Abalone Council Australia Ltd

STRATEGIC PLAN 2018-2023

Abalone Council Australia Ltd
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Abalone Council Australia Ltd (ACA) is a public not-for-profit company limited by guarantee. It was incorporated in 2004 and is the peak national body representing the wild-caught abalone industry in Australia.

The ACA Board has ten (10) director positions comprising two directors from each of the five abalone producing States of Australia – New South Wales, Tasmania, Victoria, South Australia and Western Australia.

The primary function of Abalone Council Australia Ltd is to oversee and manage nationwide investment in abalone related research. Its inaugural 10-year strategic plan focused on investment in:

1. Product development and market management
2. Harvest optimisation
3. Resource and environmental sustainability
4. Human capacity development
5. Socio-economic sustainability

ACA and the Fisheries Research and Development Corporation (FRDC) have established an Industry Partnership Agreement (IPA) to ensure investment in abalone-related research and development supports and underpins the needs of the Australian wild-caught abalone industry.

ACA is an Approved Body under the Export Market Development Grants Scheme. For more information about Abalone Council Australia Ltd and its activities please go to: www.abalonecouncil.com.au.

Enquiries about this Plan may be directed to:

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Chris Izzo - FRDC Senior Portfolio Manager christopher.izzo@frdc.com.au

Our Core Business

Abalone is commercially harvested from approximately 25,000 kilometres of coastline between Shark Bay in Western Australia down and along the south coast of Australia (including Tasmania) and then north to Port Stephens in NSW. There are approximately 850 abalone license holding entities and 40 abalone processing/export companies spread across the five States spanning the entire southern coastline of Australia. Australian abalone businesses will harvest about 2,900 tonnes (wet live weight) in 2018 which represents about 50% of the total global supply of wild caught abalone.

Our Strategy 2018-2023

Following the inaugural 2007 to 2017 Strategic Plan, ACA acting on behalf of Australian abalone stakeholders will pursue the following ten main objectives over the next five years:

1. Ensure a healthy fishery maintained at biological optimums
2. Abalone stewardship – globally verified and promoted
3. A viable Harvest Strategy in each State fishery
4. Achieve higher productivity along the supply chain via innovation investment (pre and post-harvest)
5. Implement a professional international and domestic strategic marketing program for the world's best abalone
6. Australia is recognised as the global Home of Wild Abalone
7. Smart people using best industry practices
8. Increased collaboration and idea sharing between the abalone sector and other sectors (both within and external to the seafood industry)
9. An efficient and capable ACA leading a national industry
10. Build and apply social capital for industry benefit.

This second ACA Strategic RD&E Plan (2018 to 2023) focusses on the above ten primary objectives and what actions will be taken to achieve them.

Welcome to the second Strategic RD&E Plan (2018 to 2023) for Abalone Council Australia Ltd. This plan follows the inaugural ACA Strategic Plan 2007 - 2017.

This Plan sets out the key RD&E objectives for the Australian abalone industry for the next 5 years.

The new Plan coincides with a second Industry Partnership Agreement (IPA) between ACA and the FRDC.

The new IPA confers 100% of the abalone RD&E levy to the ACA to manage on behalf of the industry. This doubles the funds available compared to the inaugural ACA IPA thereby significantly increasing the scope to address the many challenges and opportunities that will confront the industry during the next 5 years.

The ACA Board looks forward to working alongside industry, Government and RD&E providers to achieve the strategic objectives outlined in this Plan

ACKNOWLEDGEMENTS

Abalone Council Australia Ltd has been assisted in the development of this Plan by its state members, fishery leaders, Abalone Association of Australasia, and the Fisheries Research and Development Corporation.

State Members:

- Abalone Industry Association of South Australia,
- Tasmanian Abalone Council Ltd,
- Abalone Association of New South Wales,
- Abalone Industry Association of Western Australia,
- Abalone Industry Committee, Seafood Industry Victoria

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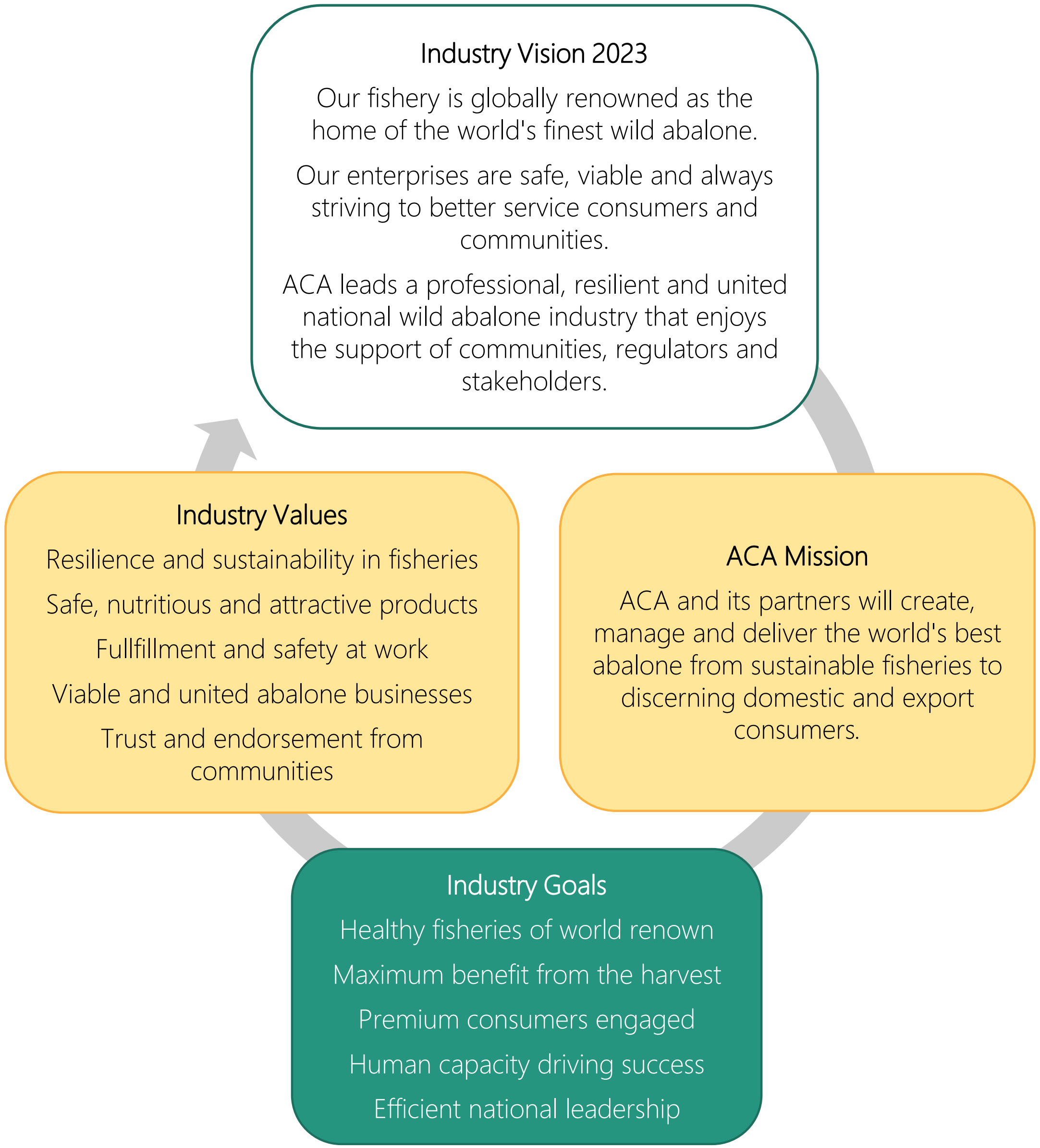
1. STRATEGY FRAMEWORK



Australia's wild abalone fisheries produce the world's finest abalone.

The industry commenced exporting abalone products to Asian markets in the mid 1960's and were global supply leaders by 1970. In 2018 our license holders, divers and processors will harvest 2,900 tonnes of premium wild products (worth $150 Million) and supply to a global abalone market of approximately 140,000 tonnes.

Reduced productivity in wild fisheries coupled with rapidly increasing global farm supply has moved Australia from a dominant market player producing almost 50% of global production in 2001 to a much smaller player producing little more than 2% of the world's abalone in 2018.

Wild caught abalone from legal and illegal sources in Australia, New Zealand, South Africa, Japan and Mexico now represents about 6% of total global production with the remaining 94% grown in marine farms across China, Taiwan, Japan, South Korea, South Africa, Australia and the US.

Australia's wild caught abalone industry needs a updated strategic plan which drives investment in initiatives to optimise the health and value of our fisheries that support so many regional Australians.

This Plan aims to position the sector to make best advantage of its choices over the medium to long-term horizon. ACA Members have developed this Plan after consultation with fishers, supply chain partners, fishery managers and agencies, and customers.

GOALS AND STRATEGIES

Australia is the home of premium wild Abalone. Our strategic landscape will be framed by the following Goals and Strategies.

A. Healthy Fisheries of World Renown

- Healthy abalone fishery stocks maintained at biological optimums
- Abalone stewardship – globally verified and promoted

B. Maximum Benefit from the Harvest

- A viable Harvest Strategy operating in every State fishery
- Higher productivity through innovation (pre and post-harvest)

C. Premium Consumers Engaged

- A Professional Marketing Program for the world's best abalone
- Australia recognised as the "Global Home of Wild Abalone"

D. Human Capacity Driving Success

- Smart Industry people using Best Practices
- Team work and collaboration across Australian fishery stakeholders

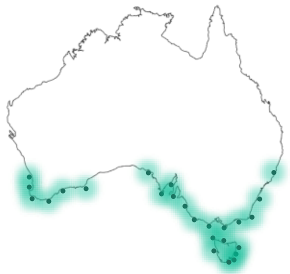
E. Efficient National Leadership

- An efficient ACA leading a united national industry
- Build and apply social capital for industry benefit

2. INDUSTRY CONTEXT

OUR FISHERIES

Australia's abalone are native to approximately 25,000 kilometres of southern-ocean coastline from WA to NSW and including SA, Tasmania, and Victoria.



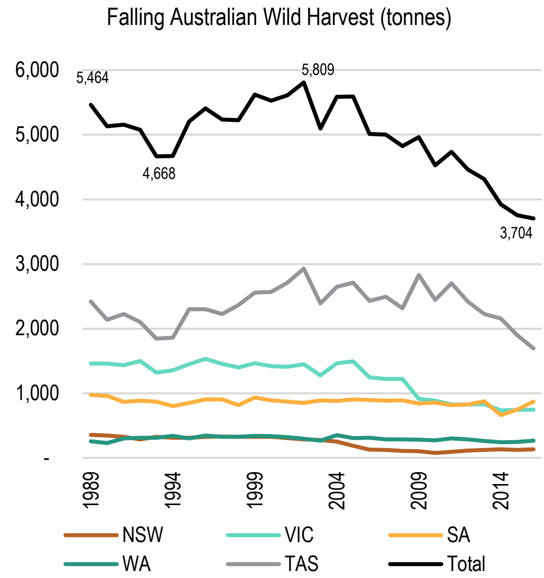
Four commercial species are harvested across 22 fishery zones – Blacklip *(Haliotis rubra)*, Brownlip *(Haliotis conicopora)*, Greenlip *(Haliotis laevigata)*, and Roe's *(Haliotis roei)*. Recreational and non-commercial Indigenous fishers harvest a small share of the resource in most waters.

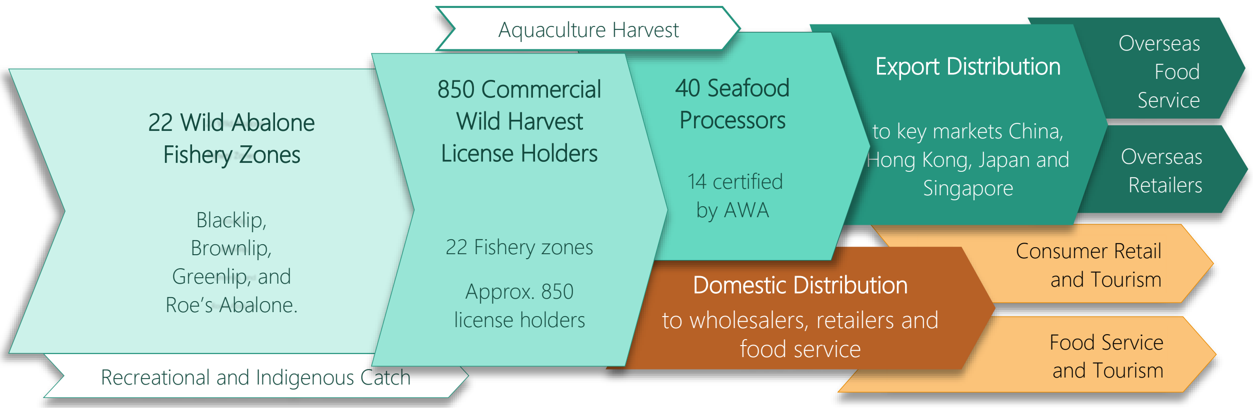
Australian wild abalone contain naturally high levels of many nutrients which contribute to a healthy human lifestyle. Seafood CRC (SCRC) research found that a 100 gram serve of abalone provides the same Omega 3 benefits as 400 grams of chicken breast. Abalone offers a large contribution to the daily intake of Vitamin E (antioxidant defences), Iodine (thyroid, nervous system) and Magnesium (muscle and nerve function).

Since 2011, Australia's commercial wild harvest abalone fishery yield has declined 35% from 4,450 tonnes to 2,900 tonnes in 2018.

The science suggests we must pay more attention to biomass and marine ecosystem health, harvest strategies, climate change and real-time fishery data. There is much more to learn about innovative fishery management.

Australia's wild abalone supply chain offers overseas and domestic consumers premium products in a range of formats. Fresh live, chilled, frozen, canned, and processed ready-to-eat pouches are optimised for markets based on species, market preference and availability. A small but expanding volume of product will be offered to inbound Asian tourists.





GLOBAL SUPPLY

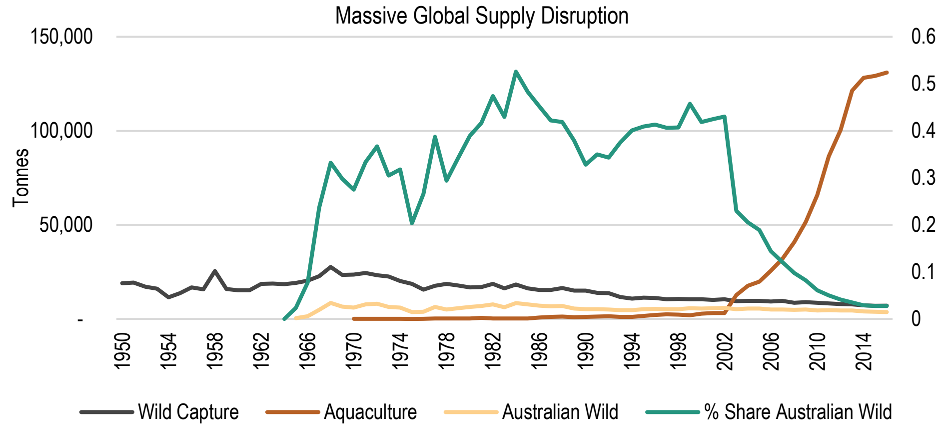
Global Abalone supply has grown 940% since 2002, from 13,500 tonnes to an estimated 150,000 tonnes in 2018 (in shell, excluding illegal harvest). Abalone Farms have contributed all of this growth, rising to 94% of global supply. These data include all species from the *Haliotis* spp. genus but exclude some non-haliotus species (e.g. *Concholepas concholepas* from Chile).

Since 2002, legal wild supply has declined from around 10,500 tonnes, to 7,200 tonnes in 2016. Quantified illegal harvest (4,800 tonnes) arises mostly from South Africa, Australia and New Zealand.

In 2016, China's farms contributed 81% of global abalone supply. Since 2010, China (Fujian and Guangdong provinces) and South Korea have been the main farm growth centres. Both countries have moved to marine cage systems, but also face ongoing issues - disease, lack of seed, lack of sustainability, and politically driven austerity measures, all of which sap market confidence. Many of China's 300 farms operating in 2010 have since closed or switched species to *Haliotis discus hannai*, a higher value hybrid species preferred by Japanese consumers.

In some countries wild harvest production has declined due to overexploitation, illegal harvesting, disease and habitat degradation. Commercial abalone fisheries in California have closed.

Most fisheries are now better regulated, and while some are rebuilding their stocks (Australia, Canada), it is unlikely that the world's wild fisheries will ever be restored to their former production levels. Leveraging an increased profit margin from wild fisheries is critical in order to maintain fishery GVP.



SUPPLY '000 t.	2010	2011	2012	2013	2014	2015	2016
WILD CATCH							
Australia	4.5	4.7	4.5	4.3	3.9	3.9	3.8
Overseas	4.1	3.5	3.4	3.3	3.3	3.3	3.4
Global IUU Est.	5.3	5.1	5.1	5.0	4.9	4.8	4.8
Total Wild	13.9	13.3	13.0	12.6	12.1	12.0	12.0
FARMED							
Australia	0.7	0.5	0.6	0.7	0.9	1.0	1.1
Other excl. China	8.6	9.2	9.1	10.2	11.9	12.2	13.9
China	56.5	76.8	90.7	110.4	115.4	116.1	116.0
Total Farmed	65.8	86.5	100.4	121.3	128.2	129.3	131.0
GLOBAL SUPPLY	79.7	99.8	113.4	133.9	140.3	141.2	142.9
Total Australia	5.2	5.2	5.1	5.0	4.8	4.8	4.8
Wild - Aust. %	32%	35%	35%	34%	32%	32%	31%
Farmed - China %	71%	77%	80%	82%	82%	82%	81%
Global farm growth		31%	16%	21%	6%	1%	1%

(ABARES and Industry Data)

COMPETITIVE ADVANTAGE

As rising abalone demand has driven up global supply, aquaculture technologies are driving the new competitive advantage for commodity products. Large high-tech abalone farms now set the long-run cost base for global abalone trade.

But lengthy grow-out times, poor genetic capacity and high working capital costs mean many farms must supply small fish (around 80 mm), and therefore compete primarily on price. Farmed and wild catch abalone are increasingly segmented into separate consumer markets – smaller farmed fish, and larger wild fish.

As farm production increases, the volume of wild abalone relative to total global supply steadily diminishes. As their relative share of the market shrinks, wild fishers must specialise to maintain relevance. Wild catch is the niche supplier to high net-worth aspirational consumers – they favour celebratory food-service ahead of retail commodity seafood. They value new competitive advantages – provenance, sustainability, food quality, and fish size.

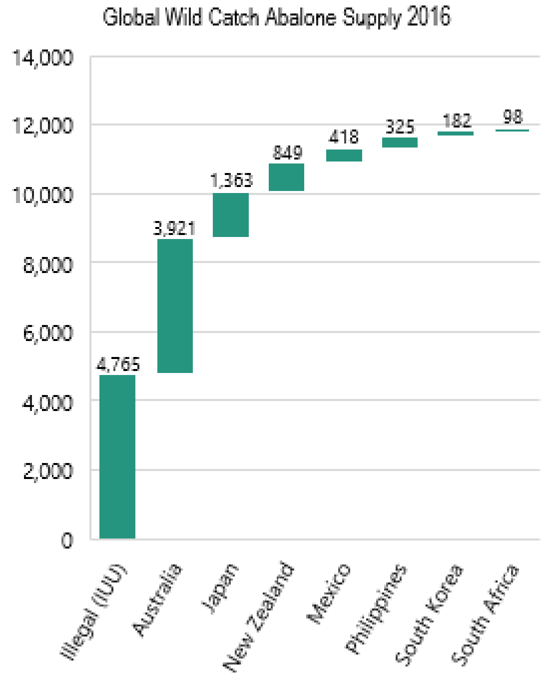
One of the key outcomes of the inaugural ACA Strategic Plan was the establishment of the Australian Wild Abalone® Program. The RD&E project that provided the foundation for the establishment of AWA® was the single largest project funded during the term of the inaugural ACA IPA. Prior to the end of 2018, a national ballot of some 850 stakeholders will determine if there is sufficient industry support for a five-year trial *Consumer Education and Promotion* campaign to be executed across the five main abalone markets of China, Hong Kong, Japan, Singapore and Australia.

NICHE THINKING

Australia leads the global legal wild catch abalone niche that comprises ~10,000 tonnes, or 7% of global supply. In 2015 illegal harvest dominated wild catch supply at 40%, indicating the scale of lucrative premiums on offer to illegal traders.

At an average 2017/18 farm gate price of US$20 per kg, global farmed abalone supply (140,000 tonnes) is valued at US$2.8 Billion. At an average beach price of US$40 per kg, wild catch supply (10,000 tonnes) is worth US$400 million. Global wild catch is ~7% of volume and ~14% of value.

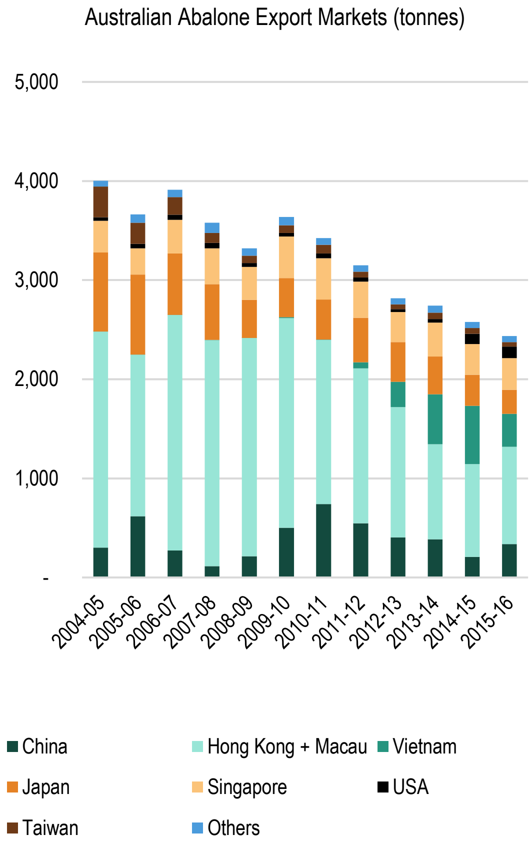
Inbound Asian tourism to Australia offers an attractive niche market for local abalone suppliers. China will likely overtake New Zealand in 2018 as our leading source of inbound tourist visitors. For 2016-17 Chinese visitor arrivals of 1.25 million grew at 9.9% p.a., compared to 1.36 million at 2.3% p.a. for New Zealanders.



An average Chinese tourists' in-country spend ($7,899) runs at around twice the rate of a Singaporean ($3,198) or Japanese ($4,011) tourist. Abalone cuisine is popular across our top ten inbound tourist sources, including Singapore, Japan, Malaysia, South Korea and Hong Kong.

TRADE

Wild abalone is one of Australia's most export intensive agri-food sectors. Subject to currency exchange rates, market dynamics and changing product formats, around 95% of meat weight harvested is exported.



Greater China (including China, Hong Kong, Macau, and via Vietnam) is the dominant export market, ahead of Japan and Singapore.

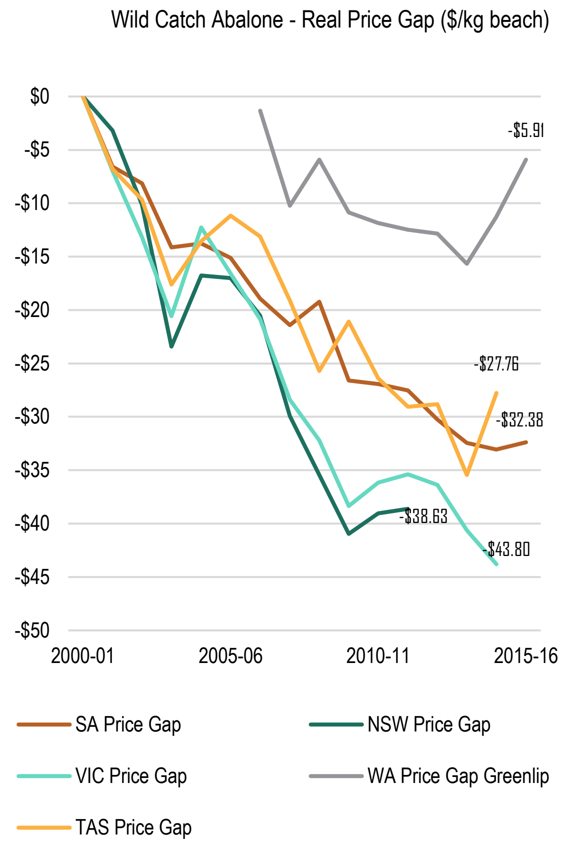
Product formats have refined over time as supply chain technologies improve, and affluent consumers seek out safe, fresh seafood products. "Live and chilled" product comprised 52% of export sales in 2016, up from 42% in 2005. More of the available "live and chilled" product is going to Greater China – 93% in 2016 (79% in 2005). Under the China-Australia Free Trade Agreement, from 2019 all Chinese import tariffs will fall to zero.

But supply volume needs to be maintained to ensure Australia's reputation for wild quality is not diminished and industry's investment in branding to date is fully leveraged by product throughput.

BEACH PRICES

Wild catch abalone beach prices have declined for twenty years. As high-cost market leader, we are most at risk from global farm-supply competition.

Price gap data from ACA shows how real beach prices have fallen over time since 2002, when "big aquaculture" began. A strong A$ and the Global Financial Crises both compounded the problem in 2005-2011.



But real price recovery has been subdued since then, and our strategic response is yet to emerge. Importantly, the data trends also show the segmentation of long term price declines into three groups: 1. *Severe* in NSW & VIC; 2. *Moderate* in SA & TAS; and *Minimal* in WA.

CONSUMER DYNAMICS

As an island, fresh seafood is a part of our national identity. Fishery sustainability is fundamental to all Australian communities, fishers, managers and seafood chain partners.

Newly affluent Asian consumers are increasingly concerned about the safety, sustainability and "story" of their food. These consumer values need to be top-of-mind for our fishers/processors who service export markets or inbound Asian tourists.

Abalone target consumers are in niche markets in China, Hong Kong, Japan, Singapore, and in related inbound tourism. Abalone AWA® consumers will be affluent, globally well-travelled, brand-savvy, 30-85 years old, discerning about their abalone cuisine and culture, aspirational in their food experiences, demanding of premium quality products and services, seeking nutritious and safe food, and seeking status and face through their purchase decisions.

A niche market strategy to serve aspirational affluent consumers must be anchored in demonstrably sustainable wild abalone fisheries.

Global abalone trade has seen massive change in the last 30 years – firstly in Japan, Taiwan, and South Korea, and now in China, our key market. This evolving nexus of abalone cuisine, food art and culture, rising discretionary incomes and modern Asian lifestyles presents attractive new market options for wild fishers.

China's switch from rural to urban life, from capital investment to consumption, is creating a new consumer middleclass. In 2020 McKinsey, a global strategy firm, expects China will have 60 million affluent consumers (6% of China's population) each earning at least US$34,000 p.a., in 21 million households across key cities. Their discretionary "dining out" spend is expected to grow by 10.2% p.a. in the decade to 2022.

For our traditional seafood and abalone traders, existing commodity brands must be recast – they need to be narrowed and deepened to engage and attract these wealthy aspirational consumer niches to new sales.

HUMAN CAPITAL

As our fishery TACCs stabilise, there has never been a more important time for industry to leverage its human capital to achieve commercial outcomes. We must now look beyond TACC harvest yield to find other ways to increase fishery performance through real-time data, innovative fishery management, and enhanced trust from communities and customers in our offer as the "Global home of wild abalone".

Industry recognises that the capability of its people is the key to its future – to ensure fishery sustainability, to secure community endorsement of its activities, and to create and offer consumers attractive products in competitive markets. As wild fisheries come under increasing public scrutiny, industry must be professional, technically and commercially skilled, embrace a common sense of purpose from water to consumer, and demonstrate a resilient and progressive culture.

But our context presents some challenges. The Wild catch abalone industry is complex – we are ~850 fishers spread along 25,000 kilometres of remote coastline, competing with other marine harvest users, in five separate regulatory jurisdictions, to support ~40 specialist processors serving multiple species in domestic and export markets.

Our people do not often see each other so communication is limited, and team trust is hard to establish and build. Our social capital (the relationships that make our industry work) is spread thinly and struggles to register in our own minds, or with our communities, or our customers. The public do not recognise us, our story, or our passion for what we do as an industry.

Our wild fisheries will soon go online with innovative data systems that boost sustainability, create new fishery management models, and better define our globally unique products. But first, our leaders must understand community and customer expectations, so they are equipped to target RD&E investments that leverage our fishery capital, brand capital and human capital.

Over the next five-years, the industry will focus on training that encourages and assists its people to collaborate and be safe at work and to use technology and best practices to enhance fishery performance and supply chain outcomes.

Global trends are local. In 2023 social capital will contribute a greater share of our wild fishery profitability. How should we invest now? In response we will boost investment in durable networks (professional or informal) where quota holders, fishers, divers and processors regularly have the time and space to train, and engage as teams in mutual interests, and build industry trust.

We will then frame our shared industry story and feel proud as professionals to share it with our regulators, customers and local communities.

Industry wins in a number of ways - we are better informed on key issues, our shared culture is deepened and aligned, young people step forward to start careers in the industry, and our shared social capital is reinvested and extended. Our customers and communities win as they understand and trust our businesses, and can influence our strategies, products and services.

As national leader the ACA will provide a guiding soft-touch that encourages, facilitates and promotes all individuals and teams to be the best they can. A common sense of purpose will bring cultural change to strengthen industry performance.

3. PRIORITIES & LINKAGE

Market Share

- In 2001 Australia's share of global abalone was 40% - it is now 2 to 3%
- Big aquaculture now sets global commodity abalone costs and prices
- Aquaculture's success attracts legions of new abalone consumers
- Aspirational consumers will transition up to premium abalone over time

Fishery Productivity

- Productivity and harvest yields in some Australian waters are declining
- Scientists, divers and managers are working hard to resolve these problems
- Predictive regional and spatial fishery productivity management is a new and critical frontier that Australia must master

Beach Prices

- Wild catch beach prices remain subdued, even though the A$ is weak
- Species and offer segmentation is occurring across State fisheries
- Leveraging regional pricing power by market segmentation is a critical challenge we must understand and exploit

Wild Catch Differentiation

- Australian fishers dominate wild catch supply in a $300m niche market
- Low volumes and moribund prices have reduced returns to quota owners
- Price and volume need strategic agendas to leverage their premium status
- Industry does not yet have the depth of data required to achieve this

Supply Competition

- One of Australia's wild catch competitors is the illegal global wild fisher
- IUU business can be defeated by a united thru-chain integrity approach
- Premium Asian consumers want stable brands as their trusted currency

Human Capacity

- Management of issues and commercial returns in our fisheries is increasingly complex, and often beyond our direct control
- Our people drive industry's capacity to understand and manage challenges and risks - better training will enable people to be their best, professionally
- Our social capital and how we collaborate as an Industry Team will have a greater impact on our success and profit in the future

CHALLENGES

Booming global abalone farming has forced wild fishers to rethink their supply strategy. Fundamental volume and price challenges will persist for the next decade.

Australia no longer controls the harvest volume to global Abalone markets. We must nurture our unique fisheries and ration limited supply to only premium aspirational consumers who value our sustainability, seafood nutrition, product size, and the unique Australian Wild Abalone (AWA®) story.

There are many existing and new abalone consumers now seeking access to what is a small premium wild abalone supply base. There will be minimal growth in wild catch supply, so scarcity will underpin consumer perceptions of luxury, and therefore drive increases in sales margins.

But aquaculture will challenge this wild – farm boundary with new technologies, and IUU fishers will seek to circumvent it. Australian wild fisheries need to innovate and potentially collaborate with aquaculture to augment natural abalone productivity with farm reared larval abalone and juvenile abalone.

There are many challenges ahead for Australian abalone fishers. But there is a pathway to a very compelling and attractive long-term vision. It requires united leadership and investment to reposition their supply chain and offer, and defend their brand as the global home of premium abalone.

INDUSTRY PARTNERSHIP

Abalone Council Australia Ltd has recently entered into a second Industry Partnership Agreement with the FRDC. The IPA which runs from 2018 to 2023 will improve the flexibility, performance and leverage that ACA achieves from its collective precompetitive RD&E investments.

An Industry Partnership Agreement is between the FRDC and a sector body. It manages the sector's RD&E program or a suite of projects.

IPAs have a budget allocation, based on forecast contributions, and FRDC "matching" contributions, (less an 8% FRDC service fee).

Under an IPA the FRDC partners with an industry sector to deliver against that sector's RD&E Plan.

The obligations of the parties signing an IPA are detailed in the Agreement.

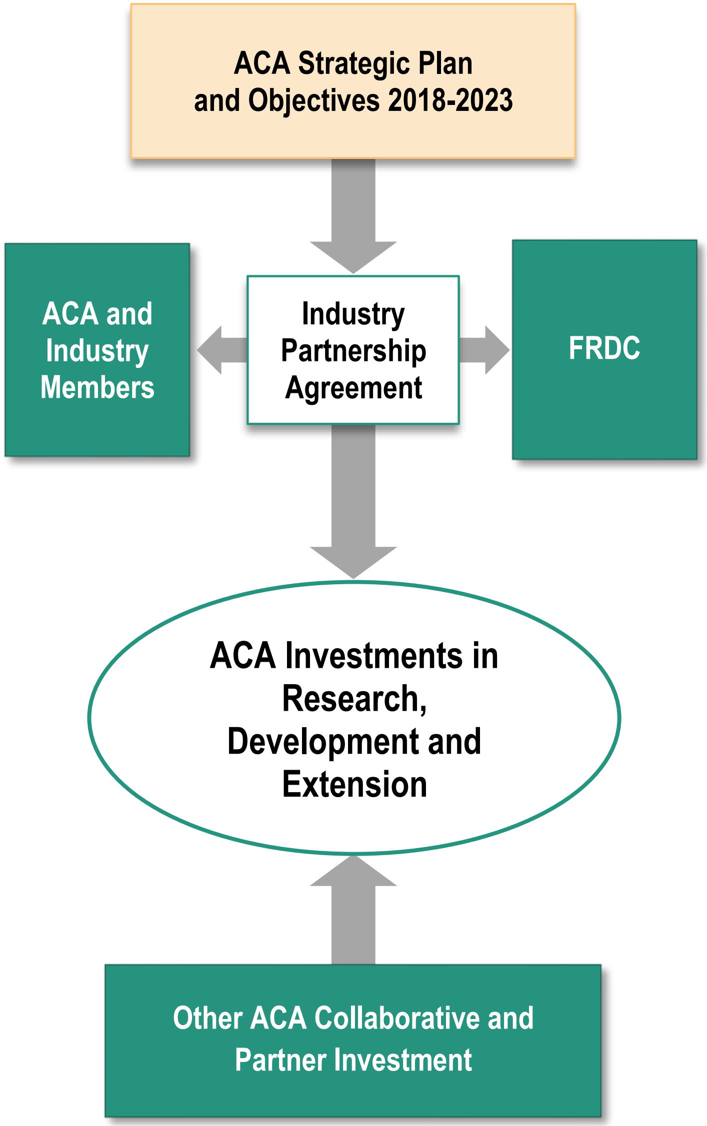
The IPA enables investment in industry projects against agreed industry strategic needs. ACA will assess individual investment options to determine if they are best funded from inside or outside the IPA.

External stakeholders keen to assist ACA to achieve its strategic needs are encouraged to contact:

ACA Chief Executive -
deanlisson@abalonecouncil.com.au

FRDC Senior Research Portfolio Manager -
christopher.izzo@frdc.com.au

ACA will address and lead national issues on Members' behalf. It will continue to support State organisations, Fishery Managers and collaborators, especially where harmonisation of regulations and data management can achieve economic benefits. The IPA establishes a customised contractual framework to better align ACA Members' aspirations directly with FRDC's investment tools and leverage.



COLLABORATION

ACA works with its State fishery stakeholders, seafood processors, value chain partners, regulators and external stakeholders to establish its Strategic and RD&E priorities and objectives. In turn, these priorities drive the ACA Investment Program for both RD&E and Market Development.

This figure illustrates ACA's partners, collaborators and affiliates in precompetitive RD&E and market development investments.

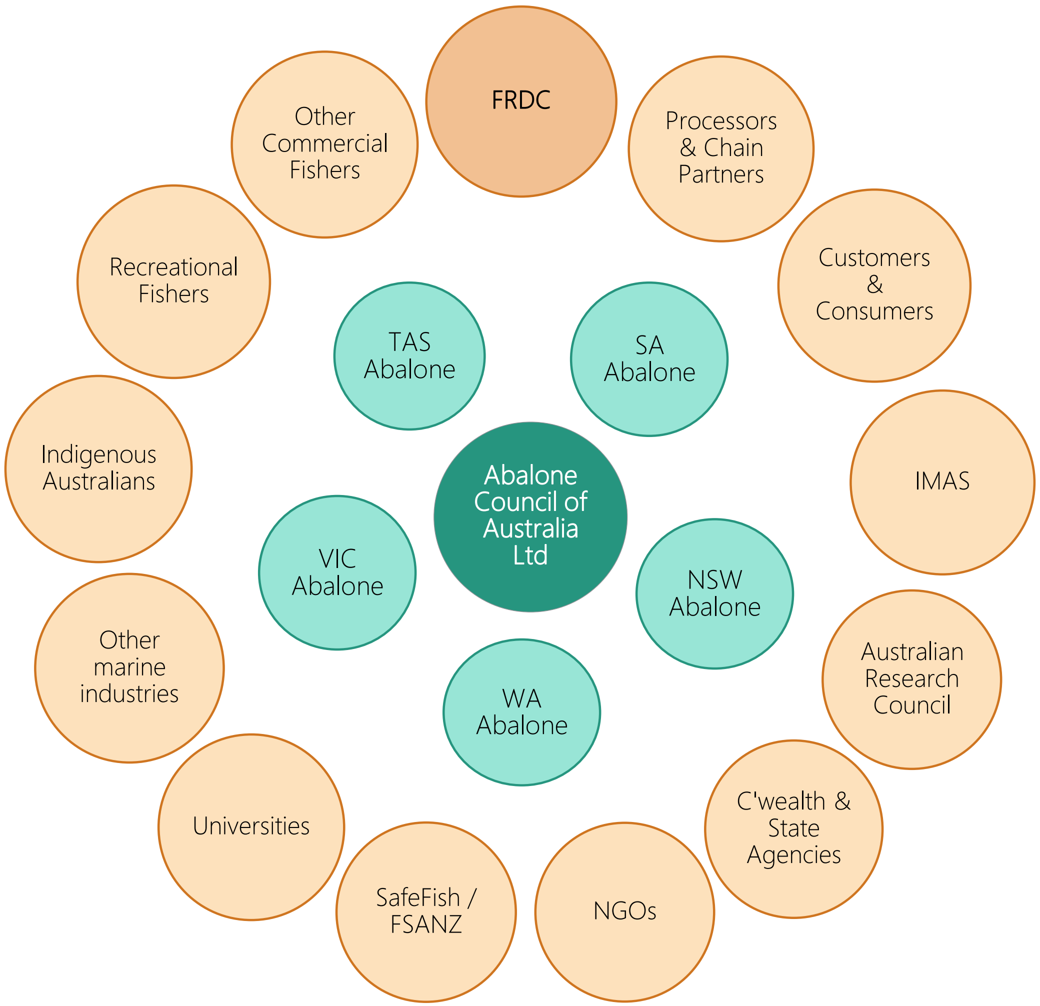
RD&E investment and approval is achieved via a collaborative process between ACA and research providers, with priorities developed and agreed at RD&E meetings.

The FRDC and ACA have established an IPA to facilitate efficient and effective investment in RD&E that is supported by FRDC's charter.

This Strategic / RD&E Plan formalises this approach and embeds it into the IPA framework. It provides clear direction on priority areas, roles, responsibilities, timelines and expected outputs and outcomes.

The new IPA will move to 100% (up from 50% previously) of the industry's RD&E matched investments managed by FRDC.

Industry's Partners in RD&E Investment



INVESTMENT FUNDING

ACA's investment in RD&E is intended to strengthen Industry's capability to capture opportunities and meet emerging challenges, increase seafood consumption, employ fishery and human resources more effectively, and build a strong and collaborative industry culture.

ACA Members contribute funds via their individual States to the FRDC for the funding of RD&E activities. Under the PIRD Act these industry funds are matched by the Commonwealth Government.

Further leveraging of industry contributions is obtained via Cooperative Research Centres, the Australian Research Council, Department of Agriculture and Water Resources and other federal funding initiatives, as well as through the contributions of research providers and State management agencies.

Under the Industry Partnership Agreement with the FRDC, ACA takes a lead role in the investment of this funding to achieve strategic RD&E objectives.

ACA recognises the need to secure new funding sources for the conduct of market development and product promotion activities. ACA is spearheading the establishment of an industry wide abalone marketing levy collected via the Commonwealth Department of Agriculture and Water resources (DAWR).

ACA's investment strategy emphasises collaboration and partnership with key players to ensure that the right people and partners are involved, and optimum leverage is achieved for investment outcomes. Partners include other State and industry parties (including aquaculture), Australian based bodies (e.g. Tourism Australia), international sectors (New Zealand Abalone Industry) and downstream processors, and partners (e.g. China Cuisine Association).

This Plan identifies a number of new challenges and opportunities for ACA and its Members over the next five-year horizon. It proposes to build on ACA's last strategic platform with a more comprehensive strategy, to unite all abalone stakeholders, and lift investment in RD&E priorities, market development and product promotion.

ACA and its Members have a direct relationship with the processor members of the Australasian Abalone Association, a supply chain group comprising the leading abalone processors based in Australia and New Zealand.

In addition, ACA works closely with a number of research providers to conduct RD&E for the industry, most of which have also provided leverage opportunities for funding, whether these be cash or in-kind. ACA will seek to strengthen relations with these expert researchers through funding of increased formal engagement in RD&E and planning events for the national abalone industry. Major organisations in this category include the University of Tasmania through the Institute of Marine and Antarctic Studies (IMAS), the South Australian Research and Development Institute (SARDI), NSW, Victorian and Western Australian Fisheries and Research Agencies.

Funds will be sourced from a number of RD&E and Market Development streams, including leveraged and unleveraged levies and voluntary payments within and outside the formal Industry Partnership Agreement with the FRDC.

The proposed source and use of funds are broadly outlined over the planning horizon, in the following table.

The subsequent pages identify the use of these funds across five Investment programs.

INVESTMENT CAPACITY

The following table summarises the drivers of investment capacity for ACA. Funding sources include industry contributions to RD&E, and leveraged funds from the Australian government. Most of the funds will be contributed, leveraged, managed and invested under the IPA between ACA and the FRDC.

ABALONE BASE CASE **Nominal A$ values**		Years end June	Actual 2015	Actual 2016	Estimate 2017	Estimate 2018	**1** **2019**	**2** **2020**	**3** **2021**	**4** **2022**	**5** **2023**
Actual & Forecast Harvest - forecast growth of 0%	**ACA**	Tonnes	**3,753**	**3,704**	**3,704**	2,900	2,900	2,900	2,900	2,900	2,900
	TAS		1,897	1,694	1,694	1,340	1,340	1,340	1,340	1,340	1,340
	SA		745	870	870	719	719	719	719	719	719
	VIC		739	746	746	596	596	596	596	596	596
	WA		248	264	264	144	144	144	144	144	144
	NSW		124	130	130	101	101	101	101	101	101
Est. Sector GVP – Strategic Plan growth @3.0%	Nominal	$Mill.	135.68	148.02	148.00	140.00	141.4	143.52	145.67	148.59	153.04
						Assume long-term GVP decline is reversed with support of ACA market investment					
Forecast Beach Price Average	Nominal	A$/kg	36.15	39.96	39.95	48.28	48.76	49.49	50.23	51.24	52.77
INDUSTRY INVESTMENT CAPACITY											
GVP Rolling 3 Year Average	Nominal	$Mill.	142.61	140.63	143.90	145.34	143.13	141.64	143.53	145.93	149.10
RD&E Contribution to FRDC @ 0.25% Max.	Nominal	$'000	357	352	360	363	358	355	359	365	373
DAWR Matching	Nominal	$'000	357	352	360	363	358	355	359	365	373
Gross Investment pool	Nominal	$'000	713	704	720	727	716	708	718	730	746
less FRDC service fee estimate	Nominal	$'000	32	32	32	32	57	57	57	58	60
% of funds managed in IPA			50%	50%	50%	50%	100%	100%	100%	100%	100%
Total Leveraged IPA RD&E Funds Available	**Nominal**	**$'000**	**200**	**200**	**200**	**200**	**658**	**652**	**660**	**671**	**686**

Note: 2015-2018 data based on ABARES data and FRDC IPA advice. Estimates for this Strategic Plan (2019-2023) are based on ACA estimates and advice.

4. INVESTMENT PROGRAMS

A. Healthy Productive Abalone Stocks, Globally Renown

OBJECTIVES	ACTIONS	STATUS
1. Healthy stocks maintained at biological optimums	1. Secure access to better fishery and supply chain data via: o Integration of defendable real-time E-Data into Harvest Strategies o E-data capture and use via data loggers o GPS data loggers to inform Harvest Strategy via broader & deeper spatial /temporal indicators 2. Gain a better understanding of the effects of climate change and anthropogenic impacts on marine environmental conditions and fishery productivity 3. When appropriate, adjust fishery management strategies to account for climate change and other anthropogenic impacts on marine ecosystems 4. Gain a better understanding of the key factors that drive high yield zones in abalone fisheries and then consider habitat enhancement and stock enhancement options 5. Implement low risk stock enhancement options such as larval reseeding, juvenile reseeding and/or, translocation of mature abalones. 6. Gain a better understanding of disease management – especially *Perkinsus* and Abalone Viral Ganglioneuritis - establish improved diagnostic tools and efficient and effective response plans 7. Utilise, harmonise, own and control fishery and supply chain data and related e-data 8. Collaborate with New Zealand and other jurisdictions re. - joint work on dive logger, abalone aging, and assessing recreational catches	
2. Abalone Stewardship - globally verified and promoted	1. Establish effective communication strategies with internal and external stakeholders 2. Explore globally recognised 3rd party accreditation of all fishery stocks such as MSC. 3. Understand, review and engage with FRDC re the Status of the Fisheries Assessments (SAFS) with the aim of having all abalone stocks in the green "sustainable" status by 2020. 4. Review the Abalone National Code of Practice to ensure workers and workplaces are demonstrably safe, regarding both OH&S and biosecurity.	

Note: OH&S refers to Occupational Health and Safety

B. Maximum Benefit from the Harvest

OBJECTIVES	ACTIONS	STATUS
1. A clear and harmonised Harvest Strategy in every State fishery	1. Optimise utilisation of biomass for long term commercial return 2. Integrate defendable real-time E-Data to inform all harvest strategies 3. Quantify all sources of harvest mortality for all users (commercial and non-commercial) 4. Rebuild the state reporting and compliance systems using modern electronic technologies 5. Collect, collate, validate and utilise harvest data and information across all user sectors, for Industry benefit	
2. Higher Productivity through innovation (pre and post-harvest)	1. Boost fishery productivity through adaptive and innovative management strategies 2. Understand and adapt to changing environmental conditions (e.g. water temperature and water quality) 3. Align and emphasise predictive indicators for stock management and harvest strategies 4. Engage, co-invest with, and incentivise processors to innovate, to build chain efficiency and consumer value 5. Ensure all supply chains are demonstrably safe, regarding food safety, OH&S and biosecurity 6. Ensure product traceability, authenticity and integrity along the supply chain from harvest to plate 7. Standardise fishery data management on a national basis – interoperability and privacy 8. Identify and utilise appropriate expertise (e.g. aquaculture) and practices where beneficial, to boost fishery productivity	

C. Premium Consumers Prefer Australian Wild Abalone

OBJECTIVES	ACTIONS	STATUS
1. A Professional Marketing Program for the world's best abalone	1. Maintain and improve trade and market access to global markets for Australian wild caught Abalone products via ongoing support and input to the Seafood Trade Advisory Group (STAG) 2. Establish a marketing levy to promote Australian Wild Abalone® as a luxury/premium food brand globally underpinned by guarantee of supply chain integrity and product provenance 3. Through the levy funded AWA® Program, work with supply chain partners to educate consumers and collaboratively promote our product in key Asian markets and Australia.	
2. Australia recognised as the global Home of Wild Abalone	1. Design and implement a professional market research program 2. Increase Industry value through more efficient seasonal harvesting strategies when appropriate 3. Support innovation in harvest and processing infrastructure 4. Understand and implement strategies to enhance product taste, texture and other abalone product quality attributes 5. Create innovative packaging and products for target markets 6. Promote Australian abalone in consumer markets: o Differentiate, promote and create consumer preference for Australian wild Abalone o Investigate and promote use of brand/quality/ provenance protection technologies; and educate consumers to recognise this benefit o Raise Industry finance to educate the consumer re Australian wild Abalone 7. Launch and promote "Australia as the global home of Wild Abalone", to inbound tourists – work with Sydney Fish Market and other partners to leverage this opportunity	

D. Human Capacity that Drives Success

OBJECTIVES	ACTIONS	STATUS
1. Smart Industry People using best practices	1. Invest in people to ensure ongoing human capacity is available to undertake abalone related science 2. Implement Diving Best Practice: o Minimise risk of Shark Interactions using improved risk management practises and technologies o Adopt State of the Art dive technologies for safer diving o Adopt harvesting best practices for long term fishery productivity 3. Review and update the national abalone industry OH&S and QA CoP's and associated training programs 4. Create opportunities for diversity in abalone industry bodies and forums. 5. Encourage the creation of training programs that identify people and organisations to be upskilled to support industry strategic needs 6. Establish, support and encourage implementation of knowledge and experience exchange programs for all supply chain participants 7. Encourage the review of National and State regulations to ensure Industry can meet changing technologies and market needs 8. Identify and adopt "triple bottom line" practices defined along the abalone harvest and supply chain 9. Incorporate NZ, where beneficial to Australian Industry, into Industry leadership programs	
2. Team work across Australian Abalone fisheries and Users	1. Facilitate opportunities for fishers, scientists and fishery managers to collaborate in strategic planning (minimum 1 event p.a.) 2. Facilitate the extension of abalone science (minimum 1 event p.a.) 3. Create skills-based teams to drive market initiatives that are levy funded 4. Lead an increase in resource stewardship jointly with State fishery managers 5. Encourage strategic collaboration and partnerships – e.g. with Tourism Australia, Australian Abalone Growers Association, NZ Abalone(?) 6. Educate and encourage General Public to endorse and support Australian abalone Industry 7. Communicate with and engage fishery communities, NGOs and legislators 8. Establish a strong linkage to the new national body Seafood Industry Australia	

E. Efficient National Leadership

OBJECTIVES	ACTIONS	STATUS
1. An efficient ACA leading a united national industry	1. Collaborate with FRDC to understand and create links and collaborations between ACA and other Fishery & Aquaculture Bodies that are actively engaged in national issues 2. Identify industry bodies, fishery and aquaculture organisations, and relevant third parties that ACA can partner with to leverage its RD&E investment and strategic outcomes 3. Manage National Abalone Conventions on a periodic cycle (minimum 2 conventions by 2023) 4. Utilise national Industry training programs of formal training and mentoring for existing and new ACA directors, to build relevant human capacity, transparent governance (via Aust. Institute of Company Directors one day Directors course), and support leadership succession	
2. Build and Apply Social Capital for Industry benefit	1. Create, engage and develop industry and supply chain networks that attract young people into the abalone fishery 2. Conduct research to understand community/consumer/public perceptions of the Australian wild abalone industry. Establish the issues, facts, and barriers to positive perceptions of the industry. Engage industry in a conversation about these learnings and develop a strategy to boost social capital 3. Review community engagement strategies in premium food industries (e.g. dairy A2 milk, wagyu beef) and generate/trial innovative new ways for fishery and supply chain participants to engage their local communities, target consumers and the broader public. 4. "Professionalise" the Industry's culture. Encourage and support fishers, divers, quota holders, processors and supply chain partners to become the best they can through formal education, personal development, and networking within industry and seafood community 5. Promote the Australian wild abalone fishing Industry to Industry, to fishery communities and to the public, as a desirable place to work. Highlight key attributes, including sustainable resources, safe working activities, world leading science and practices, globally renowned seafood products, skilled and resilient people, respected fishery communities, and viable and legal enterprises.	

GLOSSARY & REFERENCES

Glossary

AAA	Australasian Abalone Association
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ACA	Abalone Council of Australia
AICD	Australian Institute of Company Directors
ARC	Australian Research Council
AWA®	Australian Wild Abalone, a registered brand name of the ACA
ChAFTA	China-Australia Free Trade Agreement
CSIRO	Commonwealth Scientific and Industrial Research Organisation
FRDC	Fisheries Research and Development Corporation
FTA	Free Trade Agreement
IMAS	Institute for Marine and Antarctic Studies, University of Tasmania
IP	Intellectual Property
IPA	Industry Partnership Agreement, between ACA Ltd and FRDC
IUU	Illegal, Unregulated and Unreported fishing
MMT	Million metric tonnes
NGO	Non-Government Organisation
Real Prices	Adjusted for the uncontrollable effects of inflation
SCRC	Seafood Cooperative Research Centre 2009-2016
STAG	Seafood Trade Advisory Group

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Wilkie, Dan, Going Wild over ocean abalone, Australia China Business Review July 2018

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State Fishery Science Priorities

South Australia

E data capture and use via data loggers
- Diver assessment surveys contributing to strategy
- Stock enhancement techniques particularly for localised recovery
- Disease management e.g. Perkinsus
- Shark interactions

Tasmania

Biomass proxy as a contribution to harvest strategy
Seasonal decline and abalone condition
Stock enhancement via assisted recovery
Anthropogenic sedimentation
Tuning the fishery to meet target markets
Understanding high yield zones for improving habitat
Diving practices for long-term fishery productivity

Victoria

Harvest strategy development and testing
- GPS data logging - improved harvest strategy – spatial and temporal
- Fine scale performance and size indicator analysis
- Recruitment to the fishery
- Standardised FDE data across all abalone fisheries
- Adapt state of the art dive technology for deep water
- Best practice shark cages
- Ensuring human capacity in abalone science

New South Wales

Harvest strategy development and testing
GPS data logging - improved harvest strategy – spatial and temporal
Fine scale performance and size indicator analysis
Habitat rehabilitation
Translocation and restocking
Fishery status assessments (SAFS)

Western Australia

Predictive indicators for stock management and harvest strategy
- Enhanced productivity based on MSC guidelines
- Effects of climate and environment on harvest strategy
- Spatial management of marine areas
- Stock enhancement and restocking

ACA Strategy input advice from state fisheries