

# Operational policy

## Marine Management

### **Fish Habitat Area selection, assessment, declaration and review**

*Operational policies provide a framework for consistent application and interpretation of legislation and for the management of non-legislative matters by the Department of Environment and Science. Operational policies are not intended to be applied inflexibly in all circumstances. Individual circumstances may require a modified application of policy.*

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## Policy subject

Declared Fish Habitat Areas (FHAs) are geographically defined areas of critical inshore and estuarine fish habitats which play a key role in sustaining local and regional fisheries. Declared FHAs protect all fish habitats (e.g. vegetation, sand bars and rocky headlands) within their boundaries against physical disturbance from coastal development, while still allowing legal fishing and community use. FHAs are declared by Regulation under section 120 of the *Fisheries Act 1994* as part of the ongoing identification, management and protection of critical fish habitats in Queensland.

This policy provides a framework for the selection, assessment, declaration and review of declared FHAs.

The policy principles are:

- Principle 1: Nomination and prioritisation of candidate FHAs
- Principle 2: Investigation of priority candidate FHAs
- Principle 3: Suitability of priority candidate FHAs for consultation
- Principle 4: Preparation for consultation on candidate FHA
- Principle 5: First round of consultation
- Principle 6: Second round of consultation
- Principle 7: Post-consultation tasks
- Principle 8: FHA declaration
- Principle 9: Management of declared FHAs
- Principle 10: Review of declared FHAs

The use of this policy will ensure that declared FHA selection, assessment, declaration and review decisions are made in a transparent, accountable and equitable manner.

Relevant definitions are included in Appendix A.

## Background

### Declared Fish Habitat Areas

The Queensland Government ensures the sustainable use of fisheries resources, including fish, marine plants and other fish habitats. This is one of our responsibilities under the *Fisheries Act 1994*. The declared FHA program will anticipate and respond to pressures and impacts on the state's fish habitats and dependent fish stocks. The *Declared Fish Habitat Area Network Strategy 2009-14* sets the direction for the future of the declared FHA network. Aim 1 of this Strategy is to 'Ensure a comprehensive, adequate and representative declared FHA network that effectively supports the state's fisheries' – this policy addresses that Aim directly. The Department of Environment and Science (DES) is currently responsible for declaration and management of FHAs.

FHAs are declared by Regulation under section 120 of the *Fisheries Act 1994* as part of the ongoing identification, management and protection of critical fish habitats in Queensland. The declared FHA concept focuses on the inclusion, linkage and management of all available fish habitat types within an area as a single unit, rather than simply protecting individual specific habitat types (as is the case with marine plant protection provided under the Act). This approach has been developed in response to our better understanding of the manner in which aquatic ecosystems function. The maintenance of diverse and abundant fish, mollusc and

crustacean communities depends on an equally diverse, extensive and connected suite of relatively undisturbed fish habitats.

Each year the commercial fishing sector harvests product valued at around \$203 million from Queensland-managed fisheries (DEEDI 2011a) and the state's 700,000 recreational fishers take around 8,500 tonnes of finfish, crabs and prawns (DEEDI 2011b). The long-term sustainability of these fisheries depends on both management of the fish stocks (via stock assessment and monitoring, size limits, bag limits, closures, etc.) and management and protection of the habitats upon which the fish depend. Declared FHAs minimise non-fishing impacts on fish stocks, maintaining habitats for stock management measures to be most effective.

Since their inception during the late 1960s, 70 FHAs have been declared. Previously these were referred to as Fisheries Habitat Reserves, Fish Habitat Reserves (now management A areas) and Wetland Reserves (now management B areas). Collectively, declared FHAs form a protected area network over approximately 1.1 million ha of Queensland's coastal and estuarine waterways.

### **Marine protected area planning and management**

Queensland's declared FHA network is specifically focussed on the protection and management of fish habitats. The *Declared FHA Network Assessment Report* involves the assessment and review of existing declared FHAs, every three years. The 2012 Assessment documents that overall the Network was assessed to be in a good condition (DAF 2012a). Most declared FHAs had good fish habitat diversity and associated fisheries activity, which reflects the importance of these two key attributes in the selection of areas for FHA declaration.

The Commonwealth and Queensland Governments have committed to developing a National Representative System of Marine Protected Areas (MPAs) to ensure a comprehensive, adequate and representative system of marine protected areas. The primary intent of this marine protected area network is to "contribute to the long-term ecological viability of marine and estuarine systems, maintain ecological processes and systems, and protect Australia's biodiversity at all levels" (ANZECC 1999).

The declared FHA network is recognised as a key element of this Australia-wide system of MPAs. The declared FHA Network falls within Category VI (Protected area with sustainable use of natural resources) of the World Conservation Union (IUCN) categories for protected areas (IUCN 2009).

### **FHA selection, assessment and declaration process**

To investigate, consult on and declare an FHA requires many resources, and often takes more than 2 years to complete. Therefore, no more than two candidate FHAs are generally considered at any one time. This allows DES to react to new development pressures, if necessary, and ensures that investigation goals are supported by available funding opportunities.

This policy replaces the Fisheries Queensland policies FHMOP 006 *Fish Habitat Area Declaration and Review* (2001) and FHMOP 007 *Fish Habitat Area Selection and Assessment* (2003).

This policy complements the existing Fisheries Queensland operational policy document FHMOP 002 *Management of declared Fish Habitat Areas: Departmental policy position*, which deals with the ongoing management of FHAs following declaration.

### **Policy statement**

The selection, assessment, declaration and review process for declared FHAs is provided as a series of policy principles.

## **Principle 1: Nomination and prioritisation of candidate FHAs**

### **Strategic planning**

DES considers the following in planning strategically for the declared FHA network:

- gaps in the geographic representativeness of the network:
  - declared FHAs are to be well-represented in each meso-scale Integrated Marine and Coastal Regionalisation of Australia (IMCRA4) bioregion (Commonwealth of Australia 2006)
  - all fish habitat types will be well-represented in declared FHAs within each bioregion
  - declared FHA boundaries will anticipate and accommodate future challenges such as sea level rise
- consistency with the United Nations Code of conduct for responsible fisheries (FAO 1995), in particular:
  - Principle 6.8 All critical fisheries habitats in marine and fresh water ecosystems, such as wetlands, mangroves, reefs, lagoons, nursery and spawning areas, should be protected and rehabilitated as far as possible and where necessary. Particular effort should be made to protect such habitats from destruction, degradation, pollution and other significant impacts resulting from human activities that threaten the health and viability of the fishery resources.
  - Principle 6.9 States should ensure that their fisheries interests, including the need for conservation of the resources, are taken into account in the multiple uses of the coastal zone and are integrated into coastal area management, planning and development.
- the views of fishery stakeholders, including community nominations (see below)
- the results of broad-scale assessments of fish habitat and fish stocks
- the existing levels of habitat protection (i.e. habitat protection offered through other legislation)
- consultation within DES and other agencies involved in MPA planning to avoid unnecessary duplication of habitat conservation initiatives
- current and future threats.

### **Community nominations**

Fishery stakeholders, local government and members of the community have nominated areas as candidate FHAs. Such nominations form an important component of declared FHA strategic planning. A candidate FHA proposed by the community is likely to have strong 'grass roots' support, which makes future declared FHA consultation, declaration and management processes more easily achieved.

A formal nomination of a candidate FHA from the community should be submitted in writing to the Chief Executive, DES, and should include the following information:

- a map showing the approximate location of the candidate area
- a brief description of the fisheries values within the area
- contact details of the organisation or individual nominating the area.

### **Nominations based on research**

Additional areas for consideration as candidate FHAs may result from research, monitoring and survey into fisheries stocks and the habitats on which these depend.

### **Prioritisation**

Strategic planning generates a list of candidate FHAs for investigation, prioritised using the following criteria:

- declared FHA representation in the candidate area's bioregion
- existing or potential threats to each candidate area
- the likely level of community and political support
- likelihood of success
- available funding opportunities for investigation and declaration.

A review of the FHA investigation priority list is undertaken annually or on an 'as needs' basis.

### **Principle 2: Investigation of priority candidate FHAs**

The primary objective of the investigation phase is to ensure that detailed information is documented and available for assessment against the declared FHA assessment criteria. This will require a review of literature and complementary field work.

Investigation of the highest priority candidate FHA area/s should commence a minimum of 12 months prior to the proposed formal stakeholder consultation period. However, if substantial data are available on the fisheries and habitat values of the candidate area, this time frame may be reduced.

Review of published and grey literature will assist in determining the nature and extent of additional information that are required to adequately assess the fisheries and habitat values of the candidate FHA. In some instances the literature review may provide the majority of the information required for this assessment, while in other cases only limited or outdated information may be available.

An additional benefit of collecting, collating and documenting this information is the provision of baseline data for future monitoring purposes. For selected areas that may be the focus of intensive future monitoring, (i.e. to evaluate long-term benefits of the declared FHA program), increased scientific rigour may be required to provide higher quality baseline data.

Results of the investigation should be presented in Fisheries Resource Assessment Report that defines the fisheries and habitat values of the area, the existing and potential impacts to the habitats and provides a concise summary of how the candidate FHA compares with each of the assessment criteria.

### **Assessment criteria**

The declared FHA selection approach is based on the use of relatively straightforward fish habitat and fisheries indicators, in combination with the strategic planning objectives (refer to Principle 1) to ensure that all habitat types are adequately represented within the regional declared FHA network.

This approach combines traditional aquatic protected area assessment criteria such as comprehensiveness, adequacy and representativeness with fisheries specific assessment criteria such as the value of an area to the productivity and long-term sustainability of fish stocks, fishing values and fishing opportunities. This emphasis on fish and fishing values reflects the management objectives of the *Fisheries Act 1994* and the dependency of fish stocks on suitable habitats.

Table 1(a-c) provides an overview of the criteria used to determine if an area of inshore / estuarine fish habitat is suitable for declaration as a declared FHA.

For a candidate inshore/estuarine area to be considered as a potential declared FHA for consultation, it should satisfy the following assessment criteria:

- 3 or more of the 4 fisheries criteria (Table 1a); and
- 6 or more of the 8 fish habitat criteria (Table 1b); or

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- 1 or more regionally unique features (Table 1c).

Table 1a - Declared Fish Habitat Area assessment criteria - fisheries.

<b>Fisheries criteria</b>	<b>Compatible with management B area</b>	<b>Compatible with management A area</b>
High fish species richness	Fish species richness similar to that of comparable regional 'benchmark' waterways.	
High diversity and abundance of regionally targeted fish species (adult or juvenile)	>10 regionally targeted fish species highly abundant.	> 15 regionally targeted fish species highly abundant.
Supports existing fisheries	Regular use of area by commercial, recreational or traditional fishers.	Major commercial and/or recreational and/or traditional fishery within area.
Supports external / regional fisheries	Commercial, recreational or traditional fishing occurs adjoining the area or in adjacent offshore waters, targeting species that are directly linked to the area.	Major commercial, recreational or traditional fisheries occurs adjoining the area or in adjacent offshore waters, targeting species that are directly linked to the area.

Table 1b - Declared Fish Habitat Area assessment criteria – fish habitats.

<b>Fish habitat criteria</b>	<b>Compatible with management B area</b>	<b>Compatible with management A area</b>
Large in size	> 100 ha	> 500 ha
Diverse habitat types	> 4 habitat types represented	> 7 habitat types represented
Presence of a functioning riparian buffer zone	> 50% of the length of the riparian zone is adequately vegetated and functioning effectively.	> 80% of the length of the riparian zone is adequately vegetated and functioning effectively.
Limited disturbance from artificial in-stream structures	Minimal disturbance from artificial structures (e.g. jetties, boat ramps, revetments). Average separation between structures 100 – 400 m and / or < 5% of the riverbank altered by artificial structures.	Nil to minimal disturbances from artificial structures (e.g. jetties, boat ramps, revetments). Average separation between structures > 400 m and / or < 5% of the riverbank altered by artificial structures.
Good water quality	<ol style="list-style-type: none"> <li>1. Water quality standard meets the Queensland Water Quality Guidelines (DES 2009) or water quality objectives under the <i>Environmental Protection (Water) Policy 2009</i> where applicable, for the protection of aquatic ecosystems; or</li> <li>2. Documented water quality improvement program is in place to enable the area to meet the Queensland Water Quality Guideline or water quality objectives within 5 years or less.</li> </ol>	

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Limited disturbance from, or ongoing reduction of impacts from, water impoundment structures	<ol style="list-style-type: none"> <li>1. No water impoundment structures are present on the main stream and any major tributary of the main stream; or</li> <li>2. The main stream and any major tributaries of the main stream only have water impoundment structures that: <ul style="list-style-type: none"> <li>• allow for &gt; 75% of flows to overtop the structure or are managed to release adequate (from a fisheries perspective) environmental flows; and</li> <li>• drown out regularly enough to allow for adequate fish passage or have a functional fishway; or</li> </ul> </li> <li>3. Fish passage and environmental flows in the main stream and any major tributaries will be maintained and a proposed program of water management activities will ensure a net improvement in fish passage and / or environmental flows within a 10 year timeframe.</li> </ol>	
Limited interaction with developments of major significance to the state	<ol style="list-style-type: none"> <li>1. No developments of major significance to the state are present within or adjoining the area; or</li> <li>2. Any adjoining developments of major significance to the state are in a location and can be appropriately buffered to ensure that they will have no existing or future impacts on the area.</li> </ol>	
Compatible adjacent land and aquatic planning	Adjacent land and aquatic planning compatible with intent of management B area	Adjacent land and aquatic planning compatible with intent of the strict management A area.
	No reduction in habitat values through inappropriate public or a proliferation of private structures or impacts from development.	

Table 1c - Declared Fish Habitat Area assessment criteria – regionally unique features

Regionally unique features	Compatible with management B area	Compatible with management A area
Presence of regionally unique natural fish habitat features	Contains one or more regionally unique features, e.g. habitat type, spawning ground, nursery location or habitat assemblage.	

Refer to Appendix B for more detail on these criteria.

These assessment criteria were used to develop the criteria employed in the Declared FHA Network Assessment Reports. Declared FHAs are assessed periodically to ensure that each gazetted area retains high fisheries and fish habitat values.

### Principle 3: Suitability of priority candidate FHAs for consultation

If the candidate area is suitable for FHA consultation:

- The Chief Executive and the Minister should be advised of the intention to proceed to formal FHA consultation for the candidate FHA, including a recommendation of the preferred management level. If supported:



- A mailing list of all major stakeholders with an interest in the candidate FHA is compiled.
- A letter, and a copy of the Fisheries Resource Assessment Report, or a weblink to the report is forwarded to the original nominee (if applicable) and all major stakeholders. The letter should advise that, based on the outcomes of the report, DES intends to proceed to public consultation for the proposed declaration of the candidate FHA.
- A period of approximately three months should separate the release of the report to stakeholders and the commencement of formal consultation.

If candidate area does not satisfy the declared FHA assessment criteria:

- The Chief Executive and the Minister are to be advised of this outcome and the following actions adopted:
  - The nominee (if applicable) and all major stakeholders are to be advised including the reasons for this outcome.
  - Alternative strategies to manage the fish habitats of the area are to be considered, with any recommendations forwarded to relevant agencies and stakeholders.

#### **Principle 4: Preparation for consultation on candidate FHA**

Prior to engaging in external consultation, internal consultation should be undertaken to allow for departmental issues of concern to be identified and resolved, where necessary, prior to public release of the proposal for comments.

Stakeholder consultation is essential to develop an acceptable and effective declared FHA. The consultation period also provides an opportunity to focus community interest onto fisheries issues and improve collective understanding of the value of fish habitats and the essential links between habitat and the seafood we consume or target for recreation.

FHAs are declared as a long-term investment in the future sustainability of local, regional and state-wide fish stocks and fishing. The long-term integrity of any declared FHA will only be maintained through strong community support and commitment to the objectives of FHA declaration and management.

The external consultation process for FHA declaration involves two phases: the first round and second round.

#### **Principle 5: First round of consultation**

The objectives of the first round of consultation are to:

- ensure stakeholders are aware of the fish habitat values of the Area of Interest and its adjacent waterways
- promote a clear understanding of the benefits and restrictions of declared FHA management, including the differences between management A and B
- obtain information from stakeholders on existing, planned and possible future development requirements within and adjacent to the Area of Interest
- determine the level of community support for the proposed FHA declaration
- determine the locations of a possible declared FHA outer boundary and exclusions
- determine the acceptable management level/s for the proposed declared FHA.

### **Preparation of Area of Interest Plan**

The Area of Interest Plan is developed from the information in the Fisheries Resource Assessment Report and is the focus of the first round of consultation.

The following drafting format requirements apply for the Area of Interest Plan:

- The Digital Cadastral Data Base (DCDB) is used to provide the plan base with all lots adjacent to the area of interest for declaration identified with their unique lot and plan numbers.
- Satellite imagery is to be used as the background for the map.
- The Area of Interest:
  - contains important fish habitats that are suitable and available to be declared due to appropriate tenure (e.g. unallocated state land or national park)
  - is tied to cadastral boundaries, which may provide a suitable terrestrial buffer to cater for future sea level rise. If a particular lot includes a large area of terrestrial land, the plan may indicate the 'line of tidal activity' as the boundary
  - is shown by a red boundary line and with red hatching.
- Fish habitat ('other areas of fisheries value') is to be shown on the plan. It may be shown as one layer (see the example in Appendix C) or if detailed information exists, may specify individual habitats, e.g. 'mangroves', 'seagrass', 'saltmarsh' etc. This imagery is a broad indicator of areas of fisheries value, regardless of tenure or other management restrictions.
- A note on the plan is to state that it is for the first round of consultation.
- Plans are drafted at a scale of not more than 1:100,000 and preferably less than 1:50,000.
- If required the plan may be drawn over more than one map sheet.
- A1 is the standard plan format, however all lettering on the plan is to be legible when the plan is produced at an A3 size.
- Waterways are to be visible on the plan.

An example of an Area of Interest Plan is shown in Appendix C.

### **Preparation of consultation literature**

The following consultation literature is required for the first round of consultation:

#### ***Covering letter***

This letter outlines the consultation process and invites comment on the proposal.

#### **Declared Fish Habitat Areas fact sheet**

A fact sheet describes the benefits of declaration and summarises the FHA management guidelines. Refer to the website for a copy of this fact sheet.

#### ***Candidate declared Fish Habitat Area fact sheet***

A short summary (approximately 1 page) of the Fisheries Resource Assessment Report will identify the values of the proposed area that warrant its formal declaration as an FHA.

**Poster**

The poster should detail the declared FHA proposal, where to get more information and the closing date for comments.

**Website**

Details of the first round of consultation, including a copy of the proposed FHA Area of Interest Plan and details of how to comment should be placed on a new webpage. The page should also provide links to this policy, the latest Declared FHA Network Assessment Report and Declared FHA Network Strategy.

**Mailing list**

The mailing list should include, but is not limited to, the following stakeholders who may have an interest in the proposed area:

- local councils
- state government agencies
- statutory authorities (e.g. port authorities, service providers)
- fishing sectors (commercial, recreational and indigenous)
- aquaculture groups
- non-government organisations (e.g. canegrowers)
- natural resource management and catchment groups
- community and conservation groups
- Traditional Owners and/or native title claimants and Indigenous groups
- land councils.

Individual landowners adjoining the Area of Interest and other individuals do not need to be included on the stakeholder list. However, detailed community consultation will provide an avenue for members of the community to request information and provide comment on the proposal. The community is advised of the proposal via the local media, public meetings, posters, etc.

**Duration and timing**

The first round of consultation is to be conducted over approximately a three month period. As it is standard practice for councils, management boards and community groups to meet on a monthly basis, a three month consultation period will allow the proposal to be considered at two monthly meetings.

A closing date for the submission of comments on the proposal is to be determined prior to the commencement of consultation and advertised throughout the consultation period.

Consultation can commence at any time throughout the year. However it is preferable to avoid the period between mid-December and early February as this is the traditional holiday period. In the tropics, the wet season (between November and April) should be avoided, if possible. Attempting consultation during these periods may reduce its effectiveness and may not allow the community the opportunity to fully review the proposal or make timely comments.

**Consultation methods****Initial meetings with key stakeholders**

Prior to sending out consultation materials, one-on-one meetings may be held with key stakeholders likely to be interested or concerned about the proposal. Traditional Owners in particular should be contacted.

**Information pack**

The covering letter, Area of Interest Plan, Declared FHA fact sheet and Candidate FHA fact sheet are to be forwarded to all stakeholders on the mailing list. This information pack can also be provided to any other stakeholder who requests further information on the proposal.

**Posters**

Posters may be placed at prominent community locations (e.g. QBFP offices, post offices, council foyers, public notice boards) throughout the catchment of the proposed declared FHA.

**Stakeholder meetings**

Staff will attend stakeholder and community meetings upon request and will address individual queries as required, throughout the consultation period.

**Public meeting/s (optional)**

Public meetings may be convened on request, or when deemed necessary. Ideally, public meetings should be scheduled for approximately one month after the commencement of the first round of consultation to allow time for interested members of the community to obtain the information pack on the proposal.

**Public notice**

A public notice announcing the commencement of consultation for the declared FHA proposal is to be placed in local newspaper/s (refer to Appendix D for an example of a public notice). The notice is to include a summary of the proposal, the closing date for comments and where the information pack can be obtained. If a public meeting has been arranged, this information should also be included.

**Media**

The distribution of a press release and follow-up interviews with local media should also be considered, particularly if response from the community following other consultation methods has been limited. The local media should be monitored following any press releases or interviews, to ensure the information has been presented accurately. Social media (e.g. Facebook, Twitter and YouTube) may also be appropriate.

**Event display (optional)**

Information may be displayed at any relevant events (e.g. fishing classics, environment or wetlands festivals) held during the consultation period. This allows members of the community to informally view plans and discuss issues with staff.

**Website**

The proposed FHA consultation web page is to be maintained to update progress.

**Consultation with indigenous communities**

Consultation associated with most FHA proposals will involve discussions with Traditional Owners, clan groups and land councils. This is particularly the case with declared FHA proposals within Cape York Peninsula and the Gulf of Carpentaria regions.

Staff conducting consultation within indigenous communities should be sensitive to indigenous history, culture and customs. Each community is different and unique in that they have specific spiritual ties with land and sea country.

Where this consultation is particularly complex, the engagement of a consultant may facilitate the process.

When conducting FHA consultation within indigenous communities, the following documents should be utilised as information sources:

- Department of Aboriginal and Torres Strait Islander Policy and Development 1999, Protocols for consultation and negotiation with Aboriginal people, Queensland Government.
- Department of Environment and Science 2012, Native Title Work Procedures.

### **Review of first round of consultation submissions**

At the completion of the first round of consultation an assessment of the content of each submission is made. The submissions will generally fall within the following categories:

- support for/no objection to the proposal
- request for specific areas / activities to be excluded or allowed
- objection to the proposal.

### **Negotiation with stakeholders**

Stakeholders who have objected or who have specific concerns on the proposal should be contacted to clarify their concerns. Most issues are likely to be overcome by small alterations to the draft boundary and the incorporation of appropriate exclusion zones.

It is possible that some issues may not be overcome without major boundary changes. Any proposed boundary modifications which threaten the integrity of the declared FHA proposal should be subject to Ministerial approval.

At times objections to the proposal by stakeholders will be of an 'in-principle' nature. The issues of concern should be discussed with the respondent and documented. However it is possible that a mutually acceptable outcome may not be negotiated. Formation of a working group of key stakeholders may be considered to resolve outstanding issues.

The discussion and outcomes of any meetings must be confirmed in writing.

It is important that any major negotiation and amendments to the proposal are finalised prior to the commencement of the Second Round of Consultation. This should allow the Second Round of Consultation to efficiently confirm the acceptability of the proposal rather than lead to further amendments.

### **First round of consultation summary**

A report summarising the content of all submissions and the outcomes of any negotiations is to be prepared.

The consultation summary is to recommend:

- if a viable declared FHA can be achieved, subject to:
  - modifications to the outer boundary and any exclusion zones
  - proposed management level/s
  - support of the preparation of a Declared FHA Proposal Plan and commencement of the Second Round of Consultation; or

- if a viable declared FHA cannot be achieved, noting:
  - key boundary and management issues that are not able to be resolved.

This consultation summary should form the basis of a Ministerial brief for approval. If approved, commencement of a second round of consultation can proceed.

Should a decision be made to not proceed with the declaration of the proposed FHA, details and justification for this decision should be released to stakeholders as soon as possible.

### **Principle 6: Second round of consultation**

The objectives of the second round of consultation are to:

- provide stakeholders with the Declared FHA Proposal Plan (based on the revised Area of Interest Plan), including advice on amendments to boundary locations and exclusion zones and on the proposed management level
- confirm the level of stakeholder support for the Declared FHA Proposal Plan and identify whether any further amendments are required.

### **Preparation of Declared FHA Proposal Plan**

The Declared FHA Proposal Plan is a modification of the Area of Interest Plan and reflects those changes negotiated during the first round of consultation.

The following drafting format requirements apply for the Declared FHA Proposal Plan:

- The Digital Cadastral Data Base (DCDB) is used to provide the plan base with all lots adjacent to the area of interest for declaration identified with their unique lot and plan numbers.
- The proposed outer boundary is to be identified with a continuous red line (no hatching), tied to the cadastre.
- The different management areas are to be identified by 5% black shading for management area A, and 15% black shading for management area B.
- Any boundary locations that do not coincide with a cadastral boundary are to be defined by notation on the plan.
- The locations of any exclusion zones within the outer boundary are to be identified on the plan and described by notation on the plan or within accompanying text.
- The title of the Declared FHA Proposal Plan should be in accordance with the following format FHA - \_ \_ PP (the two spaces marked with underscores should identify the plan location e.g. BC – Baffle Creek, AN – Annan River).
- A note on the plan is to state that it is for the Second Round of Consultation, and is the outcome of the first round of consultation.
- The plan is to be produced at both A1 and A3 sizes.

### **Preparation of consultation literature**

The following consultation literature is required for the second round of consultation:

#### **Covering letter**

This letter outlines the consultation process and invites comment on the proposal. The letter should explain that should no comments, or no request for an extension of time to provide comments be received by the closing

date, the proposal will proceed on the basis that no objection has been lodged. This also applies to stakeholders who offered support for the proposal during the first round of consultation and do not provide additional comment during the second round of consultation.

The letter should also describe the major issues raised and outcomes of the first round of consultation, including any proposed exclusions or major amendments.

**Poster**

As per the first round of consultation, with amendments to the proposal included.

**Website**

The website should be updated with details of the second round of consultation and a copy of the Declared FHA Proposal Plan.

**Mailing list**

As per the first round of consultation, with any additional stakeholders identified.

**Duration and timing**

The second round of consultation is to be conducted over a minimum of two months.

The timing is to avoid the wet season and major holiday periods, as for the First Round.

**Second round of consultation methods****Formal request for final written comments**

The covering letter, A3 Declared FHA Proposal Plan, Declared Fish Habitat Areas and Candidate declared Fish Habitat Areas fact sheets are to be forwarded to all stakeholders on the revised mailing list, and other stakeholders on request.

**Posters**

Posters that show the Declared FHA Proposal Plan may be placed at prominent community locations as per the first round of consultation.

**Stakeholder meetings (optional)**

Staff will attend stakeholder and community meetings upon request and will address individual queries as required, throughout the consultation period.

**Public meetings (optional)**

Public meetings may be convened on request, or when deemed necessary.

**Public notice**

A public notice announcing the commencement of the second round of consultation for the declared FHA proposal is to be placed in local newspaper/s as per the first round of consultation.

**Media**

A media release and the use of social media should be considered, as per the first round of consultation.

**Event display (optional)**

Information may be displayed at any relevant events (e.g. fishing classics, environment or wetlands festivals) held during the consultation period.

## **Website**

The web page is to be maintained to update progress.

## **Principle 7: Post-consultation tasks**

### **Review of second round of consultation submissions**

All submissions are to be reviewed, with any objections to the proposal specifically identified. Depending upon the nature of the objection, further negotiation and minor modification to the proposal may be required. In some cases however, the objection may be 'in principle' or cannot be resolved through negotiation. It is essential that the nature and implications of any unresolved issues are clearly documented.

### **Preparation of a second round of consultation summary report**

A detailed summary report of the consultation is to be prepared and a recommendation for declaration or otherwise be made.

Approval for the recommendation is to be sought from the Minister. If the Minister supports the proposed declaration of the FHA, the legislative declaration phase can proceed.

## **Principle 8: FHA declaration**

Declaration of an FHA requires the approval of the Governor-in-Council, and may require Cabinet endorsement, depending on the significance of the proposal. Declaration is by amendment to the Fisheries Regulation 2008.

### **Regulatory Assessment Statement requirements**

The Regulatory Assessment Statement (RAS) system is managed by Queensland Treasury, and involves the assessment of regulatory impacts (such as economic, social, environmental and compliance) on the community or any individual sector of the community. Amendment to subordinate legislation is required to be assessed as a regulatory impact. The RAS system incorporates Regulatory Impact Assessment, required under the *Statutory Instruments Act 1992*, and the Public Benefit Test process under the Competition Principles Agreement.

The declaration of an FHA requires amendment to the Fisheries Regulation 2008 (the subordinate legislation); therefore a RAS may be required. If the proposed legislative change has already undergone an extensive impact assessment process (e.g. through the two Rounds of Consultation) that takes into account the impacts on Queensland and regulatory best practice principles, a RAS exemption may be awarded (QORE 2010).

A RAS exemption proposal is to be submitted to Queensland Treasury (Figure 1). This includes details of the completed consultation process. If a RAS exemption is awarded, Ministerial approval is required for the legislative amendment to proceed to Governor-in-Council.

If a RAS is required, the process outlined in Figure 1 applies.

### **Legislation drafting instructions**

The declared FHA plan should show as much detail as possible. However additional information may be included in the Fisheries Regulation. For example:

- leasehold land that is included in the declared FHA (as this is not automatically included when shown within the boundary of the declared FHA plan)
- non-tidal land within a USL or national park lot that is excluded
- small exclusions that are difficult to show on the plan.

Office of the Queensland Parliamentary Council (OQPC) drafts the legislative amendment to the Fisheries Regulation 2008, based on drafting instructions provided by DES. These instructions will include any specific



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inclusions and exclusions, and declared FHA plan numbers. OQPC consults with DES throughout the legislation drafting process and will provide a copy of the draft legislative amendment for final review and approval.

**Parliamentary approval**

**Cabinet**

The declared FHA (legislative amendment) proposal will require Cabinet approval if it is subject to a RAS or considered to be 'significant subordinate legislation'. The Minister must give approval to lodge a Cabinet submission. Details of the purpose of the proposal and timing of the submission must be then added to the Cabinet forward timetable. If a Cabinet submission is not required, the legislative amendment will go directly to the Governor-in-Council for approval.

**Governor- in-Council**

The FHA is declared on the date the amendment to the Fisheries Regulation 2008 is signed by the Governor-in-Council. It takes effect from the date it is notified in the Queensland Government Gazette, normally the following day.

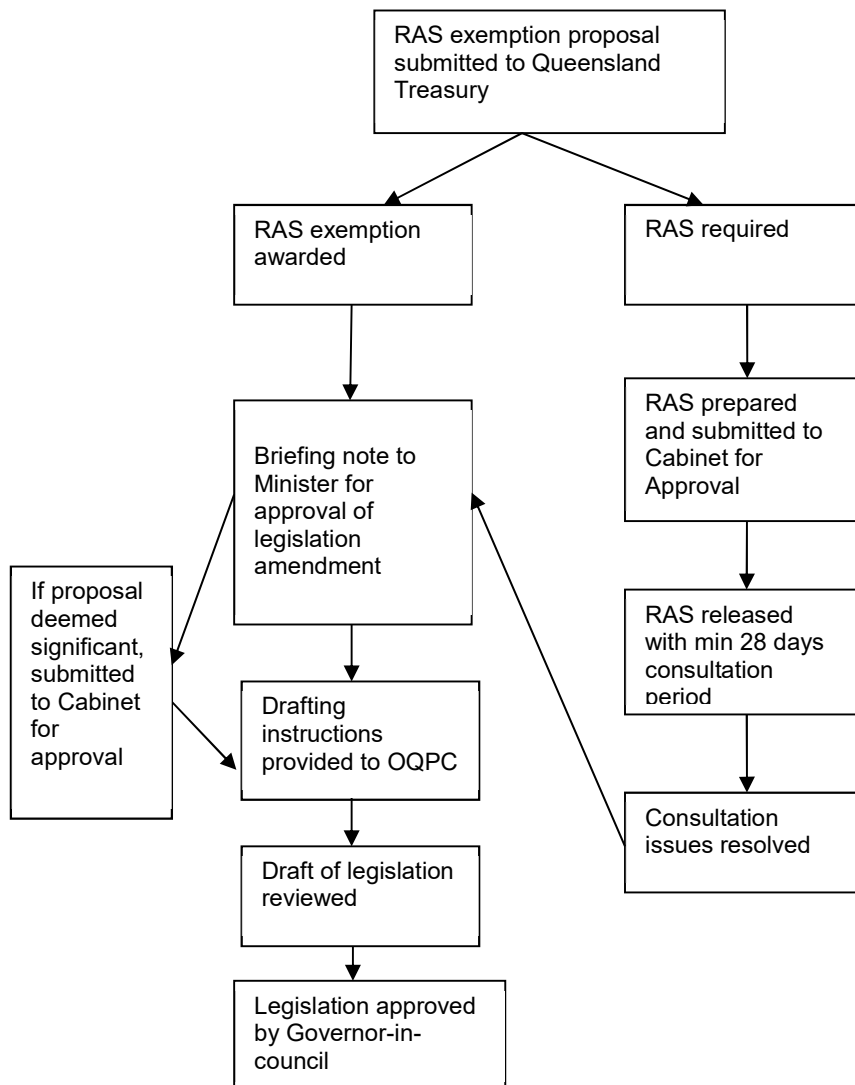


Figure 1. The regulatory assessment statement (RAS), government approval and legislative amendment process.

Note that the sequence outlined in Figure 1 may vary depending on circumstances. For example, the Minister may be briefed earlier in the process, or steps such as RAS assessment and development of drafting instructions may proceed concurrently. Preliminary consultation with Queensland Treasury and OQPC is advisable to facilitate the legislative process.

### **Release of declared FHA plans**

A letter and copy of the declared FHA plan are sent stakeholders on the consultation mailing list.

A communication strategy is undertaken to raise awareness of the FHA declaration and the new management arrangements. This strategy may include the following:

- updated webpage
- signage
- media release
- newsletter articles
- preparation and distribution of leaflets via the local council, fishing tackle shops etc
- a launch by the Minister
- presentations at local community meetings where relevant (e.g. natural resource management groups etc).
- provision of a digital version of the declared FHA plan to relevant agencies and to local government for inclusion in local planning schemes
- updating the GIS state coverage for the declared FHA network.

### **Principle 9: Management of declared FHAs**

The *Operational policy- Management of declared Fish Habitat Areas: Departmental policy position* (Derbyshire et al. 2008) is used to guide day to day management of declared FHAs. The policy:

- interprets legislation in relation to declared FHA boundary definition
- defines activities that are subject to declared FHA management
- guides the application of legislation for specific works and related activities within declared FHAs. To achieve this, assessment criteria for development works or activities in declared FHAs must meet the objectives of the *Fisheries Act 1994*.

### **Principle 10: Review of declared FHAs**

#### **DES boundary review**

The boundaries of all declared FHAs will be reviewed at intervals of at least 10 years or as needed. The Declared FHA Network Assessment Reports will inform the review process. Other information will be used to help prioritise declared FHAs for boundary review, such as the availability of key fish habitats for inclusion.

Boundary review will typically focus on the following issues:

- boundary or management area modifications
- addition of valuable areas of fish habitat, which were not available for inclusion at the time of declaration
- possible amalgamation of adjacent declared FHAs
- clarification and better definition of boundary locations.

DES will undertake an appropriate level of consultation with relevant stakeholders when reviewing declared FHA boundaries.

The normal process for legislative amendment applies (refer to Principle 7).

### **Proponent boundary review proposals**

Declared FHA amendments may be proposed by proponents to accommodate additional infrastructure needs, e.g. rail and road crossings, pipelines, etc. If accepted, these changes may then require management area change from A to B or removal of part of a declared FHA for the agreed purpose (revocation).

The legislative process for changing a management area or revoking a declared FHA is similar to that followed for a new declaration. A number of revocations have been approved since the start of the declared FHA/Reserves for Fisheries Purposes program in 1969. In most cases, revocations have been offset by additions of fish habitat to the declared FHA.

An initial assessment of the proposal is undertaken to prepare the Terms of Reference (TOR), for a 'Revocation Assessment Study'. The TOR may include, but is not limited to:

- document the need for the revocation
- document all site options/alternatives for the proposed works
- identify impacts on the declared FHA and on fisheries
- outline mitigation measures to reduce impacts from any proposed works
- outline offset measures (DAF 2012b) for the loss of declared FHA lands
- summarise methods and results whole-of-government, stakeholder and community consultation undertaken for the proposal.

The proponent uses the TOR to carry out the Revocation Assessment Study to support their revocation proposal.

TOR are also to be developed for proposals to amend the declared FHA management area (i.e. change from management A to management B area). These TOR may be based on the list above.

If the Revocation Assessment Study (or study into management area change) is accepted, the normal process for legislative amendment applies (refer to Principle 7).

### **Reference materials**

Australian and New Zealand Environment and Conservation Council 1999, *Strategic plan of action for the National Representative System of Marine Protected Areas: A guide for action by Australian governments*, ANZECC Task Force on Marine Protected Areas, Environment Australia.

Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand, *2000 Australian and New Zealand guidelines for fresh and marine water quality*, National Water Quality Management Strategy.

Banks, SA, Skilleter, GA, Possingham, H 2005, 'Intertidal habitat conservation: identifying conservation targets in the absence of detailed biological information' in *Aquatic Conservation of Marine and Freshwater Ecosystems*, vol. 15, pp. 271-288.

Bavins, M, Couchman, D & Beumer, J 2000, *Fisheries guidelines for fish habitat buffer zones*, Department of Primary Industries, Queensland, Fish Habitat Guideline FHG 003, 39pp.

Cappo, M, Alongi, DM, Williams, DMcB and Duke N 1998, *A review and synthesis of Australian fisheries habitat research: major threats, issues and gaps in knowledge of coastal and marine fisheries habitats*, Fisheries Research and Development Corporation project #95/055, Australian Institute of Marine Science Volumes 1-3, 633pp.

Commonwealth of Australia 2006, *A guide to the integrated marine and coastal regionalisation of Australia*: version 4.0, Department of the Environment and Heritage, Canberra.

DAF, 2012a, *Declared Fish Habitat Area network assessment report 2012*, Department of Agriculture, Fisheries and Forestry <http://www.DES.qld.gov.au/managing/habitat-areas/assessment-report.html>

DAF 2012b, *Marine fish habitat offset policy*, Department of Agriculture, Fisheries and Forestry, 39 pp.

Department of Aboriginal & Torres Strait Islander Policy and Development 1999, *Protocols for consultation and negotiation with Aboriginal people*, Queensland Government.

DEEDI 2011a, *Prospects for Queensland's primary industries 2011-12*, September 2011.

DEEDI 2011b, *Recreational fishing*, [http://www.dpi.qld.gov.au/28\\_139.htm](http://www.dpi.qld.gov.au/28_139.htm), 18 May 2011, accessed 10 November 2011.

Department of Employment, Economic Development and Innovation 2010, *Declared Fish Habitat Area network strategy 2009-14*. <http://www.DES.qld.gov.au/managing/habitat-areas/network-strategy.html>

Department of Environment and Science 2012, *Native Title Work Procedures 16 April 2012*, accessed 29 October 2012.

Derbyshire, K, McKinnon, S & Sheppard R 2007, *Management of declared Fish Habitat Areas: Departmental policy position*, Queensland Department of Primary Industries and Fisheries, Fish Habitat Management Operational Policy, 108 pp. <http://www.DES.qld.gov.au/managing/habitat-areas/policies-code.html>

Environment Australia 2001, *A directory of important wetlands in Australia*, Third Edition. Environment Australia, Canberra.

Department of Environment and Science 1999, *State of the environment Queensland 1999*, DES, Brisbane.

Food and Agriculture Organization 1995, *Code of conduct for responsible fisheries*, United Nations, Rome.

Glaister, JP 1978, *The Impact of River Discharge on Distribution and Production of School Prawn *Metapenaeus macleayi* (Haswell) (Crustacea: Penaeidae) in the Clarence River Region, Northern New South Wales*, Australian Journal of Marine and Freshwater Research, vol. 29, pp. 311-323.

Halliday, I & Robins, J 2007, *Environmental flows for sub-tropical estuaries: understanding the freshwater needs of estuaries for sustainable fisheries production and assessing the impacts of water regulation*, Final report FRDC Project No. 2001/022, Canberra.

Higgs, J 1997, *Experimental recreational catch estimates for Queensland residents: RFISH Technical Report # 2 Results from the 1997 diary round*, QFMA Brisbane.

IUCN 2009, *Category VI - Protected Area with sustainable use of natural resources*, [http://www.iucn.org/about/work/programmes/pa/pa\\_products/wcpa\\_categories/pa\\_categoryvi/](http://www.iucn.org/about/work/programmes/pa/pa_products/wcpa_categories/pa_categoryvi/), accessed 5 July 2012.

Lawrence, M, Sully, D, Beumer, J & Couchman, D 2010, *Fisheries guidelines for conducting an inventory of instream structures in coastal Queensland* (revised version), Department of Employment, Economic Development and Innovation, Fish habitat guideline FHG 007 update.

Loneragan, NR & Bunn, SE 1999, '*River flows and estuarine ecosystems: implications for coastal fisheries from a case study of the Logan River, south-east Queensland*'. Australian Journal of Ecology, vol. 24, pp. 431-440.

Queensland Office of Regulatory Efficiency 2010, *Queensland Regulatory Assessment Statement System Guidelines*, Version 2.1, Queensland Treasury.

Quinn, RH 1992, *Fisheries resources of the Moreton Bay region*, Queensland Fisheries Management Authority.

Ridd, P, Sandstrom, MW & Wolanski, E 1988, '*Outwelling from Tropical Salt Flats*'. Estuarine, Coastal and Shelf Science, vol. 26, pp. 243-253.

Ruello NV 1973, 'Burrowing, feeding and spatial distribution of the school prawn *Metapenaeus macleayi* (Haswell) in the Hunter Region' *Australian Journal of Experimental Marine Biology & Ecology*, vol. 13, pp. 189-206.

Salm, R V, Clarke, J & Siirila, E 2000, *Marine and Coastal Protected Areas: A guide for planners and managers*, IUCN, Washington DC.

Samut, J and Lines-Kelly, R 1996, *An introduction to acid sulfate soils*. NSW Agriculture, Wollangbar, NSW.

Sheppard, R and Helmke, SA 1999, *A fisheries resource assessment of the Annan River, North Queensland*, Department of Primary Industries, Information Series QI 99043, Queensland Government.

Staples, DJ 1985, '*Modelling the recruitment processes of the banana prawn, *Penaeus merguensis*, in the southeastern Gulf of Carpentaria, Australia*', Second Australian National Prawn Seminar, NPS2, Cleveland, Australia, pp. 47-54.

Thorrold, SR & McKinnon, AD 1995, '*Response of larval fish to river plume in coastal waters of the central Great Barrier Reef lagoon*', Limnology and Oceanography, vol. 40 (1), pp. 177-181.

Williams, LE (ed) 1997, *Queensland's Fisheries Resources: Current Condition and Trends 1988-1995*, Queensland Department of Primary Industries Information Series QI97007.

## **Authorities**

*Fisheries Act 1994*

*Fisheries Regulation 2008*

**Disclaimer**

While this document has been prepared with care, it contains general information and does not profess to offer legal, professional or commercial advice. The Queensland Government accepts no liability for any external decisions or actions taken on the basis of this document. Persons external to the Department of Environment and Science should satisfy themselves independently and by consulting their own professional advisors before embarking on any proposed course of action.

**Approved By**

Ben Klaassen

Signature

7 January 2013

Date

Deputy Director General  
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## Appendix A Definitions

“**Act**” refers to the *Fisheries Act 1994*

“**Chief executive**” means chief executive (or delegate) of DES

“**DAF**” means the Queensland Department of Agriculture and Fisheries

“**FHA**” means (declared) Fish Habitat Area, defined in section 4 of the *Fisheries Act 1994*

“**Fisheries Queensland**” refers to the Queensland Government agency that is part of DAF, and that has responsibility for management of Queensland’s fisheries.

“**fish habitat**” as defined in section 4, *Fisheries Act 1994*

“**GIS**” means Geographic Information System

“**marine plant**” typically includes saltwater couch, samphires, mangroves, seagrasses and *Melaleuca* spp. adjacent to tidal lands (defined in section 8, *Fisheries Act 1994*)

“**MPA**” means Marine Protected Area

“**DES**” means the Queensland Department of Environment and Science

“**OQPC**” means the Office of the Queensland Parliamentary Counsel

“**QBFP**” Queensland Boating and Fisheries Patrol

“**QSIA**” Queensland Seafood Industry Association

“**RAS**” means Regulatory Assessment Statement

“**regionally unique**” means remarkable, rare or unusual (fish habitat) within the region

“**Regulation**” means the *Fisheries Regulation 2008*

“**TOR**” means Terms of Reference

## **Appendix B - Criteria for assessment of declared FHAs**

### **Fisheries criteria**

#### **Criterion 1 - High fish species richness**

Declared FHAs are intended to protect areas of high quality fish habitat that sustain fisheries production. A direct indicator of important fish habitats is the presence of a species-rich fish community (including both target fisheries species and non-target species).

This selection criterion recognises that whilst target fisheries species are the focus of fisheries management, these species form only part of the complex and inter-related aquatic food web and therefore cannot be treated in isolation from the broader fish community.

In addition, species that are not currently targeted for recreational, commercial or traditional purposes may be targeted in the future. It is therefore important that the declared FHA network protects regionally representative habitats that support a broad suite of fish species, some of which may have future economic potential.

Assessing fish species richness within a waterway and comparing results with other similar areas is a complex task. Comparisons are dependent on factors such as the selectivity of the sampling apparatus, sampling frequency and seasonal variability. The development of standardized sampling procedures within Fisheries Queensland and other research organisations continues to produce baseline fish inventories and population data within a number of relatively undisturbed waterways throughout the State, recognised as high quality fish habitats. These data can provide regional 'benchmarks' for basic comparative purposes. A declared FHA should support a fish species richness that is similar to that of these comparable regional 'benchmark' waterways.

#### **Data required for assessment of criterion**

The degree of field sampling required to assess fish species richness within a candidate area will depend on the quantity and quality of existing information. Sources of existing information include published literature, commercial logbook data, relevant EIS data, recreational catch data, anecdotal information and research and monitoring data. Extensive field sampling requires considerable time and resources. Therefore, any sampling should be specifically designed to complement existing data.

In locations where existing fish fauna data are limited, the standard Fisheries Queensland field sampling methodologies for fish and crab species in inshore waterways (Sheppard and Helmke 1999), complemented with beam trawling for juvenile prawn and fish (Lupton and Heidenreich 1999), should be utilised to provide a basic assessment of species richness (and relative abundance data – as required in Criterion 2) of the fish fauna within the subject area. Where possible such an assessment should be undertaken on a seasonal basis over a 12 month period.

#### **Criterion 2 - High diversity and abundance of regionally targeted species (adult or juvenile)**

A candidate FHA should provide habitat for fish targeted by commercial, recreational or traditional fishers. Declared FHAs have a vital role in sustaining Queensland's fisheries by ensuring that the inshore and estuarine habitats required by targeted fish species are maintained in a high quality, natural condition and are therefore capable of sustaining this ongoing harvest.

Some targeted species spend their life cycle within inshore and estuarine habitats (e.g. flathead). Other species only use these habitats during particular phases of their life cycle, before moving to offshore habitats to mature (e.g. red emperor). Inshore and estuarine fish habitats are vital to the maintenance of the red emperor life cycle and the offshore fishery for this species. For this reason the presence of juvenile or adults of target fisheries species within a declared FHA is an equally important confirmation of the values of these habitats.



A declared FHA should have a minimum of 10 (15 for management A areas) regionally targeted fisheries species, in high abundance (relative to the species), within its habitats. For example, a typical southern Queensland declared FHA may have a high abundance of the following species: three species of whiting, bream, two species of flathead, mud crabs, sand crabs, several species of prawns (e.g. banana, kings and greasy), juvenile snapper, three species of mullet. A typical northern Queensland declared FHA may have high abundance of: barramundi, mangrove jack, two species of grunter, salmon (king and blue), three species of mullet, mud crabs, several species of prawns (e.g. banana, kings and tigers), sharks (several species), whiting (several species).

#### **Data required for assessment of criterion**

Refer to data required in section Criterion 1.

#### **Criterion 3 - Supports existing fisheries**

Significant existing fisheries within a candidate area indicate that the habitats within are important for local and regional fisheries productivity.

This criterion should be determined by the size of the commercial catch and the number of fishers using the area and/or the size of catch for recreational and traditional fishers.

It is important to consider that proximity to major urban areas has a significant influence on the numbers of recreational fishers using an area. Although this may also be an issue with the commercial catch size, it is unlikely to apply to the same extent. Commercial fishers may have a greater ability and commitment to follow targeted species further away.

(Note: this criterion is not applicable if the candidate area is completely closed to fishing through legislative controls).

Consideration should be given to fishing access (e.g. public boat ramps), including opportunities for improved access.

#### **Data required for assessment of criterion**

Information on existing and historic fishing activities within the candidate FHA can be obtained from the following sources:

- interrogation of Fisheries Queensland data bases
- discussions with representatives from the Queensland Seafood Industry Association (QSIA), Sunfish and local indigenous fishing sectors
- discussion with local Queensland Boating and Fisheries Patrol (QBFP) Officers
- discussion with researchers/historians
- discussion with landholders adjacent to the area
- review of published information.

#### **Criterion 4 - Supports external/regional fisheries**

The identification of links between the candidate FHA and external fisheries recognises that many targeted fish species utilise different habitats during their life cycles. Assessment of this criterion ensures that the possible interdependence of external/offshore fisheries on the habitats within the candidate FHA is recognised.

Unless significant research has been conducted on species movement within the area (e.g. through tagging studies), it is likely that the assessment of this criterion will be based on educated deduction. An example of a situation where a candidate FHA would clearly receive a high rating under this criterion is outlined below:

A major banana prawn fishery is conducted in inshore waters near a candidate FHA. A survey of the candidate area identifies that large numbers of juvenile banana prawns use the area as a nursery ground. Given that scientific literature reports that banana prawns migrate from estuarine nursery grounds to adjacent inshore areas, it would be reasonable to assume that the candidate FHA directly contributes to the major external fishery.

#### **Data required for assessment of criterion**

Identification of the links between the candidate FHA and external/regional fisheries requires collection and analysis of the following:

- information on the adjacent fisheries which can be sourced through:
  - interrogation of Fisheries Queensland data bases
  - discussion with representatives from the QSIA, Sunfish and local indigenous fishing sectors
  - discussion with local QBFP Officers.
- data collected for Criterion 1
- information on the life cycles and habitat requirements (larval, juvenile and adult) of the species that are targeted in the adjacent fisheries.

#### **Habitat criteria**

##### **Criterion 5 - Large in size**

It is generally accepted that the protection of large areas as MPAs is more sustainable over the long term than the protection of smaller areas. Overlooking size in the MPA design process has resulted in severe degradation—even total destruction—of relatively smaller protected areas (Salm et al. 2000).

While the mean declared FHA size within the existing network is approximately 13,000 hectares (ha), some of Queensland's most productive fish habitats are protected in relatively small declared FHAs (e.g. in Moreton Bay). The recommended declared FHA minimum size of > 100ha for management B areas (> 500ha for management A areas) is relatively small when considered in terms of current MPA theory. However, much MPA theory is based on biodiversity conservation objectives, which differ from the objectives of FHA declaration.

This minimum size provides flexibility to capture and protect smaller areas of highly productive fish habitats, while ensuring that the area is of a size worthy of specific protection. It is likely that most declared FHAs will need to be substantially larger than the nominated minimum size of 100ha to meet a number of the other assessment criteria.

#### **Data required for assessment of criterion**

The size of a candidate FHA can be determined through basic GIS analysis.

##### **Criterion 6 - Diverse habitat types**

An area that rates highly for FHA declaration should contain a broad range of habitat types. This not only ensures that individual habitat types are protected, but also that the connectivity between adjacent habitats is maintained. Many inshore and estuarine fish species are highly mobile and may require, or opportunistically utilise, a variety of habitats on a daily basis and during different phases of their life cycle. Where different habitat types are in close proximity, it is likely that connectivity exists.

The capture of a diverse range of habitats within a declared FHA:

- helps to ensure that the declared FHA is representative of the available habitat types within the geographic region

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- reduces the risk of not capturing habitat types, which, with a more complete understanding of the complex habitat requirements of individual species, may prove vital to the sustainability of individual species or fish stocks in general. For example, claypan habitats are not broadly recognised as a highly productive fish habitat. However, Ridd et al. (1988) suggest that nutrients exported from the claypan areas in the Gulf of Carpentaria during summer spring tides may trigger the important ecological processes that initiate and support production of juvenile prawns.

Estuarine / inshore habitat classifications are provided for declared FHA assessment (Table 2). This table is based on the wetland classification system used in the Second Edition of the Directory of Important Wetlands in Australia (Environment Australia 2001), with minor modification appropriate to declared FHA assessment requirements.

Table 2. Inshore and estuarine Fish Habitat Area habitat classifications

Inshore habitat classifications	
1	Marine waters - greater than 6 metres deep at low tide
2	Marine waters – permanent shallow waters less than 6 metres deep at low tide; includes sea bays, straits and shoals
3	Sub tidal aquatic beds; includes algal beds, seagrasses
4	Coral reefs
5	Sand, shingle or pebble beaches
6	Estuarine waters: permanent waters of estuaries and estuarine systems of deltas
7	Intertidal mud/ sand flats
8	Intertidal marshes; includes salt marshes and saltpans including <i>Casuarina glauca</i>
9	Intertidal forested wetlands; includes mangrove communities and snags
10	Brackish to saline lagoons and marshes with one or more relatively narrow connections to the sea, including shallow saline lakes
11	Brackish to freshwater swamps; includes melaleuca
12	Rocky Structures; includes rock bars and rocky headlands
13	Surf bars
14	Overhanging / undercut river banks

#### Data required for assessment of criterion

Assessment of fish habitat diversity is undertaken using the broad habitat classifications defined in Table 2. A range of assessment tools may be required to adequately describe the fish habitat diversity of a candidate FHA including: satellite imagery and air photo analysis, land and water based field surveys and searches of existing published literature.

Considerable existing data is available on the vegetated estuarine and inshore habitats throughout Queensland. As mangrove and saltmarsh communities tend to be relatively robust and generally respond relatively slowly to natural environmental variation, this data should represent the current distribution of these habitat types well. A basic assessment of the most recent aerial photography of the candidate FHA will identify any recent changes.

Data on seagrass distribution is available from a range of sources including DAF, Department of Environment and Science, Department of Science, Information Technology and Innovation, local governments and community monitoring programs. As seagrass meadows are sensitive to changes in environmental conditions (e.g. high turbidity) significant variation in their density and extent are common. It is likely that available data may not reflect the current seagrass distribution within some candidate FHAs. Field inspections and discussions with regular waterway users may be required to supplement any seagrass distribution data to ensure that recent changes are identified.

The different unvegetated structural features of a waterway (mud banks, rocky outcrops, deep water areas, sand bars, etc.) are critical in providing the habitat complexity necessary to sustain a species-rich fish community. An assessment of the presence and location of these unvegetated habitats is also required. Shoreline type surveys have been conducted for the entire Queensland coast (e.g. Banks et al. 2005). Shoreline type GIS data should be complemented with field surveys, bathymetric data, assessment of aerial photography and analysis of existing published information.

### **Criterion 7 - Presence of a functioning riparian buffer zone**

The riparian zone is the interface between the terrestrial and aquatic environments and serves a variety of vital functions including:

- improved bank stability (prevents erosion)
- buffers to filter sediment, nutrients and chemicals
- physical habitat (tree roots etc)
- detrital input (leaf material and woody debris into the water)
- shading (greater relative influence in smaller water bodies)
- separation between the waterway and adjacent more intensive or incompatible land uses.

Assessment of the condition and extent of riparian habitats provides an indicator of the likely level of direct and diffuse interaction between adjacent land uses and the candidate FHA. The type and intensity of adjacent land use influence the density and type of vegetation cover that are required to provide a functional buffer (e.g. a functional riparian buffer between intensive agricultural activities and tidal lands generally needs to be wider and more densely vegetated than a buffer against an area that is used for light cattle grazing).

The benefits provided by different types of buffer vegetation, including grasses, trees and shrubs, will vary according to the required function. All or one of these vegetation types may be required to provide appropriate buffer functions. As a general rule, multi-species vegetated buffer zones, which contain high quality, natural habitats provide more effective buffer function (Bavins et al. 2000).

### **Data required for assessment of criterion**

Aerial photographs and field inspections can be used to assess vegetation cover and functional condition of the riparian buffer zone. For the purposes of this analysis the riparian buffer zone is considered to commence at the upper limit of tidal action (HAT) and extends an arbitrary distance of 100 metres inland from that contour. Riparian vegetation communities are therefore terrestrial, although marine plants may be found in these communities.

A riparian buffer zone does not necessarily need to be pristine natural vegetation to function effectively. In some instances, use of the buffer (e.g. light grazing) may not significantly reduce its function, particularly if the surrounding land uses are also of low intensity.

The riparian buffer should be assessed and categorised as follows:

- pristine
- adequately vegetated and functional given existing land use within and adjacent
- vegetated but offers limited functional value given existing land use within and adjacent
- severely altered.

Those sections of the riparian buffer that fall within the first two of the above categories are considered to be vegetated and functional.

For further information on buffer function refer to Bavins et al. (2000).

#### **Criterion 8 - Limited disturbance from in-stream artificial structures**

The presence and nature of in-stream artificial structures (e.g. jetties, boat ramps, bridges, revetment walls, aquaculture inlet / outlet structures, stormwater discharges) indicate that the natural fish habitat values beneath, upstream and downstream of these structures have been altered. If these structures are present in large numbers or cover a significant area, the compounding impacts on the area's value as a declared FHA may be significant.

Existing structures may require future maintenance to ensure their purpose and functions are retained. Maintenance works can lead to ongoing disturbance and may conflict with the management intent of FHA declaration.

Documentation of the number and location of existing artificial in-stream structures provides a baseline measure of existing physical development pressures within the candidate FHA. This information can also assist with determining appropriate locations of exclusion zones and with future management implications, should the FHA be declared.

#### **Data required for assessment of criterion**

Each existing structure should be recorded, photographed (where possible) and its location identified for inclusion in a GIS coverage. Field survey, using the *Fisheries guidelines for conducting an inventory of instream structures in coastal Queensland* (Lawrence et al. 2010), and air photo analysis are effective methods of data collection.

#### **Criterion 9 - Good water quality**

Good quality water is important for productive fish habitats. Acute water quality problems (e.g. chemical contamination) can cause fish to avoid the area, or a localised fish kill. Chronic water quality problems can also significantly affect fisheries productivity within an area. For example, ongoing acid sulfate soil leachate has been linked to an increase in fish diseases, smothering of fish eggs and benthos, physical stress and loss of spawning area through avoidance (Samut and Lines-Kelly 1996).

It is essential that a candidate FHA has good water quality to be considered for declaration. There are guidelines (e.g. ANZECC & ARMCANZ 2000) that provide standards to assess water quality within a candidate FHA. These standards include default trigger values for physical and chemical stressors, conductivity, turbidity and suspended particulate matter within different regions of Queensland.

Should the water quality within a candidate FHA be assessed to be currently below water quality standards, the area may still be accepted as meeting this criterion if a detailed water quality improvement program is in place, which will achieve the acceptable standards within 5 years.

#### **Data required for assessment of criterion**

Water quality data can be obtained from a number of sources including state agencies, local government, Healthy Waterways, Waterwatch, NRM groups and Catchment Coordinating Committees.

Generally, water quality sampling undertaken as part of short-term field assessments of candidate FHAs will only provide snapshot data. Although this may be the only available data for some waterways, it is preferred that the assessment of water quality is undertaken using data collected over a longer period (e.g Healthy Waterways programs). Interpretation of water quality data is a specialist field and advice from water quality specialists may be required to adequately assess this criterion.

#### **Criterion 10 - Limited disturbance from water impoundment structures**

The regulation of streams in Queensland by the construction of dams, weirs and tidal barrages has caused major alteration to fish habitats and their function.

Water impoundment structures can:

- restrict migration pathways for anadromous and catadromous species
- alter natural flow patterns (volume and frequency) through estuarine habitats
- alter the tidal prism within the estuary
- modify the siltation regime within the estuary.

Tidal barrages change estuarine habitats into permanent freshwater areas.

Freshwater flows to estuaries are crucial in supporting fisheries production. These flows help deliver fish from freshwater reaches to estuarine sections, facilitate movement of newly recruited fish from marine spawning areas to estuarine and freshwater habitats, and increases growth rates of fisheries species through increased estuarine nutrients (Halliday and Robins 2007).

By reducing or altering natural flows into estuaries, there is significant potential to impact on critical life cycle triggers for some fisheries species. Environmental flows – strategic water releases to mimic natural flow – are used to remediate some of the impacts of flow regulation. However, many of Queensland's coastal rivers have water storage structures that do not allow for adequate environmental flows and fish passage.

Modification of existing structures to achieve fish passage and adequate environmental flows can be a difficult and expensive process, which may never be fully achieved for some structures or certain catchments. The approach taken for assessment of this criterion is to focus on the objective of 'continual improvement'. Continual improvements in fish passage and the release of environmental flows within upstream waterways will maintain or improve on the current fisheries and habitat values of the candidate FHA over time.

For the purposes of satisfying this criterion the waterways within the catchment of the candidate FHA should have:

- no impoundment structures present on the main stream and any major tributary of the main stream; or
- only impoundment structures on the main stream and any major tributary of the main stream that:
  - allow for > 75% of flows to overtop the structure or are managed to release adequate (from a fisheries perspective) environmental flows; and
  - drown out regularly enough to allow for adequate fish passage or have a functional fishway; or
- no decline in existing levels of fish passage and environmental flows in the main stream and any major tributary of the main stream, and a proposed water management program that will achieve a net improvement in fish passage and/or environmental flows through these waterways within a 10 year timeframe.

**Data required for assessment of criterion**

Numerous government agencies are involved in freshwater management in Queensland. Water resource planning processes and licensing of water impoundment structures occurs under the *Water Act 2000*. The assessment of this criterion will require detailed consultation with relevant officers and review of local water planning processes.

Consultation should also occur with Fisheries Queensland regarding the adequacy of fish passage.

**Criterion 11 - Limited interaction with developments of major significance to the State**

Numerous locations along the Queensland coast are, or are proposed as, developments of major significance to the State. Such developments include export ports, airports and major industrial nodes. These developments are considered vital to the economic functioning of the State. Unless the boundaries of such developments are clearly defined and expansion is unlikely, a declared FHA proposal close to one of these areas is unlikely to be supported by Government. These strategic issues require careful consideration and assessment.

In some instances quality fish habitat may be adjacent to a well-defined boundary of a significant development. If it can be confirmed that any future expansion of the development will be confined to locations well away from the identified quality fish habitats, these habitats may have potential for FHA declaration. With suitable buffers, a declared FHA in such a location may also receive support from managers of the development. Such support would reflect genuine motives of balancing regional development and fish habitat protection. Strong support from adjacent development managers is highly desirable and provides long-term benefits to the declared FHA.

**Data required for assessment of criterion**

Ports, airports and similar developments have strategic planning documents that outline future development plans. Discussions with the managers of these developments will help to determine to what extent a declared FHA could be achieved close to one of these developments.

Discussions with officers of the Department of Infrastructure, Local Government and Planning should also be undertaken to identify any proposed major developments which may influence declared FHA considerations.

**Criterion 12 - Compatible adjacent land and aquatic planning**

A broad assessment of adjacent land and aquatic planning is required. The type and intensity of adjacent development will strongly influence the effectiveness of declared FHA management.

For example, a candidate FHA with predominantly residential adjoining land may not be suitable for FHA declaration due to development pressure for private waterway structures (e.g. jetties). Discreet development nodes adjoining a candidate area can be excluded from the proposal.

Protected areas (e.g. national or marine park) adjoining a candidate FHA provide a high level of long-term protection. Shoreline esplanades and reserves that separate a candidate FHA from adjacent properties can also offer significant protection from direct development impacts.

**Data required for assessment of criterion**

Pending or previously approved development proposals within or adjacent to the candidate FHA, can be identified by a review of:

- local government planning schemes
- regional plans
- long-term planning strategies by infrastructure providers.

Discussions with planning officers from local government and relevant state agencies will also be required.

### **Unique features**

#### **Criterion 13 - Presence of regionally unique natural fish habitat features**

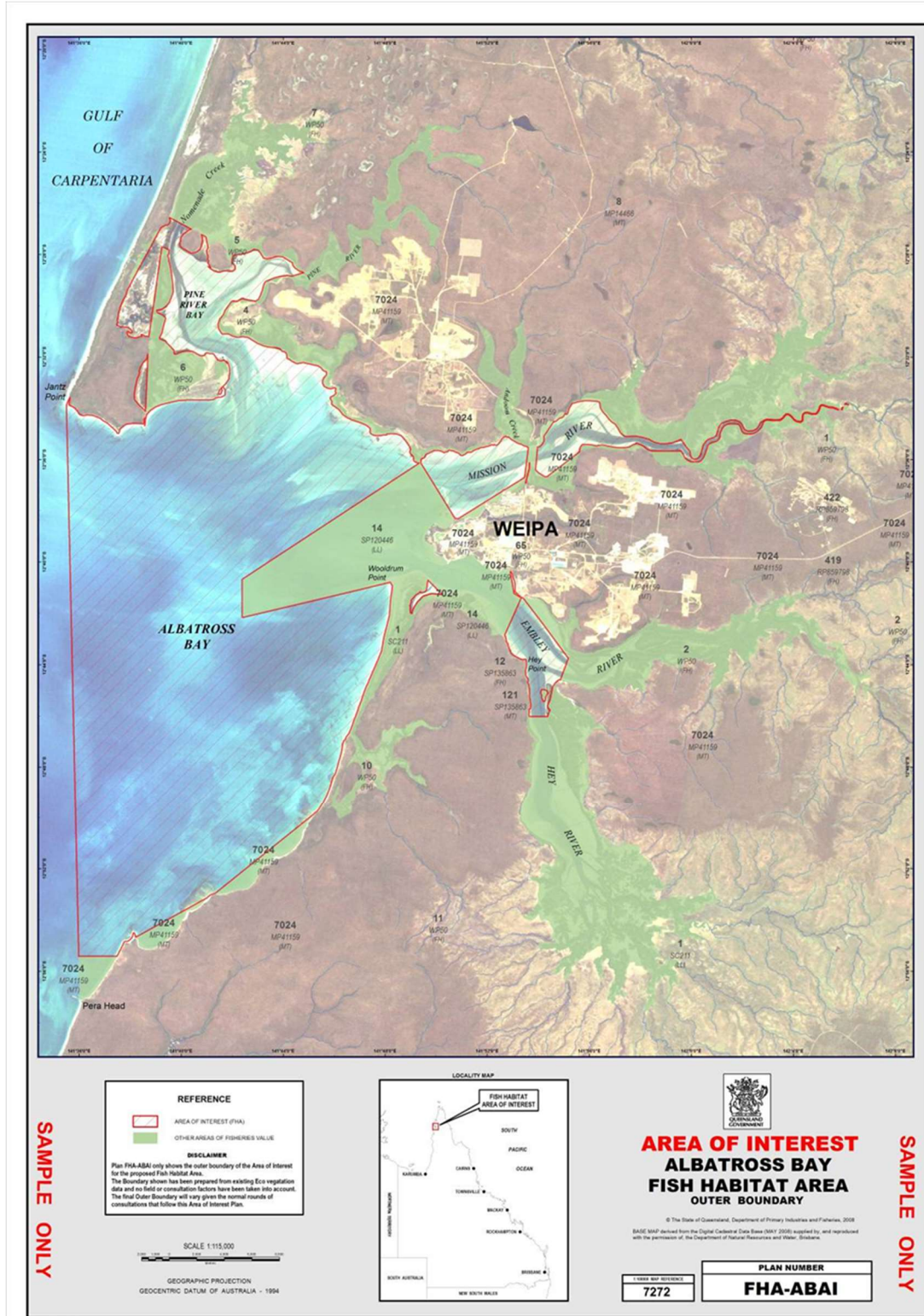
Declared FHAs may be proposed specifically or in part to protect a significant fisheries feature, e.g. a known spawning habitat or a regionally unique rocky reef habitat. Where unique features are small (i.e. on a scale of tens of hectares or less), they should be incorporated as part of larger declared FHA. However if the adjacent habitats are not suitable for FHA declaration, an area that rates highly for this criterion may require special consideration and could be recommended for declaration.

#### **Data required for assessment of criterion**

Information from other assessment criteria will inform this criterion. Published literature and discussions with researchers, fishers and other stakeholders who have extensive local knowledge may also identify regionally unique features within the candidate FHA.



Appendix C - Example of an Area of Interest Plan



**Appendix D - Example of a public notice****Public Notice****Declared Fish Habitat Area Proposal – \_\_\_\_\_**

Members of the public are invited to provide written comment on a proposal by the Queensland Government to declare a Fish Habitat Area, under the provisions of the *Fisheries Act 1994*, within the \_\_\_\_\_ River, near \_\_\_\_\_. The area of interest covers approximately \_\_\_\_ hectares of high quality tidal fish habitats stretching from \_\_\_\_\_ to \_\_\_\_\_, and including the tidal lands and waters of the \_\_\_\_\_ Rivers.

Fish Habitat Areas are declared to protect the areas of high quality fish habitats which sustain Queensland's existing and future fish stocks. Declared Fish Habitat Area management provides long-term protection for the natural fish habitats while allowing the continued community use and enjoyment of the area. Please note that activities such as legal **recreational, commercial and traditional fishing and boating can continue in a declared Fish Habitat Area.**

An information package about the proposal, including a plan of the Area of Interest for declaration and details on how to provide a submission on the proposal is available on the website [www.DES.qld.gov.au](http://www.DES.qld.gov.au) or by calling \_\_\_\_\_.

The closing date for initial comment on the proposal is \_\_\_\_\_.