Strategic and Research, Development & Extension Plan

2015–2020
## GLOSSARY

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Details</th>
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<tr>
<td>AAH</td>
<td>Aquatic Animal Health Subprogram</td>
</tr>
<tr>
<td>ABARES</td>
<td>Australian Bureau of Agricultural and Resource Economics and Sciences</td>
</tr>
<tr>
<td>ABFA</td>
<td>Australian Barramundi Farmers Association</td>
</tr>
<tr>
<td>AGM</td>
<td>Annual General Meeting</td>
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<tr>
<td>APFA</td>
<td>Australian Prawn Farmers Association</td>
</tr>
<tr>
<td>AQIS</td>
<td>Australian Quarantine Inspection service</td>
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<tr>
<td>BFCP</td>
<td>Barramundi Farming Certification Program</td>
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<tr>
<td>BFCP Green Tick</td>
<td>Barramundi Farming Certification Program Green Tick Certification</td>
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<tr>
<td>CoOL</td>
<td>Country of Origin labelling</td>
</tr>
<tr>
<td>CSIRO</td>
<td>Commonwealth Scientific and Industrial Research Organisation</td>
</tr>
<tr>
<td>Dept Ag</td>
<td>Commonwealth department of Agriculture</td>
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<tr>
<td>FNC</td>
<td>Fish Names Committee</td>
</tr>
<tr>
<td>FNS</td>
<td>Fish Name Standards</td>
</tr>
<tr>
<td>FRDC</td>
<td>Fisheries Research and Development Corporation</td>
</tr>
<tr>
<td>GBRMPA</td>
<td>Great Barrier Reef Marine Park Authority</td>
</tr>
<tr>
<td>GI</td>
<td>Geographical Indication</td>
</tr>
<tr>
<td>IPA</td>
<td>Industry Partnership Agreement</td>
</tr>
<tr>
<td>JCU</td>
<td>James Cook University</td>
</tr>
<tr>
<td>MUP</td>
<td>Minor Use permit</td>
</tr>
<tr>
<td>NAC</td>
<td>National Aquaculture Council</td>
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<tr>
<td>NOFIMA</td>
<td>Norwegian Institute of Food, Fisheries and Aquaculture Research</td>
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<tr>
<td>NSIA</td>
<td>National Seafood Industry Association</td>
</tr>
<tr>
<td>NT</td>
<td>Northern Territory</td>
</tr>
<tr>
<td>POS</td>
<td>Point of Sale</td>
</tr>
<tr>
<td>QAIF</td>
<td>Queensland Aquaculture Industry Federation</td>
</tr>
<tr>
<td>QDAFF</td>
<td>Qld Department of Agriculture Forest and Fishery</td>
</tr>
<tr>
<td>Qld</td>
<td>Queensland</td>
</tr>
<tr>
<td>RD&amp;E</td>
<td>Research, Development and Extension</td>
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<tr>
<td>SCRC</td>
<td>Seafood Cooperative Research Centre</td>
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<tr>
<td>TBL</td>
<td>Triple Bottom Line</td>
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<tr>
<td>USQ</td>
<td>University of Southern Queensland</td>
</tr>
<tr>
<td>WA</td>
<td>Western Australia</td>
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ACKNOWLEDGEMENTS

The Australian Barramundi Farmers Association would like to acknowledge the input and support from the following:

- Seafood Cooperative Research Centre (SCRC) for funding
- Fisheries Research and Development Corporation (FRDC) for funding
- Australian Barramundi Farmers Association (ABFA) Members for input
- Ridge Partners for contribution to the development of the Plan
- C-AID Consultants for developing, managing and preparing the Plan on behalf of Industry.
1. ABFA STRATEGIC OVERVIEW

Through an inclusive 18 months process the Australian Barramundi Farmers Association (ABFA) has developed a clear understanding of its purpose and aims from a member’s perspective. This process involved identifying the organisations Vision, Mission and Values and then determining the Key Strategic issues that required the ABFA’s attention.

This process involved three industry workshops, individual face to face meetings with all members and culminated in an independently facilitated industry workshop held in Townsville in March 2014, with a series of follow up action across and between members.

This resulted in the following strategic view for the ABFA over the next 5 years.

VISION AND MISSION

Australian Barramundi will be the Australian fish of choice for seafood consumers.

The ABFA will achieve this by:

• Differentiating Australian Barramundi as the fish of choice for consumers, and
• Supporting industry profitability.

VALUES

• Provide consistent high quality Australian product across a range of forms to meet expectations in terms of value, quality and accessibility
• Produce fish through sustainable operations that are recognised as such and supported by the community
• Provide social, health and economic return to industry and the community
• A growing industry with a positive profile with government, communities and consumers
• Seek to operate under a lean regulatory framework that underpins quality control, best practice production, sustainability and environmental performance
• Disseminate information to nurture our Australian aquaculture Industry’s positive profile with consumers, communities and government.

PURPOSE, PRINCIPLES AND CHALLENGES

The purpose of the ABFA is to provide whole of Industry leadership and guidance through information, consultation and representation.

The organisation’s guiding principles are:

• Sound and transparent governance
• Integrity in terms of decision making and commitment to those decisions
• Transparency in dealing with industry and government
• Independence through self-funding
• Utilisation of association resources for Industry benefit.

The ABFA faces four challenges it must address to achieve its vision:

• Lack of market certainty, especially pressures from imported *Lates calcarifer*
• Complex and overly restrictive regulatory environment to operate in
• Uncertainty of funding
• Building and maintaining Industry unity.

STRATEGIC GOALS

Seven strategic goals have been agreed by the ABFA Members for delivery by July 2020:

1. Market differentiation for Australian produced aquaculture barramundi
2. Consistent high quality product to meet consumer preferences
3. Effective regulatory frameworks to support barramundi farms
4. Effective management of biosecurity risk
5. Better awareness of farm productivity issues and options
6. Sustainable barramundi production systems
7. A well-resourced national body that delivers industry outcomes.

RD&E PRIORITIES AND INVESTMENT

The ABFA’s strategic intent in terms of Research Development and Extension (RD&E) is to focus discretionary research funding onto four critical investment areas:

1. Differentiation
   • naming
   • branding
   • certification
2. Consistent high quality
   • quality scheme
3. Effective regulatory framework

The need for RD&E across these areas will drive industry’s investment strategy. As a guide, the industry will need to contribute and invest at least $100,000 in RD&E per annum.
2. INDUSTRY OVERVIEW

BACKGROUND

*Lates calcarifer* are found in the wild throughout tropical and subtropical coastal waters of the Indo-Pacific including northern Australia. In Australia it is an iconic species and called barramundi, whilst overseas it is generally referred to as Asian Sea Bass, Giant Perch or a large range of regional names.

*L. calcarifer* is caught in the wild and is also a prominent fish for the aquaculture trade. Within Australia the wild catch has remained steady/decreased mainly due to reallocation of the stock between the various competing sectors (Indigenous, commercial, recreational, charter as well as an ecological allowance). The aquaculture sector has however been growing since the 1980s when the Australian farmed barramundi industry started.

Barramundi is farmed in all mainland states of Australia and the Northern Territory (NT). The industry currently produces approximately 6,000 tonnes of product valued at around $60 million at farm gate.

Australian barramundi is farmed in diverse production systems. The majority of production comes from outdoor fresh or salt water pond operations and sea cages, in north Queensland (Qld), Western Australia (WA) and the Northern Territory. The remainder comes from recirculation, or flow through systems, using thermal spring water or fresh water mainly operating in southern Australia. The size of production units varies greatly from boutique operations, usually based on recirculation systems, to large-scale pond or cage systems.

Barramundi is grown to various sizes to meet market demand and needs, but there are two basic size classes – plate sized (under 1.0kg) or whole large fish (2.5kg plus).

CONSUMPTION

Barramundi is an integral part of the Australian dining scene and is viewed as premium fish in most food service areas, and as a meal for home.

Total consumption of *L. calcarifer* in Australia is estimated to be in the vicinity of 20,000t per year, made up of around 1,500t Australian wild caught barramundi, 6,000t Australian farmed barramundi with the balance from a range of overseas wild caught and farmed *L. calcarifer*. The current inability for consumers to readily identify the origin of production of the fish in their meals means that consumers are not fully informed when purchasing a ‘barramundi’ meal. Recent research shows that over 90% of consumers associate the term barramundi with Australian produced fish.

Barramundi has the potential to increase its market share considerably if there can be market differentiation for consumers between Australian produced barramundi and imported *L. calcarifer*. 


The industry has identified that it faces many challenges and undertook an extensive and inclusive process to gain insight into the strategic need and RD&E priorities for the industry over the next five years and beyond. RD&E, marketing/branding, improved regulatory frameworks, biosecurity, improved system and productivity and an effective and adequately resourced peak body were key outcomes from the process.

REGULATORY FRAMEWORK

The Australian farmed barramundi Industry works in a complex regulatory environment. Each operation is subject to varying levels of regulation from each jurisdiction that they operate in which focus on; aquaculture licensing requirements to allow fish farming operations to take place, along with regulation relating to waste water, food safety, food labelling, work health and safety. In addition, in Queensland the Commonwealth also has a regulatory role through the Great Barrier Reef Marine Park Authority (GBRMPA) which can impose additional regulatory controls above and beyond State laws.

This complex and at times burdensome regulatory framework is a major challenge and disincentive to industry growth.

To assist in addressing potential environmental issues the ABFA has developed a 3rd party accreditation program, the Barramundi Farming Certification Program (BFCP).

VOLUME AND VALUE

The annual Australian farmed production of barramundi is estimated to be in the vicinity of 6,000t (whole fish weight) valued at around $60 million at farm gate (ABARES data). ABFA members are responsible for over 90% of that value.

Production in pond and sea cage in northern Australia is responsible for some 90% of the production volume with the balance from recirculating and flow through systems in the southern parts of the country, WA, SA, NSW and Vic.

The vast majority of northern fish is large fish (2.5kg+) which are sold whole to wholesaler, retailers and food service providers who then fillet and portion the fish. Southern production is focussed on plate sized fish, a large proportion which is sold live.

National Production Farmed Barramundi (tonnes and % of production)
Current market demand for *L. calcarifer* is large with over 20,000t consumed annually in Australia, but with only 40% being Australian grown or caught, with the balance imported.

Product differentiation is a key for the Australian industry so as to build on the iconic barramundi name and quality that has been developed in Australia. In most markets overseas *L. calcarifer* is generally traded as Asian sea bass, Giant perch or through a number of distinctive regional names.

Production volumes and gross value of Australian grown barramundi has slowly increased over the last 5 years. Australian producers have the capacity to increase production if the regulatory environment is appropriate and the market and consumer can readily identified the source of their fish – so they can more easily identify Australian produced product.

Member’s survey production growth is forecast to double by 2020 to more than 10,000t per annum (see Figure below).

National Production Forecast Farmed Barramundi by Jurisdiction (tonnes): 2014–2018

In addition, expanding production is forecast in a number of large existing overseas suppliers (e.g. Vietnam, Indonesia, and Saudi Arabia). In an openly traded seafood market such as Australia, this means there will be increasing competition from imported product and greater downward pressure on pond-side prices for Australian farmers.

A well informed and targeted marketing approach will be required by Industry to differentiate its offer to Australian consumers, as a first step to maintaining its viability and profitability.
MARKETS

Barramundi competes on global markets across a number of white fleshed fish product lines. Farmed Australian barramundi is generally sold whole chilled on ice (with some live product) and this has allowed some level of differentiation in the market, as much of the wild caught Australian fish and imported product comes frozen as fillets or plate sized product. Recently this has changed with much larger volumes of chilled whole or portioned *L. calcarifer* coming into the country.

Farmed barramundi is in high demand for its consistent year-round availability, it size, quality, ability to meet market specifications, food safety record and in recognition of its Australian origin.

Australian consumers equate barramundi with Australian grown and as such are prepared to pay a premium over fish identified from other sources. Farmed barramundi is mainly for domestic consumption but there is a small boutique export market in place – however it is difficult to compete on price alone, with imported *L. calcarifer* that is produced by overseas operators.

The current focus of the ABFA members is to secure and build their share of the Australian market through product differentiation from imported *L. calcarifer*. Australia will remain a net seafood importer, with the imported share of domestic consumption forecast to increase over the next five years.

FISHERY SNAPSHOT SUMMARY

The Australian farmed barramundi industry operates in a dynamic environment. Significant threats exist to the Industry’s viability due to increasing imports and the associated pressures this places on production efficiency, price and market share.

These pressures mean the Industry, together with the ABFA and supply chain partners, must now work together to best allocate resources to address the industry challenges. The ABFA must determine how best to utilise its limited resources through a mix of marketing/branding, RD&E, advocacy and industry intelligence to achieve its aims. Opportunities to leverage resources and outcomes through collaborative co-investment will be an efficient approach. As demonstrated in the following figure drawn from FAO Data, Australia is a relatively small and high cost producer of the species variously referred to as Asian Sea Bass/Sea Perch/Barramundi.
GOVERNANCE

The industry’s governing body for the Australian farmed barramundi industry is the ABFA which is a non-profit incorporated organisation addressing issues affecting farmers and representing their interests.

The Constitution identifies a number of objectives relevant to the effective pursuit and management of RD&E in the Industry, including:

- To promote and support all aspects of the Australian barramundi farming industry
- To provide a unified representative barramundi farming industry voice to governments and others,
- To promote and undertake RD&E in the Australian barramundi farming industry,
- To promote the development of barramundi farming as an environmentally sustainable industry,
- To foster and promote goodwill among Association members in the furtherance of its objects.

The ABFA is a member of a number of organisations and works with or liaises with a number of industry groups, including the National Aquaculture Council (NAC), National Seafood Industry Assn (NSIA), Australian Prawn Farmers Assn (APFA), and Queensland Aquaculture Industry Federation (QAIF)
3. RD&E PROGRAM

BACKGROUND
The ABFA did not have an RD&E program until the creation of the SCRC in 2007.

The creation of the SCRC and with the financial support of two feed companies, Ridleys AgriFood and Skretting, provided the impetus and a focus for investment and development of a series of RD&E priorities based around:

- Marketing/Positioning
- Genetic improvement
- Quality, including:
  - Addressing taint
  - Color
  - Harvest methods
  - Quality scheme
- Feed improvement (with Ridleys AgriFood and Skretting)
- Developing a strategic framework for life after the SCRC.

COLLABORATIVE INVESTMENT
The ABFA works with key agencies, SCRC, the FRDC, and a number of specialist institutional and private researchers (e.g. CSIRO, USQ, QDAFF, NOFIMA, JCU, Curtin University, WA University, etc.) In addition, some research is undertaken on barramundi and the associated industry independent of the advice and input of the ABFA.

RD&E investment and approval has been through a collaborative process between ABFA members and research providers with priorities developed and agreed at Annual General Meetings (AGM) and half yearly conferences. This has now been formalised through the development of this Strategic and RD&E Plan which provides clear direction on priority areas, roles, responsibilities, timelines and expected outputs and outcomes.

The proposed model for industry investment will now see funding directly to RD&E (leveraged funds), ABFA operational costs and the balance to areas of industry priority (e.g. marketing, advocacy, intelligence, people development etc).

The ABFA and FRDC propose to establish an Industry Partnership Agreement (IPA) which allows investment in industry specific projects over a specified period against agreed industry strategic needs.
FUNDING THE RD&E INVESTMENT

The ABFA has no secure independent funding model with all contribution provided voluntarily.

The current model sees four funding streams:

- Membership fees – based on a sliding scale aligned with production volume, currently ranging from $500 to $3,000 per member
- Feed companies gift (Ridleys AgriFood and Skretting) provide an annual gift to the ABFA for use in RD&E
- Industry Benefit Contribution (IBC) – a non-compulsory contribution made by the majority of members to fund important projects or needs of the ABFA (based on contribution per tonne of feed used)
- Other sources – these include sponsorship, returns from the annual combined Prawn and Barramundi Farmers Conference, project funding and fees for service.

KEY INVESTMENT AREAS

The ABFA, Members and partners have identified seven key RD&E investment areas for the five year period through to June 2020. These are outlined on the following pages.
## SUMMARY OF KEY INVESTMENT AREAS

<table>
<thead>
<tr>
<th>Investment Area</th>
<th>Summary of Key Investment Outcomes</th>
<th>Fund Sources</th>
<th>Near Term Year 1</th>
<th>Mid Term Years 2-3</th>
<th>Long Term Years 4-6</th>
</tr>
</thead>
</table>
| 1. Market Differentiation for Australian Produced Barramundi                     | • Naming rights for ‘Barramundi’ for Australian produced *Lates calcarifer*  
• Branding and promotion program for Barramundi  
• Differentiate Australian caught or grown (produced) Barramundi v imported *Lates calcarifer*                                                                                                                                                        | ABFA Funds  
ABFA IBC                                                                   | $80,000 | $175,000        | $375,000         |
| 2. Consistent High Quality Australian Product to Meet Consumer Preferences      | • National ABFA Quality (QA) Scheme  
• Cool chain management and product integrity adopted along whole supply chain                                                                                                                                                                       | ABFA RD&E  
ABFA Funds                                                                  | $30,000 | $80,000        | $120,000         |
| 3. Effective Management of Biosecurity Risk                                      | • Understanding of biosecurity risks and processes to minimise those risks.  
• Industry Informed of status of biosecurity  
• AQUAPLAN is adequate to deal with emergency response to a disease outbreak in industry  
• Address off label treatments and MUP                                                                                                                                                    | ABFA RD&E  
ABFA Funds                                                                  | $20,000 | $20,000        | $30,000         |
| 4. Awareness of Farm Productivity Issues and Options                             | • Better awareness of Farm Productivity Issues and Options                                                                                      | ABFA Funds  
Members  
Universities                                                             | $30,000 | $40,000        | $60,000         |
| 5. Sustainable Barramundi Production Systems                                     | • Understand the level of regulation seeking to address sustainability  
• Strategy to address unnecessary burdens  
• National strategy to manage water discharge  
• Promote ABFA members environmental sustainability                                                                                                                                     | ABFA Funds  
Members                                                                  | $10,000 | $20,000        | $30,000         |
| 6. Effective Regulatory Frameworks to Support Australian Barramundi Farms       | • Understand regulation level in place impacting on barramundi aquaculture  
• Strategy to address unnecessary burdens  
• Promote ABFA members environmental sustainability                                                                                                                                   | Members  
ABFA RD&E  
ABFA IBC  
ABFA Funds                                                              | $20,000 | $20,000        | $45,000         |
| 7. A Resourced National Industry Body That Delivers Outcomes                    | • ABFA Business Plan  
• Industry Communication Plan  
• Sound Governance  
• RD&E Strategy  
• Capacity Building  
• ABFA Business Plan  
• Industry Communication Plan  
• Sound Governance  
• RD&E Strategy  
• Capacity Building                                                                                                              | ABFA Funds  
ABFA RD&E  
ABFA IBC                                                              | $131,000 | $280,000       | $420,000         |

**TOTAL INVESTMENT in RD&E and Marketing**                                                                                       | **$321,000** | **$635,000** | **$1,080**
**INVESTMENT AREA 1 – MARKET DIFFERENTIATION FOR AUSTRALIAN PRODUCED BARRAMUNDI**

Imports are the biggest threat to market share due to free riding on the iconic Australian Barramundi name. There is a lack of differentiation of Australian Barramundi in the market so there is need to improve consumer knowledge and understanding across industry by engaging domestic consumers and increasing the public perception, including of imports. Currently, it is not readily possible to differentiate local barramundi v imported *L. calcarifer* at the food service sector end of the supply chain (except in NT). Research identified that Australian sourced ABFA barramundi is the core strategic competitive advantage that industry has control over.

<table>
<thead>
<tr>
<th>Investment Objective</th>
<th>Risks and Action</th>
<th>Investment</th>
<th>Responsibility</th>
<th>Horizon</th>
<th>Resources</th>
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</thead>
</table>
| **Naming rights for ‘Barramundi’ for Australian produced *Lates calcarifer*** | Imports are major threat to market share due to free riding on Australian Barramundi name.  
  - The name Barramundi to be applied and implemented exclusively by all Australian barramundi farmers and fishers (i.e. whole-of-industry).  
  - Address disjunct between Australian Fish Name Standards (FNS) objectives, Fish Names Committee (FNC) operations and current outcomes  
  - Maintain activity to seek alternative means to achieve clarity:  
    - CoOL  
    - GI. | ABFA Funds ABFA IBC | ABFA Members | Near Term | NAC  
NSIA  
FRDC  
Federal Agencies  
Wild harvest |
| **Branding and promotion program for Barramundi** | Lack of identification or consumer understanding of Australian Barramundi’s place in the market. Need to be able to improve consumer knowledge and understanding at a whole of industry level. Engage domestic consumers and increase public perception, including imports.  
  - Engage an external marketing firm to develop and build a Brand Name and Marketing Plan (based on a starting budget of $50,000/year). Plan must be positively focused to not negatively impact on consumer’s seafood consumption. Use strong positive legislative platform/differentiation in Australia (health, labour, etc) as a selling point for branded Australian produced barramundi to domestic consumers.  
  - The Plan driven through ABFA Branding and promotion Sub-Committee.  
  - ABFA to coordinate, manage, promote labelling, origin and brand with initial program based on building links through existing distribution chain (Point of Sale [POS] material and eMedia presence)  
  - Need to ensure the Plan is adopted by downstream partners and investors – accredited wholesalers, retailers and builds over time. | ABFA IBC | ABFA Members | Near Term with existing budget.  
Ongoing and enhanced over 5-7 year time frame based on available budget | Supply Chain partners  
SCRC  
FRDC  
Wild harvest |
| **Differentiate Australian caught or grown (produced) Barramundi v imported *Lates calcarifer*** | Currently, it is not readily possible to differentiate local barramundi v imported *L. calcarifer* at the food service sector end of the supply chain (except in NT). Australian sourced ABFA barramundi is the core strategic competitive advantage identified  
  - Product will be fresh Australian grown – a unique offer to the domestic market  
  - ABFA members to adopt the Barramundi Farming Certification Program (BFCP) ‘Green Tick’ Certification as point of differentiation at market – ‘if it has the tick you can be assured it is Australian grown’ therefore sustainably produced and guaranteed quality  
  - Leverage Certification with 3rd parties.  
  - Obtain better and timely market data on imports (monthly, volumes, type of product). | ABFA IBC | ABFA Members | Near Term and Ongoing | Supply Chain partners  
SCRC  
FRDC  
Wild harvest  
NGO |
**INVESTMENT AREA 2 – CONSISTENT HIGH QUALITY AUSTRALIAN PRODUCT TO MEET CONSUMER PREFERENCES**

The industry needs a professional National ABFA QA Scheme to underpin the Branding Strategy (based on research and a clear documentation of understanding of what quality means to the Australian seafood consumer). Industry must avoid a “Quality lite” approach and demonstrate to consumers that the industry is serious about quality from resource to plate. All farmers must address any quality issues using the QA scheme as the benchmarks, with individual companies encouraged to continually improve beyond the Scheme where possible.

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<tr>
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<th>Risks and Action</th>
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<th>Responsibility</th>
<th>Horizon</th>
<th>Resources</th>
</tr>
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</table>
| National ABFA Quality Scheme (QA) | • Develop proprietary ABFA QS and incorporate into Certification Program:  
  – ensure scheme meets requirements of chains and major fish mongers – understand consumer needs based on research – target key issues.  
  – build in existing food safety arrangements, GMP, EU residue testing program  
  – address taint and assess other issues such as flesh colour etc  
  – work with whole-of-chain, existing partners and retailers  
  – ABFA manage and monitor through a 3rd party audited scheme.  
  • Access to ABFA branding benefits as an incentive for all farmers and fishers to participate in the scheme. | ABFA RD&E | ABFA QDAFF Members EcoSustainAbility | Near Term and Ongoing | SCRC FRDC Supply Chain partners QDAFF |
| Cool chain management and product integrity adopted along whole supply chain | • As part of QA Scheme develop processes to work with partners to optimise cool chain:  
  – cool chain management critical to ensure the quality investment by farmers is not lost down the supply chain.  
  – maintain high level of chain of custody and product integrity with supply chain partners | ABFA Funds | ABFA Members | Near Term and Ongoing | FRDC Supply Chain partners |
INVESTMENT AREA 3 – EFFECTIVE MANAGEMENT OF BIOSECURITY RISK

It is critical to manage biosecurity risk to minimise impacts on the Australian wild harvest and fish farming sectors. Apart from the risk to fish and the environment, it is a vital aspect of domestic market appeal. Biosecurity breaches (pest and diseases) are a major and growing threat to Australian wild stocks and seafood and barramundi production systems, especially due to increased seafood and fishery imports with whole and fresh fish major risks; (e.g., disposal/use of waste product).

<table>
<thead>
<tr>
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<th>Horizon</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding of biosecurity risks and processes to minimise those risks.</td>
<td>• Undertake a desk based review of external (overseas production regions and import border) biosecurity/testing protocols/trade pathways/ and risks. Clarify the biosecurity process. Utilise a professional to undertake intelligence and technical component of the strategy and build data sets to guide ABFA approach: – document and understand the biosecurity risks associated with importation of <em>Lates c</em> – documented and agreed actions determined with farms and regulators – arguments developed as required for improved border biosecurity (AQIS and AQUAPLAN) with credible and effective monitoring program for key risks established and maintained</td>
<td>ABFA RD&amp;E</td>
<td>ABFA</td>
<td>Near Term and Ongoing</td>
<td>FRDC AAH Subprogram</td>
</tr>
<tr>
<td>Industry Informed of status of biosecurity</td>
<td>• Collate/analyse/disseminate biosecurity data and information to industry via website and electronic newsletter.</td>
<td>ABFA Funds</td>
<td>ABFA</td>
<td>Ongoing</td>
<td>AAH Dept Ag FRDC NAC</td>
</tr>
<tr>
<td>AQUAPLAN is adequate to deal with emergency response to a disease outbreak in industry</td>
<td>• Engage in the process to ensure AQUAPLAN is adequate to deal with emergency response to a disease outbreak in industry.</td>
<td>ABFA Funds</td>
<td>ABFA</td>
<td>Ongoing</td>
<td>AAH Dept Ag FRDC NAC</td>
</tr>
<tr>
<td>Address off label treatments and MUP</td>
<td>• ABFA to work with state and national regulators, and other aquaculture/seafood sectors (where mutually beneficial) to address off label treatments and MUP.</td>
<td>ABFA Funds</td>
<td>ABFA</td>
<td>Ongoing</td>
<td>NAC</td>
</tr>
</tbody>
</table>
INVESTMENT AREA 4 – AWARENESS OF FARM PRODUCTIVITY ISSUES AND OPTIONS

Australian Barramundi farms operate in a globally competitive seafood market and farm viability is a critical issue. This will be increasingly important as import volumes increase under new FTA. To remain competitive there is a need to continually seeking means to sustainably maximise performance and develop cost effective improved productivity. The technical aspects of improved farm energy efficiency, productivity, feed utilisation, and water treatment and recycling will differ with each production system, however there are a number of improvements that can be made by industry immediately at relatively low cost. This can be achieved by identifying key productivity issues and where best gains can be made across farms.

<table>
<thead>
<tr>
<th>Investment Objective</th>
<th>Risks and Action</th>
<th>Investment</th>
<th>Responsibility</th>
<th>Horizon</th>
<th>Resources</th>
</tr>
</thead>
</table>
| Better awareness of Farm Productivity Issues and Options | * Access, collate and review existing production research from barramundi and other comparative aquaculture sectors regarding farm productivity and performance – across all production types (including international)  
* Identify key productivity issues and where best gains can be made across farms (i.e. hatchery, fingerlings, growth, power, labour, feed, logistics, etc) – understand where farms are inefficient and target common issues  
* Seek access to APFA/CSIRO productivity model as a draft to adapt to barramundi farming – use outcomes to guide RD&E and capital spend to optimise return on investment  
* Develop farm and industry performance benchmarks (spreadsheet) – use independent source to collect and collate. Share whole of industry data and use farm data to assess individual performance.  
* Gather operational and economic data – undertake appropriate analyses and establish ongoing economic and productivity data  
* Develop reference source for aquaculture production.  
* Each barramundi farm should introduce a program of continuous improvements to ensure better use of resource inputs and reduce adverse outputs. | ABFA Funds  
Members  
Universities | Members  
ABFA | Ongoing | Feed companies  
CSIRO  
Masters/PhD students  
APFA  
FRDC  
Other farmers |
INVESTMENT AREA 5 – SUSTAINABLE BARRAMUNDI PRODUCTION SYSTEMS

All members must aspire to a Triple Bottom Line (TBL) sector sustainability goal (i.e. economic, social, environmental – ‘profit, people, planet’). ABFA can work through a whole of industry approach to identify key issues for environmental sustainability and ensure all members and production systems can be addressed through this approach. State/territory based members need to drive the process to identify and seek to address local regulatory issues as part of a national approach to defend against unnecessary red/green tape and lobby governments to reduce or remove unnecessary regulatory burdens. In addition, the industry must continue to seek cost effective options to improve Industry’s sustainability credentials. There is a need to ensure that Australian farms have high sustainability ratings as this is critical to domestic market appeal. The Barramundi Farming Certification Program (BFCP) ‘Green Tick’ Certification program provides a 3rd party audited process to highlight the sustainability credentials of the industry.

<table>
<thead>
<tr>
<th>Investment Objective</th>
<th>Risks and Action</th>
<th>Investment</th>
<th>Responsibility</th>
<th>Horizon</th>
<th>Resources</th>
</tr>
</thead>
</table>
| Understand the level of regulation seeking to address sustainability                  | • Document state/territory/national operational regulatory programs that seek to address sustainability issues impacting on barramundi aquaculture production  
• Assess their cost/benefits and areas of overlap                                      | ABFA Funds | Members        | Medium        | Uni/student QDAFF NAC |
| Strategy to address unnecessary burdens                                               | • Seek to address local regulatory issues as part of a national approach         
• Develop a sound argument to lobby governments to reduce or remove unnecessary regulatory burdens. | ABFA Funds | Members        | Near to Medium | NAC APFA NFF   |
| National strategy to manage water discharge                                           | • Develop a strategy or policy to manage water discharge quality                  
• Develop a sound argument to lobby regulators to adopt industry sensible water discharge policies | ABFA Funds | ABFA Members   | Near          | APFA NAC       |
| Promote ABFA members environmental sustainability                                      | • Get ‘BFCP Green Tick Certification’ in place for all ABFA members              
– continue EU testing program                                                         | ABFA Funds | ABFA Members   | Near          | Dept AG Media |
|                                                                                        | • Develop media strategy and incorporate ‘BFCP Green Tick’ into Branding/Promotion program to disseminate and promote ABFA members environmental sustainability | ABFA Members | ABFA Members   | Near          |               |
INVESTMENT AREA 6 – EFFECTIVE REGULATORY FRAMEWORKS TO SUPPORT AUSTRALIAN BARRAMUNDI FARMS

Australian aquaculture systems are recognised as some of the best managed in the world and operate in a highly regulated environment covering many facets of operation (e.g. sustainability, labour, power etc). A clean environment is critical to the operation of barramundi farms in Australia. To continue to operate the industry must seek to have in place regulatory frameworks, across Australia, that allow barramundi aquaculture to operate sustainably, efficiently and profitably.

<table>
<thead>
<tr>
<th>Investment Objective</th>
<th>Risks and Action</th>
<th>Investment</th>
<th>Responsibility</th>
<th>Horizon</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand level of regulations in place impacting on barramundi aquaculture</td>
<td>• Document state/territory/national operational regulatory programs in place impacting on barramundi aquaculture, identify overlaps and impacts of regulatory burden on productivity v environmental and other benefits (clearly articulating the TBL cost/benefit)</td>
<td>Members ABFA RD&amp;E ABFA IBC ABFA Funds</td>
<td>ABFA</td>
<td>Near and ongoing</td>
<td>NAC Agencies CSIRO</td>
</tr>
<tr>
<td>Strategy to address unnecessary burdens</td>
<td>• Identify key regulatory issues • Work with likeminded organisations to develop a national strategy to lobby to reduce or remove unnecessary regulatory burdens applied by Government and NGOs • Develop clear science based regulatory policy framework strategy</td>
<td>ABFA RD&amp;E ABFA IBC ABFA Funds</td>
<td>ABFA</td>
<td>Near to medium</td>
<td>APFA NAC FRDC Aquaculture sectors NGO CSIRO</td>
</tr>
<tr>
<td>Promote ABFA members environmental sustainability</td>
<td>• Get ‘BFCP Green Tick Certification’ in place for all ABFA members • Develop media strategy and incorporate ‘BFCP Green Tick Certification’ into Branding/Promotion program to disseminate and promote ABFA members environmental sustainability</td>
<td>ABFA Members</td>
<td>ABFA Members</td>
<td>Near to medium</td>
<td>Media</td>
</tr>
</tbody>
</table>
INVESTMENT AREA 7 – A RESOURCED NATIONAL INDUSTRY BODY THAT DELIVERS OUTCOMES

The ABFA is a relatively new organisation, that represents the vast majority by numbers and production (90+%) of farmed barramundi producers in Australia. To date the ABFA has been maintained a very lean operation, often addressing issues on an as needs basis, rather than operating from a clear and agreed strategic direction. The process used to identify key farm and industry needs, as part of developing this strategic plan, ensured that all members had ‘skin in the game’ and their views were included. With the winding up of the SCRC the ABFA identified the need to have a well resourced national industry body that delivers outcomes for members, including an organisational costed business and RD&E plan and communication strategy. Due to its limited resources and budget it is agreed the ABFA must focus on a few key issues and do them well so members are clearly better off. The industry demands that members are engaged in many complex and dynamic issues, and whole of Industry viability often depends on ABFA’s ability to negotiate issues and risks beyond the control of each licence holder. There is a need to develop a ‘value proposition’ that is clear, attractive and well understood and that provides value to members of ABFA – an organisation that farmers want to join.

<table>
<thead>
<tr>
<th>Investment Objective</th>
<th>Risks and Action</th>
<th>Investment</th>
<th>Responsibility</th>
<th>Horizon</th>
<th>Resources</th>
</tr>
</thead>
</table>
| **ABFA Business Plan** | • Develop national ABFA Business Plan to achieve objectives and strategic priorities:  
  – compile accurate and detailed budget with focussed spending on the Plan  
  – each strategy to be supported by a clear funding stream from industry/FRDC/others  
  – establish industry task groups to manage key strategic areas and advise the Executive (e.g. Branding).  
  • Maintain IBC and seek additional funds from industry as necessary (e.g. ongoing Branding costs and/or one off contribution). | ABFA Funds ABFA RD&E ABFA IBC | ABFA | Near to medium | FRDC |
| **Industry Communication Plan** | • Engage with all farmers, feed companies and stakeholders to build greater trust:  
  – engage with all barra farmers in order to increase ABFA membership to maximum participation and reduce IBC leakage  
  – promote industry benefits to community for mutually beneficial reasons (e.g. social licence, employment) | ABFA Funds ABFA RD&E ABFA IBC | ABFA | Near to medium | FRDC |
| **Sound Governance** | • Effective and transparent Executive/Leadership Team to manage and establish governance platform:  
  – appoint staff as per Constitution (e.g. CEO, EO, contract staff etc)  
  – build strong alliances with other organisation. | ABFA Funds ABFA RD&E ABFA IBC | ABFA | Near to medium | APFA NAC FRDC Aquaculture |
| **RD&E Strategy** | • Formalise IPA with FRDC as basis for post SCRC RD&E program | ABFA RD&E | ABFA | Near | FRDC |
| **Capacity Building** | • Increase human capacity in core areas:  
  – Governance capacity, Leadership development, Media Training  
  • Establish capacity to lobby on key issues  
  • Maintain a watching brief on strategic opportunities to establish alliances with other bodies – liaise with other sectors/organisations to enhance outcomes  
  • Undertake Annual conference and ½ year workshop | ABFA Funds ABFA RD&E ABFA IBC | ABFA Members | Near to medium | APFA NAC FRDC |
4. RD&E INVESTMENT CAPACITY 2015–2020

BASE CASE SCENARIO

The following table presents the ABFA Base Case Growth Scenario on behalf of the whole Australian Barramundi Farming Industry, based on 4 core assumptions:

1. Harvest tonnage from Australian barramundi farms assumed to increase at an average of 8% per year from 2014 base (this is considered a relatively conservative figure).

2. Long term nominal $A beach price stable at $9/kg. This assumes real prices will slowly decline at −3% p.a. during this plan, in the face of increased pressure from imports.

3. Industry (farmers & feed companies) will contribute funds for RD&E and marketing, with assumed leakage from both streams. ABFA leadership will attract new funding.

4. Additional RD&E capacity will accrue from co-investors, especially via co-investment from the FRDC under an IPA.

The growth assumptions and related RD&E investment funds presented on the following page in the Base Case Scenario are therefore quite conservative.
<table>
<thead>
<tr>
<th>BASE CASE INDUSTRY GROWTH SCENARIO</th>
<th>Assumption</th>
<th>Year end June</th>
<th>Industry 2012</th>
<th>Est. 2013</th>
<th>Est. 2014</th>
<th>Year 1 2015</th>
<th>Year 2 2016</th>
<th>Year 2 2017</th>
<th>Year 4 2018</th>
<th>Year 5 2019</th>
<th>Year 6 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvest</td>
<td>8% growth p.a.</td>
<td>tonnes</td>
<td>4,919</td>
<td>4,870</td>
<td>4,725</td>
<td>5,103</td>
<td>5,511</td>
<td>5,952</td>
<td>6,428</td>
<td>6,943</td>
<td>7,498</td>
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<tr>
<td>Feed Tonnes</td>
<td>FCR of 1.50</td>
<td>tonnes</td>
<td>7,088</td>
<td>7,655</td>
<td>8,267</td>
<td>8,928</td>
<td>9,642</td>
<td>10,414</td>
<td>11,247</td>
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<tr>
<td>Forecast Nominal Pond Price</td>
<td>Constant price</td>
<td>$/kg</td>
<td>9.38</td>
<td>10.00</td>
<td>9.00</td>
<td>9.00</td>
<td>9.00</td>
<td>9.00</td>
<td>9.00</td>
<td>9.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Est. Nominal Farmed GVP</td>
<td>$Mill.</td>
<td>46.2</td>
<td>48.7</td>
<td>42.5</td>
<td>45.9</td>
<td>49.6</td>
<td>53.6</td>
<td>57.9</td>
<td>62.5</td>
<td>67.5</td>
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<tr>
<td>Net Industry Betterment Contribution</td>
<td>0.25%, less leakage</td>
<td>$'000</td>
<td>87</td>
<td>95</td>
<td>109</td>
<td>124</td>
<td>135</td>
<td>152</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Feed company contribution</td>
<td>$10/tonne, less leakage</td>
<td>$'000</td>
<td>77</td>
<td>83</td>
<td>89</td>
<td>96</td>
<td>104</td>
<td>112</td>
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<tr>
<td>Industry Funds Received</td>
<td>$'000</td>
<td>164</td>
<td>178</td>
<td>199</td>
<td>221</td>
<td>239</td>
<td>264</td>
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<tr>
<td>Marketing Performance Funds Rec’d</td>
<td>incl. performance bonus</td>
<td>$'000</td>
<td>60</td>
<td>30</td>
<td>20</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Membership Funds Received</td>
<td>$'000</td>
<td>20</td>
<td>20</td>
<td>22</td>
<td>24</td>
<td>24</td>
<td>26</td>
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<tr>
<td>TOTAL ABFA FUNDS RECEIVED</td>
<td>$'000</td>
<td>244</td>
<td>228</td>
<td>241</td>
<td>245</td>
<td>263</td>
<td>290</td>
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<tr>
<td>RD&amp;E Matching Funds</td>
<td>incl. FRDC matching</td>
<td>$'000</td>
<td>77</td>
<td>81</td>
<td>85</td>
<td>89</td>
<td>94</td>
<td>99</td>
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<tr>
<td>TOTAL INVESTMENT FUNDING</td>
<td>Funds Pool Available</td>
<td>321</td>
<td>309</td>
<td>326</td>
<td>334</td>
<td>357</td>
<td>389</td>
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<tr>
<td>INVESTMENT AREAS</td>
<td>$'000</td>
<td>80</td>
<td>80</td>
<td>95</td>
<td>110</td>
<td>125</td>
<td>140</td>
<td></td>
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</tr>
<tr>
<td>1. Market Differentiation</td>
<td>$'000</td>
<td>30</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td></td>
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<tr>
<td>2. High Quality Product</td>
<td>$'000</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td></td>
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<tr>
<td>3. Management of Biosecurity</td>
<td>$'000</td>
<td>30</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
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<td></td>
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<tr>
<td>4. Farm Productivity Awareness</td>
<td>$'000</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5. Sustainable Production Systems</td>
<td>$'000</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td></td>
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<td></td>
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<tr>
<td>6. Effective Regulatory Frameworks</td>
<td>$'000</td>
<td>131</td>
<td>139</td>
<td>141</td>
<td>129</td>
<td>137</td>
<td>154</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>7. Well Resourced National Body</td>
<td>incl. admin &amp; EO salary</td>
<td>$'000</td>
<td>321</td>
<td>309</td>
<td>326</td>
<td>334</td>
<td>357</td>
<td>389</td>
<td></td>
<td></td>
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<tr>
<td>TOTAL INVESTMENT $'000</td>
<td>$'000</td>
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