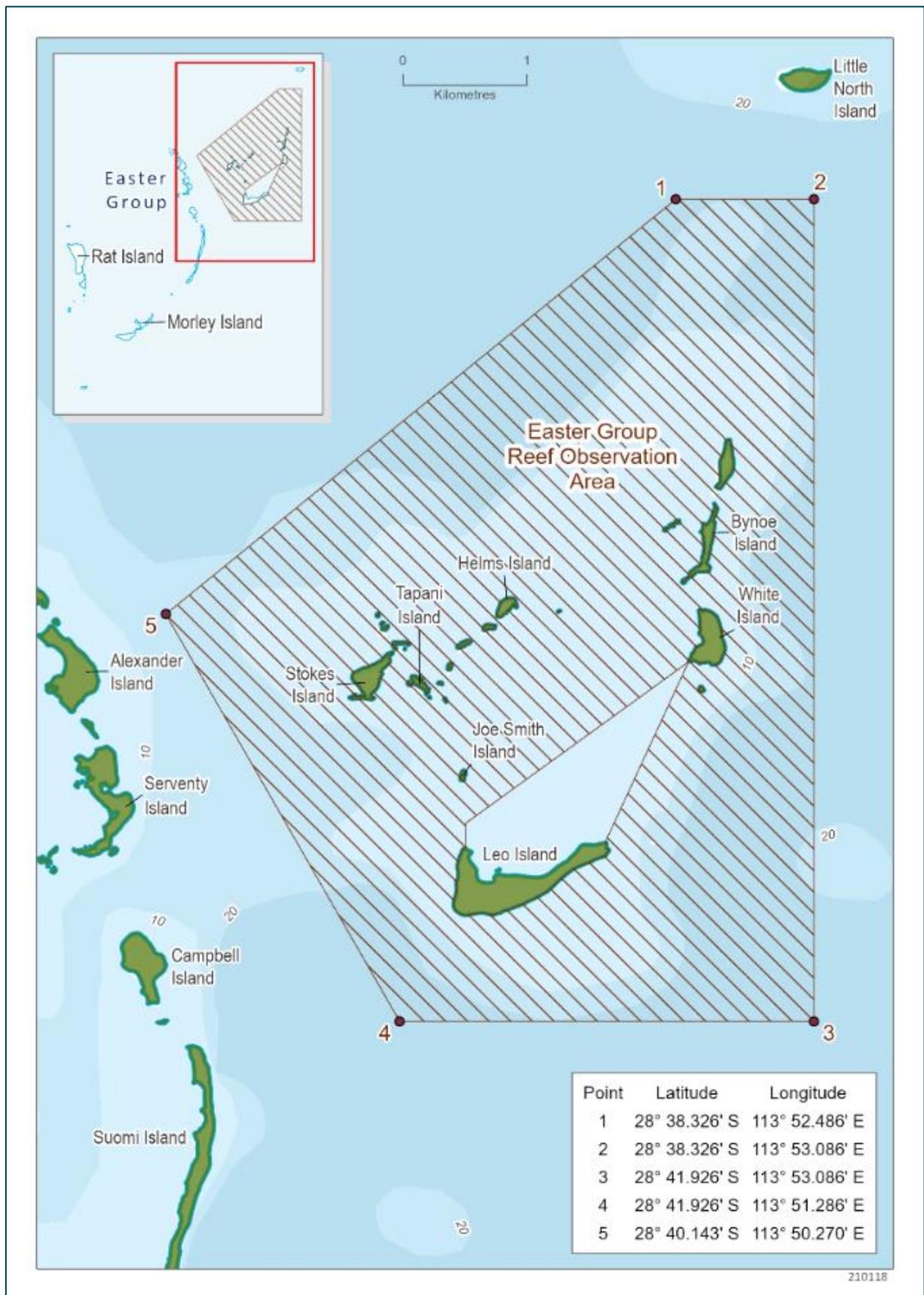


Figure 8- Leo Island ROA (Easter Group)

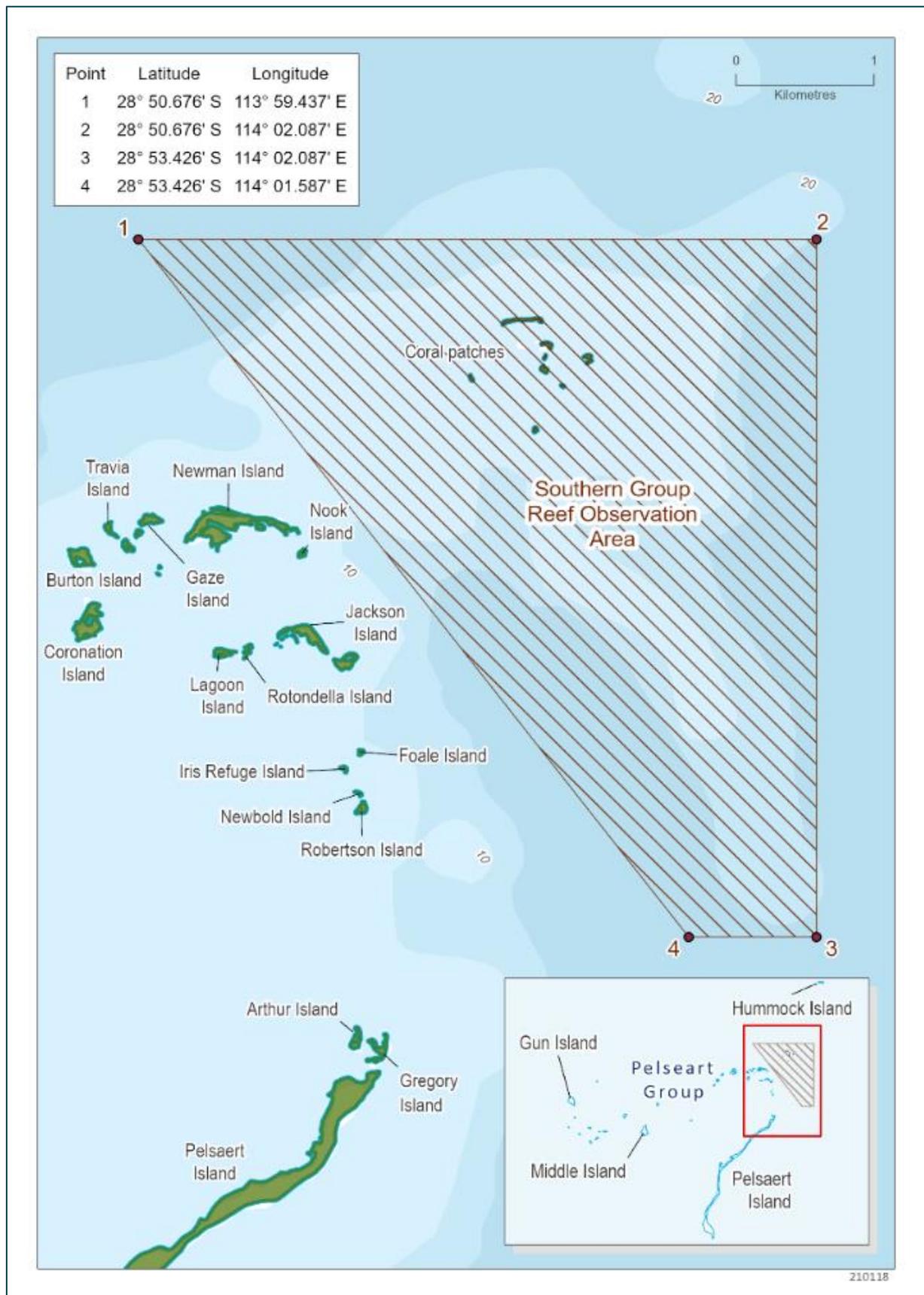


Figure 9- Coral Patches ROA (Pelsaert Group)

Creation and management of the Abrolhos FHPA

In December 1998, the (then) Department of Fisheries released a blueprint for the future management of the Abrolhos Islands - *Management of the Houtman Abrolhos System, Fisheries Management Paper No. 117*⁷. One of the key strategies for management was to declare the state territorial waters surrounding the Abrolhos Islands as a FHPA. The Abrolhos FHPA was created by the Minister for Fisheries in 1999 under section 115 of the FRMA for the purposes of:

- a. the conservation and protection of fish, fish breeding areas, fish fossils or the aquatic eco-system
- b. the culture and propagation of fish and experimental purposes related to that culture and propagation
- c. the management of fish and activities relating to the appreciation or observation of fish.

The *Houtman Abrolhos Islands Management Plan, Fisheries Management Paper No. 260*⁸, was released in November 2012. The 2012 management plan applied to both the Abrolhos Reserve (which, prior to the National Park included all islands) and the FHPA. Following the creation of the National Park in July 2019, a new planning framework was introduced following the release of State Government's Strategic Direction in 2020.

The Houtman Abrolhos Islands FHPA Management Plan 2022 – 2032 (this management plan), together with the Houtman Abrolhos Islands Reserve Management Plan 2022 – 2032, replace the Houtman Abrolhos Islands Management Plan 2012.

DPIRD's role in the management of the Abrolhos FHPA

DPIRD administers the *Fish Resources Management Act 1994* (FRMA), the *Fish Resources Management Regulations 1995* (the Regulations) and other associated subsidiary fisheries legislation such as commercial fishery management plans, and orders and notices.⁹

The objects of the FRMA are to:

- a. *develop and manage fisheries and aquaculture in a sustainable way.*
- b. *share and conserve the State's fish and other aquatic resources and their habitats for the benefit of present and future generations.*

⁷ MANAGEMENT OF THE HOUTMAN ABROLHOS SYSTEM - Fisheries Management Paper 117

⁸ [The Houtman Abrolhos Islands Management Plan 2012 \(fish.wa.gov.au\)](http://fish.wa.gov.au)

⁹ <http://www.fish.wa.gov.au/About-Us/Legislation/Pages/default.aspx>

DPIRD's primary role in the management of the Abrolhos FHPA is to sustainably manage aquatic organisms and aquatic resources (targeted fish species) and is committed to-

1. using a risk-based approach to ensure the key elements of the aquatic ecosystem are maintained
2. ensuring that management systems are robust, effective and work to facilitate development by:
 - a. scientifically assessing the risks to our fisheries and aquatic resources and publishing the State of the Fisheries annual report.
 - b. developing and reviewing legislation, regulation, policies and plans to ensure management arrangements continue to respond appropriately to resource level risks, including to those habitats on which fisheries production depend.
 - c. working with stakeholders to support the delivery of sustainable aquatic resource outcomes, including increased industry and community engagement in fisheries and marine compliance activities.
3. facilitating future opportunities for growth and value adding within the sustainable limits and optimal use of the aquatic resource.

In addition to managing the commercial, charter fishing and recreational take of fish, and aquaculture activities within the Abrolhos FHPA, DPIRD is the lead agency responsible for-

1. managing risks to the key values of the Abrolhos FHPA up to the high-water mark
2. licensing of aquatic eco-tourism (non-fishing) commercial operators
3. approving the location, installation, standards and use of marine-based infrastructure that support commercial fishing, aquaculture and marine tourism (including fishing charter) operations
4. compliance and enforcement.

The Aquatic Resources Management Act 2016 (ARMA) will replace the FRMA and the Pearling Act 1990 in the near future to become the primary legislation used to manage fishing and aquaculture activities, and aquatic resources in WA. New, separate regulations for the Abrolhos FHPA will be developed under the ARMA.

Whole of government management

State Government is committed to developing a collaborative, whole-of-government approach to managing the Abrolhos and creating sustainable economic opportunities.

Houtman Abrolhos Islands Strategic Direction 2020-24

State Government's Strategic Direction advocates for the development of a governance framework built on collaborative partnerships across key government agencies. It also supports an outwardly facing seamless management framework across the Abrolhos FHPA, Abrolhos Reserve and National Park.



Figure 10- Planning Framework for the Houtman Abrolhos Islands

Partner agencies

In addition to the FRMA (and ARMA in the future), all relevant state legislation applies to the waters of the Abrolhos FHPA. There are several partner agencies who, together with DPIRD, have areas of shared responsibility across the Abrolhos Islands.

Department of Biodiversity, Conservation and Attractions (DBCA)¹⁰

DBCA delivers services to support management of the National Park in accordance with the *Conservation and Land Management Act 1984* (CALM Act) and the *Biodiversity Conservation Act 2016* (BC Act). DBCA are also responsible for the protection of listed flora and fauna species, including marine species, across all tenures (including the Abrolhos FHPA) under the BC Act and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Cwlth).

Western Australian Museum (WAM)¹¹

WAM is responsible for the management of underwater cultural heritage and maritime archaeological sites in WA waters under the *Underwater Cultural Heritage Act 2018* (Cwlth) and *Maritime Archaeology Act 1973* (State). WAM also delivers services related to protecting, managing, and interpreting ‘Batavia shipwrecks and survivor camps 1629’ National Heritage listed sites under the EPBC Act.

Further information regarding WAM’s role in conserving maritime cultural heritage values in the FHPA is provided in Section 2.2 Cultural Heritage Protection.

¹⁰ <https://www.dbcwa.gov.au/>

¹¹ <https://museum.wa.gov.au/>

Department of Transport (DoT)¹²

DoT has lead responsibility for the administration of the *Marine Act 1982 (WA)* for ensuring the safety of all vessels in state territorial waters. DoT is also responsible for several functions including-

- vessel licensing
- mooring management and licensing
- marine environmental and vessel emergencies
- jetty standards and licensing.

Further information regarding DoT's role in managing these matters in the FHPA is provided in Section 2.4 Marine Tourism and Recreation and Section 2.5 Abrolhos Community.

City of Greater Geraldton (CoGG)¹³

The CoGG is the Local Government Authority for the Abrolhos Islands. CoGG is responsible for administering State and local law relevant to the Abrolhos Reserve and Abrolhos FHPA, particularly in relation to emergency management, building, waste and wastewater.

International obligations and Commonwealth legislation

Under the United Nations Convention on the Law of the Sea (UNCLOS), Australia has rights and responsibilities over 16 million square kilometres of ocean – more than twice the area of the Australian continent. Australia is signatory to several international treaties covering shipping, marine pollution and hazardous waste, safety at sea, underwater cultural heritage, biological diversity, trade of endangered species, migratory species protection, climate change and fishing. These obligations are recognised in Commonwealth and State law and apply to the Abrolhos FHPA. Further information regarding international marine treaties is provided on the DFAT website¹⁴.

There are several Commonwealth government agencies that administer legislation relevant to the marine environment in, and adjacent to, the Abrolhos FHPA. These agencies are responsible for management relating to protection of marine species and habitats, commonwealth marine parks, vessels and operators, safety at sea, marine pollution and maritime heritage-

- Australian Maritime Safety Authority (AMSA)¹⁵
- Department of Agriculture, Fisheries and Forestry (DAFF)¹⁶
- Department of Climate Change, Energy, the Environment and Water (DCCEEW)¹⁷
- Parks Australia
- Civil Aviation Safety Authority

¹² transport.wa.gov.au/imate/marine/marine-information.asp

¹³ cgg.wa.gov.au/

¹⁴ dfat.gov.au/international-relations/themes/environment-sea-law/

¹⁵ amsa.gov.au/

¹⁶ agriculture.gov.au/

¹⁷ dcceew.gov.au/

As Australia's national regulatory body, AMSA promotes maritime safety, protection of the marine environment and combats ship-sourced pollution. AMSA also provides the infrastructure for safety of navigation in Australian waters and maintains a national search and rescue service for the maritime and aviation sectors.

DCCEEW is responsible for ensuring protection for marine environments, conserving biodiversity and delivers the Australian Government's marine conservation priorities in accordance with the EPBC Act. It also responsible for administering the key national heritage law the under the EPBC Act.



Image 4- Coral Patches ROA. Credit: DPIRD.

Aquatic resources research and monitoring

DPIRD uses both fishery dependent (catch and effort information) and independent data (research projects, monitoring and assessment of stocks) to inform the management of aquatic resources and ecological attributes within the Abrolhos FHPA, and to further guide the development of future science and monitoring plans.

In 2022, DPIRD published the fisheries research report *Houtman Abrolhos Islands Fish Habitat Protection Area: A Summary of Marine Resource Use and Ecological Attributes* (FRR 321)¹⁸. FRR 321 complements this management plan by providing a summary of the ecological attributes of the Abrolhos FHPA, as well as a summary of research and monitoring data available relating to the use of aquatic resources.

Section 2.1 Nature Conservation and Protection and Section 2.3 Sustainable Fisheries and Aquaculture provide further information relating to DPIRD's approach to aquatic resource and ecosystem management, research and monitoring activities in the Abrolhos FHPA.

¹⁸ <http://www.fish.wa.gov.au/About-Us/Publications/Pages/Fisheries-Research-Reports.aspx>

Compliance and education

DPIRD undertakes regular compliance inspections in the Abrolhos FHPA to ensure fishing and aquaculture is being undertaken in accordance with legislation. DPIRD also runs education programs with various stakeholder groups to increase the levels of voluntary compliance and the community can also access a broad range of publications and information online.¹⁹ Our other responsibilities in the Abrolhos FHPA include providing at-sea marine safety compliance services on behalf of DoT.

Community stakeholders

The Abrolhos FHPA is a state asset owned by all Western Australians. DPIRD's primary objective is to manage unacceptable risks to the key six values of the FHPA for the benefit of current and future generations.

Within the WA community, there are several sectors with a key interest in the Abrolhos FHPA including:

- commercial fishers, the WA Fishing Industry Council and industry associations
- aquaculture operators, the Aquaculture Council of WA
- recreational fishers, Recfishwest
- fishing tour (charter fishing) operators, Marine Tourism Association of WA
- recreational boat owners, Boating WA
- Abrolhos Islands Body Corporate members (Abrolhos Reserve lease holders)
- tourists and regular visitors
- aquatic commercial eco-tourism (non-fishing) operators, Tourism WA and Tourism Council of WA
- local industry representatives
- conservation and heritage groups
- marine safety and volunteer rescue services
- researchers and research institutions.

Performance assessment

All actions in this management plan have been prioritised with timeframes for implementation. Priorities assigned to actions should be interpreted as:

Priority 1 (Very high):	Requires immediate implementation, or commencement
Priority 2 (High):	Action to be completed within one – two years
Priority 3 (Medium):	Action to be completed within five years
Priority 4 (Low):	Action to be completed within ten years
Ongoing:	Action implemented on an ongoing basis, or as required
N/A:	Supporting role

¹⁹ <http://www.fish.wa.gov.au/About-Us/Publications/Pages/default.aspx>

Importantly, some management actions may require additional targeted funding (over and above existing DPIRD resources). Progress towards achieving the management objectives and actions will be demonstrated by regular monitoring, evaluation and reporting to investigate the effectiveness of management actions and identify opportunities for improvement.

This management plan will be subject to annual monitoring as well as a five-year mid-cycle review commencing in 2027 and will be in place for the next ten years or until it is formally reviewed and updated.



Image 5- Commercial rock lobster gear and jetties, Easter Group. Credit: DPIRD

1.4. Key values and management objectives

DPIRD's primary focus is to ensure that the key elements of the marine ecosystem of the Abrolhos FHPA are maintained and that aquatic resources are managed within sustainable limits. Additionally, DPIRD aims to achieve marine-based tourism management outcomes in the Abrolhos FHPA by mitigating risks to key values, aligning with State Government's aspirations and achieving an appropriate balance between the needs of nature, visitors, and workers.

A low impact and light touch approach to marine-based tourism and visitation is supported, with a view to complementing existing visitor experiences at the islands.

The management focus for marine tourism and recreation described in this management plan applies to both the current and potential growth in marine-based tourism in the Abrolhos FHPA.

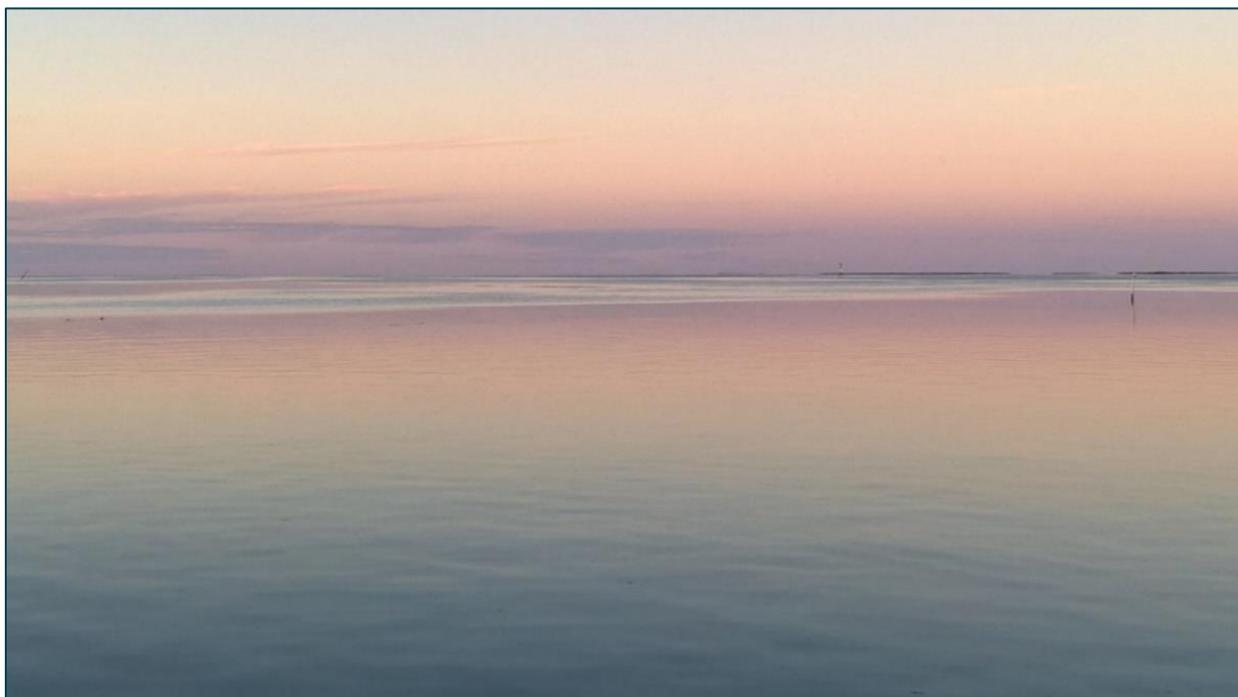


Image 6- Sunset colours, Rat Island Easter Group. Credit: DPIRD, M Killick

Table 1 below sets out DPIRD's management focus based on the key values identified in the Abrolhos FHPA. The key values are categorised in accordance with the six key initiatives as set out in State Government's Strategic Direction.

Table 1: Abrolhos FHPA key values and management objectives

Key Values	Management Objectives
<p>Natural (Section 2.1) Aquatic organisms, resources and habitats Marine biosecurity Mangrove communities Marine mammals, reptiles and seabirds/shorebirds Broader marine environment and climate Sense of place – pristine and natural wilderness</p>	<p>Identify and manage the impacts of FHPA users and marine-based infrastructure on marine-based natural values.</p> <p>Identify and manage the impacts of FHPA users on the land-based natural values and the broader environment of the Reserve and National Park.</p>
<p>Cultural Heritage (Section 2.2) Shipwrecks and maritime history Guano mining heritage Defence Tourism Abrolhos community Ancient and modern indigenous cultural heritage Sense of place – culture and history</p>	<p>Identify and manage the impacts of FHPA users on cultural heritage values in the FHPA, Reserve and National Park.</p>
<p>Fishing and Aquaculture (Section 2.3) Sustainable aquatic resources Viable commercial fishing, charter fishing and aquaculture activities High recreational fishing amenity Supply of local seafood Regional economic benefit and employment Local and family run businesses Strong understanding and stewardship of the marine environment Sense of place - unique workplace, way of life</p>	<p>Support the sustainable management of commercial, recreational and charter wild-capture fisheries and viable aquaculture activities that are consistent with management objectives and the conservation of key values in the Abrolhos FHPA.</p>

Key Values	Management Objectives
<p>Marine Tourism and Recreation (Section 2.4) Rich marine biodiversity and extraordinary marine wildlife experiences Remarkable shipwreck and maritime history Recreational and charter fishing opportunities Diving and snorkelling, surfing, stand-up paddleboarding, kayaking, windsurfing and kitesurfing Local residents and industries Sense of place – experiences, remote and rugged wilderness</p>	<p>Enhance and facilitate a diverse range of marine-based recreational opportunities for visitors that will complement the destination as a low-impact, ecologically sustainable, nature-based visitor experience.</p> <p>Ensure future public and private marine tourism infrastructure is appropriate and located in key areas to support land-based tourism.</p> <p>Promote awareness of the preparation and knowledge required to visit the Abrolhos FHPA safely.</p> <p>Facilitate the establishment of licensed marine-based aquatic eco-tourism commercial tourism operations that provide extraordinary visitor experiences while minimising impacts on the key values of the FHPA, Reserve and National Park.</p>
<p>Abrolhos Community (Section 2.5) Significant marine biodiversity asset owned and shared by the WA community Abrolhos Reserve residents' community – long term employment, social and family connections, way of life Long term marine-based charter fishing and eco-tourism operators - employment, way of life Recreation visitors – recreational fishing and appreciation of the marine environment, amenity and lifestyle Strong community understanding and stewardship of the marine environment Sense of place – lifestyle, belonging, affinity</p>	<p>Build strong relationships with the Abrolhos community and increase awareness and stewardship of the Abrolhos FHPA across the wider community.</p> <p>Implement a management and licensing framework designed to improve safety, standards and maintenance of commercial marine fishing and aquaculture infrastructure in the FHPA.</p>
<p>Governance (Section 2.6) Appropriate resources, funding and revenue Contemporary and transparent policy and legislation Knowledge and experience of stakeholders Meaningful consultation and engagement Effective cross-government collaboration Consistent management across tenures Streamlined management and administration</p>	<p>Identify funding and resources required to effectively achieve State Government's strategic direction for the Abrolhos FHPA.</p> <p>Ensure that FHPA legislation and policy is contemporary and fit for purpose, and that decision-making processes are consistent and transparent.</p> <p>Work with partner agencies to apply a cooperative inter-agency management approach that will facilitate seamless management across all tenures.</p>

2. Strategic Priorities

2.1. Marine Nature Conservation and Protection

Protect, promote, and educate the community on the unique marine environment of the Abrolhos.

Houtman Abrolhos Islands Strategic Direction 2020-24

Natural marine values

The Abrolhos FHPA is home to a diverse and unique range of temperate and tropical marine species, due to its southern geographical location (28 to 29° S) and the influence of the warm Leeuwin Current. The FHPA supports the southernmost coral reef system in the Indian Ocean and one of the highest latitude coral reef systems in the world.

Aquatic organisms and habitats

More than 380 species of finfish have been reported in the Abrolhos FHPA, with a mixture of approximately 66% tropical, 21% warm temperate and 13% subtropical species. Common demersal (bottom dwelling) species at the Abrolhos FHPA include groper (e.g., baldchin and eightbar), dhufish, emperors (e.g., redthroat and spangled), snappers (e.g., pink, stripey, rosy and moses), rockcods (e.g., breaksea and rankin), coral trout and sweetlips.



Images 7 and 8- Baldchin groper (Choerodon rubescens) and juvenile WA dhufish (Glaucosoma hebraicum). Credit: DPIRD.

Pelagic (water column) species include mackerels (e.g., Spanish, school, grey and shark), tunas (e.g., bigeye, longtail, yellowfin and mackerel), yellowtail kingfish, amberjack, cobia and samsonfish. Species of sharks found in the Abrolhos FHPA include port Jackson, wobbegong, common blacktip, dusky, grey nurse, white, lemon, carpet, bull, sandbar and tiger sharks. Skates and rays include short-tail (smooth) stingrays, manta and shovel nose rays are also found. Pelagic migratory shark species can also be found, including hammerhead, oceanic white tip, mackerel, thresher and whale sharks.

Nearshore species include buff bream, herring, trevallies, garfish, longtom and barracuda. Smaller colourful reef fish add to the beauty of the coral reefs such as damselfish, butterflyfish, cardinalfish, wrasse, porcupine fish and parrotfish. Seahorses and pipefish (Syngnathids) can be seen residing in seagrass and macroalgae habitats.



Images 9 and 10- Tiger shark (*Galeocerdo cuvier*) and green moon wrasse (*Thalassoma lutescens*). Credit: DPIRD.

Over 490 mollusc species have been recorded in the Abrolhos FHPA. Molluscs include octopus, cuttlefish and squid (cephalopods), saucer scallops, oysters and clams (bivalves) and gastropods including conch, whelk, cone and cowry shells. Nudibranchs and sea hares are also included in the mollusc group of marine fauna. More than 170 echinoderm species have been identified in the Abrolhos FHPA, including sea cucumbers (holothurians), featherstars and sea lillies (crinoids), sea stars (asteroids), brittlestars (ophiuroids) and sea urchins (echinoids).

The Abrolhos FHPA plays a vital role as a major habitat for the spawning stock of western rock lobster (*Panulirus cygnus*). Eggs and larvae from the Abrolhos FHPA and the deep-water refuges further north along Big Bank are thought to be distributed by ocean currents along the west coast. Other crustaceans found in sand habitat include western king and coral prawns and crabs.



Images 11 and 12- Western rock lobster *Panulirus cygnus* and *Godiva* sp. nudibranch, Credit: DPIRD.

The coral fauna of the Abrolhos FHPA is diverse for a high-latitude reef system, with over 180 species from 42 genera discovered so far. The FHPA is home to the Octocorals, including fleshy soft corals - gorgonian (sea whip) corals, organ pipe corals, sea fans and sea pens. Sea anemone (Actinariid) communities are common including the bubble tip anemone which is home to the Clark's anemone fish. Sea sponges can also be found attached to rocky substrate, either by a holdfast or an encrusting mass. Most sea sponges in the Abrolhos FHPA are 'demosponges' although some calcareous sponge species can be found. Tunicates (ascidians) known as sea squirts can also be found attached to rocky substrate.

The hard (Scleractinids) corals are reef builders and include branching, encrusting, plate corals and brain corals, with the Abrolhos FHPA recognised for its high percentage of branching *Acropora* species.



Images 13 and 14- *Acropora* sp. and coral and algae mix, Pelsaert Group. Credit: DPIRD, Shannon Conway

Around 295 species of marine plants have been recorded in the Abrolhos FHPA including a mixture of species from both tropical and temperate origins. Many marine plant species are at the northernmost or southernmost extent of their distribution, with almost 17% being endemic to the area. Brown, red and green macroalgae species mix with tropical coral communities in a unique display of marine biodiversity. Seagrasses are flowering plants and are generally located in protected, shallow sand and silt habitats up to 15 m in depth. The predominant species of seagrasses occurring in the Abrolhos FHPA include *Posidonia australis*, *Amphibolis* sp. and *Halophila* sp.

Marine mammals, reptiles and sea/shorebirds

Dolphin species are present in the Abrolhos FHPA all year round. The most common species is the bottlenose dolphin (*Tursiops truncatus*), but other species found at the Abrolhos include striped (*Stenella caeruleoalba*) and common dolphins (*Delphinus delphis*). Turtles are regularly observed in the Abrolhos FHPA. Resident green turtles forage in and around the Abrolhos FHPA reefs. Sea snakes are not residents in the Abrolhos FHPA, but during strong winter storms they may be transported south from Shark Bay and other northern areas.



Images 15 and 16- Dolphins and green turtle. Credit: DPIRD, Ann Storrie, Shannon Conway.

The main whale species seen in the Abrolhos FHPA are the humpback and southern right whales. Sightings of humpback whales are between April and October each year, during their annual northward breeding migration and return journey to Antarctica.

The Abrolhos Islands also mark the northern-most habitat and breeding location of the Australian sea lion (*Neophoca cinerea*). Australian sea lions feed on fish, western rock lobster, octopus and occasionally sea birds. They can dive to depths of up to 150 m in search of their prey. Often, they can be seen on sandy beaches throughout the islands.



Image 17- Australian sea lion (*Neophoca cinerea*). Credit: DPIRD, Shannon Conway.

The Abrolhos Islands are one of the most significant seabird nesting areas in the eastern Indian Ocean. Over two million seabirds and migratory shorebirds roost and breed on the islands and small rocky atolls. Schools of pelagic baitfish in the waters of the Abrolhos FHPA provide an important food source.

A total of 95 bird species have been recorded as residents or visitors to the islands, such as the Australian lesser noddy, common noddy, wedge-tailed shearwater, little shearwater, roseate tern, fairy tern, and sooty tern.

The mix of bird species is unique, as subtropical and tropical species, and littoral and oceanic foragers, share the breeding islands. The sandy beach habitat on some of the intertidal areas of the Abrolhos FHPA also provide important feeding habitat for a variety of migratory shorebird species, and nesting habitat for some seabirds.

Mangrove communities

Mangroves are coastal plants which live in the upper intertidal zone within the Abrolhos FHPA. A single mangrove species, the grey mangrove (*Avicennia marina*), occurs in the Abrolhos FHPA. The grey mangrove provides an important source of nutrients for marine food chains, in addition to habitat for both terrestrial and marine animals. Mangroves also protect the island shoreline from storm damage and erosion. Extensive stretches of mangroves can be seen on Pelsaert Island (Pelsaert Group), Wooded Island and Morley Island (Easter Group).



Image 18- Abrolhos mangroves (Avicennia marina) Pelsaert Group. Credit: DPIRD

Aquatic biosecurity

Biosecurity refers to measures aimed at preventing the introduction and/or spread of organisms that are harmful to native animals and plants. The introduction and spread of aquatic pest species into and around WA waters through biofouling, or in a ship's ballast water, can harm fisheries, threaten healthy fish habitats and have widespread economic and health effects. All vessels travelling to, from and within, WA waters, regardless of their size or frequency of visits, pose a risk to the state's aquatic environment. Several marine pests have been identified in WA waters, primarily mollusc and crab species.

The marine pest, *Didemnum perlucidum*, also known as the white colonial sea squirt, is now widely established in many ports, marinas and other locations in WA. In 2015, *D. perlucidum* was identified on several pearling lines and moorings in the Abrolhos FHPA. A trial was undertaken to eradicate *D. perlucidum* but this was unsuccessful due to very heavy re-infection of treated infrastructure from newly discovered pearling lines, and lines below the safe diving depth of 30 m.

Broader marine environment, weather and climate

The three main island groups are located on separate limestone platforms up to 36 m thick separated by deep channels. North Island, which is the northernmost island at the Abrolhos, is on the same carbonate platform as the Wallabi Group. Each platform has a fringing reef system, with a windward reef on the southern and western sides and a leeward reef on the eastern side. Most of the islands in the Abrolhos have formed within the central lagoons or on the eastern reefs.

The Abrolhos FHPA has a history of higher nutrient levels than coastal waters at Geraldton. There are a number of theories for this, including nutrient upwelling (a phenomenon where dense, cooler and nutrient-rich water is driven from the depths toward the sea surface, replacing warmer, nutrient-poor surface water) and an abundance of seagrass detritus. Tides alternate between diurnal and semi-diurnal (two tide cycles per day), though they are predominantly diurnal (one high tide and one low tide per day). The daily tidal range is low - about 0.8 m between high and low tides.

Sea surface temperatures range between a monthly mean of 20° C in September and a maximum of 27.3° C in March. This is mainly due to the Leeuwin Current which runs in a southerly direction bringing warm tropical water through the Abrolhos FHPA. Between the islands, ocean currents are highly variable. Because of its location near the edge of the continental shelf, bathed in the Leeuwin current, water temperatures in the Abrolhos FHPA are warmer than in coastal waters near Geraldton.

Whilst wave heights can average about two metres in the open ocean near the Abrolhos Islands, within the island groups they are lower, dampened by the shallow reefs and islands. Despite this, the Abrolhos FHPA is a high energy environment given the combination of wind and swell. The Abrolhos Islands are subject to strong winds, with calmer conditions mostly in autumn and early winter, coinciding with the peak visitation period. The prevailing winds are from a southerly direction, and these are strongest in summer.

There is a weather station based on North Island which has been recording temperature and rainfall data since 2000. Based on the data collected at North Island to date, the Abrolhos Islands receive a mean annual rainfall of 270 mm, with the majority falling between May and August. At least one mm of rain falls annually on average over 41 days, mostly between June and August. The warmest mean maximum air temperature of around 28°C is recorded in February and March, while the coolest mean maximum air temperature of 21°C is recorded in July and August. The minimum air temperature in winter can reach 15°C.

The Abrolhos Islands are occasionally subject to cyclone activity during the cyclone season from December to May, with more than half the recorded cyclones occurring between March and May. The most recent cyclone (Seroja) passed to the east of the Abrolhos Islands making landfall just south of Kalbarri in April 2021. Prior to this, cyclone Elaine crossed the coast to the east of the Islands between Kalbarri and Geraldton on 18 March 1999 and cyclone Herbie made landfall at Denham on 21 May 1988.

Potential threats and impacts

Table 2: Potential threats and impacts to natural marine values in the FHPA

Potential Threat	Impact to Natural Values
Inappropriate management measures	
Increased recreational visitation and commercial marine tourism in priority marine areas	General marine ecosystem disruption and trophic disturbances
Unmanaged site selection, design, installation and use of marine infrastructure	
Adverse interactions with endangered, threatened and protected species (protected fish, marine mammals, reptiles and shore/seabirds)	Degradation and loss of marine benthic habitat (coral, seagrass, macroalgae)
Untreated sewage discharge into the FHPA	Reduced water quality, pollution
Hazardous material spills into the FHPA	Eutrophication (excessive plant and algal growth)
Unmanaged disposal of biodegradable (e.g., food) waste into the FHPA	Increased pressure on fish and aquatic resources
Disposal of non-biodegradable waste into the FHPA	Physical interactions with wildlife causing stress, injury and death
Introduction of marine pests and disease	Changes in wildlife behaviour and breeding
Unmanaged anchoring in priority benthic habitat, illegal removal of coral for navigation purposes	Lights and noise from boats and marine-based facilities causing wildlife disturbances and stress
Unmanaged marine-based activities in priority areas (snorkelling, diving, surfing, windsurfing, kitesurfing, kayaking, jet skis, beaching tenders)	Potential human health risks from bacterial/viral loading in shellfish
Unregulated landing of seaplanes and boat planes	Marine species health risks and fish kills
Climate change and extreme weather events	Shoreline erosion and intertidal zone damage
Gaps in knowledge of the impacts of users on FHPA values	Damage to mangrove communities
Outdated FHPA visitor information and lack of awareness of the importance of protecting and conserving the marine environment	

Current and future management

The creation of the Arolhos FHPA provides the Minister for Fisheries with the power to regulate any matter necessary for the protection or management of the FHPA. This includes managing marine-based activities that may adversely affect the natural values of the Arolhos FHPA and adjacent islands.

Marine habitat and ecosystem management

For management and science purposes, DPIRD assigns aquatic resources into bioregions and depth range categories. The Arolhos FHPA is located within the Central West Coast Area of the West Coast Bioregion (WCB), an area that extends between Kalbarri and Perth.

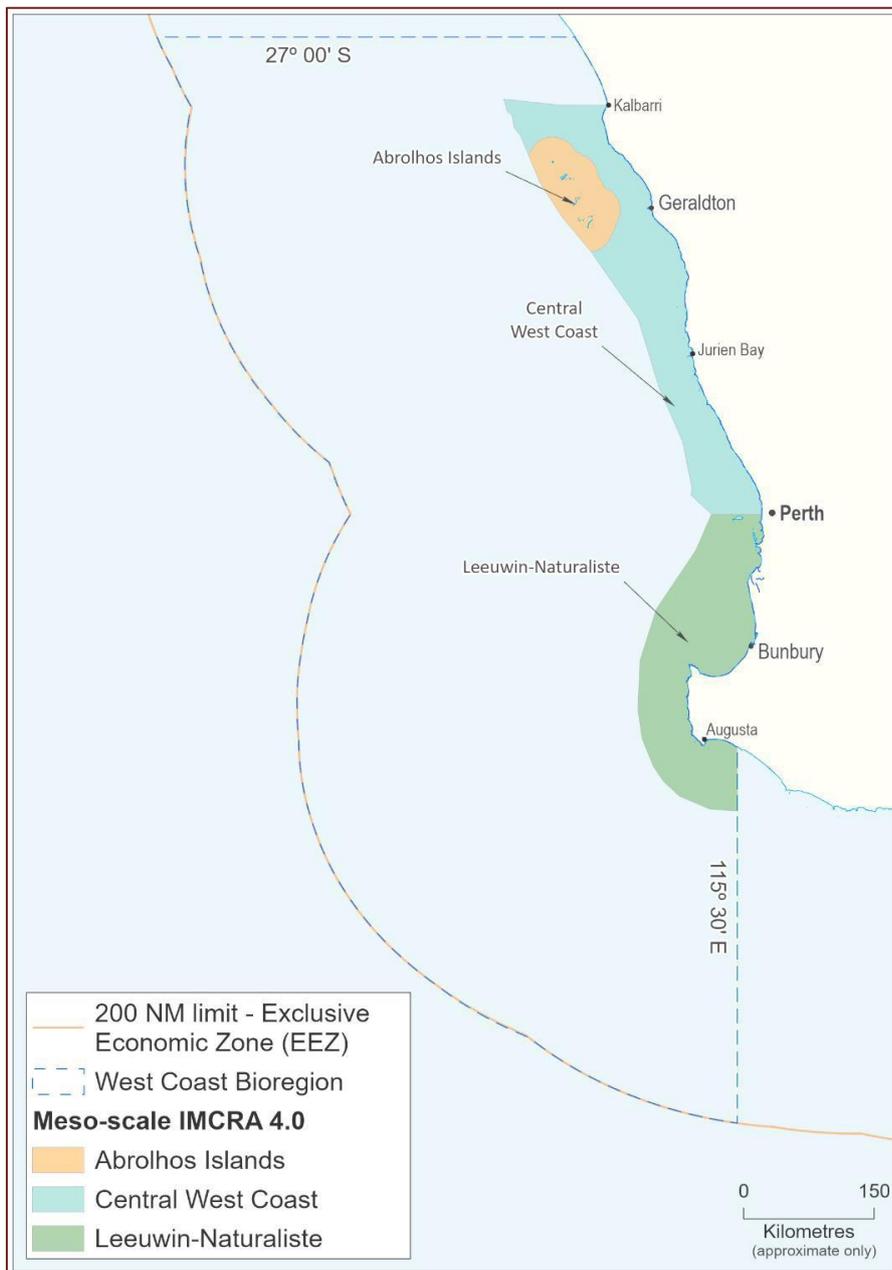


Figure 11- West Coast Bioregion and IMCRA 4.0 ecosystems

Assessment of risk

DPIRD adopts an Ecosystem-Based Fisheries Management (EBFM) approach to assesses the risk of fishing activities and external drivers on the broader marine ecosystem. A thorough appreciation of the nature and extent of the habitats a fishery operates across, and possibly impacts upon, is fundamental to the effective implementation of EBFM (de Lestang et al. 2019).

Ecological risk assessments (ERAs) are conducted by DPIRD as part of its EBFM framework. ERAs consider the potential ecological impacts of fisheries that either target, or have access to, aquatic resources and evaluate the impact of fishing on retained species, endangered, threatened and protected species (ETPs), habitats and the broader ecosystem.

Given its unique attributes, the risks to the marine habitat and ecosystem of the Abrolhos FHPA are assessed separately to the rest of the WCB. In 2021, DPIRD identified the current risk status for the marine habitat and ecosystem of the Abrolhos FHPA as 'medium'. A medium risk status requires that specific management be required, with a full performance report and regular monitoring.

The Abrolhos FHPA is home to a range of temperate and tropical marine species which has created a unique and highly valued biodiverse marine environment. Many species are at the most northern or southern range of their population distribution and are vulnerable to changes in climate that cause atypical fluctuations such as the flow and strength of the Leeuwin Current, an increased frequency of intense storms and cyclones, and increasing sea surface temperatures.

Some fish species such as invertebrates are highly sensitive to extreme events and climate change and have been, or are, impaired by these events. It is therefore important that EBFM recognises climate change impacts when considering fishing and other management controls in the FHPA. In 2021, DPIRD assessed the risk of climate change to the entire WCB in the long term to be 'high'. A high-risk status requires continued strong management actions or new / further risk control measures to be introduced in the near future, with full performance reporting and regular monitoring.

Some fisheries in the Abrolhos FHPA have also been assessed via third - party accreditation processes. These processes independently assess the risks posed by fishing activities on aquatic resources, as well as the marine habitat and ecosystem. DPIRD will continue to assess the risks posed by fishing activities on the marine habitat and ecosystem of the Abrolhos FHPA, in accordance with EBFM principles and third-party accreditation processes.

See [Section 2.3 Sustainable Fisheries and Aquaculture](#) for further information.

Management of risk

Several measures are in place to protect benthic (bottom dwelling) marine organisms in the FHPA that are essential to marine ecosystem function. The take of sea urchins, starfish, sea cucumber, gastropods and bivalves for a commercial purpose is prohibited unless a relevant commercial fishing authorisation is held. In addition, all persons are prohibited from taking soft corals (Anthozoans and Hydrozoans) and live rock or algae unless a relevant commercial authorisation is held. Hard (stony) corals in the Abrolhos FHPA are totally protected and must not be taken, except for small amounts for aquaculture broodstock and growout.

Section 2.3 Sustainable Fishing and Aquaculture provides further information relating to the current and future management of the take of aquatic resources in the Abrolhos FHPA (i.e., targeted fish species) by commercial fishers, fishing tour operators and recreational fishers, and the management of aquaculture operations.

The FRMA and associated fishing legislation currently includes measures to reduce risks from the impacts of fishing gear and activities on ETPs such as fish, marine mammals, reptiles and seabirds. These include the use of sealion exclusion devices in rock lobster pots in the Easter and Pelsaert Groups as well as fish and turtle exclusion devices in trawl gear. Whale entanglement mitigation strategies have also been implemented to reduce the amount of rope and floats used by fishers and eliminating surface floating rope in deeper waters (How et al. 2020).

In accordance with our primary role, DPIRD will continue to manage the risks posed by fishing activities on the marine habitat and ecosystem of the Abrolhos FHPA in accordance with EBFM principles and third-party accreditation processes.

The management of risks posed by non-fishing activities on marine habitats and ecosystems in the FHPA is described below.

Science and monitoring

DPIRD carries out long term habitat and ecosystem monitoring and research in the Abrolhos FHPA such as coral reef monitoring, habitat mapping, relative fish abundance and environmental monitoring. FRR 321²⁰ includes science and monitoring recommendations to support effective management of the marine ecosystem of the FHPA across all user groups.

To assist in conserving and protecting the natural values of the FHPA, DPIRD will develop, implement and support a science and monitoring plan specific to the aquatic resources and ecosystems of the FHPA that will-

1. update the Abrolhos FHPA Ecological Risk Assessment (ERA)
2. prioritise and support a habitat mapping and monitoring program (at an appropriate scale), particularly in the <30 m depth zone, to support ecosystem management
3. investigate management measures to further support areas of ecological significance in the Abrolhos FHPA (e.g., sensitive habitats and fish aggregations), especially in the <10 m depth zone
4. investigate the effectiveness of management arrangements and potential expansion to ensure adequate protection and representation across the entire Abrolhos FHPA.

²⁰ <http://www.fish.wa.gov.au/About-Us/Publications/Pages/Fisheries-Research-Reports.aspx>

The Abrolhos FHPA Science and Monitoring Plan will both complement and continue long term habitat and ecosystem research which has previously completed in the FHPA. For detailed information regarding DPIRD's research and monitoring activities in the Abrolhos FHPA please refer to FRR 321 and the annual State of the Fisheries report.

Reef observation areas

As discussed in [Section 1.3](#), the unique natural marine values of the Abrolhos Islands were formally recognised in 1994 with the creation of the ROAs, followed by the Abrolhos FHPA in 1999. ROAs were originally created to achieve a mix of marine conservation and tourism outcomes. ROAs have an important role to play in protecting priority areas of marine benthic habitat from risks associated with marine-based activities and infrastructure. Additionally, ROAs also provide for other non-fishing activities relating to education, appreciation of maritime heritage and the appreciation and observation of fish and their habitats.

*ROAs were created under fisheries legislation and are **not** sanctuary zones. Sanctuary zones are areas defined within marine parks and are managed by DBCA.*

The four existing ROAs account for 2.6% (64.3 km²) of the waters of the Abrolhos FHPA and include areas of high habitat diversity and species richness that were identified as deserving conservation and protection. Taking, or attempting to take, fish is prohibited in ROAs, except commercial rock lobster potting and recreational rock lobster potting or diving. The ROAs are located at:

1. North Island
2. Beacon Island (Wallabi Group)
3. Leo Island (Easter Group)
4. Coral Patches reef complex (Pelsaert Group)

Maps of each ROA are provided in [Figures 6-9](#).

The ROAs primarily cover shallow waters 0 - 10 m in depth but some can extend into deeper water up to 40 m. DPIRD does not grant aquaculture licenses for sites within ROAs. The boundary of the Leo Island ROA provides DPIRD with the opportunity to manage boat - based activities that may impact on the natural values of several priority islands in the National Park (Leo, White, Bynoe, Helms and Stokes Islands).

Given the existing ROAs were originally established over 25 years ago, DPIRD will conduct a review of ROAs in consultation with stakeholders. The review will include (but may not be limited to):

- determining the objectives of ROAs and principles for management as they relate to natural values.
- reviewing the existing ROA locations and boundaries to determine their effectiveness in protecting and conserving natural values.
- determining the activities in ROAs that will be restricted to protect the natural values in ROAs and on adjacent islands where relevant.
- considering the need for additional ROAs in identified priority marine areas.

While the objectives, principles and activities associated with ROAs will be reviewed with stakeholders, the future management arrangements for ROAs should align with the purposes of the Abrolhos FHPA (see [Section 1.3](#)) and the principles for marine tourism and recreation (see [Section 2.4](#) Marine Tourism and Recreation).

The existing ROA legislation was made in accordance with section 43 of the FRMA, which is focused around managing fishing activities. As there will likely be a need to further manage non-fishing activities in ROAs, the subsequent management arrangements will be moved to regulations to allow for better management of both fishing and non-fishing activities.

For further information relating to the role of ROAs in conserving maritime cultural heritage and marine tourism and recreation values, please refer to [Section 2.2 Cultural Heritage Protection](#) and [Section 2.4 Marine Tourism and Recreation](#).

Marine-based non-fishing activities

Marine-based non-fishing activities such as boating, anchoring, snorkelling, kayaking, surfing, kite surfing and wildlife viewing have the potential to impact on natural values by-

- disrupting the marine ecosystem and trophic balance (e.g., hand feeding and discarding food waste)
- degrading marine benthic habitat (damage to coral, seagrass, macroalgae)
- shoreline erosion, intertidal zone damage and damage to mangrove communities
- pollution (discharging waste, wastewater)
- physical interactions with wildlife causing stress, injury and death
- changes in wildlife behaviour and breeding impacts
- lights and noise from boats and other marine-based facilities causing wildlife disturbances and stress.

Most ETP species occurring in the Abrolhos FHPA are protected under international agreements, and/or Commonwealth and State legislation. DBCA manages the State legislation that protects mangroves and marine fauna. DCCEEW (and DBCA in WA for listed flora and fauna) administers the EPBC Act, national recovery plans and Australia's marine biodiversity obligations under international agreements. There are two national recovery plans that apply to the management of seabirds at the Abrolhos. One is for the Australian fairy tern and the other is a recovery plan for 10 species of seabirds, which includes the Australian lesser noddy. There are also State recovery plans in place for eight species of threatened migratory shorebirds that visit WA, seven of which visit the Abrolhos Islands.

DPIRD will support DBCA to achieve outcomes associated with state and national recovery plans that apply to marine species and birds occurring at the Abrolhos Islands. In consultation with stakeholders and wildlife experts, DPIRD will review the potential threats posed by marine-based (non-fishing) activities to the natural values of the FHPA, Reserve and National Park, and determine the measures required to manage risks.

Public moorings and anchoring

Recreational boat trips to the FHPA have increased in recent years. On average, more than 60% (over 1,000) of boat trips to the Abrolhos FHPA occur during the five-month peak visitation period between February and June. This short but intense visitation pattern is known to impact on the natural values of the FHPA and adjacent islands that experience high visitation.

Most anchoring (particularly overnight) by recreational visitors is undertaken near existing public mooring areas when public moorings are not available. Due to their size, very large private vessels (>30 m) are unable to use the public moorings and moor under their own anchor at sheltered locations. Anchoring in the FHPA (and ROAs) is not currently restricted. DPIRD relies on recreational boat-based visitors and commercial marine operators voluntarily complying with anchoring best practice to protect coral reef and seagrass bed habitats from damage by boat anchors and anchor chains.

The installation and maintenance of public (general use) moorings in the Abrolhos FHPA is carried out by DPIRD. Public moorings are currently installed in areas that are known to experience high visitation and to achieve several outcomes relating to benthic habitat protection, vessel safety and shelter, and supporting popular locations on islands in the National Park. Please refer to [Section 1.2](#) for maps displaying the locations of the 36 public moorings in the Abrolhos FHPA.

The location of the existing public moorings within (and nearby) ROAs recognises the need to protect priority benthic habitat from anchoring damage in areas that experience high visitation. While there is limited accessible sand/mud habitat in which to anchor in some ROAs, there are often sheltered sand/mud anchorages and public moorings located nearby.

During 2021, DPIRD engaged the services of Wavelength Consulting to undertake a mooring review and analysis in the Abrolhos FHPA. The final report²¹ indicated that the number of public moorings available in the Abrolhos FHPA is inadequate to support boat trip patterns during the peak visitation period, increasing the risk of anchoring on vulnerable benthic habitat such as coral and seagrass. The final report also provided recommendations relating to future demand, and additional moorings and anchorage locations.

In consultation with stakeholders, DPIRD will review existing high visitation locations in the FHPA to determine measures to protect benthic habitat from the impacts of anchoring including-

- identifying accessible and sheltered areas of sand/mud habitat for anchoring
- appropriate locations for additional moorings
- appropriateness of existing mooring locations
- no anchoring areas and designated anchoring areas where required.

Please refer to [Section 2.4 Marine Tourism and Recreation](#) for further information regarding public mooring and anchoring areas.

²¹ <https://yoursay.dpird.wa.gov.au/abrolhos-reserve-fhpa-draft-management-plans>

Risks to listed species ETP species arising from boats in mooring and anchoring areas (e.g., physical interactions, lights and noise) will also be assessed. Benthic habitat mapping information, together with the outcomes and recommendations of Wavelength Consulting's mooring review and analysis report will assist in guiding this review.

To protect the fragile marine benthic habitat and ecosystem of the Abrolhos FHPA, boat-based visitors are encouraged to continue to use public moorings when available. If no moorings are available, anchoring within the FHPA (including ROAs) in a depth of less than 30 m should only occur on soft bottom (i.e., sand/mud) using an appropriate anchor, except in circumstances of extreme weather or distress/safety of life at sea, or for the purposes of aiding persons, vessels or aircraft in danger or distress.

Soft bottom is the most effective substrate to reduce the risk of anchor drag. Anchors should be positioned to protect adjacent reef from scouring by anchor chains and ropes across the extent of their entire swing. There are many popular snorkelling and diving locations across the FHPA where sand/mud bottom is located nearby. Weather permitting, visitors are encouraged to anchor vessels of a length of 10 m or more in sand/mud bottom nearby and use a tender to reach points of interest, taking special care to anchor tenders in sand holes.

Hauling up tenders onto beaches should be undertaken carefully without damaging coral, and on islands with accessible sandy beaches that are clear of mangroves and nesting seabirds.

Private commercial marine infrastructure and use

DPIRD is responsible for approving the location, installation and design of privately owned commercial marine-based infrastructure in the Abrolhos FHPA (such as moorings, jetties, aquaculture infrastructure and fixed floating platforms).

Currently, applications from commercial fishing, aquaculture, fishing tour and tourism operators for marine-based infrastructure are assessed to ensure that the infrastructure type and location is appropriate and does not pose a serious risk to benthic habitat and other key natural values of the FHPA and adjacent islands. The existing application process for the design, installation and use of private jetties and moorings for commercial purposes will be reviewed in collaboration with DBCA and DoT to ensure it continues to include an appropriate assessment of potential impacts to natural values.

A more formalised assessment framework for the design, installation and use of fixed floating platforms (such as those used for marine tourism day use and overnight accommodation) will be developed to ensure risks to natural values are managed appropriately, particularly where they are proposed to be installed adjacent to priority islands in the National Park and Reserve.

Please also refer to [Section 2.4 Marine Tourism and Recreation](#) and [Section 2.5 Abrolhos Community](#) for marine infrastructure management relating to those strategic priorities.

Aquatic biosecurity

DAFF coordinates the management of threats to aquatic biosecurity at a national level.²² It is responsible for the *National Marine Pest Plan 2018 – 2023*, which applies to vessels, aquaculture, ports and marinas and offshore infrastructure. There are also national biofouling management guidelines for recreational vessels in place.

DPIRD administers aquatic biosecurity legislation in WA and is responsible for aquatic biosecurity policy, managing the translocation of wild fish, incident response, education, research and surveillance. DPIRD also educates boat-based users and aquaculture operators to reduce the risk of the introduction of marine pests.

In consultation with stakeholders, DPIRD will assess the threat to aquatic biosecurity posed by vessels translocating marine pests to the Abrolhos FHPA. The analysis will provide a baseline of the current pest biosecurity risk posed to the aquatic environment of the FHPA, with future projection of that risk based on the proposed installation of infrastructure and projected increase of visitation, vessel movements and diversity of port of origin. The outcomes of the analysis will guide the consideration of arrangements to manage risks as required, including the need to implement an Aquatic Biosecurity Management Plan for the Abrolhos FHPA following the commencement of ARMA.

DPIRD will also support DBCA to manage the risks to terrestrial biosecurity posed by boat-based visitors accessing the National Park.

Broader marine environment

The International Convention for the Prevention of Pollution from Ships (MARPOL Convention)²³ was developed by the International Maritime Organisation (IMO), of which Australia is a signatory. The IMO has legislated for pollution from ships travelling the world's oceans. It covers all forms of marine pollution, such as-

- oil
- noxious liquid substances
- harmful substances in packaged form
- sewage
- garbage (both biodegradable and non-biodegradable)
- air pollution

AMSA administers the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* (Cwth) and is responsible for ensuring the MARPOL Convention requirements are adhered to in Australian waters. AMSA releases marine orders relating to a range of marine environmental matters, all of which apply to Australian vessels. Further information regarding these requirements can be found on AMSA's website²⁴. The following therefore applies to vessels operating within the Abrolhos FHPA (i.e., within 3 nautical miles from land)-

- oil and all oily mixtures to be retained onboard for on shore disposal
- noxious liquid substances to be retained onboard for disposal
- all non-biodegradable garbage to be retained onboard for disposal
- **no** food waste discharge permitted

²² <https://www.marinepests.gov.au>

²³ <https://www.amsa.gov.au/marine-environment/marine-pollution/discharge-standards>

²⁴ www.amsa.gov.au/marine-environment/marine-pollution/discharge-standards

- fresh fish waste, including shellfish, produced during fishing or aquaculture activities are not considered as garbage and may be discharged
- **small** quantities of food released directly into the sea is permitted for the specific purpose of fish feeding in connection with fishing or tourist operations in certain areas
- **no** vessel sewage discharge permitted
- grey water that does not include noxious liquid or oil is permitted to be discharged

DCCEEW also administers legislation relevant to marine water quality such as the *Environmental Protection (Sea Dumping) Act 1981* (Cwth). There are also a range of state government agencies with legislative obligations to regulate discharges, waste, wastewater and pollution in the Abrolhos FHPA including-

- DoT
- DBCA
- DWER
- Department of Health (DoH)

CoGG as the Local Government Authority for the Abrolhos Islands administers state and local laws relevant to land-based sewage and effluent disposal into the FHPA from inhabited islands. Land-based and illegal marine-based sewage discharge into the Abrolhos FHPA is having an impact on the development of aquaculture ventures at the Abrolhos, particularly in relation to species being farmed for human consumption (e.g., edible shellfish). Improving wastewater management at the Islands is an important priority for Government for both environmental and public health reasons.

While DPIRD is not the lead agency for the management of pollution in the Abrolhos FHPA, regulations can be made to protect the Abrolhos FHPA from activities that impact water quality or have the potential to pollute the marine environment.

The need for such regulations will be reviewed and DPIRD will work with DoT to consider further educational tools to improve FHPA users' knowledge of the existing arrangements that are in place to manage marine waste, pollution and vessel sewage discharge requirements.

Information gaps and education

To ensure risks to natural marine values are managed to an appropriate level, DPIRD will implement strategies to improve the collection of data relating to FHPA users accessing the marine environment. DPIRD will also review and update all education material to promote community and visitor awareness of the importance of conserving and protecting natural marine values of the Abrolhos FHPA.

DPIRD will support DBCA to collect data from FHPA users who also access the National Park and to promote FHPA users' understanding of guidelines and requirements for interacting with wildlife including physical interactions, noise control and boat lights (see *National Light Pollution Guidelines for Wildlife*²⁵). DPIRD will also support DBCA to increase FHPA users' understanding of the importance of conserving the broader environment of the National Park.

²⁵ <https://www.awe.gov.au/environment/biodiversity/publications/national-light-pollution-guidelines-wildlife>

Management objectives and actions

Table 3: Nature conservation and protection – management objectives and actions

Action No.	Abrolhos FHPA – Nature Conservation and Protection	Relative Priority
<i>Management Objective 1: Manage the impacts of FHPA users and marine-based infrastructure on the natural values of the Abrolhos Islands FHPA</i>		
<i>Management Objective 2: Work collaboratively to identify and manage the impacts of FHPA users on the natural values and broader environment of the Abrolhos Islands.</i>		
2.1(1)	Work with DoT to develop educational products to improve FHPA users' knowledge of the existing arrangements managing marine waste, pollution and vessel sewage discharge in the FHPA.	1
2.1(2)	Conduct a review of ROAs in consultation with stakeholders. The review will include (but may not be limited to): <ul style="list-style-type: none"> determining the objectives of ROAs and principles for management as they relate to natural values reviewing the existing ROA locations and boundaries to determine their effectiveness in protecting and conserving natural values determining the activities in ROAs that will be restricted to protect natural values of the FHPA and adjacent islands considering the need for additional ROAs in identified priority marine areas. 	1
2.1(3)	In consultation with stakeholders, review existing high visitation locations in the FHPA to determine measures to protect benthic habitat from the impacts of anchoring.	1
2.1(4)	In consultation with DBCA and stakeholders, review the potential threats to the natural values of the FHPA, Reserve and National Park posed by marine-based (non-fishing) activities, and determine measures required to manage risks.	1
2.1(5)	Move new ROA management arrangements to the regulations following the completion of the ROA review.	2
2.1(6)	Assess the threat to aquatic biosecurity posed by vessels translocating marine pests to the Abrolhos FHPA to identify a baseline of the current pest biosecurity risk posed to the aquatic environment of the FHPA, and a future projection of that risk.	2
2.1(7)	Update Abrolhos FHPA education material to promote community and visitor awareness and understanding of conserving and protecting natural values.	2
2.1(8)	Investigate ways to improve the collection of data and information as it relates to FHPA users accessing the marine environment.	2

Action No.	Abrolhos FHPA – Nature Conservation and Protection	Relative Priority
2.1(9)	Implement a science and monitoring plan specific to the aquatic organisms, habitats and ecosystems of the Abrolhos FHPA.	2
2.1(10)	Continue to ensure that the installation and use of all marine infrastructure for commercial purposes (fishing, aquaculture and marine tourism) includes an appropriate assessment of potential impacts to natural values in the FHPA and adjacent islands in the Abrolhos Reserve and National Park.	Ongoing
2.1(11)	Continue to effectively manage the risks posed by fishing activities on listed species, marine habitat, and the broader marine ecosystem of the Abrolhos FHPA in accordance with EBFM principles and third-party accreditation processes.	Ongoing
2.1(12)	<p>Support DBCA to:</p> <ol style="list-style-type: none"> 1. achieve outcomes associated with state and national recovery plans that apply to marine species and shore/seabirds. 2. improve the collection of data and information for FHPA users accessing the National Park. 3. promote FHPA users' understanding of State and Commonwealth guidelines and requirements for interacting with wildlife in the National Park. 4. increase FHPA users' understanding of conserving the broader environment of the National Park. 	N/A

2.2. Cultural Heritage Protection

Protect, promote, and educate the community on the extraordinary cultural heritage of the Abrolhos.

Houtman Abrolhos Islands Strategic Direction 2020-24

Cultural heritage values

Early shipwrecks

Vessels have traversed up and down the coast of WA for more than 400 years. Many ships and lives have been lost over this time and it is estimated that up to 50 vessels may have been wrecked within the Abrolhos FHPA, some still to be located.

Batavia

Batavia was a Dutch East India Company (VOC) vessel on its way from the Cape of Good Hope to Batavia (modern day Jakarta). On 4 June 1629, *Batavia* hit Morning Reef in the Wallabi Group. The majority of its 316 passengers and crew made it ashore to some of the small islands on the eastern side of the Wallabi Group.

Jeronimus Cornelisz, who had been left in charge, had recruited a small band of men, who then brutally murdered 125 of their fellow survivors. Some of the victims were buried on what is now Beacon Island. Out of the 316 people aboard *Batavia*, only 116 survived. The wreck of *Batavia* was discovered in 1963 and extensive archaeological surveys and excavations have since been conducted, both in the water and on land. Most of the artefacts have been excavated and conserved by WAM.



Images 19 and 20- Anchor and cannon from Batavia, Beacon Island ROA, Easter Group. Credit: DPIRD, Shannon Conway.

Zeewijk

Zeewijk was also a VOC vessel sailing from the Cape of Good Hope to Batavia, which ran aground on Half Moon Reef in the Pelsaert Group on 9 June 1727. Many of the crew established a camp on nearby Gun Island. Using materials salvaged from their stricken ship, the crew of *Zeewijk* constructed a rescue sloop – the first ocean-going vessel built in Australia. On the 26 March 1728, the remaining 88 survivors from the original 212 crew set sail for Batavia in the rescue sloop. Only 82 crew survived to reach Batavia on 30 April 1728.

Many vessels involved in fishing and guano mining during the twentieth century ran afoul of the reefs including *Columbia* in 1929, off Rat Island. One man from *Columbia*, Giuseppe Benvenuto, drowned trying to swim to shore. His gravestone can still be seen on Rat Island.

Table 4: Significant ships wrecked within the Abrolhos FHPA more than 75 years ago

Shipwreck	Year Lost	Location	Cargo/Activity
<i>Batavia</i>	1629	Morning Reef Wallabi Group	Bullion, goods and silver
<i>Zeewijk</i>	1727	Gun Island Pelsaert Group	Goods, coin
<i>Ocean Queen</i>	1842	Half Moon Reef Pelsaert Group	Coin
<i>Venus</i>	1851	Half Moon Reef Pelsaert Group	Mail
<i>Hadda</i>	1877	Beacon Island Wallabi Group	Guano mining
<i>Marten</i>	1878	Pelsaert Island Pelsaert Group	Voyage - Fremantle to Darwin
<i>Ben Ledi</i>	1879	Pelsaert Island Pelsaert Group	Voyage - Sydney to Calcutta
<i>Windsor</i>	1908	Pelsaert Island Pelsaert Group	Sandalwood

Aboriginal connection

Little is known about Aboriginal cultural heritage values of the Abrolhos FHPA. A single artefact, excavated from Beacon Island in 1967, is the only known evidence of Aboriginal occupation at the Abrolhos Islands. Modern-day Aboriginal cultural heritage associated with the Abrolhos FHPA may include taking part in recreational, commercial fishing and aquaculture activities, in addition to employment in historical guano mining operations and defence activities (see below). At the time of writing, the Abrolhos Islands are not subject to any native title claim or determination. The Yamatji Nation Native Title Determination extends offshore from the mainland but does not incorporate the Abrolhos Islands.

Guano mining

When the Abrolhos Islands were surveyed in 1840 by Commander John Wickham and Lieutenant John Lort Stokes in HMS *Beagle*, their report identified guano resources on the islands. Guano is a natural fertiliser, predominantly made up of bird droppings, which was highly sought after in Europe and the United States at the time. The first commercial shipment of guano to leave the Abrolhos Islands was in 1844. The commercial guano industry was developed by the Pelsaert Fishing Company from 1847, and guano continued to be mined at the islands until 1946. At least five guano ships ran afoul of the reefs and sand bars in the Abrolhos FHPA, including the German barque *Hadda* in 1877. The remnants of buildings, jetties and tramways used for guano mining are still visible on many islands in the Wallabi, Easter and Pelsaert Groups.

In all, there are more than ten known stone guano jetty structures in the Abrolhos FHPA. One stone jetty on the north - eastern coast of Rat Island supports part of a fishing jetty that is still in operation today. Eight stone jetty structures located in the Pelsaert Group and one in Shag Bay off West Wallabi Island are adjacent to National Park land and provide a unique insight for visitors into how these structures were built and used in guano mining operations.



Image 21- stone jetty, Rat Island, Easter Group. Credit: DPIRD.

Early tourism

The Abrolhos Islands were considered ideal for tourism and recreation in the first half of the 20th century. Utilising the buildings constructed by the British Phosphate Commission for their guano mining operations during World War II, a fishing and tourist resort was established on Pelsaert Island. This resort was not particularly successful, due to the lack of fresh water supplies. Most of the resort has been demolished, though the construction materials can be seen forming parts of fishing shacks on other islands in the Pelsaert Group.

For more information on marine tourism and recreation values, please refer to [Section 2.4 Marine Tourism and Recreation](#).

Early fishing

In 1840, Commander John Wickham of HMS *Beagle* noted the plentiful and excellent quality of fish available in any quantity. Commercial fishing targeting finfish and shellfish and sealing and whaling operations commenced at the Abrolhos Islands during the 1840-50s. The Pelsaert Fishing Company operated from Middle Island in the Pelsaert Group. The Abrolhos Islands were noted as a potential commercial western rock lobster fishing site by the WA Government as early as 1904.

The western rock lobster industry started to develop in the 1920s, increasing during and after World War II because of a decision by the Defence Foodstuffs Administration in 1941 to supply canned lobster to canteens for the armed forces. Some of the first fishers' camps on the islands were constructed around this time and parts of these original camps still remain today. Today, the western rock lobster is WA's most valuable commercial fishery.

For more information on commercial and recreational fishing, charter and aquaculture values, please refer to [Section 2.3 Sustainable Fisheries and Aquaculture](#).

Abrolhos Community

The Abrolhos Community includes Abrolhos Reserve residents, commercial fishers/aquaculture operators in the FHPA and persons undertaking long-term/frequent commercial marine tour operations (charter fishing and eco-tourism).

The Abrolhos Community also includes other regular or long-term returning visitors (e.g., private recreational boat owners, recreational fishers). A detailed list of Abrolhos Community stakeholders is provided in [Section 1.3](#).

The unique cultural heritage of the Abrolhos residents continues today, with a rich history spanning 100 years. *Seeing Change: A Photographic Story from Abrolhos Fishers* (Shaw 2013) presents an intriguing insight into the Abrolhos residents, showcasing their past and looking to the future.

There are over 100 private commercial jetties adjacent to inhabited islands in the Abrolhos Reserve that are used to support commercial rock lobster fishing and aquaculture operations.

The jetties are recognised by DPIRD as structures that contribute to the unique cultural heritage of the resident community and its fishing history.

For more information on Abrolhos Community values, please refer to [Section 2.5 Abrolhos Community](#).



Image 22- Fishing and aquaculture community on the eastern coast of Rat Island, Easter Group. Credit, Tourism WA.

Potential threats and impacts

Table 5: Potential threats and impacts to cultural heritage values in the FHPA

Potential Threat	Impact to Cultural Heritage Values
Increased visitation to marine-based archaeological sites	Anthropogenic damage or loss of sites or artefacts
Illegal take of marine artefacts	Environmental damage or loss of sites or artefacts
Lack of visitor reports of new marine-based sites and artefacts	Gaps in collection/story associated with artefacts
Increased frequency of extreme weather events (storms, cyclones etc) because of climate change	Community unable to appreciate artefacts No expert identification and assessment of artefacts
Inadequate education of the marine-based cultural heritage values	Site or artefacts lost for future generations Lack of knowledge and appreciation for sites, history and Abrolhos community
Lack of visitor awareness of the social and cultural values of local residents and the Abrolhos community	Reduced community stewardship Lack of understanding of the need to protect cultural heritage

Current and future management

Shipwrecks and associated sites

DCCEEW is responsible for administering the key national heritage law under the EPBC Act, and manages the National Heritage List, which includes places of outstanding heritage value to the nation. *Batavia*'s wreck site and survivor camps were added to the National Heritage List in 2006²⁶ and *Batavia* has its own National Heritage Management Plan.

The (Commonwealth) *Underwater Cultural Heritage Act 2018* (UCH Act) is also administered by DCCEEW and automatically protects all shipwrecks or sunken aircraft older than 75 years that lie within Australian waters that extend from the low tide mark/Territorial Sea Baseline to the edge of the continental shelf and/or Exclusive Economic Zone (EEZ). Other UCH Act sites may be protected by Ministerial declaration. The UCH Act also protects all artefacts on land directly associated with historic shipwrecks²⁷.

WAM is responsible for maritime archaeological sites relating to shipwrecks and associated land sites at the Abrolhos Islands under the *Maritime Archaeology Act 1973* (State). The Chief Executive Officer of the WA Museum is delegated with certain provisions of DCCEEW's Ministers' powers to administer the UCH Act in WA. The historical and cultural environment of the Abrolhos Islands has been described in several publications by WAM (Green and Stanbury, 1988; Stanbury, 1991; Stanbury, 1993). WAM also published a draft management plan for the protection and use of historic shipwrecks and associated maritime heritage sites in the Wallabi Group in 2001.

The objectives of the *Batavia National Heritage Listing–Heritage Management Plan* are to identify, protect, conserve, present and transmit the National Heritage values of the *Batavia* (1629) Shipwreck and Survivor Camps National Heritage Listed area. DPIRD will support WAM to conserve the underwater cultural heritage sites in the FHPA and assist in managing risks to these sites.

The Beacon Island ROA in the Wallabi Group includes both wreck sites of *Batavia* and *Hadda*. The review of ROAs detailed in [Section 2.1](#) will include an evaluation of the need for additional management to manage risks to maritime heritage sites in the Beacon Island ROA and impacts from FHPA users accessing adjacent islands (Beacon, Traitors and Seal Islands).

Aboriginal connection

It is noted that future research at the Abrolhos Islands may uncover further evidence of Aboriginal occupation. DPIRD will support relevant organisations and local Aboriginal people to explore and research past and present aboriginal connections to the Abrolhos FHPA.

²⁶ <https://www.dcceew.gov.au/parks-heritage/heritage/places/national/batavia>

²⁷ <https://www.dcceew.gov.au/parks-heritage/heritage/publications/underwater-cultural-heritage-compliance-strategy>

Protecting local cultural heritage places

The National Trust of Western Australia works to raise knowledge, awareness, understanding and commitment to WA's natural and cultural heritage. It also establishes and administers heritage appeals on behalf of local governments and community groups to raise funds for conservation and interpretation of WA's heritage. The Heritage Council of WA is State Government's expert body on WA's cultural heritage significance as vested under the *Heritage Act 2018*. The Heritage Council makes key decisions on places to be entered into the State Register.

The Houtman Abrolhos Marine Area (03387) has been nominated and assessed for inclusion in the State Heritage Register but is not yet registered. DPIRD will support progressing the listing of the Houtman Abrolhos Marine Area, and assist in identifying sites that require further assessment, listing and protection in the FHPA.

Guano mining jetties

The guano mining jetties are a tangible reminder of the Abrolhos FHPA's cultural heritage and are at risk to damage and loss caused by inundation and exposure to the harsh weather conditions and storms/cyclones. It is important to preserve these fragile structures from further damage by FHPA users, while allowing for the continued appreciation of these structures and their story.

DPIRD will create eight guano mining heritage sites adjacent to National Park land, one located adjacent to northwest West Wallabi Island and another seven sites adjacent to six islands in the Pelsaert Group (refer to maps at [Appendix 1](#)). Each area will be zoned as *Special Marine Use Area – Cultural Heritage*. The sites will be protected by a buffer zone that will only allow for activities that will reduce the risk of further human-related damage to the stone jetty structures.

The extent of the buffer zones and the permitted activities within the sites will be finalised in consultation with WAM, DBCA and stakeholders.

Abrolhos community

The stories and history of the Abrolhos Islands is tightly interwoven into the cultural heritage of the Abrolhos community and forms a significant part of the appeal of visiting the Abrolhos Islands.

DPIRD recognises the importance of maintaining the unique cultural heritage values of the Abrolhos community and understands that the cultural heritage of the islands' residents is of interest to the broader community, visitors and tourists.

DPIRD will investigate ways to promote the importance of the Abrolhos community's cultural heritage to the wider community through education and interpretation. This is an important step to increase the awareness, understanding and appreciation of the unique cultural heritage and values of the Abrolhos community.

For more information on preserving Abrolhos community values, please refer to [Section 2.5 Abrolhos Community](#).

Management objectives and actions

Table 6: Cultural heritage protection – management objectives and actions

Action No.	Abrolhos FHPA – Cultural Heritage Protection	Relative Priority
<p><i>Management Objective:</i> <i>In collaboration with DBCA, WAM and stakeholders, identify and manage the impacts of FHPA users on cultural heritage values in the FHPA, Reserve and National Park.</i></p>		
2.2(1)	<p>In consultation with WAM, DBCA and stakeholders:</p> <ol style="list-style-type: none"> 1. determine the appropriate management measures required to manage risks to guano mining jetties in the <i>Special Marine Use Area – Cultural Heritage</i> sites 2. consider the need for additional <i>Special Marine Use Area – Cultural Heritage</i> sites over the life of this plan 	1
2.2(2)	<p>During the review of ROAs detailed in Action 2.1(2), evaluate the need for additional management to manage risks to <i>Hadda’s</i> wreck site and <i>Batavia’s</i> heritage sites in the Beacon Island ROA and on associated islands (Beacon, Traitors and Seal Islands).</p>	1
2.2(3)	<p>In consultation with WAM and DBCA, assess and manage the risks posed by FHPA users accessing key land-based heritage sites in the National Park.</p>	1
2.2(4)	<p>Implement regulations for eight new <i>Special Marine Use Area – Cultural Heritage</i> sites (refer to Appendix 1) following the completion of Action 2.2(1) above.</p>	2
2.2(5)	<p>Assist in the development of community education programs and interpretation material to increase awareness, understanding and appreciation of the unique cultural heritage values in the FHPA, Reserve and National Park.</p>	2
2.2(6)	<p>Engage WAM when planning for the installation of any new public or private commercial marine-based infrastructure located within an agreed distance from key maritime heritage sites in the Abrolhos FHPA.</p>	Ongoing
2.2(7)	<p>Support WAM to progress listing the Houtman Abrolhos Marine Area on the State Heritage Register and identify sites that require further assessment, listing and protection in the FHPA.</p>	N/A

2.3. Sustainable Fisheries and Aquaculture

Support the development of sustainable wild-capture fisheries and commercially viable aquaculture industries.

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The significant contribution that the state's fishing and aquaculture sectors make to WA are acknowledged in the state's *Primary Industries Plan 2020 – 2024*. The role of the many stakeholders that work with DPIRD to achieve sustainable fisheries, valuable industries and healthy ecosystems remain an invaluable part of the ongoing successful management of fisheries in WA (Gaughan and Santoro 2021).

Recreational fishing values

Recreational fishing is a popular activity in the Abrolhos FHPA, providing important social and economic benefits to the community. Recreational fishers target a range of demersal scalefish species in the Abrolhos FHPA including WA dhufish, pink snapper, baldchin groper, breaksea cod, redthroat and spangled emperors. Rock lobster and squid are also highly sought after, as well as pelagic species such as mackerel, tuna and samsonfish.

The participation rate of WA's population in recreational fishing was estimated to be 25.4% in 2017/18 and the estimated number of recreational fishers in 2018/19 was 619,000 (DPIRD 2018). Recreational fishing activities support a wide range of local businesses and the expenditure attributable to recreational fishing in WA was estimated at \$2.4 billion in 2015/16 (Lindner and McLeod 2019).

Recreational fishers often have important catch-related motives such as fishing to 'obtain a feed' or 'for fresh seafood' (Ryan et al. 2019). However, there are also significant social benefits from recreational fishing. Recreational fishers also have non-catch related motives (e.g., 'to relax and unwind', 'to be outdoors', 'for solitude', or 'to be with family and friends') as their primary motive for fishing (Henry and Lyle 2003).



Images 23 and 24- Samsonfish (*Seriola hippos*) and WA dhufish, Abrolhos FHPA. Credit: DPIRD, Neil Sumner.

Fishing tour (charter fishing) values

Fishing tour operators in the Abrolhos FHPA provide a valuable recreational and tourism service to the community, providing a platform from which any recreational fisher can enjoy fishing (and other) activities. The Abrolhos FHPA has long been a destination of choice for the fishing tour operator industry due to the unique and diverse experience it provides.

The Abrolhos FHPA is located within the West Coast Zone of the WA Fishing Tour Operator Fishery (WAFTOF), an area between Augusta in the south to Kalbarri in the north. Over 5,000 clients participate in licenced fishing tours to the Abrolhos FHPA annually, also enjoying a range of eco-tourism activities in addition to fishing. Fishing tours can range from full day trips to extended live aboard trips of two to ten days duration. Licenced fishing tour operators primarily visit the Easter and Wallabi Groups, with moderate effort in the Pelsaert Group and channels between island groups.

In November 2021 a report of the WAFTOF was published entitled *The Western Australian Charter Fishing Industry: A Survey Based Study of Operators and Outcomes*.²⁸ The report valued the economic contribution of the WAFTOF to the WA economy at \$110 million.

Commercial fishing values

Commercial fishing makes a valuable contribution to the WA economy through employment and supporting regional businesses, and the supply of local, sustainable and high-quality seafood to the community.

The key aquatic resources targeted within the Abrolhos FHPA by commercial operators are summarised below. For more detailed information regarding the commercial fisheries operating in the Abrolhos FHPA please refer to DPIRD's most recent State of the Fisheries report and FRR 321 (refer to [Section 1.3](#)).

Western rock lobster resource

The major commercial fishery operating in the Abrolhos FHPA is the West Coast Rock Lobster Managed Fishery (WCRLMF), which targets the western rock lobster (*Panulirus cygnus*) using pots. The WCRLMF is Australia's most valuable single species wild capture fishery with a landed value of \$417 million (2019) and has a long – standing commercial and economic history at the Abrolhos Islands. The Abrolhos Islands FHPA is located within Zone A ('Abrolhos Islands Area') of the WCRLMF, which accounts for approximately 20% of the annual catch of the fishery.

Following the WCRLMF transition to quota in 2010 and a move to fishing all year round, there has been an 81% reduction of fishery effort within the Abrolhos FHPA. Catches inside the Abrolhos FHPA also reduced following the introduction of quota. Catch rates increased post transition to quota, with a 2.5-fold increase within the Abrolhos FHPA and a 5-fold increase in the A Zone area outside the FHPA, as fishers access the highly catchable 'whites' migrating in deeper water outside the Abrolhos FHPA during spring.

²⁸ <https://recfishwest.org.au/wp-content/uploads/2021/11/20210902-RIFF-Final-Report-WA-Charter-Fishing-Industry.pdf>



Image 25- loading western rock lobster catch to a carrier boat, Rat Island, Easter Group; and Image 26- cooked rock lobster on ice. Credit: DPIRD.

In 2019, the WCRLMF landed a total catch of 6,397 t, plus 11.5 t of “additional” domestic quota from the Local Lobster Program. Of this total catch, 1,152 t (18%) was taken from Zone A of the fishery, with a landed value of approximately \$75 million. The WCRLMF is important for regional employment with 235 commercial vessels operating in the fishery during 2019 with most of the catch handled by four main processing establishments.

West coast demersal scalefish resource

The West Coast Demersal Scalefish Resource (WCDSR) comprises over 200 demersal scalefish species in inshore (20-250 m deep) and offshore (>250 m) demersal habitats of the WCB. The primary fishery targeting the WCDSR is the West Coast Demersal Scalefish Interim Managed Fishery (WCDSIMF) using lines. Thirty-one vessels operated across the fishery in 2019, landing a total catch of 271 t demersal scalefish. The estimated gross value of product for the entire WCDSIMF in 2019 was between \$1 and \$5 million.

The Abrolhos FHPA is located within the Midwest Area of the WCDSIMF. Between 2008 and 2019, the five most frequently recorded species caught by the WCDSIMF within the Abrolhos FHPA were pink snapper (*Chrysophrys auratus*), redthroat emperor (*Lethrinus miniatus*), WA dhufish (*Glaucosoma hebraicum*), baldchin groper (*Choerodon rubescens*) and spangled emperor (*Lethrinus nebulosus*). A small increase in catch occurred in the Midwest Area, from 78 t in 2018 to 85 t in 2019.

The total live weight of WCDSIMF catch within the Abrolhos FHPA increased from 14 t in 2008 to a peak of 26 t in 2012, before trending downwards to 6 t in 2019. The annual WCDSIMF catch within the Abrolhos FHPA contributes a small proportion (2-6%) to the total catch of the fishery. The highest catches recorded by the WCDSIMF are located in waters around North Island and the Wallabi Group.

Saucer scallop resource

The second largest saucer scallop (*Ylistrum balloti*) fishery in WA is the Abrolhos Islands and Mid West Trawl Managed Fishery (AIMWTMF). Licensees are permitted to use low-opening demersal otter trawl gear, operating in sand habitats within the Abrolhos FHPA and the wider Midwest area. Within the Abrolhos FHPA, scallops are found on the sandy bottom in the leeward (eastern) side of the islands. The Abrolhos FHPA accounts for 30% (2,494 km²) of the spatial area of the AIMWTMF (8,366 km²). The ROAs within the Abrolhos FHPA are closed to trawling.

Between 2010 and 2019, AIMWTMF fishing activity only occurred over five years due to fishery closures. Fishing effort within the AIMWTMF has been variable within the last few decades, primarily driven by scallop abundance and condition, which is strongly influenced by environmental conditions. The value of the AIMWTMF is also highly variable. Scallop landings recorded in the AIMWTMF during 2019 were 159 t meat weight (795.6 t whole weight), with a value of \$5.8 million.

Octopus resource

The Octopus Interim Managed Fishery (OIMF) targets the western rock octopus resource (*Octopus djinda*) using two types of unbaited traps/pots. The fishery targets similar benthic environment to the WCRLMF, as well as sandy and seagrass habitats. Twenty-five vessels operated in the OIMF in 2019 and more than 20 vessels landed octopus as a by-product in rock lobster pots. In 2019 the total commercial octopus catch in WA was 453 t live weight, which was 44% higher than the 2018 catch of 314 t and represents the highest catch recorded.

The large increase was due to new vessels fishing across all zones of the fishery, particularly in Zone 1. The Abrolhos FHPA is located within Zone 1 of the OIMF. Between 2017-2019, it is estimated that around 1.2% of the total live weight catch of octopus from Zone 1 was taken within the Abrolhos FHPA, which represents 0.3% of the catch across the entire OIMF. The estimated annual value of the octopus resource in WA for 2019 was \$5.9 million.

Marine aquarium fish resource

The Marine Aquarium Fish Managed Fishery (MAFMF) accesses the state-wide Marine Aquarium Fish Resource (MAFR). The MAFR includes all species that are collected for marine aquarium ornamental display purposes through WA waters (e.g., hard coral, soft coral, clams, other invertebrates, algae, seagrasses and 'live rock').

While the MAFMF is not permitted to take hard coral in the Abrolhos FHPA, the 2010 – 2019 cumulative catch data indicates that the Abrolhos FHPA provides a substantial proportion of the overall take of the statewide MAFMF catch: soft coral (28.9%), 'living rock' (20.1%) and invertebrates (12.8%), with a negligible catch of fish.

In terms of weight or number this equates to approximately 15 t of soft coral, 31 t of 'live rock' and 55,987 invertebrates.

Small pelagic scalefish resource

The West Coast Purse Seine Fishery (WCPSF) accesses the West Coast Small Pelagic Scalefish Resource (WCSPSR). The northern development zone of the WCPSF includes all waters north of Lancelin and the entire Abrolhos FHPA. There is a notional total allowable commercial catch within the northern development zone of 2,700 tonnes of tropical sardines. In 2019, the entire WCPSF recorded a GVP of <\$1million, with tropical sardines constituting 70-98% of the catch from the northern development zone.

Aquaculture values

State Government is committed to further growing the WA aquaculture industry under an economic and environmentally sustainable framework. There are a variety of aquaculture industries that operate off the WA coast including pearl oyster, rock oyster, barramundi, coral, marine finfish, seaweed, mussels, abalone and scallops. The development of the aquaculture industry is supported through the recent release of the *Aquaculture Development Plan for Western Australia* in 2020. The plan supports Government, industry and the community to achieve the following development targets:

1. Economic growth
2. Resilience through diversification
3. Job security and quality

The Abrolhos FHPA's pristine waters provide potential for ecologically sustainable commercial aquaculture, particularly with endemic marine finfish and shellfish species. Aquaculture operations in the Abrolhos FHPA include blacklip pearl oyster cultivation and the grow out of species such as coral, live rock, edible shellfish, octopus and finfish. Several licensees are permitted to collect broodstock from wild fish stocks to assist in production.



Image 27 – Commercial live coral aquaculture in the Abrolhos FHPA. Credit: Abrolhos Coral and Live Rock.

The Midwest Aquaculture Development Zone²⁹ was declared in 2017 and is located within the Abrolhos FHPA between the Easter and Pelsaert Groups (**Figure 12**). The 3,000-hectare zone is comprised of two parts, a northern area of 2,200 hectares and a southern area of 800 hectares to the east of the Easter Group and to the north of the Pelsaert Group and allows for finfish aquaculture.

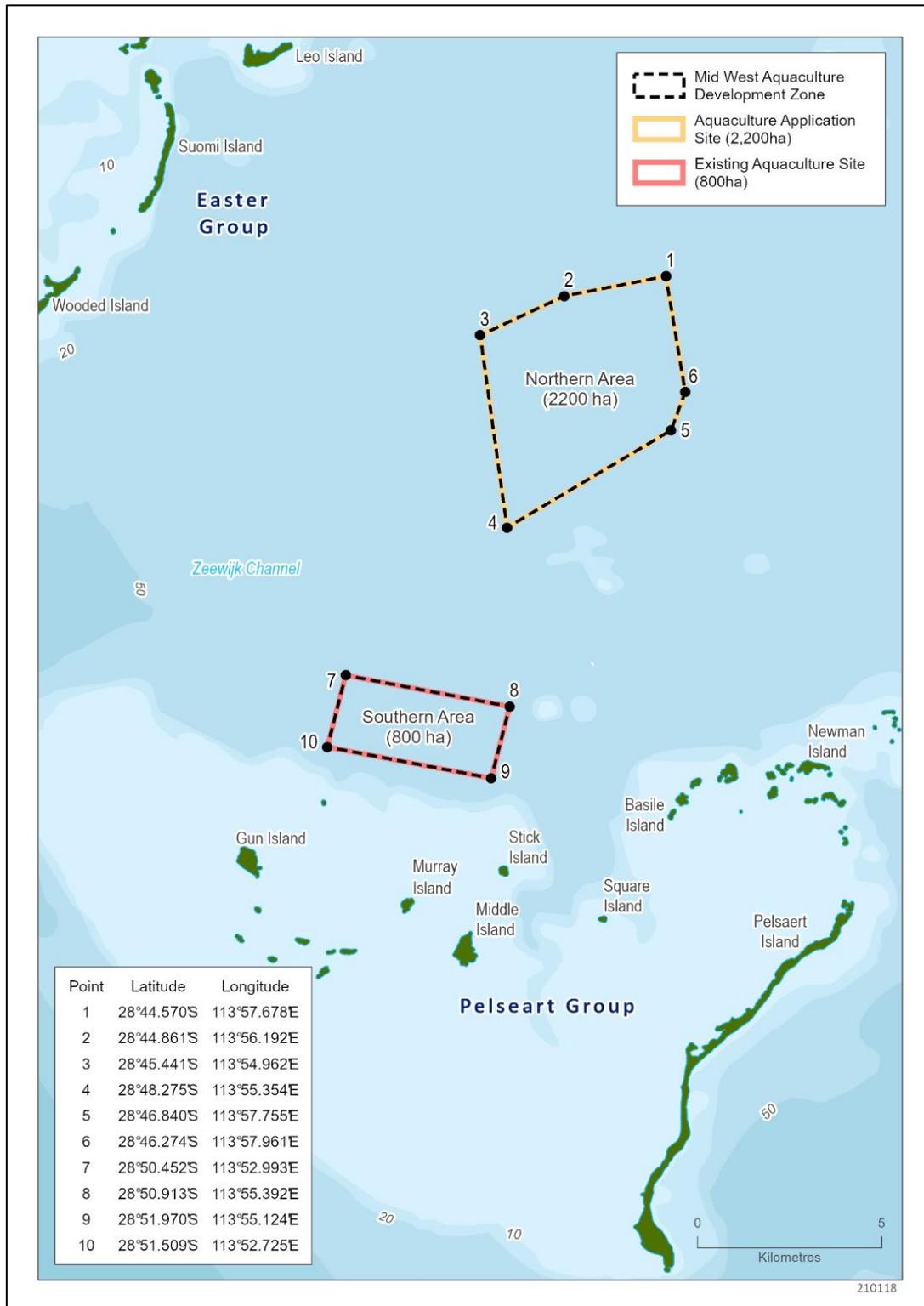


Figure 12: Map of the Midwest Aquaculture Development Zone

²⁹ <http://www.fish.wa.gov.au/Fishing-and-Aquaculture/Aquaculture/Aquaculture%20Zones/Pages/default.aspx>

Potential threats and impacts

Table 7: Potential threats and impacts to fishing and aquaculture values in the Abrolhos FHPA

Potential Threat	Impact to Fishing and Aquaculture Values
Reduced access to the Abrolhos FHPA for commercial fishing, recreational and charter fishers, and aquaculture operators	Reduced commercial viability, seafood supply and local employment Less use of regional areas and services
Unmanaged increases in recreational visitation and commercial marine tourism activities	Catches not within sustainable limits, stock collapse and localised depletion
Unsustainable increases in fishing effort and catch	Reduced recreational fishing amenity, enjoyment and experiences
Untreated and illegal sewage discharge into the FHPA	General marine ecosystem disruption and trophic disturbances
Hazardous material spills into the FHPA	Reduced water quality and pollution leading to adverse public health outcomes associated with seafood product consumption
Illegal disposal of biodegradable waste (e.g., food) into the FHPA	Marine species health risks and fish kills
Introduction of marine pests and disease	User conflicts
Lack of targeted future planning and management for aquaculture	Inadequate management outcomes due to lack of funding, research and data collection
Shark depredation (bite offs)	A lack of targeted future planning for aquaculture in the FHPA could lead to:
Climate change	<ul style="list-style-type: none"> • unused or non-productive sites not subject to performance criteria • non-viable aquaculture species and operations • aquaculture site, size and location impacting on other key values and activities • unmonitored take of broodstock, particularly coral
Gaps in knowledge	
Outdated FHPA visitor information and lack of awareness of the importance of fishing and aquaculture values	

Current and future management

Aquatic resource management

Section 2.1 describes how DPIRD's EBFM approach is used to assess and manage risks posed by fishing to the marine habitats and ecosystems of the Abrolhos FHPA. DPIRD also applies the EBFM framework to manage individual aquatic resources (i.e., targeted fish species) in the WCB (refer to Figure 11). The principles of Ecologically Sustainable Development (ESD)³⁰ are also applied to aquatic resource management, which aim to meet the ecological, economic and social objectives established for an aquatic resource.

Underpinning sustainable aquatic resource management are comprehensive research, compliance and education programs that are regularly reviewed and updated based on an assessment of risk. DPIRD regularly completes assessments of targeted fish stocks to guide aquatic resource management. Further detail can be found in the annual State of the Fisheries report, or in individual aquatic resource assessment reports available online³¹ (e.g., the southern calamari (*Sepioteuthis australis*) and west coast demersal scalefish resources).

Some aquatic resources targeted in the Abrolhos FHPA have been subject to formal intersectoral catch allocations. This involves setting the total sustainable harvest level of each resource that allows for an ecologically sustainable level of fishing and allocating an explicit share of the catch for use by customary, recreational and commercial fishers. Each sector's catch is then continually monitored and managed within its allocated share.

There are intersectoral catch allocations established for the western rock lobster and demersal scalefish resources in the WCB (and therefore the FHPA). Other aquatic resources are informally allocated to the commercial sector only (e.g., marine aquarium fish, specimen shell and scallops) and some have no allocation established at this time (e.g., mackerel, small pelagic fish and octopus).

As part of its EBFM and ESD approach to managing aquatic resources, DPIRD develops harvest strategies in consultation with stakeholders. Harvest strategies are documents that determine the appropriate harvest levels for aquatic resources (for all sectors) and detail the decision-making processes used to maintain those resources at a sustainable level. To date, harvest strategies have been developed for the following aquatic resources that are targeted by fisheries operating in the Abrolhos FHPA and are available online³²:

- western rock lobster
- west coast demersal scalefish
- saucer scallops
- octopus
- marine aquarium fish

³⁰ <https://www.fish.wa.gov.au/About-Us/Publications/Pages/Ecologically-sustainable-development.aspx>

³¹ <https://www.fish.wa.gov.au/About-Us/Publications/Pages/default.aspx>

³² <http://www.fish.wa.gov.au/About-Us/Publications/Pages/default.aspx>

Outputs from ERAs (refer to [Section 2.1](#)) also inform future versions of aquatic resource harvest strategies. To date, ERAs have been completed for the following fisheries operating in the Abrolhos FHPA and are available online³³:

- WCRLMF
- WCDSIMF
- AIMWTMF
- MAFMF
- OIMF
- WCPSF (Northern Development Zone)

DPIRD will continue to facilitate world-class management for aquatic resources in the Abrolhos FHPA in accordance with the objects of the FRMA, and the principles of EBFM and ESD.

Recreational fishing management

The WCB recorded the highest recreational fishing effort in WA (76%) during August 2017 to September 2018, with most of the catch taken by line fishing and pots. Approximately 231 t of demersal scalefish were retained by recreational fishers in the WCB, which recorded the highest catches of dhufish, pink snapper and baldchin groper (approximately 200 t) in the State.

A range of fishing rules³⁴ apply to recreational fishers in the Abrolhos FHPA that are designed to achieve sustainable aquatic resource management outcomes. These include size, bag and possession limits, gear and species restrictions and requirements, and seasonal and spatial closures. DPIRD will continue to sustainably manage recreational fishing in the Abrolhos FHPA in accordance with the objects of the FRMA and EBFM principles and will ensure that catches are meeting the management objectives for the Abrolhos FHPA.

Recreational fishers in the Abrolhos FHPA are required to hold a Recreational Fishing from a Boat Licence (RFBL) to undertake any general fishing activity from a motorised vessel. DPIRD uses the RFBL database to conduct recreational fishing surveys using iSurvey³⁵. These surveys provide biennial estimates of recreational catch by boat-based recreational fishers at both state-wide and bioregional levels.

iSurvey does not provide recreational fishing data for individual areas within the WCB, therefore DPIRD will undertake additional periodic recreational fishing surveys in the Abrolhos FHPA. This information will assist in ensuring any targeted management measures for recreational fishing in the FHPA are set at an appropriate level and are meeting the management objectives for the Abrolhos FHPA.

Shark depredation ('bite-offs') in the Abrolhos FHPA is a serious concern for recreational fishers (as well as fishing tour and commercial scalefish operators) and can impact significantly on the fishing experience. Shark depredation occurs when a shark partially or completely consumes a fisher's catch before it can be brought on deck. DPIRD recently completed a study³⁶ into shark depredation and advice is available on how to avoid it while fishing.

³³ <http://www.fish.wa.gov.au/About-Us/Publications/Pages/default.aspx>

³⁴ <http://www.fish.wa.gov.au/Fishing-and-Aquaculture/Recreational-Fishing/Recreational-Fishing-Rules/Pages/default.aspx>

³⁵ http://www.fish.wa.gov.au/Documents/research_reports/frr297.pdf

³⁶ <http://www.fish.wa.gov.au/About-Us/News/Pages/Shark-depredation-science-update.aspx>

Fishing tour operator (charter fishing) management

A Fishing Tour Operator's Licence (FTOL) allows for fish to be taken home at the end of the tour. The focus of the Restricted Fishing Tour Operator's Licence (RFTOL) is on eco-type activities, such as snorkelling or scuba diving, with limited fishing activity allowing only for fish to be caught and eaten as a meal during the tour. RFTOL tour participants are not allowed to take captured fish home with them at the end of the tour.

Licences are granted by DPIRD, and each licence holder must complete a statutory daily logbook on fishing activity. Charter fishing activities are managed by regulation and conditions of licence, in addition to complying with all other fishing requirements. Any fish caught on a charter fishing trip are taken under recreational or charter fishing regulations and are not saleable. There are 99 FTOLs and 13 FTOLs permitted to operate in the West Coast Zone of the WAFTOF, and all may currently access the Abrolhos FHPA. Between 2002 and 2020, the total number of R/FTOLs operating within the Abrolhos FHPA ranged between 15 (2012) and 31 (2019) which, since 2011, has comprised approximately 30-40% of licences within the West Coast Zone (Evans et al. 2022).

The number of recorded trips to the Abrolhos FHPA made by operators licenced to fish in the West Coast Zone of the WAFTOF between 2015 – 2019 was around 600 per year, with approximately 8 – 12 clients per trip. The number of recorded trips was lower in 2020 (528) than in 2019 (622), likely due to COVID-19 related regional travel restrictions. The number of fish kept by licenced charter operators fishing in the Abrolhos FHPA has increased steadily since 2012 (5,041 fish) to 12,169 fish in 2020.

While the current level of charter fishing in the Abrolhos FHPA is at the upper end of acceptable, there is a risk that the number of existing fishing tour operators licensed to operate in the Abrolhos FHPA will increase in the future. This is known as an activation of latent (dormant) effort. There is a risk that this will increase pressure on aquatic resources in the FHPA and may also result in an unacceptable impact on the quality of the recreational fishing and tourism experience.

To manage this, DPIRD will limit the number of licenced (existing) West Coast Zone charter operators that will have future access to the Abrolhos FHPA. In consultation with stakeholders, DPIRD will develop minimum performance criteria for continuing eligibility for future access to the Abrolhos FHPA. The agreed performance criteria will align with the management objectives for managing fish resources in the Abrolhos FHPA.

Investment warning – there is no guarantee that investment in a West Coast Zone FTOL or RFTOL and/or increased charter fishing activities in the Abrolhos FHPA after 21 February 2022 will be included for consideration for future access to the Abrolhos FHPA.

Commercial fisheries management

Most commercial fisheries operate in the Abrolhos FHPA in accordance with managed fisheries licences that are associated with a commercial fishery management plan³⁷. Management plans are a piece of legislation that sets out the rules for fishing within each fishery. Others operate under other rules and regulations. No new managed fishery licences may be granted³⁸ however existing licences are transferable. Commercial fisheries operating (or permitted to operate) in the Abrolhos FHPA include:

- Zone A of the West Coast Rock Lobster Managed Fishery (WCRLMF)
- Area 8 of the Abalone Managed Fishery (currently closed)
- Midwest area of the West Coast Demersal Scalefish Interim Managed Fishery (WCDSIMF)
- Abrolhos Islands and Midwest Trawl Managed Fishery (AIMWTF)
- Marine Aquarium Fish Managed Fishery (MAMF)
- Specimen Shell Managed Fishery (SSMF)
- Area 3 of the Mackerel Managed Fishery (MMF)
- Zone 1 of the Octopus Interim Managed Fishery (OIMF)
- Commercial squid jig fishery
- Taking aquatic resources for aquaculture broodstock and growout
- Northern Development Zone of the West Coast Purse Seine Managed Fishery (WCPSMF)

DPIRD's annual *State of the Fisheries* report provides further detail on the management, research and compliance work undertaken for the individual commercial fisheries listed above.

There are a range of other fishing closures, species and gear restrictions relevant to the commercial take of aquatic resources in the Abrolhos FHPA, including reduced scalefish fishing gear, a prohibition on the use of fish traps (rock lobster and octopus fishing excepted) and a prohibition on the use of gillnets and longlines.

In accordance with the EPBC Act, Australian commercial fisheries that export seafood require an export approval from DCCEEW. This approval requires a commercial fishery to pass an independent ESD assessment to ensure that the fishery is sustainable, and that the seafood product complies with export laws and meets importing country requirements. Several commercial fisheries that operate in the Abrolhos FHPA are qualified to export their products³⁹. DPIRD works with DCCEEW to facilitate this process. In addition, three commercial fisheries operating in the Abrolhos FHPA are currently certified as sustainable by the Marine Stewardship Council (MSC)⁴⁰:

- WCRLMF
- AIMWTF
- OIMF

³⁷ http://www.fish.wa.gov.au/About-Us/Legislation/Western_Australian_Fisheries_Legislation/Pages/default.aspx

³⁸ Except for fisheries managed under units of entitlement, where a person can demonstrate holding the minimum amount of entitlement (such as quota units) to fish.

³⁹ <https://www.dcceew.gov.au/environment/marine/fisheries/wa>

⁴⁰ <https://fisheries.msc.org/en/fisheries/>

DPIRD will continue to facilitate world-class management, monitoring and reporting of commercial fisheries within the Abrolhos FHPA, in addition to EPBC Act export approvals and MSC certifications where applicable.

Aquaculture

DPIRD is responsible for regulating aquaculture within State waters. The *Aquaculture Development Plan for Western Australia*⁴¹ provides further detail on future planning for aquaculture in WA. An aquaculture licence authorises a specific aquaculture activity at a defined site, whereas a lease provides tenure for the specified area of land or water. An aquaculture lease does not authorise the use of the leased area without an aquaculture licence. Licence holders must provide annual aquaculture production returns.

The purposes of the Abrolhos FHPA as provided in the FRMA include the culture and propagation of fish and experimental purposes related to that culture and propagation. The first Abrolhos FHPA aquaculture licence was issued to produce blacklip pearl oysters (*Pinctada margaritifera*) in 1996. There are currently 21 aquaculture licences granted for marine-based sites located within the Abrolhos FHPA, which represents 29% of non-*Pinctada maxima* aquaculture licences in the State (72).

A single licence may be linked to one or more sites. The existing aquaculture sites currently cover around 2% of the Abrolhos FHPA area. Nineteen sites are located in waters with a depth less than 20 m, ten of these are located in the Pelsaert Group and six in the Easter Group. The three remaining shallow water sites are located in the Wallabi Group / North Island area. Aquaculture production returns data indicates that up to seven aquaculture licences were actively operating annually between 2014-15 and 2018-19.

Applications for the collection of broodstock for aquaculture at the Abrolhos FHPA can be granted, with further approval potentially required for any translocation of broodstock into the Abrolhos FHPA. In addition, any persons permitted to collect marine aquarium fish species for aquaculture broodstock purposes (e.g., hard coral, live rock, corallimorphs, anemones) are required, under the MAFR harvest strategy, to maintain and submit accurate records of all fishing activity. This is of relevance to hard coral broodstock collection specifically at the Abrolhos FHPA, where the MAFMF is not permitted to harvest hard coral.

There are several improvements that can be made to manage aquaculture more effectively in the Abrolhos FHPA. DPIRD will work to ensure a pathway is developed to facilitate appropriate and productive aquaculture operations within the Abrolhos FHPA in accordance with the direction outlined in the *Aquaculture Development Plan for Western Australia*. This will include strategies to ensure existing and new sites for aquaculture in the Abrolhos FHPA are of an appropriate size for production and licensed for commercially viable species. The implementation of appropriate tenure (leases), lease performance criteria and monitoring for all existing and new aquaculture sites in the Abrolhos FHPA reflects best practice for aquaculture management.

⁴¹ <http://www.fish.wa.gov.au/About-Us/Publications/Pages/default.aspx>

Future planning and management for aquaculture operations within the Abrolhos FHPA will be required to be compatible with this management plan. This will ensure that new applications for aquaculture sites within the Abrolhos FHPA demonstrate consideration of other FHPA users' access (including navigation) and mitigate potential impacts to key values. There is also a need to improve reporting of aquatic resources taken for aquaculture broodstock and growout such as coral. Aquatic biosecurity will continue to feature strongly in licence conditions and the Management and Environmental Monitoring Plans as required by all aquaculture licensees.

DPIRD will also ensure appropriate access to marine based infrastructure for active aquaculture operations (see [Section 2.5 Abrolhos Community](#)).

Management objectives and actions

Table 8: Sustainable fisheries and aquaculture – management objectives and actions

Action No.	Abrolhos FHPA – Sustainable Fisheries and Aquaculture	Relative Priority
<i>Management Objective 1: Work with stakeholders to support the management of sustainable commercial wild-capture fisheries and take advantage of emerging market opportunities.</i>		
<i>Management Objective 2: Support commercial scale fish farming, and the development of aquaculture industries that create jobs, economic diversification, and optimal utilisation of viable sites.</i>		
<i>Management Objective 3: Support the management of sustainable recreational and charter fishing activities consistent with management objectives and the protection of key values in the Abrolhos FHPA.</i>		
2.3(1)	Develop and implement an Abrolhos FHPA Aquaculture Management Plan that includes measures for: <ul style="list-style-type: none"> • appropriate site selection, site size and species • tenure (leases), performance criteria and monitoring • improved reporting of aquatic resources taken for aquaculture broodstock and growout. 	1
2.3(2)	In consultation with stakeholders, implement an Abrolhos FHPA Charter Operator Zone within the existing West Coast Zone of the WA Fishing Tour Operator Fishery.	2
2.3(3)	Undertake periodic recreational fishing surveys in the Abrolhos FHPA.	3
2.3(4)	Ensure that recreational and charter fishing catches are meeting the management objectives for the Abrolhos FHPA.	3
2.3(5)	Continue world-class EBFM management, monitoring, and reporting of aquatic resources and fisheries within the FHPA, in addition to EPBC Act export approvals and Marine Stewardship Council certifications where applicable.	Ongoing

2.4. Marine Tourism and Recreation

Create a world-class visitor destination that contributes to a vibrant regional economy with:

- Extraordinary visitor experiences that share the unique stories of the Abrolhos' maritime heritage, industries, environments, wildlife and people.
- Quality visitor facilities that reflect the unique character of the Abrolhos.
- Targeted overnight stay opportunities appropriate for a range of visitor markets.
- A suite of accredited land, marine and air-based tourism operators.

Houtman Abrolhos Islands Strategic Direction 2020-24

Marine tourism and recreation values

The wild beauty of the Abrolhos FHPA draws thousands of visitors annually. The relaxing and laid-back lifestyle of an extended stay on board a boat is sought by many and considered to be an extraordinary or 'once in a lifetime' experience.

Many people regularly visit the Abrolhos FHPA to enjoy the marine tourism and recreation values, some have done so for many years. These regular visitors identify with the sense of place and have a connection to the unique landscape and seascape.

Clients of commercial marine tour operators (e.g., licenced fishing tour operators and aquatic eco-tourism operators) seek to enjoy a range of nature-based experiences, recreational fishing and appreciation of cultural heritage.

Popular marine locations

The four ROAs (refer to maps in [Section 1.3](#)) are high use marine tourism and recreation areas, attracting visitors who wish to enjoy a diverse range of marine-based experiences. All ROAs offer world-class glass bottom boat, snorkelling and diving opportunities, and observation of marine life. Surfing, kitesurfing, kayaking and stand - up paddleboarding are also common recreational activities inside ROAs.

The Beacon Island ROA in the Wallabi Group includes the wreck sites of *Batavia* and *Hadda*, in addition to the Long and Beacon Islands' dive trails. Leo Island ROA in the Easter Group includes the spectacular Anemone Lump dive trail and the 'cod hole'. The Coral Patches ROA in the Pelsaert Group includes the Coral Patches dive trail.



Image 28- Diver observing the anchor from Batavia in the Beacon Island ROA, Wallabi Group and Image 29- Recreational boats visiting the Abrolhos FHPA during peak season, Wallabi Group. Credit: DPIRD.

In addition to the ROAs, other locations in the Abrolhos FHPA popular with boat-based visitors include:

- Turtle Bay anchorage and dive trail, East Wallabi Island (Wallabi Group)
- West Long Island embayments (Wallabi Group)
- White Bank anchorage, north of Rat Island (Easter Group)
- Morley and Wooded Islands anchorage and dive trail (Easter Group)
- Rootail dive trail (near Campbell Island, Easter Group)
- Southwest Pelsaert Island anchorage (Pelsaert Group)
- Middle Island anchorage (Pelsaert Group)

The seven existing dive trails⁴² were created at key locations known to attract visitors and to allow for relatively safe and sheltered observation of fish and fish habitat. Maps of the existing dive trails are provided in Appendix 2.

Marine-based tourism and recreation activities, visitors and tourism providers

For the recreational visitor, the Abrolhos FHPA showcases a diverse range of experiences such as:

- high quality recreational fishing and boating
- appreciating the remote locality and wilderness
- historical shipwrecks and their stories
- surfing, stand-up paddle boarding and kayaking
- kitesurfing and wind surfing
- world renowned bird watching
- whale watching and appreciation of marine life
- spectacular diving and snorkelling
- gaining knowledge of the local residents and their industries.

⁴² <http://www.fish.wa.gov.au/Sustainability-and-Environment/Abrolhos-Islands/Pages/Visitor-information.aspx>

A significant number of visits to the Abrolhos FHPA are by privately owned recreational boats (sometimes referred to as ‘white boats’) for day trips to the Pelsaert Group. Short stay trips across all island groups generally for a week or less are also common. Most visitors arriving to the Abrolhos FHPA by boat also visit islands during their trip.

Visitors are not permitted to enter land in the Abrolhos Reserve that is leased to commercial rock lobster fishers and aquaculture operators without permission but can access small areas of unleased land in the Reserve and land in the National Park.

The licenced fishing tour operator (charter) industry provides visitors with an opportunity to enjoy world-renowned fishing-based activities in the Abrolhos FHPA. Licenced fishing tour operators also offer eco-tourism activities to diversify their itinerary and to seek a broader range of clients.

Please refer to [Section 2.3](#) for more information regarding the values and management of fishing tour (charter) operators in the Abrolhos FHPA.

Commercial marine eco-tourism (non-fishing) operators who operate in the Abrolhos FHPA provide a valuable service to the wider community. Marine eco-tourism operators provide the platform for many visitors to experience a range of extraordinary world-class eco-tourism activities in the Abrolhos FHPA that they may not otherwise have the resources to experience.

A range of vessels offer marine eco-tourism experiences in the Abrolhos FHPA including ex-fishing boats, larger dedicated eco-tourism vessels and expedition cruise ships. There has also been some interest in including the Abrolhos Islands as a stopover for larger domestic cruise ships, and interest in operating a marine aircraft service (seaplanes).



Image 30- commercial tourism operations near the guano jetty, southwestern Pelsaert Island, Pelsaert Group. Credit: Abrolhos Adventures.

Marine safety

The Abrolhos Islands are a remote offshore location, with prevailing heavy wave action from the southwest and persistent, strong, southerly winds (more than 32km/h for 44% of the time). The Abrolhos FHPA can experience highly changeable weather and the area has been impacted by cyclones and tsunamis.

Human and vessel safety is of the highest priority for marine tourism and recreation activities in the Abrolhos FHPA. Masters of vessels require a thorough understanding of the need to safely manage the remoteness and potential dangers associated with a trip to the FHPA such as-

- having good knowledge of safe anchorages depending on wind and weather
- being able to safely navigate through the notoriously treacherous reef systems
- being equipped with all safety provisions
- having enough food, fresh water and fuel to last the length of the intended visit
- having an understanding of what to do in an emergency

Clients of commercial marine tour operators have an expectation that tours in the Abrolhos FHPA are being run by qualified staff in accordance with all vessel safety legislation, plans and procedures. Visitors and operators also have an expectation that a timely response from the relevant management agencies will occur in the event of an emergency or evacuation.



Image 31- Large swell near West Wallabi Island. Credit: DPIRD, N Sumner.

Public marine tourism infrastructure

DPIRD maintains 36 public moorings at key locations across the Abrolhos FHPA that are known to be popular visitor areas and provide shelter from wind and swell in varying weather conditions. See [Section 1.2](#) for maps of the current public mooring locations.



Image 32- Public mooring at Coral Patches ROA, Pelsaert Group. Credit: DPIRD, N. Moore.

DBCA constructed two new jetties at East Wallabi and Beacon islands in early 2022 to allow safer access for fishers, commercial tour operators and visitors. Vessels up to 20 m (65 feet) in length can access the East Wallabi Island jetty and smaller vessels, up to 7 m (22 feet) in length can use the Beacon Island jetty.

DoT is responsible for installing and maintaining navigational aids and maps for the Abrolhos FHPA.

Private commercial marine tourism infrastructure

Commercial marine tourism infrastructure in the Abrolhos FHPA currently includes moorings and there has been interest in installing fixed, floating platforms (e.g., pontoons and barges) for day use activities and overnight accommodation. There has also been interest shown from commercial marine tour operators to install jetties and landings from islands located in the National Park and Abrolhos Reserve.

Compliance, enforcement and education

An appropriate level of compliance, enforcement and education is a vital part of effective management in the Abrolhos FHPA. Stakeholders expect an appropriate level of compliance and enforcement to ensure that all measures that are in place to protect values are achieving management objectives.

Regional tourism and recreation promotion and planning

Tourism WA, the Tourism Council of WA, CoGG and MWDC are at the forefront of tourism promotion and strategic planning for the Midwest region. CoGG is committed to continuing to transform Geraldton into a top destination and a 'hub' to explore the whole of the Midwest region, including the Abrolhos Islands and FHPA (CoGG 2020). Several local tourism and community strategies have been previously developed including the recent *Greater Geraldton 2031 Strategic Community Plan*.

Issues and challenges

Table 9: Issues and challenges associated with managing marine tourism and recreation in the Abrolhos FHPA

Issues	Challenges
Protecting marine tourism and recreational values	<p>Meeting visitor expectations relating to access, activities, a sense of remoteness, amenity, and a sense of place and lifestyle</p> <p>Maintaining marine-based visitation and commercial marine tourism access and activities in the FHPA while protecting and conserving natural, cultural heritage, fishing/aquaculture and community values</p> <p>Managing user conflicts and interactions in key areas between visitors/commercial tourism and commercial fishing and aquaculture operations</p>
<p>Unmanaged marine-based visitation and commercial marine tourism in the FHPA</p> <p>Competing activities in key tourism areas in the FHPA</p>	<p>Costs of installing and maintaining new public marine infrastructure appropriate to support existing marine tourism and recreation needs</p> <p>Providing public access points for boat-based visitors and tourism operators to National Park land and airstrips</p>

Issues	Challenges
<p>Providing an appropriate level of public marine infrastructure and on-island access for boat-based visitors</p>	<p>Identification of locations for future tourism nodes in the National Park that require additional supporting public and private commercial marine infrastructure</p> <p>No current licensing or management for commercial non - fishing marine tourism operators</p> <p>Current commercial marine tourism infrastructure management framework requires improvements to regulations, licensing, transfers, policies and guidelines</p>
<p>Management and licensing for commercial (non-fishing) marine tourism operators</p> <p>Management and licensing for commercial marine tourism infrastructure</p>	<p>Multiple agency jurisdiction for managing commercial marine tourism infrastructure</p> <p>Improving knowledge of emergency framework and services</p> <p>Multiple agency management</p>
<p>Marine safety and emergencies</p>	<p>Managing risks to all FHPA users' health and safety in a remote location</p> <p>Timely emergency responses and evacuations</p> <p>Highly changeable weather</p>
<p>Cross-tenure (FHPA, Reserve and National Park) tourism planning</p>	<p>Ensuring safe use of public moorings and jetties</p> <p>Lack of cellular network, on-island medical services all year round and on-island facilities (food, water, fuel)</p> <p>Achieving a seamless cross-agency licensing and management framework for commercial (non-fishing) tourism operators across tenures</p>
<p>Revenue and cost recovery</p>	<p>Development of systems to manage cross-agency licensing and approvals</p> <p>No revenue currently generated</p> <p>Uncertainty around future funding needs for tourism management</p>
<p>Gaps in knowledge</p>	<p>Uncertainty around future visitation trends and impacts on key values</p> <p>Uncertainty around future research and monitoring needs for tourism management</p>

Current and future management

Land-based tourism and recreation in the National Park is managed by DBCA. Please refer to the Houtman Abrolhos Islands National Park Management Plan 2022.

For more information on the future management of land-based tourism in the Reserve, please refer to the Houtman Abrolhos Islands Reserve Management Plan 2022 – 2032.

As described in **Table 9**, there are several existing issues and challenges that need to be addressed to achieve the State Government’s strategic priorities as they relate to marine tourism and recreation in the Abrolhos FHPA.

A sustainable marine tourism footprint will support the retention of the key values that draw visitors to Abrolhos Islands while allowing for tourism and recreation experiences that continue to meet stakeholders’ expectations.

Guiding principles for the development of sustainable marine tourism and recreation in the Abrolhos FHPA

The State Government’s vision for the Abrolhos Islands in respect of tourism is –

To provide a world-class sustainable tourism experience and create new jobs and economic opportunities in the Midwest Region, while protecting the unique natural, cultural heritage, fishing and community values of the Abrolhos.

Houtman Abrolhos Islands Strategic Direction 2020-24

This management plan is focused on both the current and potential growth in marine-based tourism in the Abrolhos FHPA. While the marine tourism management measures in this management plan are primarily targeted at reducing the risks to key values posed by current FHPA users and activities, the impacts on key values that may arise from a potential increase in visitation and expansion of tourism operations over the next ten years have also been considered.

A low impact and light touch approach to marine-based tourism and visitation is supported, with a view to complementing existing visitor experiences at the islands.

Further detail on DPIRD’s primary focus for marine tourism and recreation is provided in Section 1.4.

A set of guiding principles for marine tourism and recreation in the Abrolhos FHPA have been developed to enhance and facilitate a diverse range of marine-based recreational opportunities for visitors and operators that will complement the destination as a low impact, ecologically sustainable, nature-based visitor experience:

Guiding principles for sustainable marine tourism development in the Abrolhos FHPA

When considering marine tourism developments and planning for visitor access and infrastructure in the FHPA, DPIRD supports and will endeavour to provide for:

- *long term coexistence of sustainable marine tourism, fishing and aquaculture*
- *appropriate physical segregation of marine tourism and recreation activities from commercial fishing and aquaculture operations, where necessary*
- *accredited marine tourism operators and a code of conduct to ensure the visitor experience involves best practice environmental and management standards*
- *licensed commercial marine tourism operators, and well-trained guides with local knowledge*
- *controlled visitor access to priority sites in the FHPA, and in the National Park in consultation with DBCA*
- *monitoring of visitor numbers at sensitive sites in the Abrolhos FHPA, and implementation of management measures where required*
- *appropriate location, design, licensing and use of marine tourism infrastructure that is compatible with the conservation of natural and cultural values and retains the unique Abrolhos sense of place.*

Management of popular marine locations in the FHPA

Targeted management of popular marine locations in the FHPA aims to-

- meet visitor expectations as they relate to marine tourism and recreation values now and into the future
- ensure the management objectives for marine tourism and recreation are met
- reduce impacts on key values
- manage conflicting uses and visitor safety
- reduce impacts of marine-based tourism and recreational activities on the key values in the National Park and Reserve.

To achieve this, DPIRD will manage six different categories of popular marine locations as they relate to marine tourism and recreation activities and infrastructure as described below.

1. Reef observation areas

In addition to ROAs playing an important role in protecting fish and fish habitats in priority marine areas from localised impacts of marine-based activities (see [Section 2.1](#)), they are also used to achieve marine tourism and recreation outcomes such as:

- providing visitors with priority marine areas to experience activities relating to the appreciation and observation of fish and fish habitats
- protecting the natural, cultural heritage and community values of priority islands (e.g., Beacon and Leo Island ROAs) from marine-based activities and visitors.

As part of the review of ROAs described in [Section 2.1](#), a review of all marine-based activities in ROAs will be undertaken to determine the activities that will be restricted in ROAs to protect the marine tourism and recreation values of the FHPA and relevant adjacent islands. As stated in [Section 2.1](#), the subsequent management arrangements for ROAs will be moved to regulations to allow for improved management of both fishing and non-fishing activities in ROAs.

2. Special Marine Use Area – Cultural Heritage

Refer to [Section 2.2](#) and [Appendix 1](#) for further detail regarding *Special Marine Use Area – Cultural Heritage* sites in the Abrolhos FHPA.

3. Dive trails

The seven existing dive trails require ongoing maintenance. DPIRD will review the current usage and need for the existing dive trails. Dependent on need and funding, DPIRD will-

- review the activities occurring in and around dive trails
- review the text of the dive trail plates
- implement a regular maintenance program.

DPIRD will also consider dive trails in new locations over the life of this management plan, if required.

4. Special Marine Use Area – Wilderness Fishing

As described in previous sections of this management plan, The wild beauty and marine biodiversity of the Abrolhos FHPA is of high value to boat-based visitors and commercial marine tour operators. Visitors expect continued access to the FHPA to experience unique marine-based activities, while appreciating a sense of remoteness, amenity and lifestyle.

To assist in achieving marine tourism and recreation outcomes, DPIRD will create a *Special Marine Use Area (SMUA) – Wilderness Fishing* across the entire Abrolhos FHPA to the high-water mark. A map of the *SMUA – Wilderness Fishing* is provided at [Appendix 3](#).

DPIRD will manage recreational and charter fishing, and other marine tourism and recreation activities, in accordance with the following wilderness fishing concepts to-

- maintain a sense of remoteness, amenity and lifestyle for all FHPA users*
- promote the importance of conserving and protecting of the unique marine environment and aquatic resources*
- promote the diverse range of non-fishing activities that make the Abrolhos FHPA a special place to visit*
- maintain world-class fishing amenity*
- identify ways to promote low impact 'catch to cook' (low take, low takeaway) recreational fishing*
- discourage 'catch and release' fishing, particularly for those demersal species that suffer a high rate of post release mortality due to barotrauma.*

Most visitors accept that enjoying a world-class marine tourism and recreation experience in a high conservation area such as the FHPA should align with a low impact and light touch approach, and many are already conducting their visits in accordance with wilderness fishing concepts. Capping the number of West Coast Zone fishing tour operators entitled to fish in the Abrolhos FHPA in the future (refer to [Section 2.3](#)) will assist in meeting wilderness fishing objectives.

DPIRD will also develop a wilderness fishing code of conduct to educate recreational fishers and fishing tour operators around the benefits of wilderness fishing and its role in preserving fishing and marine tourism values.

Any further management arrangements required to align with wilderness fishing outcomes will be developed in consultation with stakeholders.

5. Special Marine Use Areas - Tourism

In addition to the ROAs, there are other locations in the FHPA that continue to experience high visitation by boat-based visitors and commercial marine tourism operators. These locations require further management to ensure management objectives for marine tourism and recreation are met. To achieve this, DPIRD will create four new *SMUA – Tourism* sites at the following locations-

1. Turtle Bay – East Wallabi Island, Wallabi Group
2. White Bank and adjacent anchorage – north Rat Island, Easter Group
3. Southeast Rat Island, Easter Group
4. Southwest lower embayment Pelsaert Island, Pelsaert Group.

Maps of the boundaries of each of the above sites are provided in [Appendix 4](#).

The *SMUA – Tourism* sites provide sheltered anchorages in varying wind conditions and most include several existing public moorings. The Turtle Bay, White Bank and Pelsaert Island *SMUA – Tourism* sites are well known for snorkelling, diving, fishing and wildlife appreciation and are adjacent to popular locations in the National Park that are rich in natural values. The Pelsaert Island *SMUA – Tourism* site includes the wreck site of *Jon Jim*, which ran aground in 1961 off Wreck Point, south Pelsaert Island.

DPIRD will work with stakeholders to review the current marine-based activities that occur in the four SMUA – Tourism sites to determine the appropriate arrangements required to manage risks to key values and multi-sector access.

This review can occur together with the review of ROAs discussed above and in [Section 2.1](#).

DPIRD recognises that there is an immediate need to connect members of the public and commercial marine tour operators with the airstrip on Rat Island, which is located within the National Park. The southeast area of Rat Island is considered an appropriate place to identify a public access point from the Abrolhos FHPA to the island, and the SMUA – Tourism site will complement the public access point.

This area of land on Rat Island comprises National Park and both leased and unleased land in the Abrolhos Reserve. DPIRD will collaborate with DBCA, lease holders and other key stakeholders to progress appropriate options for a public access point. DPIRD will also consider constructing a public jetty in an appropriate area within the SMUA – Tourism site adjacent to southeast Rat Island, dependent on a comprehensive cost benefit analysis and funding.

New SMUA – Tourism sites may be proposed during the life of this plan to complement land-based tourism locations in the National Park.

6. Public/marine tourism and mixed-use mooring and anchorage areas

DPIRD has identified nine locations in the Abrolhos FHPA that have been designated as priority public/marine tourism mooring and anchorage areas (refer to **Table 10** below and maps at [Appendix 5](#)). The locations are based on the recommendations of the *Abrolhos Islands Moorings Review and Analysis Project – Final Report* developed by Wavelength Consulting during 2021 (refer to [Section 2.1](#)).

The nine locations are additional to the existing public moorings in ROAs and recognise areas that currently support existing marine tourism and recreation activities, and where additional management is required to protect marine habitat and natural values, manage multi-sector use and meet existing and future marine tourism demand.

Some of the nine locations would greatly benefit from the installation of new or additional moorings to better protect benthic habitat and satisfy demand during peak visitation.

No private recreational moorings are recognised or permitted to be installed in the Abrolhos FHPA.

Table 10: Priority public/marine tourism mooring and anchorage areas in the FHPA

Location	Number of existing public moorings	Justification
South of North Island, north of North Island ROA	0	Predominately sand habitat appropriate for day anchoring. Supports boat-based visitation to the North Island ROA.
Southeast East Wallabi Island Wallabi Group	0	Will support a significant marine tourism land access point – adjacent to the new public jetty and existing airstrip on East Wallabi Island. <i>Priority for new public moorings.</i>
Southwest Long Island Embayments (x2) Wallabi Group	0	Known to be popular sheltered and deep anchorages for marine tourism and recreation. Priority benthic habitat. Adjacent to wildlife and cultural heritage attractions on Long Island. <i>Priority for new public moorings.</i>
Turtle Bay, northeast East Wallabi Island Wallabi Group	6	SMUA – Tourism. Existing public moorings. Adjacent to land-based public/tourism infrastructure on East Wallabi Island. Adjacent to wildlife and cultural heritage attractions on East Wallabi Island.
White Bank, north Rat Island Easter Group	4	SMUA – Tourism. Existing public moorings. Adjacent to wildlife, diving and snorkelling attractions.
Southeast Rat Island Easter Group	0	SMUA – Tourism. Will support a significant marine tourism land access point (to be finalised).
Northeast Morley Island Easter Group	2	Existing public moorings. Sheltered anchorage adjacent to wildlife, diving and snorkelling attractions. <i>Priority for additional public moorings.</i>
Southwest Pelsaert Island Pelsaert Group	6	SMUA – Tourism. Existing public moorings. Adjacent to wildlife and cultural heritage attractions on Pelsaert Island. <i>Existing mooring locations will be reviewed.</i>
Northwest Pelsaert Group	0	Support visitation to the Coral Patches ROA. Provide an additional protected mooring location in the Pelsaert Group. <i>Priority for new public moorings.</i>

Some existing mooring and anchorage locations are mixed use, with commercial (fishing, charter fishing, eco-tourism, and aquaculture) operators' moorings and, in a couple of cases, public moorings installed. These areas consist of suitable habitat for anchoring and attract recreational boats that anchor during the peak visitor season. DPIRD has designated three locations as mixed-use mooring and anchorage areas including-

1. Southeast North Island
2. West Little Pigeon Island (Wallabi Group)
3. Shag Bay, northwest West Wallabi Island (Wallabi Group).

Maps of these locations are provided at [Appendix 5](#).

As detailed in [Section 2.1](#), a review of public mooring locations and anchoring will be undertaken to manage the risks to benthic habitats in high use locations. The review will also include an assessment of the number of public moorings across the FHPA needed to better cater for recreational boats during the peak season and will review all activities and marine infrastructure within each public/marine tourism and mixed-use mooring and anchorage area. The review will also identify safe locations for visitors to anchor in varying weather conditions. This review can occur together with the review of activities in ROAs and special marine use areas as described above, and in [Section 2.1](#) and [Section 2.2](#).

DPIRD will consider implementing an online public mooring booking system, with a target implementation date of 1 February 2025. This will provide certainty for visitors that they have access to a safe mooring and will reduce the occurrence of 'mooring-hogging'.

DBCA has indicated that some locations in the National Park could be used for land-based tourism infrastructure in the future. DPIRD will work with DBCA to identify associated public marine infrastructure requirements (such as public moorings and small vessel landings).

6. Marine aircraft landing areas

There are currently no marine tourism aircraft (seaplanes, boat planes) landing areas or associated landing pontoons identified in the Abrolhos FHPA. Based on need, DPIRD will work with tourism stakeholders, management agencies and wildlife experts to identify up to three marine aircraft landing area locations.

Marine safety

DPIRD assists all agencies and organisations with legislative responsibility for medical evacuations and sea search and rescue operations in the Abrolhos FHPA.

The Midwest region has a comprehensive management framework for sea search and rescue (SAR) operations and all visitors should be aware of how to raise these services in the event of an emergency.

WA Police (WAPOL) provides oversight and support for all sea search and rescue operations in WA⁴³, and the Commissioner of Police is the Hazard Management Agency for persons lost or in distress in a marine environment. The Water Police Coordination Centre is staffed 24 hours a day by radio/call takers and police officers who are nationally trained Search and Rescue Mission Controllers.

Volunteer Marine Rescue WA⁴⁴ (VMRWA) groups work closely with WAPOL performing search and rescue missions at sea. VMRWA groups are heavily relied upon and are usually the first resource to be deployed for marine search and rescues. VMRWA volunteers also provide a range of emergency management services including providing help to drifting vessels unable to make their own way and assisting in operations to remove grounded or submerged vessels. VMRWA volunteers that assist in sea SAR operations in the Abrolhos FHPA include those located in Geraldton, Kalbarri and Port Denison. DPIRD and other government agencies, commercial vessels and aircraft are also called upon to assist.

Local aircraft charter operators and rescue helicopters can be used to assist in emergency medical evacuations.



Image 33- RAC rescue helicopter. Credit: Department of Fire and Emergency Services.

The Silver Chain remote area nursing post services Rat Island and Pigeon Island during the peak visitor period between March and June and is available to all visitors and residents. Outside of these months, 'on – island' nursing post services are not currently available.

⁴³ <https://www.police.wa.gov.au/About-Us/Our-agency/Specialist-Units/Water-Police/Marine-search-and-rescue>

⁴⁴ <https://www.dfes.wa.gov.au/site/about-us/operational-information/mrwa/marine-rescue-western-australia.html>

In consultation with responsible management agencies, DPIRD will investigate ways to promote understanding of the current management framework for sea SAR operations, emergency evacuations and first aid available to Abrolhos FHPA users.

DPIRD will also continue to assist sea SAR and emergency evacuation agencies in any capacity that is required and will continue to be represented on regional and local emergency management committees. DPIRD's online notification database will continue to be used as an important tool to assist in rescue operations and evacuations in the Abrolhos FHPA.

The Regulations allow for the use of any public or private mooring or jetty to be used in an emergency.

DoT and AMSA manage recreational and commercial vessel operations, navigation and safety at sea. AMSA administers the *Marine Safety (Domestic Commercial Vessel) National Law Act 2012*, which is a single regulatory framework for the certification, construction, equipment, design and operation of domestic commercial vessels inside Australia's exclusive economic zone. AMSA also releases marine orders that set out a range of requirements relating to the operation of vessels.

DoT has developed boating guides for popular boating locations in WA and the guides contain local marine safety information including boating hazards, facilities, speed restricted areas, water-ski, personal watercraft and closed water areas. There is currently no boating guide available for the Abrolhos FHPA.

DPIRD will work with DoT to develop a boating guide following the implementation of management measures resulting from the reviews described in this management plan.



Image 34- solar powered north cardinal marker navigation aid, Middle Island Pelsaert Group. Credit: DPIRD.

Data collection and education

Boat-based visitation numbers have continued to rise over the past five years, primarily driven by changes and developments in the commercial marine tourism industry, improved access to the Abrolhos FHPA from increased availability of suitable recreational vessels and weather predictions and increased domestic travel. There will be an ongoing need to quantify current and future marine tourism and recreation to manage risks to all FHPA values.

As discussed in Section 1.2, the online notification form database has been used to assess basic visitation numbers and patterns. DPIRD will implement ways to improve data collection through the online notification form and consider other methods such as surveys. DPIRD will also implement improved ways to provide visitors with FHPA visitation information and requirements and will also support the preparation and implementation of an integrated interpretation program for the Abrolhos FHPA, Reserve and National Park.

Marine-based commercial tourism infrastructure – approvals and licensing

Privately owned marine-based infrastructure supporting commercial marine tourism operations in the FHPA can include-

- moorings
- jetties and landings
- fixed floating day use pontoons (swimming/snorkelling platforms, marine aircraft landing pontoons)
- fixed, floating overnight accommodation
- any other marine-based structure located within the Abrolhos FHPA used for commercial tourism.

There are several agencies that administer legislation requiring approvals and licensing for marine-based commercial tourism infrastructure. In general, all privately owned marine infrastructure in WA waters must be licenced and maintained to the correct standards.

While DPIRD is responsible for approving applications for the location, design and installation of commercial marine tourism infrastructure in the Abrolhos FHPA, it currently has no authority to licence marine infrastructure. DoT is responsible for licensing all jetties and regulates mooring licensing in many areas in WA.

DPIRD's existing application and assessment process for commercial marine tourism infrastructure in the Abrolhos FHPA will be reviewed in collaboration with DBCA, WAM and DoT to ensure it-

1. is consistent with other relevant State legislation
2. includes an appropriate assessment of proposed infrastructure types and locations to reduce risks to natural and other key values
3. seeks advice from potentially affected stakeholders (such as Reserve residents) and agencies
4. applies the appropriate building standards and design required for its use
5. includes conditions around use
6. includes processes for removal of infrastructure and transfer arrangements
7. charges an appropriate application fee.

Until recently, WA's moorings were managed under two separate sets of regulations. Amendments to the *Mooring Regulations 1998* have been implemented following a comprehensive two-year engagement with key stakeholders and two rounds of public consultation (DoT 2021). DPIRD will work with DoT to-

- investigate and implement an appropriate licensing framework for commercial tourism moorings
- review the licensing requirements for jetties owned by commercial tourism operators in the Abrolhos FHPA.

Marine-based commercial tourism activities – approvals and licensing

While the FRMA allows for the management and licensing of aquatic eco-tourism (non-fishing) operations, a framework is not currently in place. Provided a FHPA entry notification is completed, any number of aquatic eco-tourism operators may currently undertake non-fishing activities in the Abrolhos FHPA.

To better manage operations, activities, and risks to key values, DPIRD will introduce a licensing requirement for all aquatic (non-fishing) eco-tourism operations in the Abrolhos FHPA. Aquatic eco-tourism operations include eco-tours, self-steer hire vessels, ferries, expedition vessels and cruise ships. An aquatic eco - tourism licence will also be required from DPIRD to land marine aircraft such as seaplanes and boat planes in designated areas in the Abrolhos FHPA.

Importantly, the licensing framework will also consider existing arrangements for those aquatic eco-tourism operators that already hold a Commercial Tour Operators licence granted by DBCA for the National Park and those West Coast Zone fishing tour operators who may also be providing eco-tourism (non-fishing) activities to charter fishing clients. Aquatic eco - tourism operators will need to satisfy a range of requirements when applying for a licence to ensure environmental, heritage and safety standards are being met and conditions of operation will be introduced.

Initially, the number of aquatic eco-tourism licences granted for the FHPA will not be restricted but this will be reviewed during the life of this management plan.

A specific authorisation will be required for an existing West Coast Zone fishing tour operator (charter fishing) licence holder to continue to operate in the Abrolhos FHPA. Please refer to Section 2.3 for further information relating to the future management of fishing tour operators in the FHPA.

To ascertain commercial interest in marine-based tourism ventures in the Abrolhos FHPA, a competitive process will be undertaken. This process will apply to any proposed marine-based tourism ventures that require exclusive (permanent or semi-permanent) access to a location in the FHPA, and/or where a restricted commercial development opportunity exists and there is likely to be interest from more than one party. Examples of marine-based tourism ventures that will be required to undergo the competitive process include proposals to install fixed, floating marine-based infrastructure for day use or overnight accommodation.

This is considered a fair and equitable process to assess applications and will ensure the most suitable applicant is selected and State Government's strategic priorities are achieved.

Any marine-based tourism venture in the Abrolhos FHPA will be assessed to ensure that it enhances, or at least does not unacceptably impact on, the natural, cultural heritage, fishing and community values of the Abrolhos Islands, and retains the Abrolhos sense of place. Proposals will also be assessed under the *Environmental Protection Act 1986* and the EPBC Act, where appropriate, and any other relevant legislation.

Approval from DPIRD will be required for persons entering the Abrolhos FHPA to create audio-visual productions for a commercial purpose or gain. This will not apply to any commercial operator licenced to undertake commercial activities at the Abrolhos Islands across all tenures. Approval will also be required to hold a marine-based commercial event in the FHPA.

The revenue raised from approving and licensing commercial marine tourism (non-fishing) activities in the Abrolhos FHPA will be used to assist in the installation and maintenance of public marine infrastructure, education programs, administration systems, and FHPA compliance and management.

DPIRD will also consider introducing an Abrolhos FHPA entry fee for private recreational (i.e., non-commercial) boats.

Table 11 below summarises the approvals, assessment, licensing and fee framework for commercial marine tourism operators and associated marine infrastructure.

Table 11: Abrolhos FHPA Marine Tourism Assessment and Licensing Framework

Marine Tourism Activity or Marine Infrastructure	DPIRD Approval Required	Assessment Guidelines	Application Fee	Restrictions on Numbers	Licence/Approval Conditions	Annual Licence Renewal Fee	Exceptions
Offering non-fishing (only) commercial marine eco-tour activities, self-steer hire vessels, ferry services, expedition and cruise ship tours, and landing marine aircraft (seaplanes and boat planes) in the FHPA	Yes	Yes (in consultation with stakeholders)	Yes	No ⁴⁵	Yes ⁴⁶ (for activities - in consultation with stakeholders)	Yes (DPIRD)	An eco-tourism licence will not be required by a person authorised to operate in the Abrolhos FHPA Fishing Tour Operator Zone.
Offering commercial fishing tour activities in the Abrolhos FHPA Fishing Tour Operator Zone once established (and eco-tourism activities as relevant)	Yes (refer to Section 2.3)	Yes (access criteria will be subject to stakeholder consultation)	Yes	Yes	Yes (for eco-tourism activities - in consultation with stakeholders)	Yes (DPIRD)	None
Installing and using a new jetty for commercial marine tourism purposes OR Converting an existing fishing/aquaculture jetty to commercial marine tourism standards	Yes (location, design and standards)	Yes (update existing DPIRD jetty guidelines)	Yes	Yes	Yes (for purpose and use)	Yes (DoT)	None

⁴⁵ Abrolhos FHPA Aquatic Eco Tour Operators Licences will be subject to performance and operating conditions. Numbers of licences granted may be restricted in the future.

⁴⁶ Licence conditions will be developed to align with DBCA Commercial Tour Operator Licence conditions for Marine Parks and Reserves

Marine Tourism Activity or Marine Infrastructure	DPIRD Approval Required	Assessment Guidelines	Application Fee	Restrictions on Numbers	Licence/Approval Conditions	Annual Licence Renewal Fee	Exceptions
Installing and using a new mooring for commercial marine tourism purposes OR Converting an existing fishing/aquaculture mooring to a commercial marine tourism mooring	Yes (location, design and standards)	Yes (update existing DPIRD mooring guidelines)	Yes	Yes	Yes (purpose and use)	Yes (DPIRD or DoT)	None
Installing and using new fixed floating pontoons/platforms/barges/landings etc for commercial marine tourism purposes OR Converting existing private fixed floating pontoons/platforms/barges etc to commercial marine tourism standards	Yes	Yes (in consultation with stakeholders)	Yes	Yes	Yes (activities and infrastructure use)	Yes	None
Entering the Abrolhos FHPA to create audio-visual productions for a commercial purpose	Yes	Yes	Yes	No	Yes	N/A – one off approval	Will not apply to a person operating at the Abrolhos Islands under the authority of a commercial licence of any type.

Marine Tourism Activity or Marine Infrastructure	DPIRD Approval Required	Assessment Guidelines	Application Fee	Restrictions on Numbers	Licence/Approval Conditions	Annual Licence Renewal Fee	Exceptions
Holding a commercial event in the Abrolhos FHPA	Yes	Yes	Yes	No	Yes	N/A – one off approval	None
Entering the FHPA to conducting any type of marine-based research below the high-water mark	TBA (refer to Section 2.6)	TBA	TBA	TBA	TBA	TBA	TBA

Management objectives and actions

Table 12: Marine tourism and recreation – management objectives and actions

Action No.	Abrolhos FHPA – Marine Tourism and Recreation	Relative Priority
<p><i>Management Objective 1: Enhance and facilitate a diverse range of marine-based recreational opportunities for visitors that will complement the destination as a low impact, ecologically sustainable, nature-based visitor experience.</i></p>		
<p><i>Management Objective 2: Work collaboratively with DBCA, WAM and other stakeholders to ensure future public and private marine tourism infrastructure is appropriate and located in key areas to support land-based tourism.</i></p>		
<p><i>Management Objective 3: Promote awareness of the preparation and knowledge required to visit the Abrolhos FHPA safely.</i></p>		
<p><i>Management Objective 4: In consultation with partner agencies and stakeholders, facilitate the establishment of licensed marine-based commercial tourism operations that provide extraordinary visitor experiences while minimising impacts on the key values of the FHPA, Reserve and National Park.</i></p>		
2.4(1)	In consultation with stakeholders, review all marine-based activities in ROAs to determine the activities that will be restricted in ROAs to protect the marine tourism and recreation values of the FHPA and relevant adjacent islands.	1
2.4(2)	In consultation with stakeholders, review the current marine-based activities that occur in the four SMUA – <i>Tourism</i> sites to determine the appropriate management arrangements required to manage multi-sector access and risks to key values.	1
2.4(3)	In consultation with stakeholders, determine the appropriate number of public moorings across the FHPA and review all activities and marine infrastructure within each public/marine tourism and mixed-use mooring and anchoring area.	1
2.4(4)	In consultation with stakeholders, review the current usage and need for the existing dive trails.	1
2.4(5)	Work with tourism stakeholders, management agencies and wildlife experts to identify up to three marine aircraft landing area locations.	1
2.4(6)	Create a <i>Special Marine Use Area (SMUA) – Wilderness Fishing</i> across the entire Abrolhos FHPA to the high-water mark and promote wilderness fishing concepts to the Abrolhos community.	2
2.4(7)	Develop a wilderness fishing code of conduct to educate recreational fishers and charter fishing operators around the benefits of wilderness fishing and its role in preserving fishing and marine tourism values.	2

Action No.	Abrolhos FHPA – Marine Tourism and Recreation	Relative Priority
2.4(8)	<p>Create four new <i>SMUA – Tourism</i> sites (refer to Appendix 4) at the following locations-</p> <ol style="list-style-type: none"> 1. Turtle Bay – East Wallabi Island 2. White Bank and adjacent anchorage – north Rat Island 3. Southeast Rat Island, Easter Group 4. Southwest lower embayment Pelsaert Island, Pelsaert Group <p>Implement associated regulations for the <i>SMUA – Tourism</i> sites following the review described in Action 2.4(2) above.</p>	1/2
2.4(9)	Implement ways to improve data collection through the online notification form and consider other methods such as surveys.	2
2.4(10)	In collaboration with DBCA, WAM and DoT, review the existing application and assessment process for the installation and use of commercial marine tourism infrastructure in the Abrolhos FHPA.	2
2.4(11)	Work with DoT to investigate and implement an appropriate licensing framework for commercial tourism moorings and review the licensing requirements for jetties owned by operators in the Abrolhos FHPA.	2
2.4(12)	Identify and promote safe locations for vessels to anchor in the FHPA in varying weather conditions.	2
2.4(13)	Introduce a licensing requirement for all aquatic eco-tourism operations in the Abrolhos FHPA such as non-fishing eco-tours, self-steer hire vessels, ferries, expedition vessels, cruise ships and marine aircraft.	2
2.4(14)	<p>Introduce an approval requirement for persons wishing to undertake the following in the Abrolhos FHPA-</p> <ul style="list-style-type: none"> • produce film, photography, or any type of audio-visual product for a commercial purpose or gain (where a person does not hold a commercial licence of any type relevant to the Abrolhos Islands) • hold any type of commercial event. 	2
2.4(15)	<p>With regard to marine safety-</p> <ol style="list-style-type: none"> 1. In consultation with management agencies, investigate ways to promote understanding of the current management framework for sea SAR operations, emergency evacuations and first aid available to Abrolhos FHPA users. 2. Maintain DPIRD's presence and active engagement on the District Emergency Management Committee and Local Emergency Management Committee. 3. Consider ways to use the online notification form to increase education and awareness of safety at sea for Abrolhos FHPA users. 	2
2.4(16)	Implement a competitive process for marine-based tourism ventures that require exclusive (permanent or semi-permanent) access to a location in the FHPA, and/or where a restricted commercial development opportunity exists and there is likely to be interest from more than one party.	3

Action No.	Abrolhos FHPA – Marine Tourism and Recreation	Relative Priority
2.4(17)	<p>Following the review described in Action 2.4(4) above and if required-</p> <ul style="list-style-type: none"> determine the permitted activities occurring in and around dive trails review/update the text of the existing dive trail plates implement a regular maintenance program consider dive trails in new locations, if required 	3
2.4(18)	Consider implementing an online public mooring booking system, with a target implementation date of 1 February 2025.	3
2.4(19)	Work with DBCA to meet public marine infrastructure requirements to support land-based tourism infrastructure in the National Park.	3
2.4(20)	Work with DoT to develop a boating guide following the implementation of marine tourism and recreation management measures.	3
2.4(21)	Consider introducing an Abrolhos FHPA entry fee for private recreational (i.e., non-commercial) boats.	3
2.4(22)	Support the preparation and implementation of an integrated interpretation program for the Abrolhos FHPA, Reserve and National Park.	N/A

2.5. Abrolhos Community

Support a vibrant community with a strong sense of stewardship.

Houtman Abrolhos Islands Strategic Direction 2020-24

The Abrolhos Community has a strong appreciation and connection to all key values of the Abrolhos FHPA as detailed in this management plan. The Abrolhos Community includes-

- Abrolhos Reserve residents (commercial rock lobster and aquaculture 'camp owners')
- Other commercial fishing and aquaculture operators
- commercial marine tour operators (charter fishing and eco-tourism)
- long term and regular visitors undertaking recreational fishing and other recreational activities.

The Abrolhos Community recognises the importance of environmental stewardship to ensure the responsible use and protection of the marine environment through active participation in sustainable practices.

Generations of rock lobster fishing families have made the Abrolhos Islands their home, building a longstanding social community and lifestyle which captures the essence of the unique fishing cultural heritage at the Islands. More recently, aquaculture licensees operating in the FHPA have become camp owners and a part of the resident community. Other commercial fishers (refer to [Section 2.3](#)) also have a long-term and strong social connection to the FHPA.

Operating commercial marine tours in the FHPA provides a range of experiences and a unique way of life for those owners and employees to enjoy. Regular or long-term returning visitors enjoy the remoteness and raw beauty of the Abrolhos Islands, often taking extended trips to the FHPA with family and friends to 'get away' and experience the diverse natural, fishing, cultural heritage and marine tourism values on offer.



Image 35- Sunrise at Pigeon Island, Wallabi Group and Image 36- Still waters, Credit: DPIRD.

Social values

Understanding the aspirations of the Arolhos Community is a priority consideration when considering marine management and planning in the Arolhos FHPA. The Arolhos Community recognises a range of social values that are a significant part of working and recreating at the Islands including-

- ✓ stewardship and connection to the history, marine environment and wildlife
- ✓ amenity, remoteness, lifestyle
- ✓ safety and access
- ✓ affinity and 'sense of place'
- ✓ history, memories, knowledge, stories and experiences
- ✓ generations of family businesses
- ✓ unique work environment
- ✓ belonging to a unique local community, friends and family
- ✓ effective management, communication and engagement with government

Marine safety

Safety is the highest priority when considering the wellbeing of the Arolhos Community. Even the most experienced and qualified boat-users can experience a vessel or human safety incident during a trip to the Arolhos FHPA. The Arolhos Community has a comprehensive knowledge of visiting and operating in a remote and potentially dangerous location and understands that reducing the risks to safety is an essential aspect of working and recreating in the FHPA.

The marine safety values described in [Section 2.4](#) are also highly relevant to the Arolhos Community.

Private commercial (fishing and aquaculture) marine infrastructure

Commercial rock lobster and aquaculture licensees own marine infrastructure to support their business operations. There are 132 private commercial jetties adjacent to inhabited islands in the Arolhos Reserve and 188 private commercial moorings which are generally located in mooring areas adjacent to inhabited areas.



Images 37 and 38- Commercial rock lobster and aquaculture operators' jetties. Credit: DPIRD.

Abrolhos community and public engagement

DPIRD engages with key stakeholders to develop solutions to management and operational issues. DPIRD also undertakes consultation and information sharing with the Abrolhos community.

There is significant broader community interest in the activities and values of the Abrolhos community. Visitors to the FHPA often seek to appreciate and understand the experience of living and working in such a remote and unique environment. Several community groups and research organisations run volunteer programs which assists a wider community appreciation and understanding of the unique environment and values of the FHPA.

Potential threats and impacts

Table 13: Potential threats and impacts to Abrolhos community values in the Abrolhos FHPA

Potential Threat	Impact to Abrolhos Community Values
Lack of understanding and loss of Abrolhos community values	<p>Lack of wider community awareness on the important and unique social and cultural values of the Abrolhos community</p> <p>Tourism and recreation in the FHPA impacting on Abrolhos community values</p> <p>Risks to safety and liability of infrastructure users</p> <p>Lack of regular compliance audits by appropriate authorities</p> <p>Multiple agency management</p> <p>New licensing framework required</p> <p>New/updated policies, legislation and guidelines required</p> <p>Development of IT systems required to manage licensing and approvals</p> <p>No revenue currently generated to assist in management and compliance costs</p>
Unmanaged marine-based visitation and commercial marine tourism in the FHPA	
Competing marine -based activities in key areas across sectors	
Illegal use of private infrastructure by the public	
Commercial fishing and aquaculture marine infrastructure not meeting appropriate standards	
Unlicenced commercial fishing and aquaculture marine infrastructure	
Lack of revenue and cost recovery	
Marine safety framework not promoted or understood (see Section 2.4)	

Current and future management

Marine safety

Please refer to [Section 2.4](#) for further detail regarding the current and future management of marine safety in the Abrolhos FHPA.

Commercial fishing and aquaculture marine infrastructure

DPIRD is responsible for approving the location, design and installation of marine infrastructure that supports commercial fishing and aquaculture in the Abrolhos FHPA, but currently has no authority to licence such infrastructure. Applications from commercial fishing and aquaculture for new marine-based infrastructure are assessed by DPIRD to ensure that the infrastructure type and location is appropriate, meets required standards and does not adversely impact key values.

The Regulations allow for commercial fishing and aquaculture jetties and moorings to be used by any person with written permission of the owner, a copy of which must be provided to DPIRD.

Privately owned commercial fishing and aquaculture infrastructure in the FHPA can include-

- moorings and jetties for operational use
- rock lobster holding cages
- pontoons
- infrastructure associated with licenced/leased aquaculture sites
- any other marine-based structure located within the Abrolhos FHPA used for commercial fishing and aquaculture operations.

The current moorings, jetties and aquaculture infrastructure owned by commercial fishers and aquaculture operators are in locations that are recognised as an important part of business operations. These areas will be maintained for priority use by commercial operators, unless otherwise agreed between DPIRD and infrastructure owners.

Similar to commercial marine tourism infrastructure (refer to [Section 2.4](#)), the existing application and assessment process for new commercial fishing and aquaculture infrastructure will be reviewed in collaboration with DBCA, WAM and DoT to ensure it-

- achieves consistency with all other relevant State legislation and building standards
- addresses risks to natural and other key values
- seeks advice from potentially affected stakeholders and agencies
- includes conditions around infrastructure use
- includes processes for removal of infrastructure and transfer arrangements
- charges an appropriate application fee.

DPIRD will work with DoT to-

- implement a procedure for ensuring existing moorings and jetties meet required standards
- review the current licensing requirements for existing and new jetties
- investigate and implement an appropriate licensing framework for moorings.

The outcomes and recommendations of the final mooring review and analysis report will be used to guide the development of management measures for commercial fishing and aquaculture moorings.



Image 39- Collapsed jetty, Rat Island, Easter Group. Credit: DPIRD, N Moore.

Abrolhos community and public engagement

DPIRD will continue working to build our relationship with the Abrolhos community and collaborate with key stakeholders to develop solutions to management and operational issues. Effective engagement with the Abrolhos community will be an important step in achieving this. DPIRD will also undertake regular consultation and information sharing with the Abrolhos community and will continue to support volunteer programs in the FHPA.

One of DPIRD’s objectives is to promote the Abrolhos FHPA as a WA community owned asset that allows for equitable access for all sectors to carry out a diverse range of activities within a sustainable management framework.

It is important that all Abrolhos FHPA users are aware of opportunities to be involved in the planning and management of the FHPA to foster greater appreciation of its key values. DPIRD will work with DBCA, WAM and other key agencies to explore opportunities to increase public engagement and to provide management information to the wider community, including the promotion of the unique social values of the Abrolhos community.

Management objectives and actions

Table 14: Abrolhos community – management objectives and actions

Action No.	Abrolhos FHPA – Abrolhos Community	Relative Priority
<i>Management Objective 1: Build strong relationships with the Abrolhos community and increase awareness and stewardship of the Abrolhos FHPA across the wider community.</i>		
<i>Management Objective 2: Implement a management and licensing framework designed to improve safety, standards and maintenance of commercial marine fishing and aquaculture infrastructure in the FHPA.</i>		
2.5(1)	Continue working to build relationships with the Abrolhos Community and to develop solutions to management and operational issues.	1
2.5(2)	In collaboration with DBCA and DoT, review the existing application and assessment process for new commercial fishing and aquaculture infrastructure.	1
2.5(3)	Promote the Abrolhos FHPA as a WA community owned asset that allows for equitable access for all sectors to carry out a diverse of range of activities within a sustainable management framework.	1
2.5(4)	Work with DoT to- <ul style="list-style-type: none"> • implement a procedure for ensuring existing moorings and jetties meet required standards • review the current licensing requirements for existing and new jetties • investigate and implement an appropriate licensing framework for moorings. 	2
2.5(5)	Work with DBCA, WAM and other key agencies to explore opportunities to increase public engagement and to provide cross-tenure management information to the wider community, including the promotion of the unique social values of the Abrolhos community.	2
2.5(6)	Continue to support volunteer programs in the FHPA.	Ongoing

2.6. Governance

Develop a robust governance framework built on collaborative partnerships across government and stakeholders.

Houtman Abrolhos Islands Strategic Direction 2020-24

Governance values

Governance refers to the ways in which an organisation is directed, controlled and held to account with a focus on performance and accountability. DPIRD's governance obligations are largely set out in legislation and policy that defines the principles, elements and arrangements that we use to achieve DPIRD's strategic goals and meet government and community expectations for our accountable use of public resources.

Stakeholders expect that DPIRD and partner agencies (refer to [Section 1.3](#)) who are directly responsible for managing elements within the Abrolhos FHPA follow the principles of good governance such as:

- ✓ Integrity – acting impartially, ethically, with integrity and in the interests of the public sector.
- ✓ Transparency– having clear procedures, roles and responsibilities for decision making, and being open about decisions and performance.
- ✓ Accountability – being answerable for decisions and actions as individuals and as a department and having appropriate arrangements in place to ensure partner agencies adhere to applicable standards.
- ✓ Efficiency and effectiveness – ensuring the best use of resources to further the purpose and performance of partner agencies.

Due to its multijurisdictional nature, it is essential that partner agencies work together to achieve State Government's vision and key priorities for the Abrolhos Islands. An effective whole of government governance framework between partner agencies for the Abrolhos FHPA will ensure:

- that State Government's Strategic Direction is achieved
- appropriate engagement with stakeholders and the broader community
- good cross-tenure management planning and administration
- implementation of complementary legislation and consistent cross-tenure policies and procedures
- appropriate performance assessment and monitoring (refer to [Section 1.3](#)).

Appropriate resources, funding and revenue is a key part of achieving better management outcomes for the WA community. Compliance with management arrangements is of high value to the WA community and FHPA users. Stakeholders expect that an appropriate level of funding and resources is available to assist in compliance, enforcement and education activities.

The identification of stakeholders (refer to [Section 1.3](#)) and meaningful consultation is required for effective governance and management. The knowledge and experience of stakeholders and their connection to the islands is of great value to management agencies. Further consultation and feedback will continue to shape and inform future planning and DPIRD will work to engage stakeholders on a regular basis.

Contemporary, consistent and transparent policy and legislation is required to protect and conserve the key values of the Abrolhos FHPA, and to assist in managing the impact of FHPA users on the Abrolhos Reserve and National Park. This management plan aims to address those needs in a timely manner, based on priorities.

Sharing of assets, resources and services across relevant agencies reduces cost and streamlines management. DPIRD will work with partner agencies to identify and implement shared operational arrangements wherever possible.



Image 40- DPIRD fisheries compliance and education patrol vessels Credit: DPIRD.

Potential threats and impacts

Table 15: Potential threats and impacts to governance values across the Abrolhos Islands

Potential Threat	Impact to Governance Values
Inadequate funding and resources to implement FHPA management objectives and actions	Unable to achieve Government's Strategic Direction Unacceptable risks to values
No revenue and cost recovery to assist in management	Unsustainable high cost to Government to undertake appropriate research, management, compliance and education activities
Unsuitable policy and legislation	Policy and legislation not implemented or not suitable to manage risks to values
Inadequate cross-tenure governance framework and operational management	Confusion and management complexity arising from inconsistent strategic and management frameworks across tenures
Inadequate administration and licensing systems	Increased costs to Government resulting from a lack of cross-tenure operational management and use of existing State Government assets
Inadequate community consultation and engagement	Risks to effective management of commercial marine activities and infrastructure due to ineffective administration systems Engagement of the entire community not achieved
Inadequate FHPA research, data collection, monitoring and reporting	Regular consultation and information sharing not undertaken resulting in a lack of community awareness and stewardship Management measures are inappropriate to effectively manage risks due to lack of information
Inadequate level of compliance and education activities	Unacceptable risk to values due to lack of understanding on the importance of management measures, and management measures not complied with
No knowledge of marine-based research project outcomes in the FHPA	Lack of collaboration and information sharing between government and non-government organisations who are undertaking research projects in the FHPA.

Management objectives and actions

Table 16: Governance- management objectives and actions

Action No	Abrolhos FHPA - Governance - Management Objectives and Actions	Relative Priority
<i>Management Objective 1: Identify funding and resources required to effectively achieve State Government's strategic direction for the Abrolhos FHPA.</i>		
<i>Management Objective 2: Ensure that FHPA legislation and policy is contemporary and fit for purpose, and that decision-making processes are consistent and transparent.</i>		
<i>Management Objective 3: Work with partner agencies to apply a cooperative inter-agency management approach that will facilitate seamless management across all tenures.</i>		
2.6(1)	Introduce a long-term sustainable funding, revenue and resource framework for the Abrolhos FHPA to support effective administration, management and compliance.	1
2.6(2)	Set up an appropriate and ongoing governance framework to work collaboratively with DBCA, the WA Museum and other relevant agencies to enhance management of key values across tenures.	1
2.6(3)	Develop and implement contemporary and transparent Abrolhos FHPA policies, guidelines and legislation in accordance with the priorities set out in this management plan.	1
2.6(4)	Work with partner agencies to improve cooperative operational management arrangements across all tenures including sharing of services and assets, collaborative operational planning, and cross-authorisation of staff.	1
2.6(5)	Monitor implementation of this plan through regular monitoring of progress of actions in accordance with priorities.	1
2.6(6)	Consider introducing an approval requirement for persons wishing to conduct research in the Abrolhos FHPA below the high-water mark.	1
2.6(7)	Undertake a mid-term review of this management plan commencing in 2027.	3
2.6(8)	Identify opportunities to collaborate with partner agencies and research organisations to carry out targeted research programs in the FHPA to support future planning and management.	3
2.6(9)	Clarify the ethics and licensing requirements for non-government organisations taking or disturbing aquatic organisms for the purpose of undertaking biological assessment, scientific or other purposes in the Abrolhos FHPA.	4

References

Documents or websites referred to in, or used to, inform this plan are listed below.

Abrolhos Islands Moorings Review and Analysis Project – Final Report. (2021). Prepared by Wavelength Consulting for the Department of Primary Industries and Regional Development, Western Australia.

Australian Maritime Safety Authority (Commonwealth). 2021. <https://www.amsa.gov.au/>

Bellchambers LM, How J, Evans SN, Pember MB, de Lestang S and Caputi N. (2017). *Ecological Assessment Report: Western Rock Lobster Resource of Western Australia.* Fisheries Research Report No. 279, Department of Fisheries, Western Australia.

Boating WA. 2021. <https://boatingwa.com.au/>

Bureau of Meteorology (Commonwealth). 2021.

http://www.bom.gov.au/climate/averages/tables/cw_008290.shtml

Caputi, N., Pearce, A. and Lenanton, R. 2010. *Fisheries-dependent indicators of climate change in Western Australia.* WAMSI Sub-project 4.2.3. Fisheries Research Report No. 213. Department of Fisheries, Western Australia.

Caputi, N.1, Feng, M.2, Pearce, A.1, Benthuisen, J.5, Denham, A.1, Hetzel, Y.1, Matear, R.3, Jackson, G.1, Molony, B.1, Joll, L.4 and Chandrapavan A.1 (2015). *Management implications of climate change effect on fisheries in Western Australia, Part 1: Environmental change and risk assessment.* FRDC Project No. 2010/535. Fisheries Research Report No. 260. Department of Fisheries, Western Australia.

Caputi, N., Feng, M., Pearce, A., Benthuisen, J., Denham, A., Hetzel, Y., Matear, R., Jackson, G., Molony, B., Joll, L. and Chandrapavan A. (2015). *Management implications of climate change effect on fisheries in Western Australia, Part 2: Case studies.* FRDC Project No. 2010/535. Fisheries Research Report No. 261. Department of Fisheries, Western Australia.

City of Greater Geraldton. 2021. <https://www.cgq.wa.gov.au/>

Civil Aviation Safety Authority (Commonwealth). 2021. <https://www.casa.gov.au/>

Chandrapavan A, Kangas M, Caputi N. 2020. *Understanding recruitment variation (including the collapse) of Ballot's saucer scallop stocks in Western Australia and assessing the feasibility of assisted recovery measures for improved management in a changing environment.* Fisheries Research Report No. 308. Department of Primary Industries and Regional Development, Western Australia.

Commonwealth Scientific and Industrial Research Organisation. 2021.

<https://www.csiro.au/en/about/people/business-units/oceans-and-atmosphere>

Commonwealth of Australia (2019b), *National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds*, Commonwealth of Australia, Canberra.

Commonwealth of Australia (2013), *Recovery Plan for the Australian Sea Lion (Neophoca cinerea) 2013*, Department of Sustainability, Environment, Water, Populations and Communities, Canberra.

Conservation Council of WA. 2021. <https://www.ccwa.org.au/>

Conservation and Parks Commission. 2021. <https://www.conservation.wa.gov.au/>

de Lestang, S., Pember, M. and Slawinski, D. 2019. *Development of an industry-based habitat mapping/monitoring.* Fisheries Research Report No. 296, Department of Primary Industries and Regional Development, Western Australia.

Department of Agriculture, Water and the Environment (Commonwealth). 2021.

<https://www.awe.gov.au/>

- Department of Biodiversity, Conservation and Attractions (State). 2021. <https://www.dbca.wa.gov.au/>
- Department of Fire and Emergency Services (State). 2021. <https://www.dfes.wa.gov.au/site/>
- Department of Foreign Affairs and Trade (Commonwealth). 2021. <https://www.dfat.gov.au/>
- Department of Health (State). 2021. <https://ww2.health.wa.gov.au/>
- Department of Planning, Lands and Heritage (State). 2021. <https://www.wa.gov.au/organisation/department-of-planning-lands-and-heritage>
- Department of Primary Industries and Regional Development (State). 2021. <http://www.fish.wa.gov.au/sustainability-and-environment/abrolhos-islands/Pages/default.aspx>
- Department of Transport (State). 2021. <https://www.transport.wa.gov.au/imarine/marine-information.asp>
- Environmental Protection Authority (State). 2021. <https://www.epa.wa.gov.au/>
- Evans, S.N., Konzewitsch, N. and Bellchambers, L.M. 2022. *Houtman Abrolhos Islands Fish Habitat Protection Area: A Summary of Marine Resource Use and Ecological Attributes*. Fisheries Research Report No. 321 Department of Primary Industries and Regional Development, Western Australia. 159 pp.
- Harvest Strategy Policy and Operational Guidelines for the Aquatic Resources of Western Australia*. 2015. Fisheries Management Paper No. 271. Department of Primary Industries and Regional Development, Western Australia.
- Henry GW, Lyle JM (2003). *The National Recreational and Indigenous Fishing Survey*. Final Report for FRDC Project No. 99/158. Australian Government Department of Agriculture, Fisheries and Forestry, Canberra.
- Heritage Council of WA. 2021. <https://www.wa.gov.au/organisation/heritage-council-of-western-australia>
- Houtman Abrolhos Islands Conservation Network. (2021). <https://www.houtmanabrolhosislands.com/>
- Houtman Abrolhos Islands National Park Draft Management Plan 2021* (2021). Department of Biodiversity, Conservation and Attractions.
- Exploring the Houtman Abrolhos islands*. Fisheries Occasional Paper 105. 2012. Department of Primary Industries and Regional Development, Western Australia.
- Fishwatch (2021). Department of Primary Industries and Regional Development, Western Australia. <https://www.fish.wa.gov.au/About-Us/Contact-Us/Pages/Fish-watch.aspx>
- Gaughan, D.J. and Santoro, K. (eds). 2021. *Status Reports of the Fisheries and Aquatic Resources of Western Australia 2019/20: The State of the Fisheries*. Department of Primary Industries and Regional Development, Western Australia.
- Gray, H. (1993). Houtman Abrolhos Islands – Cultural Heritage. Prepared for the Abrolhos Islands Consultative Council.
- Green, G.A., Pasveer, J, Souter, C and Stanbury M. (2001). *Draft Management Plan for the protection and use of historic shipwreck and associated maritime heritage sites in the Wallabi Group of the Houtman Abrolhos System*. Report - Department of Maritime Archaeology WA Maritime Museum No. 151.
- Green, G.A. and Stanbury, M. (1988.) *Report and Recommendations on Archaeological Sites in the Houtman Abrolhos*. Report: Department of Maritime Archaeology, Western Australian Museum, No. 29, 1988.

- Houtman Abrolhos Islands Strategic Direction 2020 – 2024* (2020). WA State Government.
- How J., D. Coughran, M. Double, K. Rushworth, B. Hebiton, J. Smith, J. Harrison, M. Taylor, D. Paton, G. McPherson, C. McPherson, A. Recalde Salas, C. Salgado-Kent and S. de Lestang 2020. *Mitigation measures to reduce entanglements of migrating whales with commercial fishing gear*. FRDC 2014-004. Fisheries Research Report No. 304. Department of Primary Industries and Regional Development, Western Australia.
- Inventory of the Land Conservation Values of the Houtman Abrolhos Islands*. 2003. Fisheries Management Paper 151. Department of Fisheries, Western Australia.
- J C Phillips & J M Huisman 2009 Influence of the Leeuwin Current on the Marine Flora of the Houtman Abrolhos *Journal of the Royal Society of Western Australia*, 92: 139-146.
- Lindner RK, McLeod PB (1991). *An economic impact of recreational fishing in Western Australia*. Fisheries Management Paper No. 38. Department of Fisheries, Western Australia. 48 pp.
- Management of the Houtman Abrolhos System – a Draft Review 2007 – 2017*. 2007. Fisheries Management Paper 220. Abrolhos Islands Management Advisory Committee and the Department of Fisheries, Western Australia.
- Management of the Houtman Abrolhos System*. Fisheries Management Paper 117. 1998. Abrolhos Islands Management Advisory Committee and the Department of Fisheries, Western Australia.
- Marine Tourism WA. (2021). <https://www.marinetourismwa.com.au/>
- Master Visitor Plan for the Wallabi Group of the Houtman Abrolhos Islands*. 2014. Prepared by TRC Tourism for the WA Museum.
- Middleton, S (2021). *Abrolhos Reserve and FHPA Consultation Report*. Prepared by AgDots Consulting for the Department of Primary Industries and Regional Development, Western Australia.
- Midwest Tourism Development Strategy*. 2014. Prepared by Evolve Solutions for the Midwest Development Commission.
- Munoz, J and McDonald, J 2014. *Potential Eradication and Control Methods for the Management of the Ascidian Didemnum perlucidum in Western Australia*. Fisheries Research Report 252. Department of Primary Industries and Regional Development, Western Australia.
- National Trust of Australia. 2021. <https://www.nationaltrust.org.au/>
- Parks Australia. 2021. <https://parksaustralia.gov.au/marine/parks/south-west/abrolhos/>
- Primary Industries Plan 2020 – 2024* (2020). Department of Primary Industries and Regional Development, Western Australia.
- Redmap (2021). <https://www.redmap.org.au/article/sea-temperatures-and-climate-change-in-western-australia/>
- Richards, Z (2018). *The Coral Compactus: Western Australia Hard Coral Genus Identification Guide Version 2*. Western Australian Museum.
- Rottnest Island Authority. 2021. <https://ria.wa.gov.au/>
- Ryan KL, Hall NG, Lai EK, Smallwood CB, Tate A, Taylor SM, Wise BS 2019. *Statewide survey of boat-based recreational fishing in Western Australia 2017/18*. Fisheries Research Report No. 297. Department of Primary Industries and Regional Development, Western Australia.
- Sharksmart <https://www.sharksmart.com.au/>
- Shaw, J., in collaboration with the Abrolhos Islands fishing community, (2013). *Seeing Change: A photographic story from Abrolhos fishers*, Northern Agricultural Catchments Council, Geraldton.
- State Emergency Management Committee (2021). <https://semc.wa.gov.au/>

Stanbury, M. (1993). *Historical Sites of the Easter Group, Houtman Abrolhos, WA*. Report: Department of Maritime Archaeology, Western Australian Museum, No. 66.

Stanbury, M. (1991). *Historic areas of the Houtman Abrolhos. Code of Conduct recommendations for visitors to the Islands*. Department of Maritime Archaeology, Western Australian Maritime Museum.

Strategic Intent 2018 – 2021 (2018). Department of Primary Industries and Regional Development, Western Australia.

Telfer, C. (2010). *The Western Australian charter boat industry: Working towards long-term sustainability*. <https://ro.ecu.edu.au/theses/154>

The Houtman Abrolhos Islands Management Plan. (2012). Fisheries Management Paper No. 260. Department of Fisheries, Western Australia.

Tourism Council of WA. 2021.

https://www.tourism.wa.gov.au/Pages/welcome_to_tourism_western_australia.aspx#/

Western Australian Legislation. 2021. <https://www.legislation.wa.gov.au/>

Western Australian Museum. 2021. <https://visit.museum.wa.gov.au/maritime>

Wilson, B. (1992). *A Representative Marine Reserve System for Western Australia*. Report of the Marine Parks and Reserves Selection Working Group for the Hon Kevin Minson MLA. Department of Biodiversity, Conservation and Attractions, Western Australia.

Glossary

Term, acronym or abbreviation	Definition or term in full
Abrolhos/Abrolhos Islands	Houtman Abrolhos (land and waters)
Abrolhos FHPA	Abrolhos Islands Fish Habitat Protection Area set aside under section 115 of the FRMA, the area of WA waters adjacent to the Abrolhos Islands from the high-water mark to the seaward limits of the coastal waters of the State.
Abrolhos FHPA users	All persons accessing the waters of the Abrolhos FHPA by boat or from land including visitors, commercial fishers, recreational and charter fishers, aquaculture operators and eco-tourism operators.
Abrolhos Reserve	All the land and waters contained in Class A Reserve 20253 (managed by DPIRD on behalf of the Minister for Fisheries).
Aquaculture	The keeping, breeding, hatching, culturing or harvesting of fish.
Aquatic eco-tourism	Tourism relating to fish in their natural environment and includes the viewing or feeding of fish but does not include the taking of fish.
Aquatic organism	An aquatic organism of any species (whether alive or dead) and includes — <ul style="list-style-type: none"> (a) the eggs, spat, spawn, seeds, spores, fry, larva or other source of reproduction or offspring of an aquatic organism; and (b) a part only of an aquatic organism (including the shell or tail); and (c) live rock and live sand, but does not include aquatic mammals, aquatic reptiles, aquatic birds, amphibians or <i>Pinctada maxima</i> pearl oysters.
Aquatic resource	Includes biochemicals, genetic resources, organisms, populations and other biotic components of an aquatic ecosystem that are of actual or potential use, or of actual or potential value, to humanity.
ARMA	<i>Aquatic Resources Management Act 2016.</i>
BC Act	<i>Biodiversity Conservation Act 2016.</i>
Biosecurity	The management of the risk of animal and plant pests and diseases entering, emerging, establishing or spreading in Western Australia.
Boat	A vessel, craft or floating platform of any description that is capable of use in or on water, whether floating or submersible. Includes all types of marine aircraft.
Broodstock	Aquatic resources taken or kept for breeding.
CoGG	City of Greater Geraldton.

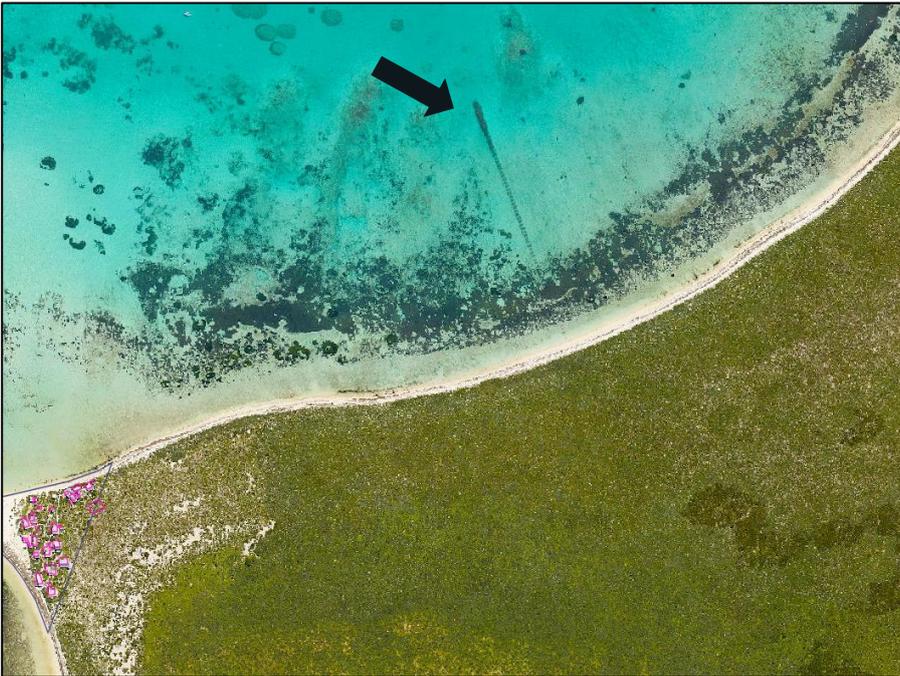
Term, acronym or abbreviation	Definition or term in full
Commercial	The purpose of sale or any other purpose that is directed to gain or reward.
Commercial Marine Tour Operator	The holder of a FTOL, RFTOL or a future Aquatic Eco - tourism Licence permitted to operate in the Abrolhos FHPA.
DBCA	Department of Biodiversity, Conservation and Attractions
DPIRD	Department of Primary Industries and Regional Development
DoT	Department of Transport
DPIRD	Department of Primary Industries and Regional Development
EBFM	Ecosystem Based Fisheries Management
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999 (Cwth)</i>
ESD	Ecologically Sustainable Development
ETP	Endangered, threatened and protected species
Export approval	Approval provided by the Commonwealth to allow export of sustainably caught Australian seafood
Fishing	Searching for fish; attempting to take fish; taking fish; engaging in any other activity that can reasonably be expected to result in the taking of fish.
Fishing tour	Means a tour a central purpose of which is to provide an opportunity for recreational fishing and may include the provision of fishing guidance, fishing gear, accommodation or transport
FRMA	<i>Fish Resources Management Act 1994</i>
FRMR	<i>Fish Resources Management Regulations 1995</i>
FTOL	Fishing Tour Operator Licence
High-water mark	The highest point reached by a high tide
Haul up	Pulling a tender onto the shoreline, either into the intertidal zone, or above the high-water mark
Intertidal area	The area of land that sits between the low and high-water mark
IUCN	International Union for the Conservation of Nature
Jetty	Any jetty, pier, wharf, quay, grid, slip, landing place, stage, platform (other than a platform that is a vessel for the purposes of the <i>Western Australian Marine Act 1982</i>) or similar structure, whether fixed or floating, erected or placed, wholly or in part, in, on or over any waters; and any ramp which is or which may be used for the purpose of launching or landing a vessel
Low-water mark	The lowest point reached by a low tide
MSC	Marine Stewardship Council
MWADZ	Midwest Aquaculture Development Zone

Term, acronym or abbreviation	Definition or term in full
Midwest Region	Midwest Region of Western Australia as defined in the <i>Regional Development Commissions Act 1993</i>
Mooring	Any gear (including an anchor or stake) set out in a permanent manner to which a vessel or other floating structure may be secured by a chain, cable, wire or rope
National Park	Houtman Abrolhos Islands National Park (vested in the Conservation and Parks Commission)
Partner agency	A department or agency with legislative responsibility for management in the Abrolhos FHPA.
Platform, pontoon, raft, barge	See Jetty
Public marine infrastructure	Any marine infrastructure the property of government or vested in any person on behalf of government
Private marine infrastructure	Any marine infrastructure used and maintained by any person not being a person representing or acting on behalf of government
Recreational	Activities not related to a commercial purpose or gain
ROA	Reef Observation Area
Regulations	<i>Fish Resources Management Regulations 1995</i>
RFBL	Recreational Fishing from a Boat Licence issued by DPIRD
RFTOL	Restricted Fishing Tour Operators Licence
State waters	The area of waters within the limits of the State of Western Australia adjacent to the Abrolhos Islands from the high-water mark to the seaward limits of the coastal waters of the State
Strategic Direction	<i>Houtman Abrolhos Islands Strategic Direction 2020 – 24</i>
Tenure	The manner in which a party holds or occupies land
This plan	<i>Abrolhos Islands Fish Habitat Protection Area Management Plan 2022 - 2032</i>
UNCLOS	United Nations Convention for the Law of the Sea
WAM	Western Australian Museum
WCB	West Coast Bioregion
White boat	Privately owned recreational boat
Whole of government	Collaborative management approach that includes more than one government agency to manage a particular community asset

Appendix 1: Special Marine Use Areas – Cultural Heritage

1. Northwest West Wallabi Island – Shag Bay (Wallabi Group) SMUA – Cultural Heritage

Adjacent land – National Park



2. West Pelsaert Island (1) (Pelsaert Group) SMUA – Cultural Heritage

Adjacent land – National Park



3. West Pelsaert Island (2) and (3) (Pelsaert Group) SMUA – Cultural Heritage

Adjacent land – National Park



4. Southeast Gun Island (Pelsaert Group) SMUA – Cultural Heritage

Adjacent land – National Park



5. Southeast Sweet Island (Pelsaert Group) SMUA - Cultural Heritage

Adjacent land – National Park



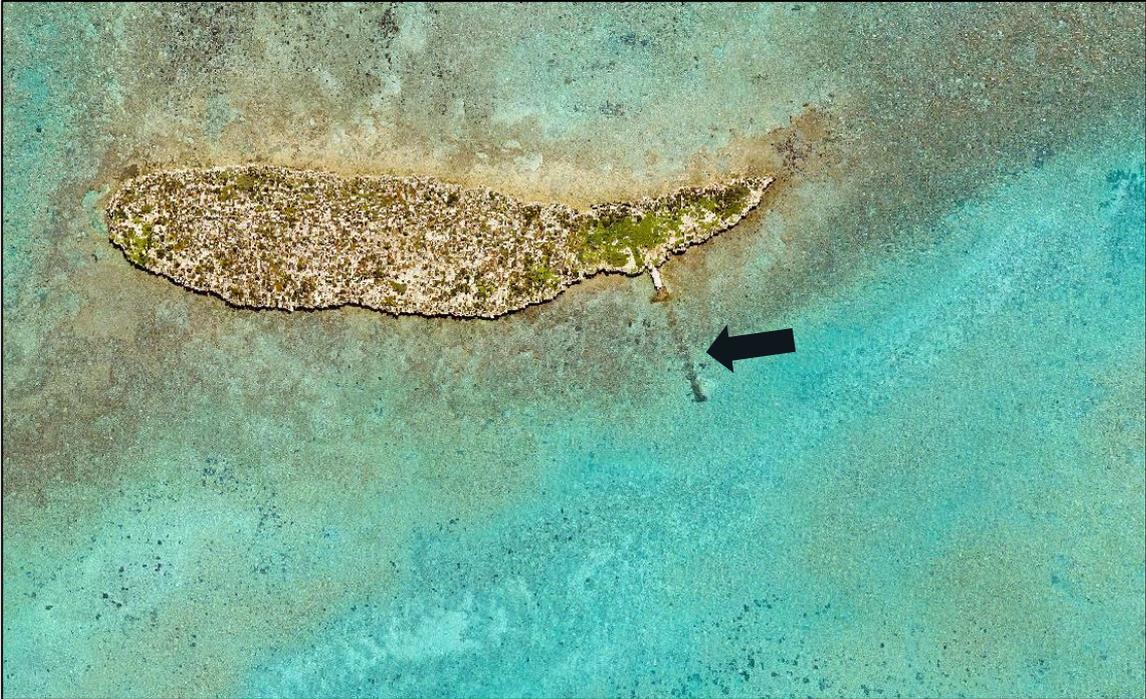
6. Northeast Three Island (Pelsaert Group) SMUA – Cultural Heritage

Adjacent land – National Park



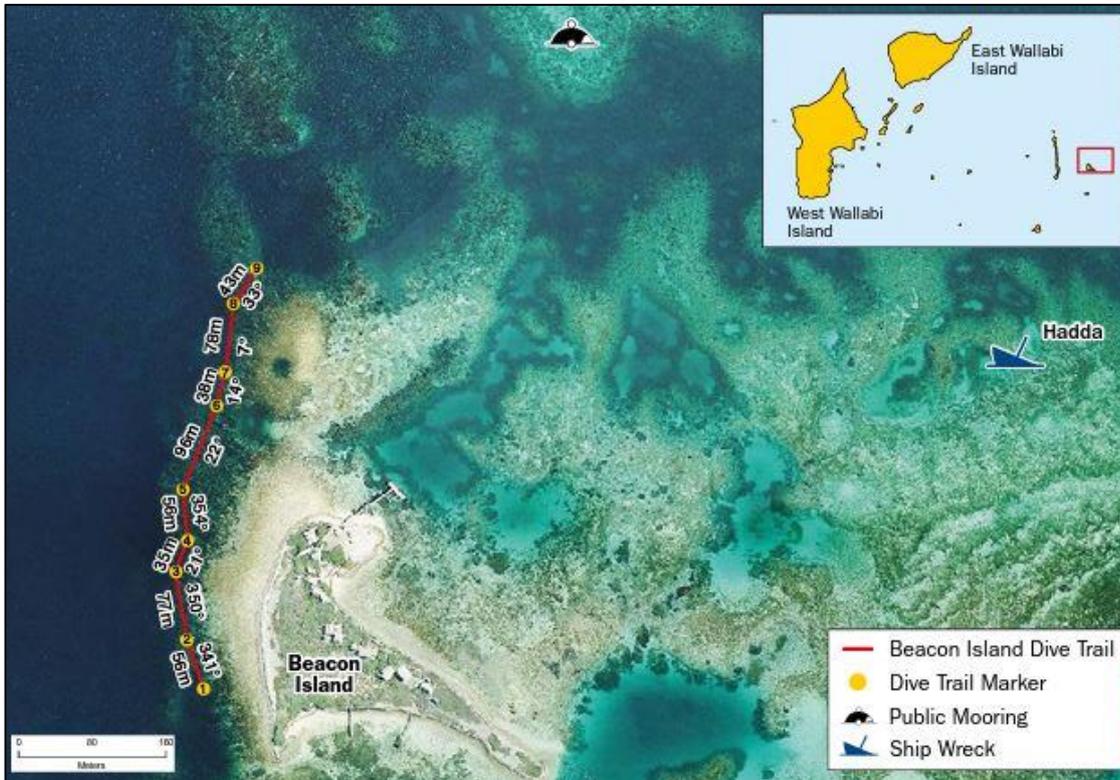
7. Southeast One Island (Pelsaert Group) SMUA – Cultural Heritage

Adjacent land – National Park

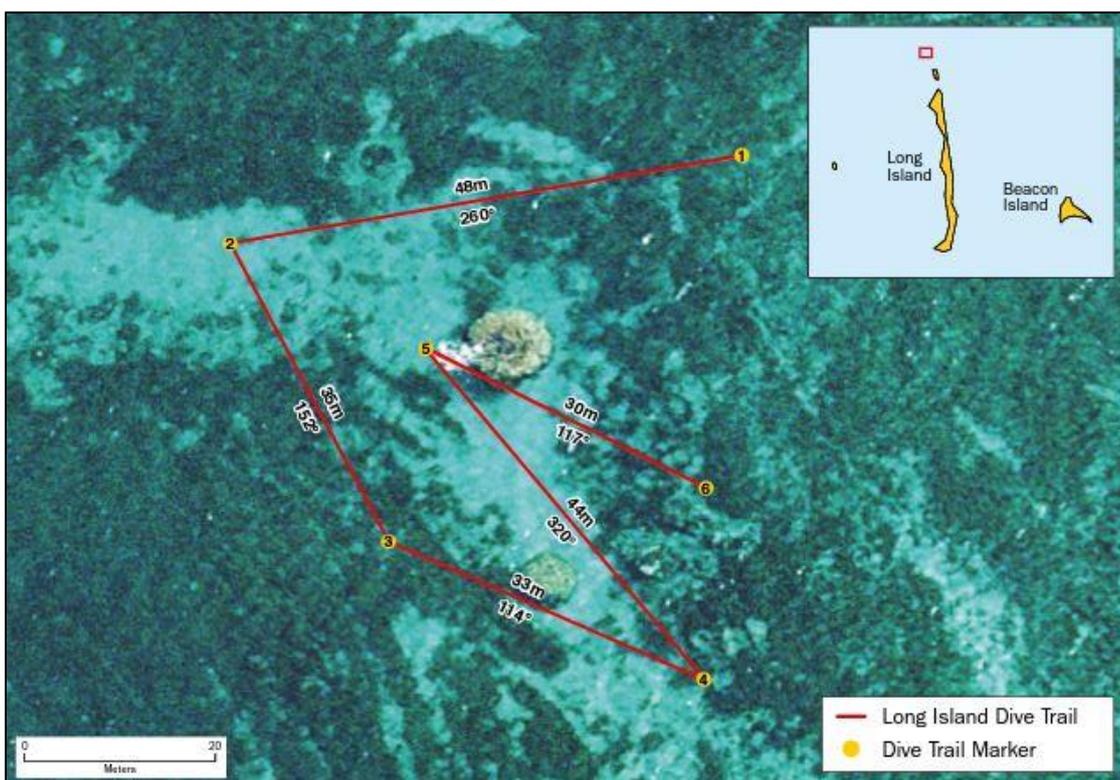


Appendix 2: Current Dive Trail Locations

1. Beacon Island Dive Trail, Beacon Island ROA, Wallabi Group



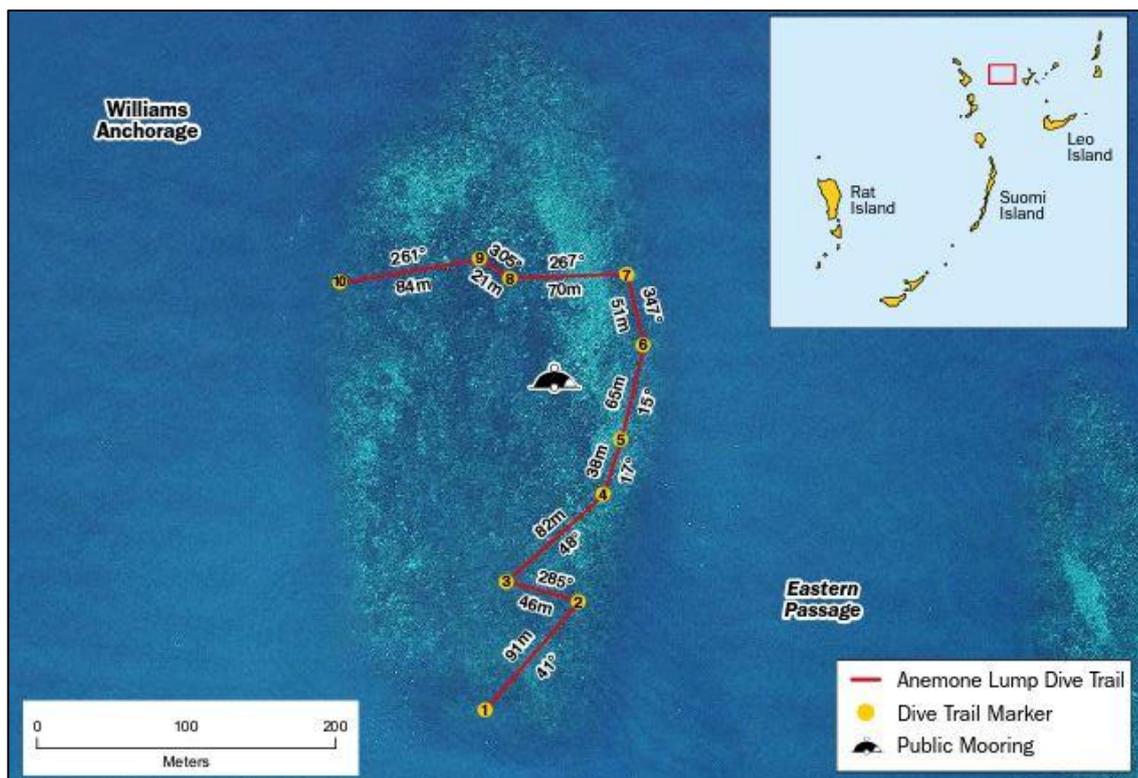
2. Long Island Dive Trail, Beacon Island ROA, Wallabi Group



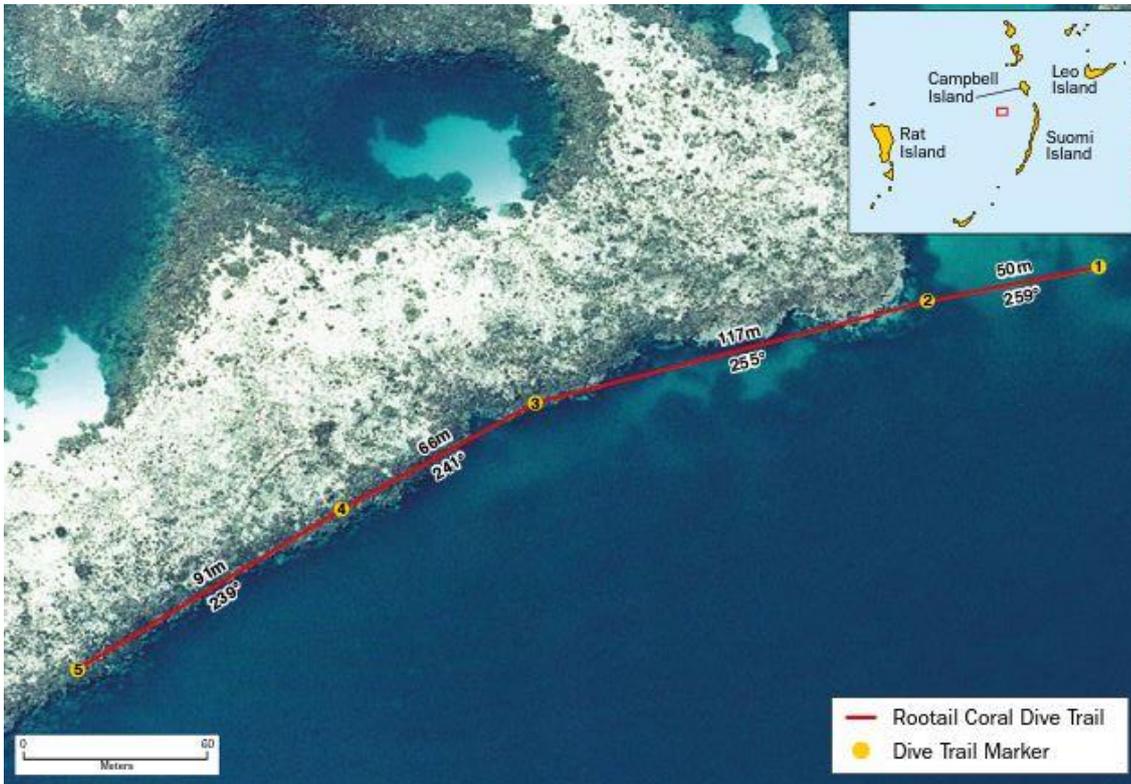
3. Turtle Bay (East Wallabi Island) Dive Trail, Turtle Bay SMUA - Tourism, Wallabi Group



4. Anemone Lump Dive Trail, west of Stokes Island, Leo Island ROA, Easter Group



5. Rootail Dive Trail, near Campbell Island, Easter Group



6. Morley Island Dive Trail, Easter Group

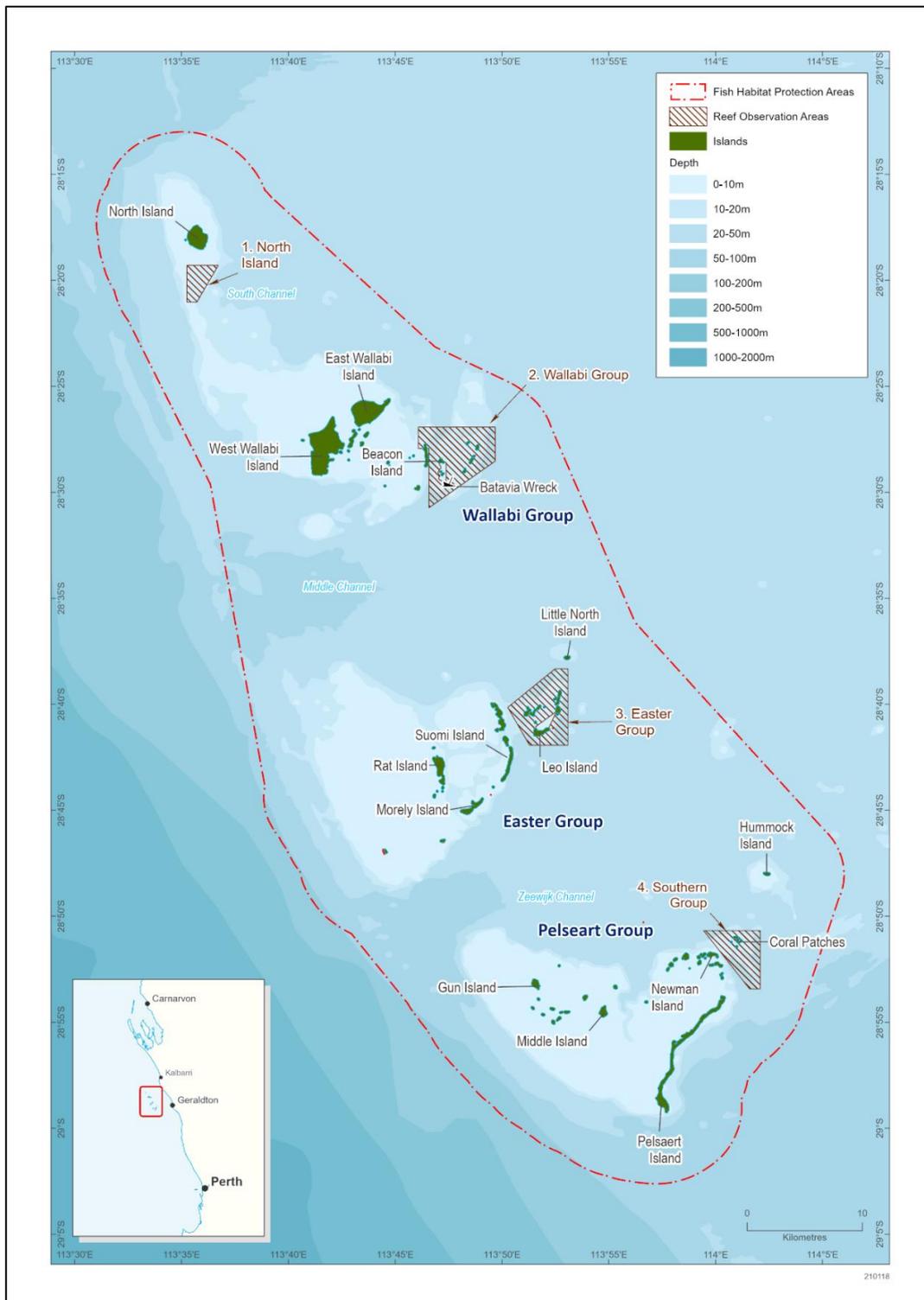


7. Coral Patches Dive Trail, Coral Patches ROA, Pelsaert Group



Appendix 3: Special Marine Use Area – Wilderness Fishing

Abrolhos Islands FHPA - SMUA - Wilderness Fishing Area - All State Waters to the high-water mark



Appendix 4: Special Marine Use Areas – Tourism

1. Turtle Bay East Wallabi Island (Wallabi Group) SMUA – Tourism

Red boundary – indicative only. Adjacent land – National Park



2. Northwest Rat Island and White Bank (Easter Group) SMUA – Tourism

Red boundary – indicative only. Adjacent land – National Park



3. Southeast Rat Island (Easter Group) SMUA – Tourism

Red boundary – indicative only. Adjacent land – mix of Abrolhos Reserve and National Park



4. Southwest Pelsaert Island Lower Embayment (Pelsaert Group) SMUA – Tourism

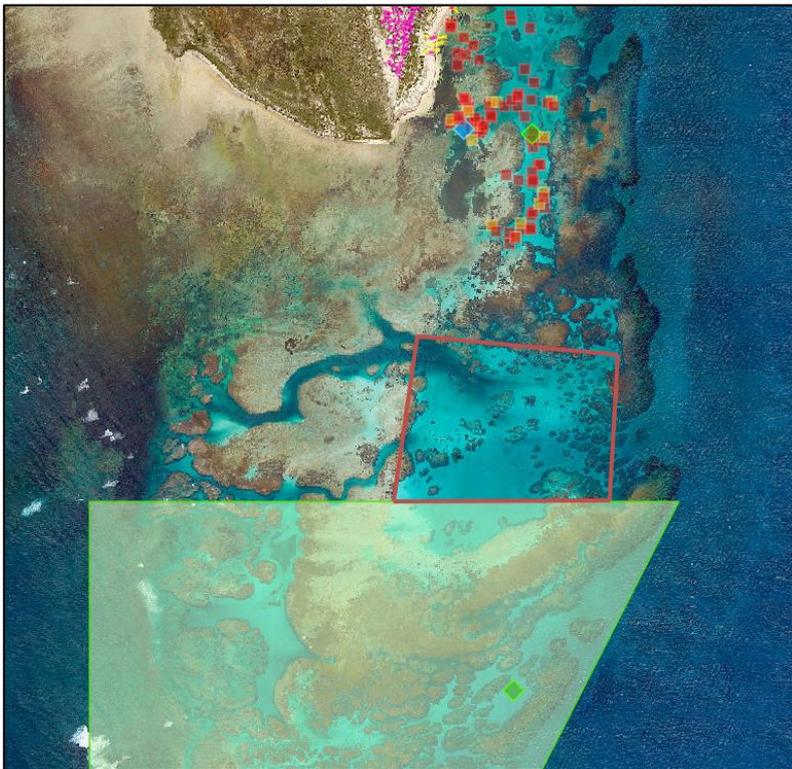
Red boundary – indicative only. Adjacent land – National Park



Appendix 5: Public/Marine Tourism and Mixed-Use Mooring and Anchorage Areas

1. Public/Marine Tourism Mooring and Anchorage Areas

1.1 South of North Island - red boundary – indicative only



Green shaded area – North Island ROA

1.2 Southeast East Wallabi Island Wallabi Group – red boundary – indicative only



1.3 Southwest Long Island (x2) Wallabi Group - both embayments indicated by yellow arrows



Green shaded area – Beacon Island ROA

1.4 Turtle Bay, Northeast East Wallabi Island Wallabi Group

Refer to Turtle Bay, northeast East Wallabi Island (Wallabi Group) SMUA Tourism Map 1 in **Appendix 4**.

1.5 White Bank and Northwest Rat Island Easter Group

Refer to northwest Rat Island and White Bank (Easter Group) SMUA Tourism Map 2 in **Appendix 4**.

1.6 Southeast Rat Island Easter Group

Refer to southeast Rat Island (Easter Group) SMUA Tourism Map 3 in **Appendix 4**.

1.7 North Morley Island Easter Group – area below red boundary – indicative only

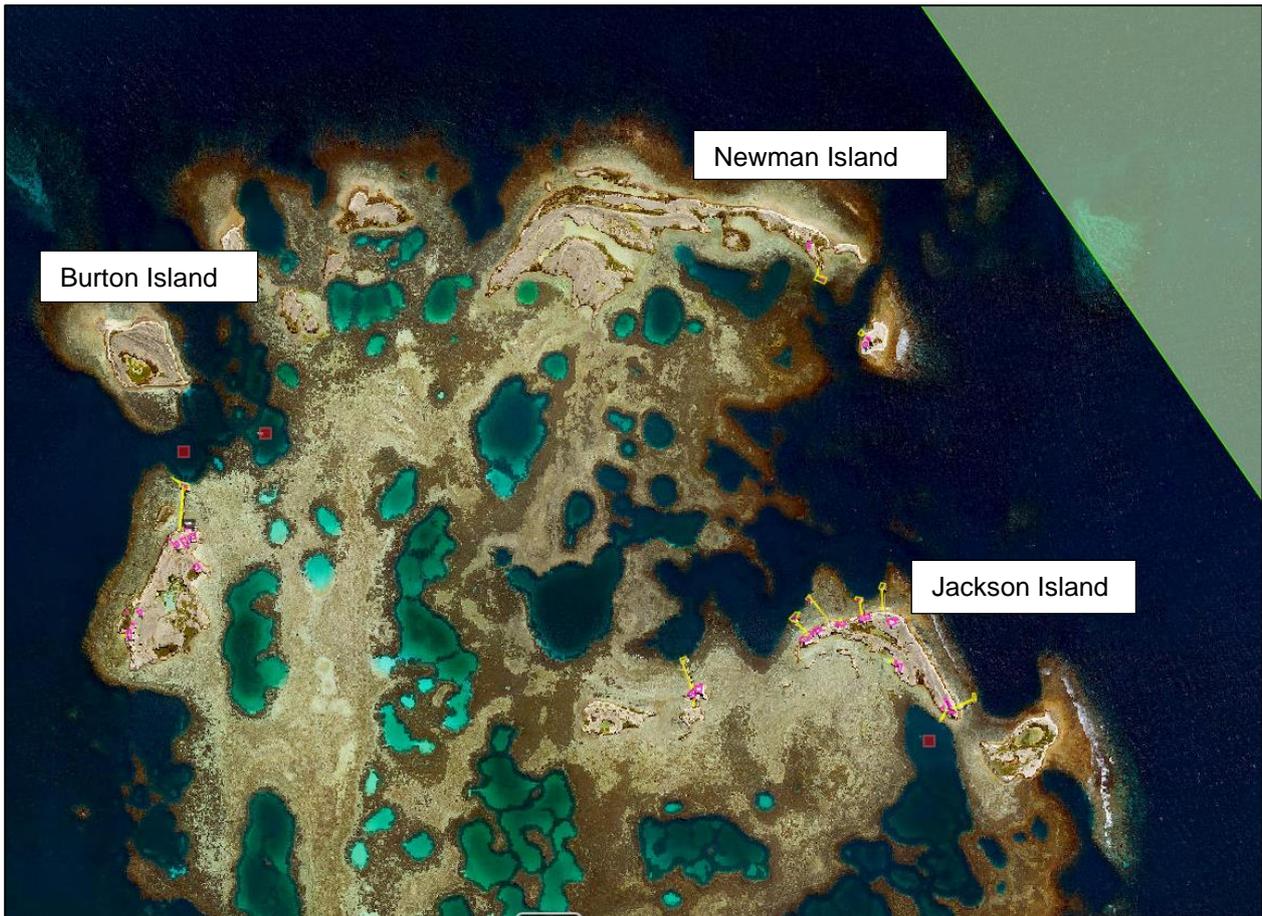


1.8 Southwest Pelsaert Island Pelsaert Group

Refer to Southwest Pelsaert Island (Pelsaert Group) SMUA Tourism Map 4 in Appendix 4.

1.9 Northwest Area of the Pelsaert Group

A new public/tourism mooring and anchoring area(s) in the northwest area of the Pelsaert Group (near Coral Patches ROA) will be considered in consultation with stakeholders.



Green shaded area – Coral Patches ROA.

**2. Mixed Use (public/tourism and commercial fishing/aquaculture)
Mooring and Anchorage Areas**

2.1 Southeast North Island



2.2 West Little Pigeon Island (Wallabi Group)



2.3 Shag Bay, Northwest West Wallabi Island (Wallabi Group)

Adjacent land – National Park

