

Emergency management— there's nothing fishy about it

Scott and East report on the importance of emergency management training and the relevance of exercises as training tools

Abstract

Within Australia, most aquaculture industries are relatively new and have been established in the past 30 years. Overseas, various diseases have devastated the aquaculture industries with on-going losses estimated to be of the order of \$3 billion per annum. Australia has experienced few of these disease epidemics and its favourable health status enables Australia to market its seafood at premium prices and without health-based trade impediments. Over the past five years, a national program of exercises has been conducted to train both government staff and industry members in the management of disease emergencies.

Introduction

Australia is a world leader in the field of aquatic animal health management. While many fisheries and aquaculture industries around the world have suffered major production losses through the impact of disease epidemics, Australia has avoided many of these epidemics

and retains a favourable disease status. This status facilitates international trade and the receipt of premium prices for Australian seafood exports.

However, in the words of Thomas Jefferson "*The price of freedom is eternal vigilance.*" The ease and speed with which disaster can arrive was clearly demonstrated in 1995 when a major die-off occurred in the Australian pilchard population along the coast from Geraldton in Western Australia across the southern Australian coastline and up the east coast to Noosa Heads in Queensland. The resulting government inquiries into the die-off found that Australia's emergency response capability was limited and ad hoc in nature.

The Government response to these inquiries lead to the development of AQUAPLAN—Australia's National Strategic Plan for Aquatic Animal Health 1998–2003. AQUAPLAN included eight programs that addressed all aspects of aquatic animal health, from legislation,



Black lip abalone

policies and jurisdiction to surveillance, monitoring and reporting. Program Four—Preparedness and Response—focused on the development of effective institutional arrangements to manage disease emergencies, and two integral components within this program were the development of AQUAVETPLAN and the conduct of exercises to test the capability and capacity of Australia's State and Territory authorities to manage emergency disease incidents.

AQUAVETPLAN is a series of technical response plans that describe the proposed Australian approach to an aquatic animal disease emergency event. It comprises a series of manuals outlining control strategies for aquatic animal disease emergencies in Australia. The manuals provide guidance based on sound analysis, linking policy, strategies, implementation, co-ordination and emergency management plans.



Atlantic salmon



Marron—a crayfish from Western Australia

Planning however is only half the story. Those who need to implement these plans need to be familiar with the plans and the plans need to be both realistic and practical. With the development and adoption of AQUAVETPLAN by Australian and State and Territory governments, the conduct of exercises became both an important tool to test Australia's emergency management capability and capacity and an effective way to train aquatic animal health officers nationwide in the appropriate AQUAVETPLAN manuals.

Over the past five years, the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) has conducted eight exercises at the State and Territory government level and in 2003 conducted the world's first national simulation exercise focused on the aquaculture industry.

Small fish...

The program of exercises at the State and Territory government level was conducted under the auspices of the Federal Budget Initiative entitled *Building a National Approach to Animal and Plant Health* and was designed to provide individual jurisdictions with training in the management of an aquatic animal disease emergency. Developed in conjunction with officers from the relevant state department of

fisheries (or primary industries) these simulation exercises have also tested the adaptation of the generic AQUAVETPLAN Control Centres Manual to the specific government framework within each State, as well as addressing any areas of concern highlighted by these state officers.

To date, DAFF has conducted exercises with:

- the Queensland Department of Primary Industries and both the prawn farming and redclaw crayfish industries;
- the Tasmanian Department of Primary Industry, Water and the Environment and the salmon industry;
- the Victorian Department of Natural Resources and Energy and the aquaculture and trout industries;
- the Western Australia Fisheries Department and both the pearling and freshwater crayfish industries;
- the New South Wales Fisheries Department and the oyster industry; and
- the South Australian Department of Primary Industries and Resources and the abalone industry.

For the most part, these exercises have been desktop in nature, simulating the work of either a State Disease Control

Headquarters (SDCHQ) or a Local Disease Control Centre (LDCC) during the two-day exercise. Over the two days, participants from the State and Territory government Departments of Fisheries (or Primary Industry) and industry representatives took on the role of SDCHQ or LDCC members. They carried out tasks such as investigating the source of infection; tracing fish and products forward from the infected farm; tracing them back to the source; communicating with industry, media and ministers; developing response plans; and resource identification.

An integral part of these exercises has been the involvement of industry in the conduct of each exercise. While emergency management policies and frameworks are developed by governments, it is the people on the farm who will have to bear the consequences of these policies and carry out any activities deemed necessary during a response. Industry involvement serves to improve the practicality of emergency response procedures, as well as highlighting the importance of emergency preparedness to industry and fostering a good working relationship between industry and government.

While DAFF has provided reports on these exercises to the relevant agencies to provide guidance on where improvements can be made, perhaps the greatest benefit of the conduct of exercises is the training of officers to work in an "emergency situation" prior to facing the "real thing".

The big fish...

While the majority of other countries continue to focus on emergency management training in the terrestrial sector, Australia is again leading the world with the conduct of the first national exercise focused on the aquaculture industry.

Developed with funding from the Fisheries Research and Development Corporation, *Exercise Tethys* was aimed at addressing issues of inter-jurisdictional¹ communication and co-operation in response to an emergency disease incident, and heightening the awareness of these jurisdictions to the potential for incursions of emergency disease in Australia's aquatic environment.

The exercise, held over two days, involved the active participation of all Australian government jurisdictions (except the Northern Territory), CSIRO and three producer organisations of the NSW Silver Perch Growers Association, the Tasmanian Salmonid Growers Association, and the National Aquaculture Council.

The exercise scenario and activity incorporated a simulated disease outbreak that spread from the initial infected premise to a total of seven farms and two enclosed lakes in three States as well as an export shipment of live fish. The interstate movement of infected fish required a large amount of communication between jurisdictions and a high level of co-operation. All seven participating State and Territory governments were involved in disease surveillance activities, controls of fish and product movement and national decision-making and resource allocation. The aquaculture industry participated at both a national and State and Territory level (through the National Emergency Animal Disease Management Group mechanism); and the activation of SDCHQ's and the Consultative Committee on Emergency Animal Disease (CCEAD).

The exercise did not incorporate physical field operations, actual communications with other countries or the establishment of local disease control centres, although these activities were simulated as required.



Government staff tackle the outbreak of a disease in the oyster industry under the watchful eye of exercise facilitator, Karina Scott



A group of farmers tackle the on-farm aspects of disease management during a simulation exercise in the Queensland prawn industry

Exercise Tethys was a functional exercise in that it took place in an operational environment and required participants to actually perform the functions of their roles. Emergency operations centres were established and participants were required to meet and make decisions. Among other things, participants had to:

- communicate across five time zones;
- investigate the source of infection;
- deal with and identify resources required for an immediate and a protracted response; and
- communicate with the media, ministers, departmental

executives, industry, and the public.

Again, industry involvement in the simulation was an integral part of the success of its conduct. Through the involvement of the three industry groups the importance of aquatic animal health and emergency preparedness was highlighted at the national level. It gave producers the opportunity to see how the government emergency management framework would work in an emergency situation, and how industry would be involved in the response.

Evaluation of the outcomes of the exercise highlighted that

¹ The term "jurisdiction" refers to State/Territory Governments and the Australian Government as whole entities, as opposed to individual agencies within the State, Territory or Australian governments.



communication, consultation and co-operation between jurisdictions are vital elements of an emergency aquatic animal disease response. The exercise report made a number of recommendations that aim to improve pre-existing frameworks and resources in order to develop more robust communication systems and procedures for an emergency response. A number of recommendations also came out of the reports of the jurisdictional debriefs, held in late November 2003. In some jurisdictions, actions are already being taken to address these recommendations.

Overall there was found to be a general knowledge and understanding of current emergency response procedures and frameworks amongst jurisdictions, but more training of a broader range of officers is required.

Over the next wave...

Overall, the conduct of exercises focused on the aquaculture industry at both the State and Territory and national level has not only provided training to a large number of officers nationwide, but has demonstrated the importance of emergency management training and highlighted the continuing success of exercises as a training tool.

But the work doesn't stop there. With aquaculture industries increasing production to meet a proposed production target of \$2.5 billion by 2010, the number of farms will increase. Farms may be closer together and stocking densities may increase all the factors associated with increased disease problems. In international trade, disease problems are increasingly becoming a *de facto* barrier to trade and it is only with continued training and enhanced preparedness that Australia will be able to respond effectively and efficiently to whatever is waiting over the next wave.

Authors

Karina Scott (B.A/B.Sc) is a scientist with qualifications in marine biology and journalism. She has experience in emergency animal disease responses in both the terrestrial and aquatic sectors. Karina has been involved in three exercises including the design and conduct of Exercise *Tethys*.

Dr Iain East is a research scientist with 15 years experience in diseases of livestock including experience with viral diseases affecting the prawn industry. In the past five years Iain has conducted nine exercises for Australian State and Territory governments and a range of aquaculture industries.