



Department of
Primary Industries and
Regional Development

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Western Australia.*

AQUATIC RESOURCE MANAGEMENT PAPER: No. 3

**OBJECTIVE SETTING AND ALLOCATIONS
FOR AQUATIC RESOURCES UNDER ARMA:**

Policy, principles and processes

FINAL DRAFT July 2022

Important disclaimer

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Policy Background

Context

Aquatic (fish) resources are a common property (pool) resource managed by government for the benefit of present and future generations. Importantly, this management is undertaken through limiting or regulating the level of access by user groups to these resources as they are not owned by anyone until they are captured and landed.

Establishing how access to aquatic resources is allocated among fishing sectors and managing these sectors to their allocation has been an increasing focus for fisheries management in Western Australia (WA) since the formal adoption of the Ecologically Sustainable Development (ESD) based management and Integrated Fisheries Management (IFM) policies. These initiatives have resulted in the explicit consideration of all relevant ecological, social and economic risks for management of each fishery (DoF, 2002; Fletcher et al., 2002; Fletcher 2005) and the generation of formal IFM-based sectoral allocations of access (DoF, 2000; Fletcher & Curnow, 2002, DOF 2009).

The management principles contained within the *Aquatic Resources Management Act 2016* (ARMA), explicitly recognise that the aquatic resources of WA are 'used' by a wide range of direct¹ and indirect² extractive-based stakeholders plus multiple non-extractive stakeholders³ who each have different values often with competing expectations and outcomes. As part of its improved contemporary rights-based framework, ARMA provides the legislative mechanism for the coordinated management of all fishing activities accessing each WA aquatic resource to deliver explicit resource-level objectives (ecological, social, economic and governance) established by the Minister on behalf of the community in a manner that is to be "*as practical, efficient and cost effective as possible*".

To give effect to these key elements of ARMA in a timely manner, a more streamlined approach than was used to determine formal allocation decisions under IFM is necessary. The updated approach outlined in this policy for *Objective Setting and Allocation Processes Under ARMA* (the Policy) will therefore replace the processes in previous IFM policy (DoF, 2009) but reflect the lessons learned during this period.

Importantly, this Policy can only address the sectoral allocation decisions and processes that are to be directly determined by the Minister for Fisheries and completed under ARMA. The decision-making processes undertaken as part of other State or Commonwealth legislative processes (e.g. CALM Act, EPBC Act)

¹ Direct extractive stakeholders include commercial, recreational, customary and charter sectors.

² Indirect extractive stakeholders include retail fish consumers plus the hospitality and tourism sectors.

³ Non-extractive stakeholders include conservation and eco-tourism sectors and the general public.

that that may affect spatial access to fishing activities cannot be directed by this policy but their outcomes can be taken into consideration where relevant.

Relationship of Policy to Aquatic Resource Management Strategies

The concepts and processes outlined in this Policy document have been specifically developed to meet the requirements of moving to use the Managed Aquatic Resource (MAR) framework provided for under ARMA. Importantly, these ARMA-based principles will be applied for the determination of objectives and allocation of all resources regardless of the legislative method under which a fishery or aquatic resource is managed. Resources managed outside of the MAR framework will, therefore, undertake the same steps but the outcomes will be formalised within a Ministerial Policy Statement (MPS)⁴.

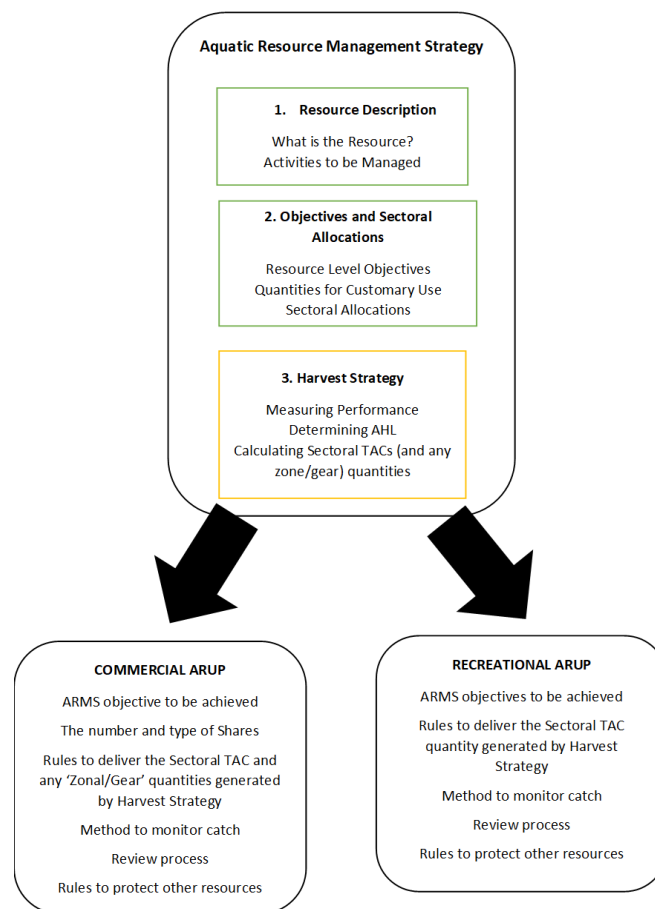


Figure 1. The three key components required to develop an Aquatic Resource Management Strategy (ARMS) and the relationship with the sectoral level, Aquatic Resource Use Plans (ARUPs) designed to deliver the ARMS⁵.

⁴ An MPS can be used as an interim process prior to developing an ARMS and/or where the resource will continue to operate using Fishery Management Plan(s) developed under the FRMA.

⁵ Note – This diagram and steps also apply to non-MAR resources to generate an MPS and its relationship with relevant Fishery Management Plans.

Application of the Policy

Under the MAR framework, the objective setting and allocation process is the second of three components (after the description of the resource is formalised) required for the development of an Aquatic Resource Management Strategy (ARMS – see Figure 1).

To help achieve the second ARMA component, this policy document aims to provide:

- a pathway for the value proposition to the community to be taken into account in the determination of formal management objectives that maximise the overall set of economic, social and cultural values from the use of WA's aquatic resources;
- a clear consistent and efficient approach as to how the determination of associated allocation decisions of aquatic resources among the sectors are to be made; resulting in
- transparency about how aquatic resources will be shared between different sector groups.

The third ARMS component covers the Harvest Strategy elements which define how the management settings will be adjusted to deliver the main objective and allocations (Figure 1). To assist with the development of the harvest strategy components of the ARMS, a complementary ARMA based Harvest Strategy Policy has been developed (DPIRD, 2022).

As the ARMS provides a single, comprehensive strategy for each resource, these two policies and their associated processes must work in concert to ensure that the ARMS are developed in an effective and coordinated manner.

Management Objective Principle of ARMA

One of the critical management principles under ARMA is that each managed resource must have a “main objective” that is set by the Minister for Fisheries (Minister). This ARMA requirement to establish an explicit main objective that formalises what set of community benefits are to be achieved from each managed resource is one of the critical improvements on the *Fish Resources Management Act* (1994).

In determining the main objective, in addition to ensuring the overarching sustainability object of ARMA, the Minister can take account of several factors. These include, but are not limited to, the relative level of benefit to the WA community that could be generated by the resource from:

- (i) economic returns to industry or the broader community through flow on effects to local/regional economies;
- (ii) social returns through employment;
- (iii) recreational fishing amenity and experiences;
- (iv) community access to local WA seafood and food security; plus
- (v) explicit recognition and priority for customary fishing practices.

Consistent with this range of potential benefits, the multi-use nature of most aquatic resources and potential valuation methods (see Viera et al., 2009), the main objective for each resource is likely to be multi-faceted but it can clearly outline specific priority outcomes.

Having a formal main objective for each managed resource will provide the guidance that was lacking in previous IFM processes by assisting in the determination of the most appropriate mix of sectoral allocations for the agreed set of future uses/outcomes.

Allocation Hierarchy

Under ARMA, the allocation of access essentially refers to how the Allowable Harvest Level (AHL) for a fishing season is to be shared among users of the resource. This starts by assigning priority allocations of the AHL for each resource to customary fishing⁶ and public benefit⁷ purposes. These priority allocation quantities specify the separate, ongoing amounts (kg, tonnes, number, etc..) of the resource to be made available for these purposes within each fishing period prior to any allocation being made to the commercial and recreational sectors. Separate guidelines will be developed to assist in determining these priority quantities for each resource.

The Total Allowable Catch (TAC) for each fishing period represents the (variable) quantity of the resource that can be sustainably taken (AHL) after these priority allocation quantities have been accounted for (see Figure 2). The fishing period allocations for the commercial fishing sector⁸ and the recreational fishing sector⁹ are determined as proportional allocations of the TAC¹⁰ to generate the Total Allowable Commercial Catch (TACC)¹¹ and Total Allowable Recreational Catch (TARC).

Any change (increase or decrease) in the AHL for a fishing season (as determined by the parameters outlined in the harvest strategy section of the ARMS) due to fishing or non-fishing impacts on stock levels will result in the same proportional change to both the TACC and TARC being applied.

⁶ Customary fishing means fishing by an Aboriginal person in accordance with the custom or tradition of the area for non-commercial uses.

⁷ Public benefit use would be for matters such as undertaking research or for education purposes – It does not include recreational activities or any commercial production activities.

⁸ Commercial fishing means “*fishing for a commercial purpose*” and includes the “*taking of aquatic organisms for broodstock and other aquaculture purposes*” plus commercial fishing activities undertaken by aboriginal individuals or groups.

⁹ Includes the charter sector catch.

¹⁰ While the formal intersectoral allocations for the recreational and commercial sectors are expressed only as percentages, the management arrangements used to achieve these allocations may vary greatly between resources and between sectors for the same resource.

¹¹ For some resources, the TACC may be further subdivided into different classes of shares such as by management zone, fishing method or purpose (e.g. broodstock collection).

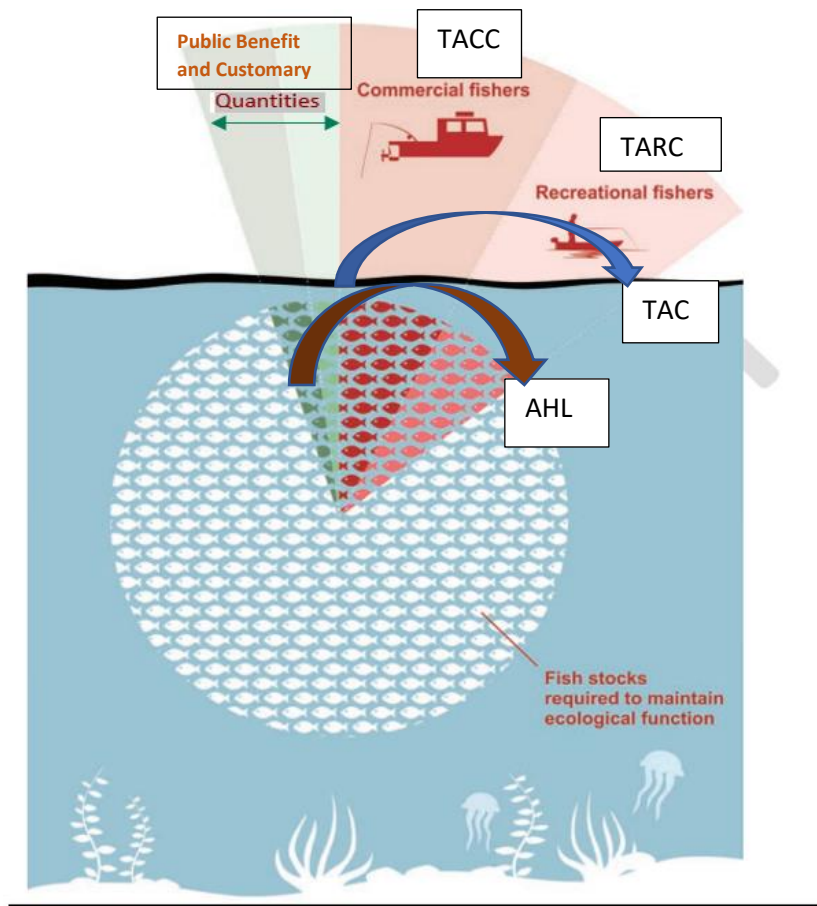


Figure 2. Summary of the allocation hierarchy for the AHL, priority allocation quantities for customary and public benefit uses, the TAC and the allocations for commercial (TACC) and recreational fishing (TARC).

Objective Setting and Allocation Policy Principles

The first step in the ARMA-based process for a defined resource is the determination of the main objective for its management and use as this provides the underlying basis for making appropriate allocation decisions.

Once the main objective has been established, the next step is to complete the allocation decision making process that will best support achieving this objective.

The following principles will be applied for all objective setting and allocation decisions.

Principle 1: In establishing the objectives and allocations, the best available information will be used. In situations where this information is limited, this should not prevent these decisions being made.

Principle 2: The main objective for the management of a specified aquatic resource is to be determined by the Minister (with stakeholder and relevant expert input) based on what is likely to achieve the best overall

suite of benefits for the WA community from a specific set or combination of uses of the resource¹².

Principle 3: Specific quantities for customary fishing and public benefit uses of the resource are to be explicitly determined and provided on a non-transferable basis prior to any catch allocations being made to the commercial and recreational sectors. These priority allocations for the resource are therefore to be ‘removed’ from the allowable harvest level (AHL) prior to the calculation of the Total Allowable Catch (TAC) for each fishing season.

Principle 4: The allocation of aquatic resources between the commercial and recreational sectors must be consistent with meeting the main objective for the aquatic resource with this to be specified as proportions of the TAC. Consistent with ARMA principles, these sectoral allocation proportions are to be “fixed for the duration of each strategy”¹³.

Principle 5: Where the main objective indicates the resource should be essentially allocated to one sector, a “marginal use” allocation¹⁴, equivalent to 1% or less of the total allowable catch, is to be nominally allocated to the other sector. This is to provide for the inadvertent or immaterial take of a resource which does not affect the potential of the priority sector to take its allowable catch.¹⁵

Principle 6: Ensuring the commercial and recreational fishing sectors are kept within their sectoral allocations must be supported by appropriate, cost-effective management structures and administrative processes as specified within the relevant Aquatic Resource Use Plans, Fishery Management Plans or sets of Regulations.

Principle 7: Cost effective monitoring and reporting systems will be used to measure catch allocations and other objectives with a suitable level of tolerance and accuracy which will be specified within the Harvest Strategy components of the ARMS/MPS (see Figure 1).

Principle 8: Consistent with the previous 2009 IFM policy, where a main objective or formal allocation has yet to be determined for an aquatic resource (it is not yet managed under an ARMS, equivalent MPS or IFM decision), the harvest strategy will ensure that each of the sectors is

¹² This is forward looking and does not have to reflect current catch shares.

¹³ Second ARMB reading speech – 24 February 2015.

[https://www.parliament.wa.gov.au/Hansard/hansard.nsf/0/683d382d1f940a4448257e45003678de/\\$FILE/A39+S1+20150224+p556c-558a.pdf](https://www.parliament.wa.gov.au/Hansard/hansard.nsf/0/683d382d1f940a4448257e45003678de/$FILE/A39+S1+20150224+p556c-558a.pdf)

¹⁴ The term ‘marginal use’ indicates that the catch of one sector is extremely low, e.g. the recreational deep sea crab catch is less than 1% of the total while the commercial take of the marron resource is likely to be less than 1% (for aquaculture broodstock purposes). Importantly, ‘marginal use’ does not include by-catch, which needs to be included as part of the allocated catch of the sector taking the bycatch.

¹⁵ A formal ARUP will generally not be required to ‘manage’ marginal use by a sector.

managed to maintain their current respective 'benchmark (2009-2022)' catch ranges/shares¹⁶.

Principle 9: Where a resource has previously been formally allocated by Government through IFM decisions, an ARMS or MPS, any permanent reallocation from one sector to another requires the process set out in this policy to be followed as if the allocation was being made for the first time.

Principle 10: To give effect to a permanent reallocation of resources not managed under the MAR framework will require the relevant harvest strategy, fishery management plan(s) and/or regulations to be appropriately amended.

Principle 11: Where the sector allocations determined for a resource within an initial ARMS/MPS are consistent with current catch shares or previous IFM decisions, there will be no consideration of compensation. Similarly, no compensation is applicable for the formal recognition of marginal use.

Principle 12: Where the proposed allocations are demonstrably different to benchmark shares or previous Integrated Fisheries Management decisions, compensation may be considered including the use of the Fisheries Adjustment Schemes Act 1987¹⁷ or Act of Grace payments¹⁸ with the likely quantum of potential compensation one of the considerations in determining appropriate allocations.

Initiating Resource – Level Objective Setting and Allocations

The effective transition to the ARMA based framework for a resource only requires beginning the consideration of how these principles apply, it is not necessary for a formal 'ARMS' process to be announced. Ideally, the establishment of the formal MAR process should be at the end of such considerations, non-formal stakeholder discussions and proposal development, not be the beginning of these process.

The implementation of the resource-based approach of ARMA was effectively begun by the Department of Primary Industries and Regional Development (DPIRD) in 2018 when each of WA's more than 50 separately identifiable commercial and recreational 'fisheries' was assigned into one of a set of 21 'indicative aquatic resources' (see Appendix 1). This indicative set of resources

¹⁶ Ensuring maintenance of current catch levels prior to completing a formal allocation process is consistent with the 2009 IFM policy which stated that "each sector will continue to be managed responsibly within current catch ranges and should the catch of a sector alter disproportionately to that of other sectors, the Minister will take appropriate management action to address this".

¹⁷ The FAS Act 1987 only applies to Managed Fisheries developed under the FRMA, not to Managed Aquatic Resources developed under the ARMA. Completing any compensation mechanisms for a resource should ideally occur prior to the finalisation of its ARMS.

¹⁸ A variety of structural adjustment mechanisms, such as those under the FAS Act and Act of Grace payments, have been used by Government where an allocation decision has materially increased the share of the resource available for recreational fishing by reducing the commercial share.

has subsequently been used by DPIRD to undertake annual, EBFM-based resource planning and stakeholder engagement¹⁹ plus the annual resource level assessment and status reporting²⁰.

For many of the indicative resources, there are minimal current or likely future intersectoral issues requiring resolution, but there are several with significant current and future use issues to resolve. To efficiently accommodate these different situations, two separate objective setting and allocation process modes (streamlined and comprehensive) have been developed to assist the Minister in determining formal main objectives and allocations.

A further initiative to facilitate adoption of ARMA principles has involved beginning to identify and document potential options for future uses, main objectives, and their associated range of sectoral allocations for each of the indicative resources. This set of 'starting values' for each indicative resource will help focus stakeholder engagement by clarifying those resources where only refinements are required prior to beginning a formal process, or those where significant disagreements remain. This should therefore help establish the priority, timelines needed and the appropriate mode for completion of a formal process for each resource.

Outline of the Objective Setting and Allocation Processes

Form of the Main Objective and Allocation Decision

All formal main objective and allocation decisions will be made by the Minister and will be publicly available either within an ARMS or MPS.

Where a MAR has been, or is intended to be declared, ARMA sets out the minimum steps for the process to be followed and elements to be included for the development of the ARMS. This includes the requirement to establish the main objective for managing the resource and the associated allocation/s (including the quantities for customary fishing and public benefit uses) which will be contained in the ARMS framework for the resource (see Appendix 2 for full set of requirements).

Where this process is completed for a fishery/resource but not as part of the declaration of a MAR, the main objective and associated formal allocation/s will be documented within an MPS that uses the same format and structure as required under the ARMS framework.

Based upon these minimum steps and the complexity of the issues to be resolved for a resource, the development of the ARMS/MPS will either use the streamlined or the comprehensive process. Each of these allocation processes is outlined below and summarised in Figure 3 and Figure 4.

¹⁹ The development of Annual Aquatic Resource Briefs.

²⁰ DPIRD (2021) Status reports of the fisheries and aquatic resources of WA 2020/21.

Streamlined Process

Where there are minimal sectoral overlaps associated with the current and future uses of a resource and/or a previous formal (including IFM) decision or new 'in principle' agreement on future uses and allocations amongst sectors for a resource are generally agreed, or if the Minister must declare a resource as a MAR for sustainability reasons under S14(3) ARMA, a streamlined process may be applied. This process includes the following set of steps:

Step 1: Minister's Intention – The Minister indicates an intention to declare a MAR or establish an MPS. This notice of intention will include a description of the resource plus the indicative main objective and allocation settings for the resource for which the Minister may invite comments from stakeholders.

Following receipt of any comments and consideration of advice, the Minister will determine a formal proposed main objective and sectoral allocations for the resource.

Step 2: Formal Public Consultation – The proposed main objective and sectoral allocations must be released (as part of the whole ARMS which must also include all the harvest strategy components) for a statutory two-month public, with the same consultation period being applied for an MPS.

Step 3: Minister's Final Determination – After consideration of comments from the formal public consultation stage, the Minister finalises the main objective and allocation decisions (plus the harvest strategy components) through the approval and publishing of the ARMS or MPS.

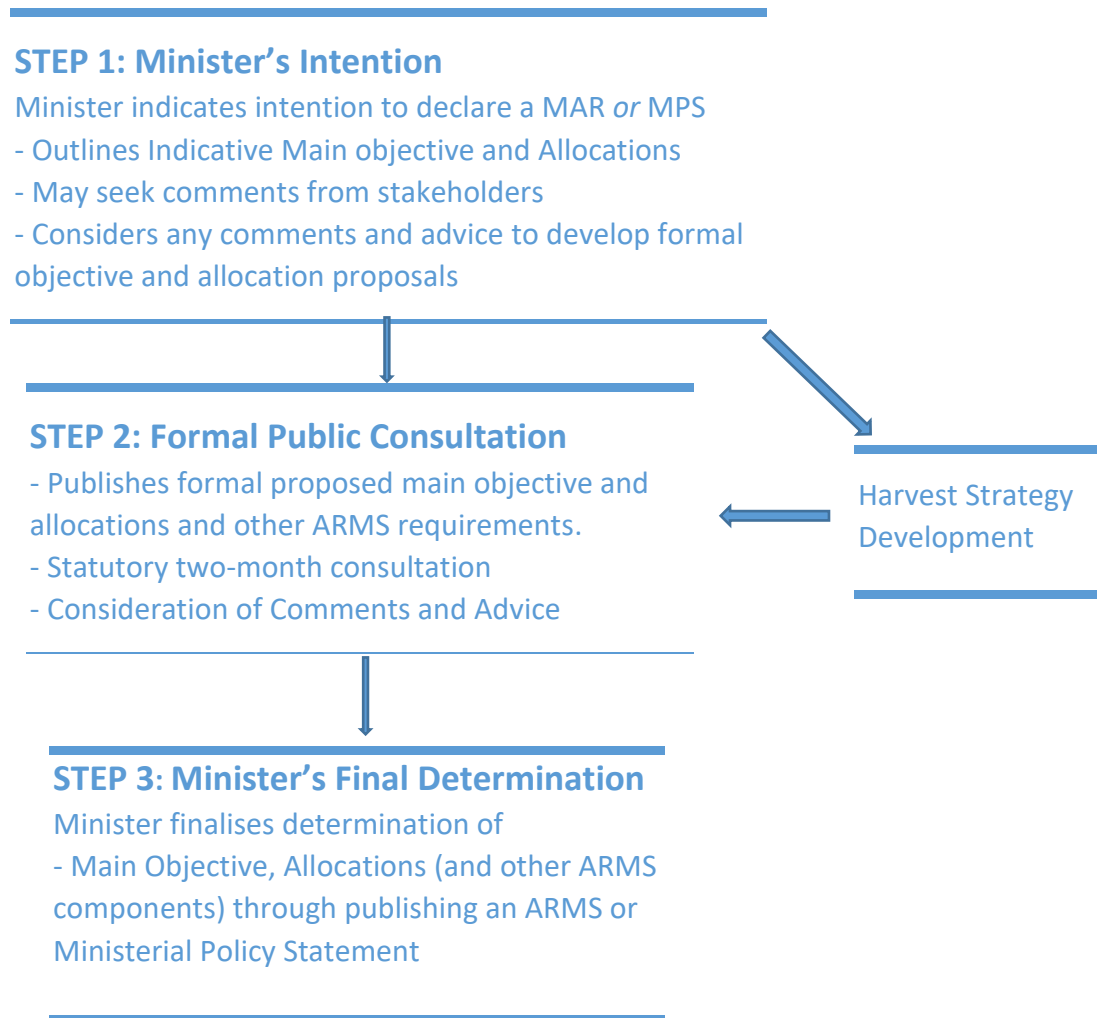


Figure 3. Outline of the three steps involved in completing the Streamlined Objective Setting and Allocation Processes as part of ARMS or MPS. Note: Development of the Harvest Strategy components to achieve the proposed main objective are required to enable formal consultation on a proposed ARMS/MPS.

Comprehensive Process

Where there is significant sectoral overlap and/or multiple potential future uses for a resource plus no 'in principle' agreement amongst sectors for allocations, a comprehensive process will be needed. This includes:

Step 1: Minister's Intention – The Minister indicates an intention to either (i) declare a MAR; or (ii) establish a formal Ministerial Policy position that includes a main objective and associated sectoral allocations for a non-ARMS fishery/resource. As part of this statement, the Minister may outline a scope for the potential future uses and associated allocations which will be considered for the future management of the resource.

Step 2: Development of a proposed Main Objective – To assist the development of the proposed objective, the Minister may seek further direct input from stakeholders on the community benefits they each ascribe to the resource; and/or appoint an expert panel to advise on the most suitable option(s) for future uses and the main objective that are consistent with any scope outlined in the letter of intent.

Where the Minister decides to establish a panel, this should consist of an independent chair, a representative of each key stakeholder sector and appropriate independent expertise.

Following receipt of any stakeholder comments and consideration of requested advice from the panel, the Minister will advise key stakeholders of the proposed set of future uses and resultant main objective.

Step 3: Development of proposed Sectoral Allocations – Based on the proposed main objective the Minister may (1) invite direct stakeholder comment on an indicative set or range of allocations and/or (2) appoint a panel (preferably the same as Step 2) to advise on the most appropriate set of allocations for achieving the main objective which may not necessarily reflect current catch shares.

Following receipt of comments and consideration of requested advice, the Minister will determine the proposed sectoral allocations for the resource and move to complete the statutory component of the ARMS process.

Step 4: Formal Public Consultation – The proposed main objective and sectoral allocations must be released (as part of the whole ARMS which must also include all the harvest strategy components) for a statutory two-month public consultation period, with the same consultation period being applied for an MPS.

Step 5: Minister's Final Determination – After consideration of comments from the public consultation stage, the Minister finalises the main objective and allocation decisions (plus all other elements of the ARMS/MPS) through approval and publishing of an ARMS or MPS.

STEP 1: Minister Announces Intention

Minister indicates intention to declare a MAR or establish a main objective/allocation decision.

- Provide any scope on future uses and associated allocations
 - Outline how input will be sought
-



STEP 2: Proposed Main Objective

Based on any scope, Minister seeks further input from stakeholders and/or expert panel on potential future uses. Based on comments and advice, Minister proposes a set of future uses and associated proposed main objective.

Independently chaired panel (preferred)



STEP 3: Proposed Sectoral Allocations

Based on Proposed Main Objective Minister
(1) invites comments on indicative allocations, or
(2) Appoints a panel to provide advice on allocations to meet main objective
(3) Considers comments and advice to develop formal objective and allocation proposals

Independently chaired panel (preferred)



STEP 4: Formal Statutory Consultation

Announces proposed main objective and allocations and all other ARMS requirements.

- Statutory two-month consultation
 - Consideration of Comments and Advice and develops final determination.
-

Harvest Strategy Development



STEP 5: Ministers Final Determination

Minister publishes final determination of the Main Objective and Sectoral Allocations through the ARMS or MPS

Figure 4. Outline of the set of 5 steps involved in the comprehensive Objective Setting and Allocation Process as part of ARMS or MPS. Note, development of the Harvest Strategy components to achieve the proposed main objective are also required to enable formal consultation on a proposed ARMS/MPS.

Timeframe for the Allocation Process

Once the Minister's initial statement of intent has been announced in respect of allocation of a resource, the timeframe to establish the main objective and allocations needs to balance the need for effective community and stakeholder input and being an expedient process.

The period between initiation and the announcement of a final decision by the Minister on these matters for the streamlined process should not exceed 6 months and 12 months for the comprehensive process.

Intrasectoral (Within Sector) Allocations

In addition to formalising intersectoral allocations, for many aquatic resources, there may be more than one type of fishing activity within each sector that may require formal intra-sectoral allocations. For example, commercial fishing for a resource may have different classes of fishing activity defined by the means of fishing gear they use or by operating in different management zones, plus the collection of broodstock for aquaculture is also defined as commercial fishing. Similarly, recreational fishers may take fish 'individually' or this may be facilitated through charter boat operations.

For many resources that formally transition into the MAR framework under ARMA, it will be necessary to divide the commercial TACC amongst different classes or sub-groups and also potentially different categories under the TARC. For the commercial sector this may require the development of different 'share types' that will need to be directly referenced both within the ARMS and the commercial ARUP.

These intrasectoral allocation processes will need to adhere to the same broad principles of transparency and timeliness as outlined above. For the commercial sector, this process must run concurrently with the development of the ARMS because one of the items requiring specification is how the TACC will be apportioned among any different share classes.

DPIRD will work with relevant peak and sector bodies in this regard to develop appropriate intrasectoral allocation guidelines for each sector. It is recognised that in some cases this may require the establishment of sector level advisory groups.

Post ARMS/MPS Reallocations

Permanent Reallocations

A key principle for establishing ARMA was to improve the level of security rights for each sector including providing investment confidence for support sectors. A critical part of this increased access security for each of the sectors is that once an ARMS/MPS has been established, the sectoral allocation proportions

are to be “fixed for the duration of each strategy²¹.” This explicit statement by Parliament is consistent with both the FRMA or ARMA not having any legislated mechanisms to enable ‘market-based’ or any other sector-initiated permanent reallocations between sectors to occur.

This fixed approach is supported by the review of allocation mechanisms completed at the beginning of the IFM initiative (Fletcher and Curnow, 2002). This study identified that if market-based reallocations were available, there is a high likelihood that for some resources this would lead to unacceptable (either economic or social) shifts or even complete loss of access for one or other of the sectors.

To ensure the integrity of the agreed set of future uses and delivery of the main objective outcomes, any permanent reallocations must remain the decision of the Minister on behalf of the entire community who are the resource owners, not the individual fishing sectors. Consequently, under ARMA, the permanent reallocation of a resource can only occur as a deliberate decision by Government through the amendment or replacement of the ARMS for that resource.

All future reallocations should therefore be progressed in the same manner as outlined in this document with permanent reallocations only to be considered if either:

- the main objective has not been and is unlikely to be achieved in the future; and/or
- there has been a significant and demonstrable change to the potential/actual community benefit/s that can be achieved from a resource which warrants consideration for the establishment of an updated main objective.

Temporary (Fishing Period) Reallocations

In contrast to permanent reallocations, the MAR framework under ARMA makes specific provision for temporary (fishing period) reallocations of available catch between sectors (temporary reallocations from the commercial to the recreational sector and from the recreational to the commercial sector).

Using this provision, the Minister may, under some circumstances, authorise funds from the Recreational Fishing Account (RFA) to be used to purchase part of the commercial sectors catch entitlement for a fishing period (usually one year). The recreational TAC for that fishing period can then be increased by the amount of catch entitlement that is purchased²². Systems to manage how and when such purchases may occur would need to be developed in consultation with the relevant commercial and recreational fishing sectors.

²¹ Second reading speech – 24 February 2015.

[https://www.parliament.wa.gov.au/Hansard/hansard.nsf/0/683d382d1f940a4448257e45003678de/\\$FILE/A39+S1+20150224+p556c-558a.pdf](https://www.parliament.wa.gov.au/Hansard/hansard.nsf/0/683d382d1f940a4448257e45003678de/$FILE/A39+S1+20150224+p556c-558a.pdf)

²² The purchase of fishing period entitlement from commercial shareholders would be through the same open market as used by the commercial sector for season length trades.

Similarly, the Minister may also under certain circumstances, make a specified quantity of the recreational TAC available for commercial fishing during a specific fishing period. This would be subject to certain pre-conditions and may include the Minister being satisfied that the quantity is surplus to the requirements of the recreational sector for that season, the temporary reallocation has been supported by the specified recreational fishing body with the payment of suitable funds into the RFA.

Managing and Monitoring Objectives and Allocations

Managing and monitoring the level of catch by each sector against their allocations are essential elements of the allocation process and are required to be specified either within the ARMS or within their associated ARUPS (see Figure 1).

The monitoring and reporting systems required for each resource are developed and specified within the harvest strategy component of the ARMS/MPS. The specifics of the management arrangements for each sector are to be specified in the ARUPS/Fishery Management Plans.

The frequency and complexity of catch and other objective monitoring for a resource must reflect its relative value, inherent risk levels and have direct management application through use of these data within the harvest strategy control rules. This will often require improvements to the current data collection processes with the strong assumption of at least annual and preferably more real time monitoring of the catch levels being available for all sectors²³.

Consistent with the legislative objective to ensure that practical, efficient and cost-effective management systems are developed, the initiation of an ARMS or other formal allocation process should explicitly consider the nature of the allocations, the expected benefits this approach will generate compared to the available resources required to monitor the proposed catch shares with sufficient accuracy.

²³ This could necessitate changes to the types of catch and effort reporting required, especially for the recreational sector.

References

- ARMA (2016) Aquatic Resources Management Act. Government of Western Australia.
- DoF (2000). Protecting and sharing Western Australia's coastal fish resources. The path to integrated management. Fisheries Management Paper, Fisheries Western Australia No 135 February 2000. 90pp.
- DoF (2002). Policy for the implementation of Ecologically Sustainable Development for Fisheries and Aquaculture within Western Australia. Fisheries Management Paper, Department of Fisheries, Western Australia. No. 157; 70pp.
- DOF (2009) Integrated Fisheries Management Government Policy 2009. <http://www.fish.wa.gov.au/Sustainability-and-Environment/Sustainable-Fisheries/Sharing%20our%20fisheries/Pages/Allocation-process.aspx>.
- DoF (2010). A sea change for aquatic sustainability. Fisheries Occasional Publication, Department of Fisheries, Western Australia. No 79. 29pp.
- DPIRD (2022). ARMA-Based Harvest Strategy Policy. Aquatic Resource Management Paper No 4. Department of Primary Industries and Regional Development. State of Western Australia.
- Fletcher, W.J. (2005). Application of Qualitative Risk Assessment Methodology to Prioritise Issues for Fisheries Management. ICES Journal of Marine Research 62: 1576-1587.
- Fletcher, W. and Curnow, I. (2002). Processes for the allocation, reallocation and governance of resource access in connection with a framework for the future management of fisheries within Western Australia: A scoping paper developed for consideration and use by the Integrated Fisheries Management Review Committee. Fisheries Management Report, Department of Fisheries, WA. No. 7, 63 pp.
- Fletcher, W.J., Chesson, J., Fisher M., Sainsbury, K.J., Hundloe, T., Smith, A.D.M. and Whitworth, B. (2002). National ESD Reporting Framework for Australian Fisheries: The 'How To' Guide for Wild Capture Fisheries. FRDC Project 2000/145, Canberra, Australia. 120pp.
- Vieira, S., Schirmer, J. and Loxton, E. (2009). Social and economic evaluation methods for fisheries: a review of the literature. Fisheries Research Contract Report No. 21. Department of Fisheries, Western Australia. 94p.

Glossary of Terms

Allowable Harvest Level (AHL)	The total quantity of the managed resource available for a fishing season (inclusive of all priority and sectoral allocations) that is consistent with the current risk levels for stock sustainability and other value components of the 'main objective' established for the use of this resource.
<i>Aquatic Resources Management Act 2016 (ARMA)</i>	Is a WA Act designed to ensure the ecological sustainability of the State's aquatic resources and aquatic ecosystems for the benefit of present and future generations which are managed, developed and used having regard to the economic, social and other benefits that the aquatic resources may generate.
Aquatic Resource Management Strategy (ARMS)	Means a strategy that has been developed and approved by the Minister to deliver on the main objective for a defined resource.
Aquatic Resource Use Plan (ARUP)	Means a resource use plan that is designed to deliver the objectives and other requirements of an ARMS
Commercial Fishing	Means fishing for a commercial purpose including the taking of aquatic organisms for broodstock and other aquaculture purposes plus commercial fishing activities undertaken by aboriginal fishers.
Customary Fishing Uses	Means fishing by an Aboriginal person that is: (a) in accordance with the Aboriginal customary law and tradition of the area being fished; and (b) for the purpose of satisfying personal, domestic, ceremonial, educational or other non-commercial communal needs;
Department of Primary Industries and Regional Development (DPIRD)	The WA government agency responsible for the administration of the ARMA and other related legislation
<i>Fisheries Adjustment Schemes Act 1994 (FAS)</i>	An Act to enable the establishment, financing and administration of fisheries adjustment schemes for the surrender or cancellation of certain

	<p>authorisations, or the reduction of certain entitlements, under the Fish Resources Management Act 1994 with the payment of compensation, and for related purposes.</p>
<p><i>Fish Resources Management Act 1994 (FRMA)</i></p>	<p>This FRMA replaced the Fisheries Act 1905 and was designed for the management of fish resources, including the development and management of fisheries and aquaculture and the conservation of fish and other aquatic resources and their habitats, and for related purposes. It covers the management of all fish resources in WA except for pearling which was covered under the Pearling Act (1994) which will be rescinded upon proclamation of ARMA.</p>
<p><i>Fishing and Related Industries Compensation (Marine Reserves) Act 1997 (FRICMA).</i></p>	<p>This is the Act that supports payment of compensation to commercial fishers who suffer a loss in the market value of their authorisation as a result of a marine park coming into effect.</p>
<p>Harvest Control Rules (HCR)</p>	<p>The pre-defined specific management actions that will be applied to maintain target (stock/catch/effort/catch rate) levels or avoid/recover from breaching threshold or limit levels.</p>
<p>Harvest Strategy (HS)</p>	<p>Establishes clear and specifically articulated performance levels and the associated set of management actions designed to achieve each of the agreed objectives for the resource and relevant fishery sectors.</p>
<p>Integrated Fisheries Management (IFM)</p>	<p>This was the previous 2004 policy used to determine explicit sectoral allocations between the commercial and recreational sectors.</p>
<p>Main Objective</p>	<p>Defines the specific set of economic and/or social outcomes to be generated from the use of a resource as determined by the Minister.</p>
<p>Managed Aquatic Resource (MAR)</p>	<p>Means an aquatic resource that has been formally declared under Section 16 of ARMA.</p>
<p>Marginal Use</p>	<p>Enables an incidental level of take of a resource by a sector for which a nominal allocation (less than 1%) of the TAC is made.</p>

Maximum Economic/Experience Yield (MEY):	The theoretical catch or effort level for a commercial fishery that maximises average net economic returns over several years and/or maximises recreational fishing experiences. Fishing to MEY should result in the equilibrium stock (biomass) of fish being approximately 20% larger than that associated with MSY.
Maximum Sustainable Yield (MSY):	The theoretical maximum sustainable average annual catch that can be removed from a stock over an indefinite period under prevailing environmental conditions.
Marine Stewardship Council (MSC)	An independent third-party body that has generated a set of standards for sustainable fishing.
Ministerial Policy Statement (MPS)	A policy statement made by the Minister for a resource that is consistent with the key component elements of an ARMS but without the formal statutory elements. These may be used as an interim step in the development of an ARMS or while fisheries continue to use the management plans developed under the FRMA.
Performance Indicators	Quantitative variables that have been selected which are used in conjunction with target, threshold and limits levels. to measure the performance of one or more objectives.
Priority Allocation Quantities	The combined priority quantities assigned for customary fishing and public benefit use each fishing season.
Public Benefit Uses	This is the quantity of a resource that is allocated for use in undertaking research to assist with the management of the resource.
Recreational Fishing	Means non-commercial, non-customary fishing activities including those undertaken on fishing tours.
Recreational Fishing Account (RFA)	The Recreational Fishing Account (S233) is an agency special purpose account where funds received for recreational fishing licences and other recreational fishing related funds that are received must be paid.

Total allowable catch (TAC)	Means the quantity (which can be a weight or volume, time spent fishing, type or quantity of gear used) of a managed aquatic resource that may be taken by the commercial and recreational fishing sectors in a fishing period which is calculated as the AHL minus any priority quantity allocations.
Total allowable commercial catch (TACC)	Proportion of the TAC that can be taken by the commercial sector for a fishing season as defined by the commercial allocation in the ARMS/MPS.
Total allowable recreational catch (TARC)	Proportion of the TAC that can be taken by the recreational sector for a fishing season as defined by the recreational allocation in the ARMS/MPS.
Target Reference Level:	The optimum level (which must be 'above' the biological threshold level), range or direction for an indicator(s) to deliver the economic and/or social outcome specified in the main objective. This is expected to approximate MEY for most resources.

Appendix 1 – Current List of Indicative Aquatic Resources

ID	Resource	Spatial location	Commercial fisheries	Key species	Resource sharing/ User conflict
1	South Coast Estuarine, Nearshore and Embayment Scalefish and Invertebrates	Embayment, Nearshore, Inshore	South Coast Estuarine Managed Fishery	Sea mullet, Estuary cobbler, Black bream, Southern school whiting, Australian herring, King George whiting, Southern garfish, Blue swimmer crab	Significant
			South Coast Open Access Net Fishery	Whiting, herring	Significant
			South Coast Herring Trap (currently closed)	Australian herring	Significant
			South Coast Salmon Managed Fishery	WA salmon	Significant
			South Coast Oceanic Fish Trap Fishery (FBL Condition 74)	Leatherjackets	Minimal
			King George Sound Fish Trap Fishery (Condition 192)	Leatherjackets	Minimal
2	South Coast and West Coast Crustacean	Nearshore, Inshore, Offshore	South Coast Crustacean Managed Fishery	Southern rock lobster, Western rock lobster	Minimal
			West Coast Deep Sea Crustacean Managed Fishery	Crystal crabs, Champagne crabs	Nil
3	South Coast and West Coast Scallop	Nearshore, Inshore	Abrolhos Island and Midwest Trawl Managed Fishery	Saucer scallops and Prawns	Nil
			South West Trawl Fishery	Saucer scallops	Nil
			South Coast Trawl Fishery	Saucer scallops	Nil
4	South Coast and West Coast Demersal Finfish	Nearshore, Inshore, Offshore	South Coast Open-access Line Fishery	Pink snapper, Bight Redfish, Queen snapper, Western blue groper, Hapuku	Significant
			West Coast Demersal Scalefish Managed Fishery	Dhufish, Pink snapper, Red throat emperor, Bight redfish, Baldchin, Hapuku, Blue eyed trevally	Significant

ID	Resource	Spatial location	Commercial fisheries	Key species	Resource sharing/ User conflict
			Cockburn Sound (Line and Pot) Managed Fishery (Line only)	Pink snapper	Significant
			West Coast Demersal Gillnet and Demersal Longline Managed Fishery	Whaler species, Gummy, Dusky, Whiskery and Sandbar sharks, Demersal Scalefish	Significant
			Southern Demersal Gillnet and Demersal Longline Managed Fishery	As above	Significant
5	Western Rock Lobster	Nearshore, Inshore	West Coast Rock Lobster Managed Fishery	Western rock lobster	Significant
6	West Coast Estuarine, Nearshore and Embayment Scalefish and Invertebrates	Estuarine, Embayment, Nearshore	West Coast Estuarine Managed Fishery (Area 1 Swan Canning, Area 2 Peel Harvey, Area 3 Hardy Inlet)	Blue swimmer crab, Sea mullet, Yellow fin whiting	Significant
			South West Trawl Warnbro Sound Crab Managed Fishery	Whiting, finfish and invertebrates	Significant
			Cockburn Sound Crab Managed Fishery	Blue swimmer crab	Low
			Mandurah to Bunbury Developing Crab	Blue swimmer crab	Significant
			Cockburn Sound Fish Net Managed Fishery	Blue swimmer crab	n/a
			South West Beach Seine	Garfish, Australian herring	Moderate
			West Coast Nearshore Open Access Net Fishery	Whitebait, Blue sprat	Significant (space and method)
			South West Coast Salmon Managed Fishery	Mullet, Whiting, Herring	Significant
			West Coast Beach Bait	WA salmon	Significant
				Whitebait, Blue sprat	Overlap – Low Method – High

ID	Resource	Spatial location	Commercial fisheries	Key species	Resource sharing/ User conflict
7	Shark Bay Invertebrate	Embayment	Shark Bay Scallop Managed Fishery	Saucer scallops	Nil
			Shark Bay Prawn Managed Fishery	Western king prawn, Brown tiger prawn	Nil
			Shark Bay Crab Managed Fishery	Blue swimmer crab	Low
8	Gascoyne Nearshore Scalefish	Embayment, Nearshore	Shark Bay Beach Seine and Mesh Net Managed Fishery	Whiting, Mullet, Western yellowfin bream, Tailor	Significant
			Exmouth Gulf Beach Seine Fishery	As above	Low
			Carnarvon Mesh Net Fishery	As above	Low
9	Gascoyne Demersal Scalefish	Nearshore, Inshore, Offshore	Gascoyne Demersal Scalefish Managed Fishery	Offshore Pink snapper, Goldband snapper	Significant
			Recreational Gulf Fishery	Gulf – Pink Snapper	Low
10	Northern Invertebrates	Embayment, Nearshore, Inshore	Exmouth Gulf Prawn Managed Fishery	Western king, Brown tiger prawns, Banana, & Endeavour prawns	Low
			Nickol Bay Prawn Managed Fishery	Western king, Brown tiger, Banana, & Endeavour prawns	Nil
			Onslow Prawn Managed Fishery	Western king & Coral prawns	Nil
			Broome Prawn managed Fishery	King prawns	Nil
			Kimberley Prawn Managed Fishery	Banana, Brown tiger, & Endeavour prawns	Nil
11	Pearl Oyster (<i>P. maxima</i>)	Nearshore	Pearl Oyster Wildstock Fishery	Silver lip pearl oyster	Nil
			Pearl Oyster Culture Industry		Nil
12	Northern Estuarine, Nearshore and Embayment Scalefish and Invertebrates	Estuarine, Embayment, Nearshore	Kimberley Developmental Crab Fishery	Mud crab, Blue swimmer crab	Significant
			Pilbara Developmental crab	Blue swimmer crab	Low
			Exmouth Developmental Crab Fishery	Blue swimmer crab	Low
			Kimberley Gillnet and Barramundi Managed Fishery	Barramundi, King Threadfin & Blue Threadfin	Significant

ID	Resource	Spatial location	Commercial fisheries	Key species	Resource sharing/ User conflict
13	Northern Demersal Scalefish	Nearshore, Inshore, Offshore	Northern Demersal Scalefish	Goldband snapper, Red emperor, Mixed demersal scalefish	Low
			Managed Fishery Pilbara Trap	Red emperor, Bluespotted emperor, Rankin cod, Mixed demersal scalefish	Low
			Managed Fishery Pilbara Fish Trawl (Interim)	As above	Low
			Managed Fishery Pilbara Line Fishery	As above	Low
14	Northern Shark	Nearshore, Inshore	Northern Shark Fishery	Sandbar, Dusky, Whaler and Reef sharks	Low
15	Statewide Abalone	Nearshore	Abalone Managed Fishery	Roes, Greenlip, Brownlip abalone	Significant
16	Statewide Cephalopod	Nearshore, Inshore	Octopus Interim Managed Fishery	Octopus	Low
			Cockburn Sound (Line and Pot) Managed Fishery (pot component)	Octopus, Squid	Low
			Western Rock Lobster Managed Fishery	Octopus	Low
			Statewide Open Access Squid and Cuttlefish	Squid and Cuttlefish	Moderate
17	Statewide Hand Collection (break into two separate resources?)	Nearshore	Marine Aquarium Managed Fishery	Various finfish and invertebrates	Low
			Section 43 Coral and Live Rock Order	Various coral species and rock	Nil
			Hermit Crab Invertebrate Exemption	Hermit Crab	Low
			Specimen Shell Managed Fishery	Various mollusc	Low
			Western Australian Sea Cucumber Fishery	Redfish and Sandfish (sea cucumbers)	Nil
			Developmental Pipi and Cockle Fishery	Pipi's and cockles	Nil
Trochus Exemption	Trochus	Low			
18	Statewide Small Pelagic Scalefish (Purse Seine)	Nearshore, Inshore	West Coast Purse Seine Managed Fishery	Scaley mackerel, Pilchards, Yellow tail scad	Nil
			South Coast Purse Seine Managed Fishery	Pilchards, Yellow tail scad	Nil

ID	Resource	Spatial location	Commercial fisheries	Key species	Resource sharing/ User conflict
			South West Purse Seine Development Zone	Scaley mackerel and Pilchards	Nil
			Northern Purse Seine Development Zone	Scaley mackerel	Nil
19	Statewide Large Pelagic Scalefish	Inshore, Offshore	Mackerel Managed Fishery	Spanish mackerel, Grey mackerel	Low
20	South West Inland Freshwater	Inland	N/A	N/A	Nil (No commercial)
			N/A	N/A	Nil (No commercial)
21	Northern Inland Freshwater Scalefish and Invertebrates	Inland	Lake Argyle Silver Cobbler Fishery Recreational	Silver cobbler Barramundi	Low

Appendix 2 – Essential elements of the MAR framework

The set of essential elements required for a resource managed under the Managed Aquatic Resource framework listing the references to the relevant Section 16 (Content of ARMS) subsections within the Act.

1. Description of the Resource

- Description of Resource (a)
- Activities to be managed (d)
- Details of fishing period (e)

2. Objectives, Allocations and Engagement

- Objectives to be achieved in managing the Resource (b)
- Quantity to be maintained for ecological sustainability (c)
- Quantities for customary fishing and public benefit uses (f)
- Sectoral allocations (h,i) and resource shares (j)
- Consultation

3. Harvest Strategy

3.1 Measuring Performance against objectives (k)

- Resource and Catch performance Indicators
- Targets, thresholds and limits
- Reference points and tolerance levels
- Monitoring procedures

3.2 Determining Allowable Harvest Levels (f, g, j)

- Annual Risk Assessment Methodology
- Control rules for Determining Allowable Harvest Level (AHL).

3.3 Calculating Sectoral 'TACs'

- Methodology for calculating 'TAC' (gi)
- Sectoral catch entitlements (TACC, TARC – h, i)
- Different Zone/Gear share distributions of TACC (gii).