Background

Aquaculture in Western Australia (WA) produces high quality, nutritious and safe seafood in a sustainable manner. It also provides a variety of other world-class products such as pearls and algae. There is significant opportunity for sustained growth in WA aquaculture to supply domestic markets and to compete in international markets. This opportunity will result in significant increase in gross value of production, enhancing the economic benefit to the whole State.

A key attraction of WA for aquaculture is its broad geographical range from the vast Kimberley through to the south coast and inland WA. This offers tropical and temperate environments for established aquaculture production systems and potentially new and emerging opportunities, such as algal-derived biodiesel and enhancement of recreational fishing through production of fish for stock enhancement.

Aquaculture offers important economic diversification to regional WA – the significant commercial investment required to establish and operate aquaculture businesses brings with it new skills, jobs and investment to the regions.

Aquaculture fosters innovation and requires technical support from various disciplines ranging from water quality specialists, engineers, oceanographic and marine experts, environmental scientists and animal health expertise. WA has access to a range of educational institutions and training providers offering these specialist skills. Development of the industry will further facilitate training and research in WA, and contribute to capacity building and career pathways.

The WA aquaculture industry also operates within a robust legislative and management framework, the establishment of which involves extensive public consultation processes to build trust and ensure aquaculture develops with strong community support and provides a foundation for environmentally sound operations.

The Government of Western Australia is committed to the development of aquaculture within WA through funding of $1.85 million for the development of investment-ready aquaculture zones in the Kimberley and Mid-West, commitment of funds for third party sustainability assessment of fisheries in WA including the opportunity for aquaculture assessment, and for finfish aquaculture pilot projects supported by Royalties for Regions.

Over the next five years, the Department of Fisheries (Department) anticipates the growth of aquaculture will be driven by “performing sectors”, likely to be represented by marine species groups such as finfish, abalone, algae and prawns. The emergence of new technologies and sectors will further diversify the industry.
Introduction

Global and National Context

In 2012, the global aquaculture production of food fish and algae increased to 90.4 million tonnes (with a value exceeding US$144 billion) and is estimated to exceed 96 million tonnes in 2013. Globally the fastest-growing food production sector, aquaculture, is set to become the major source of seafood and other marine products to meet the growing global demand as sustainability requirements limit rapid increases in production from capture fisheries. New challenges need to be met for global aquaculture to meet its potential while ensuring economic, social and environmental sustainability.

In Australia, the 2012-13 gross value of commercial fisheries production (capture fisheries and aquaculture) was $2.4 billion. The gross value of aquaculture production was $1 billion and accounted for 43 per cent of the gross value of Australian fisheries production. The largest Australian aquaculture industry sectors are those producing Atlantic salmon in Tasmania and southern bluefin tuna in South Australia, with the former now comprising the most valuable seafood production sector in Australia.

Aquaculture Production in Western Australia

In contrast to the status of global fisheries, the vast majority of commercial capture fisheries in WA are in a long-term sustainable condition under strong formal management arrangements. The total gross value of production for WA commercial fisheries and aquaculture production in 2012-13 was $427 million, with aquaculture (including the pearling industry) contributing approximately $96 million (equal to 22 per cent of total production value). While recognising the sustainability of the State’s fisheries, aquaculture is likely to represent the strongest growth opportunity.

Based on the silver-lipped pearl oyster (*Pinctada maxima*), the pearling industry is a strong performer in WA with an annual farm gate value reaching as high as $190 million during the late 1990s. The 2012-13 value of $79.2 million for pearling reflects the impact of the 2008 global financial crisis although recent indications show stronger market growth and a positive outlook for the sector in WA.

Aside from *P. maxima* pearl culture, WA aquaculture has continued to expand. Since 2007, production has shown strong growth as finfish aquaculture, in particular, has increased. The estimated value of WA aquaculture (excluding pearling) in 2012-13 was $16.8 million with finfish aquaculture comprising 73 per cent of the total value. The production of cultured abalone is growing substantially. There is also a well-established and highly valuable algae industry in WA not included in the production figures above.

Based on a range of species and production environments, the WA aquaculture industry is growing and diversifying and there are positive signs growth will continue. Growth is likely to be driven in marine species groups such as finfish, abalone, algae and prawns.

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1. World review of fisheries and aquaculture; the State of World Fisheries and Aquaculture 2014.
3. Production figures for algae are commercial in confidence.
while market improvement in the pearling sector will see it continuing to be a strong performer. Other sectors, which include species groups such as mussels, marron and other fresh water species, also contribute to the diversity of WA aquaculture. Various emerging sectors with capacity for growth include species such as coral, live rock, octopus and artemia; and new species groups such as kelp and seaweeds may emerge.

Impediments to investment in aquaculture in WA include the high exposure of the coastline (there are few sheltered bays and inlets), a high-cost operating environment and regulatory requirements to secure timely environmental approvals. If these investment hurdles can be overcome, industry growth can be accelerated.

Government Commitment

The WA Government recognises and supports aquaculture as a legitimate user of the State’s land and aquatic resources and as a strategically important industry. The Government will work with industry to support future aquaculture industry growth by establishing a thriving, profitable and sustainable industry. To support aquaculture, the WA Government commits to the following.

Support for Existing Aquaculture Industry

- Work with industry to:
  - maintain access to important aquatic species and marine areas for sustainable pearling and aquaculture development; and
  - ensure maintenance and development of pearling and aquaculture industries are considered in marine planning processes, including creation of marine reserves and developments within the resources sector.

Aquaculture Zones and Infrastructure

- Establish aquaculture zones in areas that offer sustainable competitive advantages for the establishment and operation of aquaculture activities, at both enterprise and industry levels. The establishment of aquaculture development zones significantly reduces the investment risk and cost associated with aquaculture in WA, through streamlining environmental approval processes.
- Having established an aquaculture zone in the Kimberley, the Government will prioritise the completion of a zone in the Mid-West regions to support and build on existing finfish projects in the area.
- Explore opportunities and feasibility to develop further zones or aquaculture development in the southern and Gascoyne/Pilbara regions.

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4 Western Australian Government Fisheries Policy Statement, March 2012
• Work with industry to identify opportunities for a multi-species mollusc hatchery to support growth in existing and emerging sectors such as mussels, pearl oysters, edible oysters and scallops.

Streamlining and Reducing Regulation

• Continue to improve the efficiency and transparency of regulatory processes by:
  » managing environmental issues through enterprise-level Management and Environmental Monitoring Plans;
  » managing aquaculture zones according to an integrated management framework;
  » increasing regulatory efficiency by integrating the licensing, environmental management and biosecurity frameworks; and
  » increasing opportunities for self-regulation by the industry through recognition of Industry Codes of Practice.

• Strengthen rights of aquaculture (and pearling) licence holders through:
  » granting of longer-term licences to build investor confidence and facilitate innovation; and
  » aligning the terms of the licence and lease for projects with licences attached to leases.

Industry Development and Investment

• Facilitate in co-operation with industry:
  » investment attraction through trade promotions, promotion of aquaculture zones and other development opportunities including targeted investment-oriented opportunities, presentations to visiting delegations and participation in relevant Government initiatives;
  » support for selected development initiatives with capacity for growth and smaller projects that demonstrate commercial reality; and
  » support for research activities considered a priority for the relevant industry sector or required to support government policy decisions.

• Work with the Commonwealth to establish regulatory and policy frameworks to facilitate aquaculture in Commonwealth waters.

• Support aquaculture initiatives that enhance recreational fishing opportunities including production of fish for stocking purposes and building on the ability of sea cages deployed for aquaculture purposes to attract wild fish.
• Support national initiatives to facilitate industry growth as a signatory to the National Aquaculture Statement.

• Support industry implementation of credible certification schemes that assist the sustainable development of the pearling and aquaculture industry, including Marine Stewardship Council or Aquaculture Stewardship Council certification.

Fish Health and Biosecurity

• Continue to provide a strong fish health capability and the provision of effective diagnostic services to support development and growth of the WA aquaculture industry. Services will include disease investigation and response to known and emerging disease issues. Opportunities to access specialist fish veterinarians and develop/maintain specialist laboratory-based fish health expertise will be pursued.

• Support investment and research into biosecurity initiatives that safeguard the WA aquaculture industry and aquatic environment.