Oyster industry risk management

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Disaster Relief

The size, severity, timing, location and impact of events that pose a risk to an oyster business are difficult to predict, and our changing climate increases the uncertainty about future risks.

Traditionally, financial support from the government was offered to primary producers to get through the aftermath of an adverse event (eg drought assistance). However nationally, emergency management is moving its focus towards pre-event preparedness.

Natural disaster relief and recovery programs are now structured to provide immediate short term assistance only. The majority of the cost of re-building and restocking after a major disaster event must be borne by industry. Therefore industry needs to plan well ahead to make sure they are ready.

Flood damage to an oyster raft in Nambucca River

Risks to look out for

Some areas of risk to an oyster business and to the oyster industry as a whole include:

- disease;
- environmental extremes - floods, heat kill, drought and storms;
- climate change;
- water quality - harvest area contamination, toxic algae blooms;
- personal injury;
- public liability; and
- the economy and oyster markets

The oyster industry is susceptible to adverse environmental conditions and disease, as well as risks associated with the changing financial climate.

Natural disaster relief does not cover disease related events and at this time there are no cost-sharing arrangements in place between the aquaculture industry and government to cover these events.

The impact of changes to interest rates, market prices and the costs of business inputs need to be considered well before they occur. Business succession is a longer term risk and in most cases will affect retirement planning. This risk needs to be factored into the business plan many years before retirement age.

At the business level, financial resilience is also important so that the business can survive a period of little to no income and rebuilding following an event. In some cases, businesses have improved their resilience by:

- building infrastructure that is resistant to flood and storm damage;
- diversifying the species and cultivation areas to manage the risk of pest and disease incursion and the risk of market uncertainty; and
- undertaking training in risk management and putting in place a risk management plan.

It is essential that both the industry as a whole and individual businesses build resilience to get through difficult times.

Climate change

The timing and impact of climate change on the oyster industry is uncertain. Oyster growth may be impacted by changes in air and water temperature,

sea level rise, frequency of extreme events, changes in salinity and food source and the biogeography of pests and diseases.

Adapting to climate change

The best way to deal with the uncertainty surrounding climate change is to maximise the industry's ability to adapt to changes when they occur. This may be done through developing knowledge-action networks such as the Oyster Information Portal (http://www.oysterinformationportal.net.au); developing monitoring programs (for example, see Nash et al, 2013); and working together at an estuary or regional level, for example preparing estuary-wide Environmental Management Systems.

Environmental Management Systems

A good first step towards preparedness for adverse events and climate change is to include risk management in the estuary Environmental Management System (EMS). An EMS is a process through which oyster farmers can determine which risks pose the biggest threat to the industry. The process systematically identifies, assesses and prioritises all risks then constructs a plan to mitigate these risks. This helps to build a clear vision for the future.

Risks can result from internal oyster farming practices (eg. rising costs of tar treated timber disposal), as well as external catchment-based activities (eg. livestock effluent in creeks). Addressing external risks requires working closely with other stakeholders such as neighbours, Local Land Services (LLS) and local councils.

The EMS process helps farmers to achieve better outcomes when negotiating with catchment managers, opens the door for funding opportunities, and assists in the development of partnerships that improve environmental conditions in their catchment.

Many NSW oyster farming estuaries have already prepared EMS documents with assistance from Local Land Services (LLS) and OceanWatch Australia. For an insight into how south coast oyster farmers have effectively used an EMS, watch the South Coast Oyster Growers and Australia's Oyster Coast short documentary videos at vimeo.com/76913593 or vimeo.com/69287281.

More information can be obtained from Oceanwatch Australia at: http://www.oceanwatch.org.au/our-work/ems-nsw-oysters/.

Macleay River oyster farmers discussing risks

Assistance and support

Assistance and support with risk management planning is provided by:

- Rural Support Workers
  http://www.dpi.nsw.gov.au/aboutus/services/community/support-workers
- Rural Financial Counsellors
  http://www.daff.gov.au/agriculture-food/drought/assistance/assistancerural-financial-counselling-service
- Rural Assistance Authority
  http://www.raa.nsw.gov.au/
- NSW DPI
  http://www.dpi.nsw.gov.au/agriculture/emergency

Reference

Nash C, Rubio A, Davies H, Gietzelt A, Keating J 2013, Monitoring the Canaries of our catchments - A cooperative and innovative monitoring program quantifying oyster performance and relationships with estuarine health. Technical Report submitted to the Southern Rivers Catchment Management Authority and Bega Coast Oysters. (http://www.oysternews.com.au/images/130805_Nash_Rubio_SRCMA_OMP.pdf)

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