PROJECT SEA DRAGON
STAGE 1 LEGUNE GROW-OUT FACILITY
DRAFT ENVIRONMENTAL IMPACT STATEMENT

VOLUME 1 - PROJECT OVERVIEW
CHAPTER 7 - ENVIRONMENTAL HISTORY AND ECOLOGICALLY SUSTAINABLE DEVELOPMENT

CONTENTS

LIST OF TABLES

LIST OF FIGURES

1 INTRODUCTION

In accordance with the Project Sea Dragon Stage 1 Legune Grow-out Facility (the Project) Terms of Reference for an Environmental Impact Statement (ToR), this chapter describes the environmental history of the proponent and demonstrates how the Project complies with, and contributes to, the principles and objectives of ecologically sustainable development (ESD), as set out in the National Strategy for Ecologically Sustainable Development (ESDSC 1992).

1.1 TERMS OF REFERENCE ADDRESSED IN THIS CHAPTER

The ToR addressed in this chapter, and the relevant sections in which they are addressed, are presented below in Table 1.

TABLE 1 TERMS OF REFERENCE

Section	Terms of Reference	Chapter Section
2.4	**Environmental History**	
	The EIS must include details of the environmental record of the Proponent, including: ▪ details of any proceedings against the Proponent under Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources, and details of systems and processes that have been subsequently upgraded ▪ any international or national accreditations (e.g. ISO 14001), environmental awards or other recognition for environmental performance.	Section 2
2.6	**Ecologically Sustainable Development**	
	The Project, its potential impacts (positive and negative) and the management measures used to enhance positive and reduce negative impacts will be assessed in the context of ecologically sustainable development. Therefore it is essential that the Proponent demonstrate how it complies with and contributes to the principles and objectives of ESD in the relevant section(s) of the EIS.	Section 3

2 ENVIRONMENTAL HISTORY

2.1 SEAFARMS GROUP LTD

Seafarms Group Ltd (Seafarms) is an ASX listed company holding separate subsidiary companies each operating in emerging, non-conventional commodities areas: aquaculture, carbon and environmental offsets. The companies are Seafarms Operations Limited, and CO2 Australia Limited. Project Sea Dragon Pty Ltd is a subsidiary of Seafarms Operations Limited.

Seafarms is currently the largest producer of farmed prawns – growing, processing and distributing the well-known Crystal Bay Prawns® premium brand. Seafarms has 148 ponds covering 160 hectares, across three locations throughout north Queensland. Seafarms is committed to sustainability and believes that farmed seafood is the most sustainable way to provide seafood to the world. Crystal Bay Prawns are produced using environmentally sustainable culture processes, state of the art processing facilities and support services. Seafarms believes that protection of the environment is a primary corporate responsibility. Therefore, all the Seafarms business activities reflect these beliefs and Seafarms strive to constantly:

- adopt best management practices to conduct operations in an environmentally responsible manner
- implement sound environmental management practices to minimise the impacts due to our business operations
- comply with all relevant environmental regulations
- minimise resource consumption and waste generation by efficient use of resources
- protect all natural ecosystems in our area
- conduct necessary programmes to enhance environmental awareness among our employees.

Seafarms and its subsidiary companies have never been subject to prosecution for environmental breaches and have a strong record of environmental management across a diverse portfolio of aquaculture, carbon and environmental projects.

2.2 CO2 AUSTRALIA LIMITED

CO2 Australia, a subsidiary of Seafarms, is one of the nation's leading environmental services company. As an environmental services provider, whose business model is focused on the delivery of positive environmental outcomes, CO2 Australia seeks to achieve excellence in environmental sustainability within its own operations. As part of its commitment to the environment, CO2 Australia fully offsets their entire greenhouse gas emissions profile through a combination of carbon credit purchases, and direct investment into on ground revegetation projects.

CO2 Australia has undertaken a number of independent environmental and sustainability audits across its operating history. Furthermore, CO2 Australia maintains a qualified environmental auditor on staff, and provides consulting, assessment and audit services around environmental management and data tracking. CO2 Australia regularly provides carbon and environmental offsetting services to its client-base and encourages sustainable practices in our service providers.

CO2 Australia manages the largest carbon forestry estate in Australia and has hands-on management responsibility for a series of major emissions reduction projects, expected to generate over 10 million tonnes of

carbon abatement into the Australian market, with international project interests generating an additional five million tonnes under the Clean Development Mechanism. Additional achievements to date include:

- First company to achieve Carbon Farming Initiative methodology endorsement
- First reforestation company to be accredited under the NSW Greenhouse Gas Abatement Scheme
- First reforestation company to gain 'Accredited Abatement Provider' title under the Australian government's Greenhouse Friendly™ program
- First Australian Associate Member and a listed Offset Provider under the Chicago Climate Exchange
- 2006 Australian Sustainability Award Winner – Environment Category
- 2006 Australian Sustainability Award Finalist – Small Business Category
- Banksia Environmental Awards Program Finalist – Climate Category.

3 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

The following section outlines how the Project complies with, and contributes to, the core objectives and guiding principles of ESD as defined in the National Strategy for Ecologically Sustainable Development[1].

3.1 CORE OBJECTIVES

To enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations

The Project will enhance individual and community well-being and welfare whilst safeguarding the welfare of future generations. The population of the world is expected to reach 8.5 billion by 2030, 9.7 billion by 2050 and 11.2 billion by 2100 (UN DESA 2015). Satisfying the food and nutritional needs of this growing population is an ongoing challenge faced by governments, industry and the community. As recognised in the 2016 State of the World Fisheries and Aquaculture report (FAO 2016), the aquaculture industry plays a key role in achieving food security goals both now and into the future through both the supply of vital nutrients, and supporting healthy diets, and also by providing employment which contributes to economic growth and development for individuals and communities. This most recent global snapshot of fisheries and aquaculture (FAO 2016) reveals that in 2014 aquaculture produced more seafood than wild fisheries; moreover wild fisheries remain under pressure with few being 'under fished', most being 'over fished' and some operating within sustainable limits. Aquaculture represents a viable sustainable solution for human seafood consumption over the coming decades.

The Project's contribution to food security and economic growth will be achieved without sacrificing the welfare of future generations. The Project will include the implementation of strategies consistent with all relevant Sustainable Development Goals of the 2030 Agenda for Sustainable Development, adopted in 2015 by the leaders of UN Member States.

The proponent intends to pursue accreditation from the Aquaculture Stewardship Council (ASC). Whilst generally more relevant to a number of less-developed nations where prawn production currently occurs at scale, the proponent nonetheless intends incorporating the ASC Shrimp Standard (ASC 2014a) principles into their management systems, insofar as these do not conflict with Australian laws or regulations, or cut across or undermine agreements and undertakings which the proponent may reach with local and regional stakeholders including Traditional Owners.

The ASC Shrimp Standard accounts for both the environmental and social impact of farming, "*environmentally, farms must show that they actively minimise their impact on the surrounding natural environment. This extends to careful management of the fish health and resources. Socially, farms must be a good and conscientious neighbour; that means operating farms in a socially responsible manner, caring for their employees and working with the local community*" (ASC 2014b). This is achieved by conforming to the ASC standards which provide guidance on:

- minimising impacts on biodiversity

[1] Note: The principle '*Cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms*' has been excluded from this chapter, as its intended use is for governments to begin the process of pricing environmental externalities into projects.

- ethically sourcing feed
- managing and monitoring pollution
- adhering to rigorous requirements to minimise disease outbreaks
- minimising social impacts.

Compliance with the ASC Shrimp Standards will ensure that the welfare of future generations is safeguarded, whilst the well-being of individuals and communities are enhanced.

To provide for equity within and between generations

The development of the Project will provide for equity within and between generations. The Project provides the opportunity to supply essential protein and nutrients to a growing population and contribute to the economic development of individuals and communities, whilst minimising the impact on the environment.

For the purposes of the EIS, the life of the Project has assumed a nominal 25 year period, however, there is nothing in the proposed assets, facilities design, breeding program and operating plan which would prevent the business from continuing for a significantly longer period. In fact, the business is intended to operate for decades and with a long term operating life the Project provides the opportunity to contribute to food security and economic development within and between generations.

Project Sea Dragon is an intergenerational Project with the potential for future generations of the local community to obtain economic and social benefits from the Project provided future operators pursue sustainable productivity gains. These gains are scientifically and technically achievable through: selective breeding and genetics; improvements in prawn nutrition; adoption of new technologies (such as in-pond monitoring and control systems); and advances in animal health and biosecurity.

To protect biological diversity and maintain essential ecological processes and life-support systems

To protect biological diversity and maintain essential ecological processes, measures have been taken to avoid, minimise and mitigate impacts on the environment through:

- site selection
- engineering and operational design
- the development of appropriate environmental management strategies
- commitment to the ASC Shrimp Standard and
- the identification of, and management measures for the mitigation of, environmental risks through the EIS process.

To determine the optimal location for the project, a formal multi-criteria analysis, using site suitability criteria based on initial investigations by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and further developed by the proponent, was applied across the northern Australian coast. Biophysical, environmental, economic, commercial and socio-political attributes were used to define the criteria used in the analysis. Site selection considered, *inter alia*, avoidance of sites with significant populations of threatened species, sites of archaeological, heritage or Aboriginal significance, Ramsar wetlands, breeding colonies, known critical habitat, mangroves, intertidal zones, acid sulfate soils, vegetation clearance and Great Barrier Reef and inshore reefs. Based on this analysis, Legune Station in the Northern Territory is the number-one ranked site. The site is highly modified, has existing access to ample fresh water, and is away from significant mangrove

areas. In CSIRO's opinion, *"…Legune Station has one of the highest levels of economic and environmental attributes required for the sustainable development of large-scale land-based marine aquaculture in northern Australia*" (Volume 5, Appendix 17).

Protecting biological diversity, and maintaining essential ecological processes, has also been a core focus of the engineering and operational design of the Project. For example, design has focused on: minimising the extent of the Project footprint; minimising earthworks movement; avoiding dredging; avoidance of Acid Sulfate Soils and Potential Acid Sulfate Soils; stormwater, erosion and sedimentation control; avoidance of the use of toxicants and antibiotics; hydrocarbon management; dust management; noise minimisation; traffic management; maximisation of water re-use/recirculation; use of settlement ponds, channels and environmental protection zones to treat effluent; use of outfall controls and optimisation of timing of discharge; breeding efficiency (i.e. the genetic improvements from the domestication program mean that prawns grow faster and require less feed over time); best practice for feed formulation (minimising marine ingredients - fish meal, fish oil); and incorporation of renewable energy component into the power generation demand.

Biological diversity and ecological processes will also be protected through the implementation of environmental practices as defined in the Project's Environmental Management System (EMS; see Volume 4, Chapter 2). The EMS documents the overarching policies and procedures for the management of impacts on the environmental values, commits to complying with applicable environmental legislation, regulations and other requirements, along with a commitment to continual improvement in environmental performance.

Additionally, compliance with ASC Shrimp Standards (ASC 2014b), requires that "*ASC certified farms minimise impacts on their neighbouring ecosystems in a number of ways, such as partial restoration of lost mangrove forest, the development and implementation of a biodiversity-focussed environmental impact assessment (B-EIA) and ensuring farms are not cited in critical habitats. Since shrimp farming often occurs along coastal areas, a permanent coastal barrier must be in place between the farm and the coastline*".

As part of this EIS a risk assessment process was undertaken to identify the key risks of the Project on the environment. The results of the risk assessment are presented in Volume 1, Chapter 8. The risk assessment and the EIS demonstrate how the Project will be constructed and operated to maintain biological diversity, essential ecological processes and life-support systems.

At the global scale the Project has the potential to relieve pressure on wild caught fisheries, and consequently protect biological diversity and maintain essential ecological processes. Global total capture fisheries production in 2014 was 93.4 million tonnes (FAO 2016). Total capture production in marine waters in this year was 81.5 million tonnes, and in inland waters was 11.9 million tonnes. Aquaculture production can reduce dependence on wild caught fish for both human consumption and non-food products. Figure 1 shows that 146 million tonnes of world fish production was destined for human consumption in 2014. By providing an alternative source of seafood, through large scale aquaculture, the Project can reduce the pressure on wild caught fish. As also shown in Figure 1, in 2014, 21 million tonnes of fisheries production was for non-food products, of which 15.8 million tonnes was used to produce fishmeal and fish oil. Alternative feed sources, such as Novacq, offer the potential to reduce the reliance on wild caught fish, relieving the pressure on global fisheries and contributing to the sustainability of the overall sustainability of the Project.

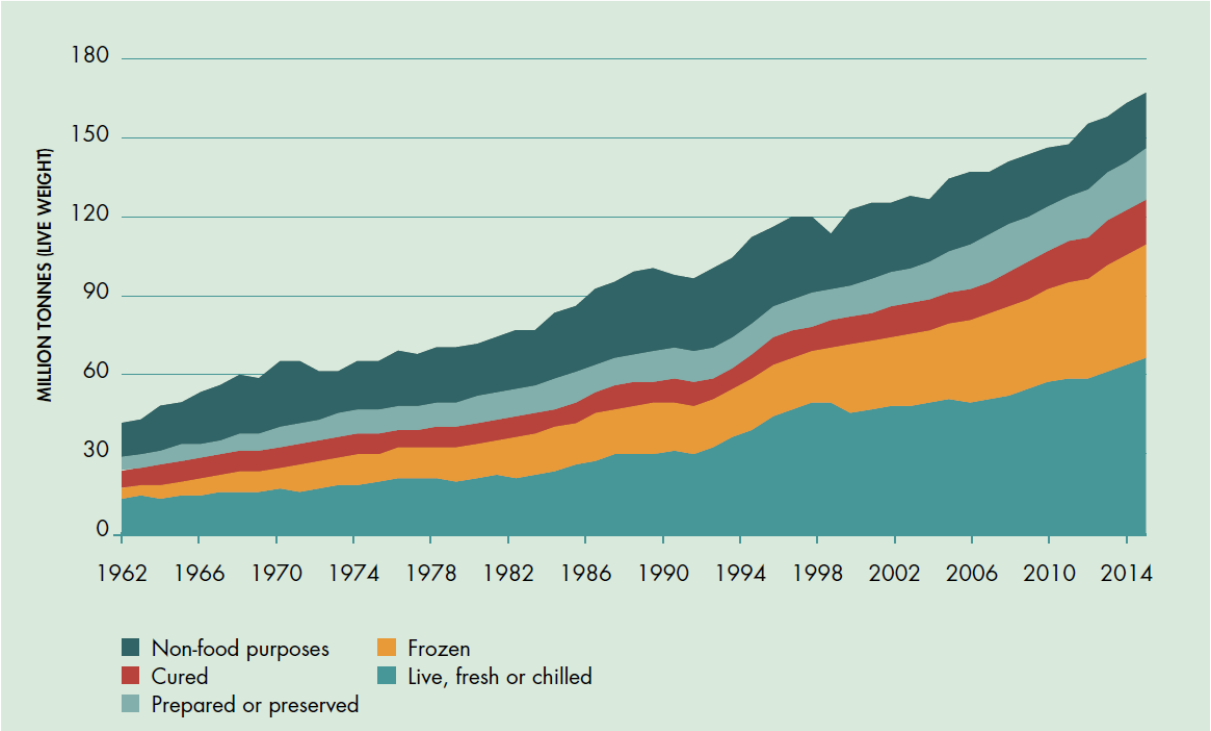

FIGURE 1 UTILISATION OF WORLD FISHERIES PRODUCTION 1962-2014

3.2 GUIDING PRINCIPLES

Decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations

Decision making has been informed by a number of key assessments including the pre-feasibility and feasibility assessments and the environmental impact assessment. These assessments integrated long and short-term economic, environmental, social and equity considerations. Particularly, the EIS process has involved a detailed assessment of these considerations, including analysis of both negative and positive impacts. The relevant sections of the EIS in which these aspects have been considered include:

- Volume 2 - Environmental Assessment
- Volume 3, Chapter 1 - Socio-economic
- Volume 3, Chapter 2 - Historic and Cultural Heritage
- Volume 5, Appendix 20 - Social Impact Assessment
- Volume 5, Appendix 21 - Economic Impact Assessment

The outcomes of these assessments have informed Project decisions on multiple levels including design and operational decisions, and decisions for mitigation, monitoring and environmental management.

Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation

The Project's EMS Manual (see Volume 4, Chapter 3) outlines the Environmental Management System for the Project. It documents the overarching policies and procedures for the management of impacts on the

environmental values, commits to complying with applicable environmental legislation, regulations and other requirements, along with a commitment to continual improvement in environmental performance. The manual outlines the strategic environmental management procedures, registers and forms for the Project as a whole. The EMS has been prepared with reference to:

- AS/NZS ISO 14001:2004 Environmental Management Systems - requirements with guidance for use
- AS/NZS ISO 14004:2004 Environmental Management Systems - general guidelines on principles, systems and support techniques
- AS/NZS ISO 9001:2015 Quality Management Systems.

The EMS is modelled on the AS/NZS ISO 14001 Plan-Do-Check-Act (PDCA) continual improvement model, as outlined in Figure 2, and designed for simple implementation, review and update. Based on the implementation of the Project's environmental management systems and practices, any risks of the Project to the environment will be prevented and addressed.

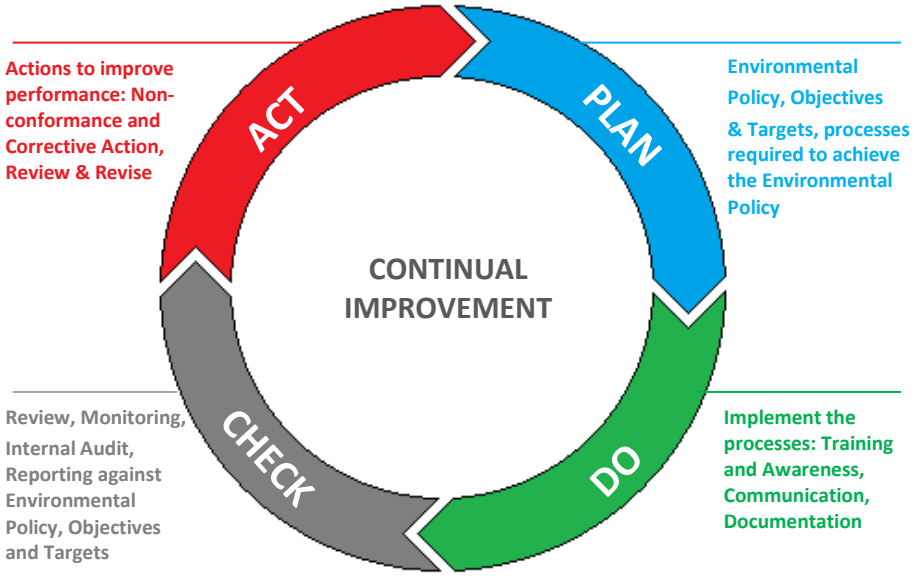

FIGURE 2 EMS CONTINUAL IMPROVEMENT MODEL

The global dimension of environmental impacts of actions and policies should be recognised and considered

Potential environmental impacts relevant to this Project at a global level are considered to include:

- impacts on migratory birds protected by international agreements
- impacts associated with sourcing of feed.

The potential impact of the Project on migratory birds has been considered through the terrestrial fauna and avifauna assessment (see Volume 2, Chapter 6). As migratory birds protected under international agreements are listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and given the Project is a controlled action, these impacts will also be considered by the Commonwealth Department of Environment and Energy through its assessment of the EIS. The impact assessment concludes that the construction and operation of the Project will not result in any significant impacts to listed migratory species under the EPBC Act.

For the Stage 1 Legune Grow-out Facility feed will be dry, cooked and pelletised as sourced from third party manufacturers. Australia currently has two suppliers of feed that service the domestic market, and the proponent also sources feed internationally. All imported feed is subject to strict Australian Quarantine Inspection Service requirements and prawn feed is regulated through the Department of Agriculture. The proponent has examined near-to-market feed innovations including CSIRO's patented Novacq technology but has not been able to trial the product. Feed manufacturers continually improve and modify primary feedstocks and the exact ingredients are usually considered commercial-in-confidence or Trade Secrets. The proponent has adopted an 'Ethical Sourcing Policy' for its feed to ensure it is sourcing its products in a responsible manner, it is providing clear guidance to its buying staff, and is protecting its corporate reputation and the reputation of its individual brands.

The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised

The Project will contribute to the development of a strong, growing and diversified economy with a range of economic benefits expected at the local, regional and national levels. Aquaculture production has been increasing globally over the last 10 years, with 6.9 million tonnes of crustaceans harvested in 2014 of an estimated first-sale value of US$36.2 billion (FAO 2016; Figure 3). Demand for fish and fishery products is expected to continue to increase, with 196 million tonnes anticipated to be produced globally in 2025 (FAO 2016). In Australia, aquaculture production is expected to increase by 20.6% by 2025, based on 2013-15 production levels.

An economic assessment undertaken for this EIS (see Volume 3, Chapter 1) demonstrates the contribution of the Project to the economy. Capital expenditure is expected to be A$411 million, and operational expenditure is A$125 million per annum average at steady state. Tax and royalty payments paid directly by the proponent are A$50 million over the period to 2032. The value of exports at full production is A$195 million per annum. The Project will contribute to the creation of 444 full time equivalent (FTE) workers over the two year construction period from 2017 to 2018. In steady state operation the Project will employ 334 FTE.

This Project creates a new export industry for northern Australia. The ultimate value of this industry has the potential to exceed the value of the northern live cattle export trade. Significantly, the region in which the Project will exist has a relatively narrow economic base consisting mainly of cropping (annual crops and sandalwood) and earth resources. Aquaculture is a highly complementary industry that will be able to operate year round.

The Project has the potential to underpin other economically and socially beneficial investments in the broader region, leading to improved outcomes for local residents. These outcomes are important for the area which is economically and socially isolated. They include such benefits as new and expanded prospects for local businesses, a range of skilled and less skilled employment opportunities, diversification of the economy, training and education opportunities, and improvements to local road infrastructure which will benefit a range of industries including the pastoral, tourism, recreational fishing industries as well as local residents.

The concrete expression of this intent will be captured by an Australian Industry Plan which is being discussed with the Australian Government and is being developed to meet the explicit requirements of both the Northern Territory and Western Australian Governments. The proponent has already opened a portal with the Industry Capability Network which facilitates transparent, open and competitive procurement.

This strong economic position is underpinned by environmentally sustainable practices. As discussed in the preceding responses, the proponent's commitment to environmental protection and management is demonstrable at each phase of Project development and implementation. Measures have been taken to avoid,

minimise and mitigate impacts on the environment through site selection, engineering and operational design, and through the development of appropriate environmental management strategies. The proponent recognises the need for environmental protection and, accordingly, is committed to compliance with the Australian Prawn Farmers Code of Practice, and will be pursuing accreditation from the ASC. Additionally, the Project will adhere to the Seafarms Sustainability Policy and Ethical Sourcing Policy.

Therefore, development of the Project provides the opportunity for diversification of the economy, whilst enhancing the capacity for environmental protection.

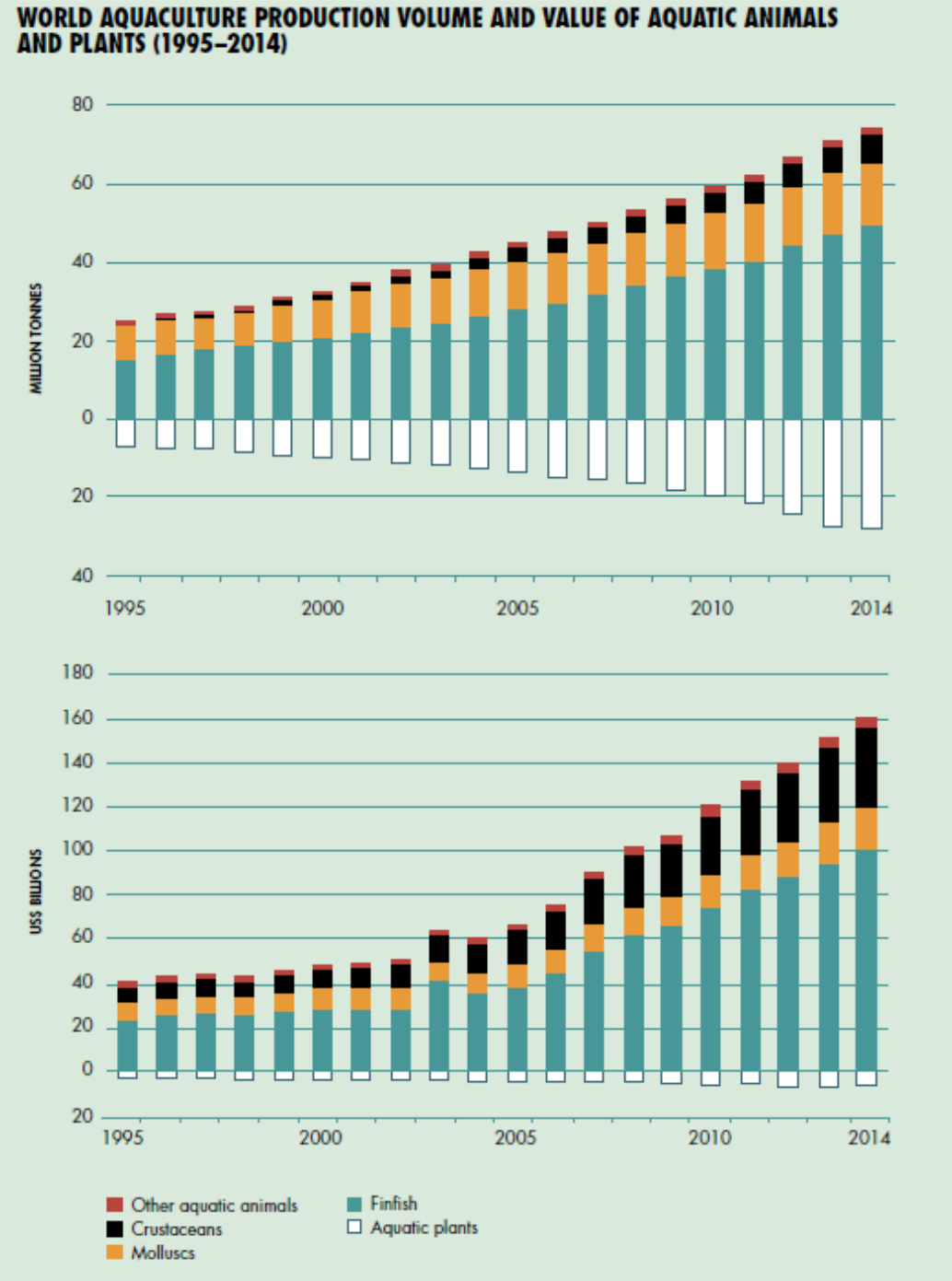

FIGURE 3 WORLD AQUACULTURE PRODUCTION VOLUME AND VALUE OF AQUATIC ANIMALS AND PLANTS (1995-2014)

The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised

Australia is well placed both scientifically, politically and geographically to develop a comparative advantage in aquaculture. While aquaculture has been practiced for thousands of years it has only recently begun to evolve on an industrial scale. Animal husbandry breeding and feed technologies in aquaculture have lagged land based animal protein production. Commercial investment and scientific research into all facets of the production of chickens, pigs, lamb and beef have all lead to substantial cost reductions in the production of these animals.

Until recently, due to the low level of technical investment and low labour costs, the comparative advantage in shrimp production and aquaculture has been enjoyed by countries with low labour costs, access to sea water and high temperatures. As result Thailand, Vietnam, China and Equador, among others, have held this advantage.

However, with the increasing industrialisation of aquaculture, and the increasing investment in technology, Australia is now well placed to achieve comparative advantage. The geography of Northern Australia is well suited to aquaculture, and Australia has some of the world's leading aquaculture research institutions in CSIRO and James Cook University.

The Project is the potential realisation of this comparative advantage. The Project is export focussed, generating high quality black tiger prawns that will be price competitive in global markets. The value of exports at full production is A$195 million per annum. Further, the development of the Project will continue to attract further capital and people into the industry, acting as a catalyst for the development of a globally competitive industry in Australia.

As previously outlined, this international competitiveness can be achieved in an environmentally sound manner. Environmental considerations have informed decision making at all stages of Project development and will continue to guide both the construction and operation of the Project. Through pursuing accreditation from the ASC, the proponent commits to accounting for both the environmental and social impact of farming.

Decisions and actions should provide for broad community involvement on issues which affect them

An extensive community consultation program has been implemented as part of the social impact assessment for this EIS. The full methods and outcomes of social consultation are described in the Socio-economic Chapter (Volume 3, Chapter 1). It involved local and regional community consultation, as well as engagement with government and industry stakeholders. The social impact assessment has drawn upon and incorporates the findings of the economic impact assessment (see Volume 5, Appendix 21), the workforce development assessment and the Historic and Cultural Heritage Chapter (Volume 3, Chapter 2). This integration ensures comprehensive assessment of potential social impacts arising from the Project.

Specific focus has been placed on Indigenous engagement and opportunities, in relation to social impacts broadly, and specifically towards the development of an Indigenous Land Use Agreement (ILUA) with the Gajirrabung-Wadanybang, Gajirrabung-Gurrbijim and Gajirrabung- Jarrajarrany[2] [3] native title holders[4].

[2] The Gajirrabung language and people are also referred to as "Gajerrong" and this name was used in the Federal Court's determination of Native Title holders over the Legune pastoral lease. Gajerrong is an exonym for the Gajirrabung in the language of the Miriuwung, a neighboring group with close ties to the Gajirrabung.

[3] Jarrajarrany is spelt "Djarradjarany" in the determination of Native Title. The draft EIS has adopted the orthography recommended by the Native Title Representative Body.

Discussions with Traditional Owners in relation to the development of an ILUA are fundamental to the assessment of overall social impact, the meeting of positive impacts and the mitigation of any social risk. It is a priority of the proponent to address the needs of Traditional Owners. The proponent has consistently acknowledged the rights of Traditional Owners and expressed its view that an Agreement between the Traditional Owners and the proponent in the form of an ILUA would be the preferred outcome. The proponent is aiming to settle the ILUA as soon as practicable.

The ongoing management of social impacts arising from the Project will be undertaken by the proponent in line with the ASC Shrimp Standard (ASC 2014a) insofar as these do not cut across or undermine agreements and undertakings which the proponent may reach with local and regional stakeholders including Traditional Owners. Based on the outcomes of the social impact assessment, economic impact assessment and Indigenous engagement process, the proponent has committed to:

- Obtain Aboriginal Areas Protection Authority certification.
- Develop ILUA with Traditional Owners.
- Develop and implement Heritage Management Plan and Cultural Heritage Management policy.
- Establish Traditional Owner Land Access Protocols as per ILUA.
- Establish Indigenous Employment, Training and Business Policy.
- Engage Indigenous rangers to monitor and manage impacts of increased public or Project Sea Dragon employees on Legune Station fishing, camping and cultural areas.
- Integrate Indigenous business and employment targets into ILUA and NT Government Priority Project agreements.
- Establish and implement a Local Employment Policy and targets.
- Integrate local business and employment targets into NT and Australian Government Priority Project agreements.
- Establish Project Sea Dragon Local Community Reference Group (PSDLCRG) for annual review of Project Sea Dragon social impacts and progress against targets and management actions.
- Develop Community Grievance Policy.
- Establish and implement a private property Recreational Fishery Access Policy, balancing public access with cultural, heritage, environmental, biosecurity, safety and other farm management concerns.
- Open and use Industry Capability Network.
- Provide local industry briefings for potential suppliers and contractors.
- Develop local expenditure targets and work with suppliers and service providers to ensure local products and services can be provided cost-effectively.

[4] Consent Determination for Legune Station lands under the *Native Title Act 1993* (Cwth) and *Native Title Amendment Act 1998* (Cwth) was reached in the Federal Court in May 2011.

- Establish, implement and monitor a Driver Safety and Fatigue Management Policy for employees and contractors.
- Establish and implement OHS policies as required under law.
- Comply with Australian Securities and Investment Commission requirements.

Through these measures the proponent ensures opportunities for broad community involvement on issues which affect them.

4 COMMITMENTS

The proponent is committed to the contributing to, and complying with, the objectives and principles of ecologically sustainable development. This includes:

- the implementation of strategies consistent with all relevant Sustainable Development Goals of the 2030 Agenda for Sustainable Development
- pursuing accreditation from the ASC
- incorporating all relevant ASC Shrimp Standard principles into management systems
- compliance with the Australian Prawn Farmers Code of Practice
- constructing and operating the Project in accordance with the Project's Environmental Management Plan (see Volume 4, Chapter 3), which includes the implementation of economic and social impact management procedures.

5 CONCLUSION

Through the implementation of sustainable aquaculture practices the Project satisfies the core objectives and principles of ecologically sustainable development. It provides a unique opportunity for economic growth, without sacrificing natural resources and the wellbeing of individuals and communities. The development of the Project offers the potential to contribute to global food security for a growing population, whilst relieving the pressure on world fisheries by providing sustainable protein alternatives, and by investing in alternative feed sources that break the reliance on fish meal and fish oil. While aquaculture has been practiced for thousands of years it has only recently begun to evolve on an industrial scale. Australia is well placed both scientifically, politically and geographically to develop a comparative advantage in aquaculture. The geography of Northern Australia is well suited to aquaculture and Australia has some of the world's leading aquaculture research institutions in CSIRO and James Cook University. The Project is the potential realisation of this comparative advantage.