DECLARED FISH HABITAT AREAS – 40 YEARS ON

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INTRODUCTION

Queensland's fish habitats are integral to the State's culture, lifestyle and economy. These habitats support the fish stocks on which Queensland's fisheries and associated seafood consumption rely.

Commercial fisheries continue to make a significant contribution to the national and State economy and many coastal towns are highly reliant on this fleet. Fishing is an important part of the Queensland lifestyle. There are around 735 000 recreational fishers who also contribute to the State's economy. The traditional fishing practices of indigenous peoples are important not only as a source of food, but also for purposes of culture, spirituality, trade, health and education (Sheppard 2004).

Fish need access to a mosaic of fish habitats for spawning, migration, feeding, growth and shelter. Maintenance of, and accessibility to, a broad range of habitat types, attributes and functions are therefore critical to maintain and enhance fisheries productivity.

The Department of Primary Industries and Fisheries (DPI&F) has a statutory role in delivering the Queensland Government's priority of protecting the environment for a sustainable future by conserving and managing fish habitats. Management of fish habitats is an integral part of the overall fisheries management strategy in Queensland, which also includes management of fishing activities, fish disease and the shark control program.

The fish habitat management provisions of the Queensland *Fisheries Act 1994* include the protection of marine plants, restoration of disturbed fish habitats, management of waterway barriers for fish passage, and the declaration and management of Fish Habitat Areas (FHAs).

Declared FHAs are spatially defined areas that protect critical fish habitats and fishing grounds required to sustain Queensland's fisheries, and also provide places for education, research and community use. The declared FHA program is an integral component of the Government's strategy for achieving the long-term sustainability of fish stocks and maintaining viable commercial, recreational and traditional fisheries into the future.

This paper describes the evolution of the State's declared FHA network and its influence over coastal planning and management.

EVOLUTION OF THE FHA NETWORK

The south east Queensland coastal fringe has experienced considerable development pressure from the 1960s onwards. Much of this development, including the extensive canal developments of the southern Moreton Bay / Gold Coast and Sunshine Coast region, resulted in the loss of significant areas of coastal fish habitat. For example, 8.4% of mangroves and 10.5% of saltmarsh habitats from Coolangatta to Caloundra were lost to development between 1974 and 1987 (Hyland and Butler 1988).

In response to this coastal development pressure, the concept of a State-wide network of spatially defined areas to protect a mosaic of key fish habitats was developed in the mid 1960s by the then Queensland Government. The *Fisheries Regulation 1968* provided the legislative framework for such areas, termed Fish Habitat Reserves to be declared. All habitats within the Fish Habitat Reserve boundary were afforded an equal, high level of protection from physical disturbance, while allowing for community use of the area including continuation of legal fishing activities. By 1977,

23 Fish Habitat Reserves had been declared over more than 70 000 ha of tidal fish habitats, mainly in south east Queensland, to counter the impacts of coastal development.

Fisheries legislation was amended in 1982 to provide for the declaration of Wetland Reserves. These served a similar purpose to Fish Habitat Reserves, but allowed for activities with a slightly higher level of impact. The more flexible management arrangements allowed for existing or proposed uses that were incompatible with the more stringent Fish Habitat Reserve protection and management. At the same time, the protection afforded by Wetland Reserves ensured that fish habitat values within the area were a primary consideration in any development activity proposed within or adjacent to the area. By 1994, 48 Fish Habitat Reserves and 30 Wetland Reserves protected more than 600 000 ha of Queensland's key coastal and estuarine fish habitats.

The *Fisheries Act 1994* (the current legislation) combined Fish Habitat Reserves and Wetland Reserves into a single category, declared FHAs. In practice, the two-tiered management approach remains, with Fish Habitat Reserves now management A FHAs and Wetland Reserves now management B FHAs. Currently, the State's network of 71 declared FHAs protects over 800 000 hectares of predominantly coastal and estuarine fish habitats. The coastal and estuarine focus of the network reflects the development pressure on these areas and the importance of these habitats in supporting fisheries. About 75% of commercial fishing catch in Queensland is derived from species that spend part of their life in estuarine and coastal waters (Quinn 1992). The declared Cleveland Bay and Fitzroy River FHAs will be added to the network in 2007, increasing the total area of protected fish habitats to over 850 000 ha.

The Queensland community increasingly has an expectation of transparency and involvement in any Government decision that affects planning and activities within the local region. Initially, Fish Habitat Reserves were selected according to the need to protect sensitive fish habitats from ongoing and imminent development pressures (Olsen 1977). Today, the declared FHA network also incorporates areas not currently subject to significant development pressure, resulting in a State-wide network that is more comprehensive, regionally representative and that anticipates the challenge of future development pressure.

Procedures for selecting and assessing candidate declared FHAs are outlined in DPI&F Fisheries policy FHMOP 007 (McKinnon *et al.* 2003). These may be nominated by any group or person and are often identified through research into and mapping of fish habitats. Geographic representativeness and existing levels of protection are key considerations in taking a strategic approach to planning for the declared FHA network. A range of fisheries resources and fish habitat selection criteria are used to determine suitability of candidate areas for FHA declaration. The results of this determination are presented in a candidate declared FHA investigation report.

Formal declaration of an FHA requires an extensive consultation process which is documented in DPI&F Fisheries policy FHMOP 006 (McKinnon and Sheppard 2001). This process informs stakeholders of the fisheries and fish habitat values of the area, and of the benefits and restrictions of declared FHA management. It also identifies existing and planned uses in the area, the suitability of proposed declared FHA boundaries and management levels and the overall level of support for the proposal. Minor boundary amendments result from consultation, but declared FHA proposals generally receive broad community support. Where consultation establishes substantial opposition to an FHA proposal, it does not proceed to declaration.

FHA MANAGEMENT

Declared FHA locations and boundaries are defined through the provisions of the *Fisheries Regulation 1995*, which refers to a plan for each area. Particular lands within the boundary may be specified in the Regulation or on the plan as either included or excluded. Marked navigation channels are excluded from all declared FHAs to allow for channel dredging to ensure maritime safety. All fish habitats (land, waters and plants) within the area are subject to declared FHA management.

Constraints on development activities in declared FHAs restrict impacts on key fish habitats, while community purposes such as legal fishing and boating are allowed and maintained. Management A areas provide the highest level of protection to fish habitats critical to supporting Queensland's fisheries. Management B areas provide more flexible management arrangements to allow for compatible existing and proposed purposes.

Certain minor, low-impact works in declared FHAs are authorised under self assessable codes for:

- Maintenance works on existing lawful structures;
- Maintenance works on powerlines and associated infrastructure;
- Works for education, research or monitoring;
- Low impact new works[1].

Works conducted under self-assessable codes do not require application or assessment, although notification is a requirement. Proponents must meet the prescriptive measures specified in the codes to ensure that any self-assessable works will be minor and low-impact.

If the development is not self-assessable, there is a two-step process for gaining an approval to conduct works in declared FHAs:

1) Obtain a resource allocation authority (RAA) under the *Fisheries Act 1994* for prescribed declared fish habitat area development, followed by
2) Obtain a development approval (DA) under the *Integrated Planning Act 1997* for building and/or operational works.

An RAA provides allocation of, or entitlement to, the resource and defines the purpose and location of the works. The requirement for an RAA recognises that declared FHAs are an important State resource under Schedule 10 of the *Integrated Planning Regulation 1998* specially managed for fisheries purposes. While RAAs set the boundaries within which development may occur, these do not authorize any works (works are authorized by the DA).

The *Fisheries Regulation 1995* prescribes the purposes for which an RAA may be granted within a declared FHA. For management A areas, these purposes are:

- maintaining existing structures;
- restoring fish habitats or natural processes;
- managing fish habitats and fisheries resources;
- education and research;
- providing public infrastructure for fishing;
- providing underground infrastructure;
- placing temporary structures.

The more flexible management arrangements for management B areas provide for the above purposes, along with:

- placing permanent structures;
- depositing material for beach replenishment.

The DPI&F Fisheries revised policy FHMOP 002 (Derbyshire *et al.* in press) provides guidance on how declared FHA management is used to achieve the objectives of Queensland's Fisheries legislation. Implications of these legislative restrictions and policy provisions on key issues for coastal planning and management within declared FHAs are discussed below.

Beach replenishment

Replenishment of beaches and foreshores in Queensland is generally proposed to meet the community's recreational and tourism expectations for sandy beaches and/or as an

[1] This code will come into force following amendments to IPA and the Fisheries Act.

environmentally 'soft' solution to control foreshore erosion. Beach replenishment alters existing fish habitats, with the degree of impact dependent on site-specific factors. Due to the level of risk associated with potential impacts of this activity on key fish habitats, the deposition of material for beach replenishment is only provided for in Fisheries legislation within management B areas.

Key declared FHA management requirements for beach replenishment proposals in management B areas include:

- Suitable replenishment material must be sourced from outside a declared FHA, or from works within an FHA that have been authorised for another purpose; and
- Source of replenishment material for future maintenance to be identified; and
- Proposed works must be for control of existing or imminent erosion; and
- Works are not designed to create terrestrial land for the placement of structures (e.g. park infrastructure). Creation of terrestrial land for a sacrificial dune or beach may be supported only where this forms an integral part of erosion control design, and will minimise the frequency and impact of ongoing erosion control activities on the declared FHA; and
- Replenishment works will not require frequent maintenance (i.e. < 2 year maintenance intervals); and
- Location is a high-energy, sandy sediment shoreline with biological communities adapted to mobile sediments; and
- Dredging or use of other techniques such as 'beach scraping/sand pushing' to obtain replenishment material within a declared FHA is not supported.

DPI&F Fisheries policy FHMOP 010 (Batton in press) provides further policy guidance on beach replenishment, coastal erosion control and fish habitat management.

Dredging and extracting sediment

Dredging and sediment extraction are generally not supported in declared FHAs due to the impacts of these activities on the fish habitats and natural processes and/or on current fish habitat values and functions of the area. Specifically, the following activities are not supported within declared FHAs:

- Capital dredging for navigation purposes[2] (including new dredging works to maintain vessel access to existing facilities);
- Sand and gravel extractive industry; and
- Sourcing sediment for beach replenishment or fill purposes.

DPI&F Fisheries policy FHMOP 004 (Hopkins and White 1998) provides further policy guidance on dredging and fish habitat management.

Clamation

Clamation (previously termed 'reclamation') of natural tidal lands permanently converts these submerged and intertidal fish habitats to terrestrial land, thereby removing any values that these lands previously provided for fisheries. Loss of productive fish habitats for clamation is contrary to the intent of FHA declaration and is not supported in a management A area. Clamation may be supported under limited circumstances for beach replenishment in management B areas as outlined above. DPI&F Fisheries policy FHMOP 001 (Couchman and Beumer 2002) provides further policy guidance on clamation and fish habitat management.

Revetment works

Within a management B FHA, approval of a revetment, groyne or gabion for erosion control may be considered for the purpose of constructing a permanent structure. The proposed location of the structure must show evidence of significant erosion, or of an immediate threat of significant erosion, and must not include any creation of terrestrial land (clamation).

[2] Note that marked navigation channels are excluded from all declared FHAs.

Use of structures such as revetments, groynes and gabions for erosion control may also be approved within both management A and B areas for the purpose of restoring the fish habitat or natural processes in the area. To ensure that proposed restoration works will support and enhance existing declared FHA values, key management requirements for restoration proposals include:

- Disturbance area proposed for restoration must be in a degraded condition resulting in reduced fisheries productivity;
- Ecological monitoring of the proposed restoration area to identify that the disturbance area shows no evidence of adequate natural recovery;
- Sediment or marine plants required for the restoration project to be obtained from outside the declared FHA to avoid further disturbance within the area;
- Disposal of excess sediment from restoration within the boundaries of a declared FHA is not supported.

Aside from the key issues discussed above, declared FHAs have implications for conducting a range of other coastal development works, including jetties, bridges, pipelines, marinas, aquaculture, etc. A number of declared FHA management considerations apply across the spectrum of development works, including:

- Maintaining community use of the area, in particular, in relation to fishing activities;
- Impacts on the declared FHA are minimised such that:
    - for a management A area, the natural condition of fish habitats and natural processes is maintained;
    - for a management B area, the current fish habitat values and functions are maintained;
- Works location is in part of the declared FHA for which the proponent can demonstrate a level of 'rights'; and
- Proposal will have lesser impact on the declared FHA than all other reasonable options;
- Appropriate buffer distances are maintained between declared FHAs and incompatible development.

TAKE HOME MESSAGES

The Queensland Government's declared FHA network protects key areas of fish habitat required to sustain the State's fisheries from development impacts, while allowing for community uses such as fishing and boating.

The declared FHA program has evolved since the late 1960s to provide a comprehensive and representative strategic network of areas that protect more than 800 000 ha of fish habitats throughout coastal Queensland.

Declared FHA management on coastal planning and management activities is an appropriate constraint necessary to ensure that productive coastal and estuarine fish habitats continue to sustain Queensland's fisheries into the future.

For more information on declared FHAs, including plans of each area and DPI&F fish habitat management operational policies, visit www.dpi.qld.gov.au.

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