24 May 2002

Ms Margot Kerley
Secretary
Joint Committee of Public Accounts and Audit
Parliament House
CANBERRA ACT 2600

REVIEW OF AUSTRALIA'S QUARANTINE FUNCTION

Dear Ms Kerley

On behalf of the Australian Society for Parasitology, I have attached our submission to the Committee's inquiry on Australia's Quarantine Function.

The signed original is in the mail.

We would be happy to meet with the Committee if required.

Yours sincerely

RC Andrew Thompson
Professor of Parasitology
President, Australian Society for Parasitology

cc A/Professor Mark Sandeman
Head of Agricultural Sciences
Vice-President, Australian Society for Parasitology
School of Life Sciences
La Trobe University
Vic 3086

Review of Australia's Quarantine Function

The Australian Society for Parasitology welcomes the opportunity to make a submission to the Review of Australia's Quarantine Function. The Review is particularly timely for two reasons:

1. The threats to which Australia is exposed in terms of its biosecurity are probably greater than at any time in this country's history. Trends have been identified in both the developed and developing world which are likely to lead to an upsurge in infectious disease emergence (Cohen, 2000). The future impact of emerging and exotic diseases is greatly dependent upon human activity. However, factors associated with global warming and the globalisation of trade put Australia at particular risk in view of our proximity to endemic regions in South East Asia, and the increasing likelihood that introduced diseases could become established (Sandeman and Warner, 2002). Parasite migration due to global warming will put increasing pressure on the tick control program and spread of mosquitoes carrying encephalogenic viruses, malaria and filarial worms.

2. The realisation of the enormous impact that an outbreak, such as that caused by foot and mouth disease in Britain, can have not only on livestock production, but also on trade and tourism.

In light of the above, we should like to emphasise three issues that we consider should be central to this Review:

- Pre-border surveillance and quarantine capacity
- Australian wildlife
- Education and training

<u>Pre-border surveillance and quarantine capacity</u>

Australia undoubtedly has one of the best quarantine services in the world but its activities must increasingly extend to pre-border areas. The effectiveness of any quarantine agency is dependent not only on adequate resources but also on access to, and availability of, information to identify threats to a country's biosecurity. Such information is acquired by surveillance that requires the availability of the latest 'tools' with which to undertake this surveillance, as well as data networks to interpret data generated.

Australia's biosecurity is most likely to be compromised through the entry of diseases from the South East Asian Region. We are already seeing changes in the distribution of diseases in this region as well as the appearance of 'new' diseases. It is clearly important for Australia to know what diseases are present in the region and their distribution. Many developing countries in the SE Asian region have little detailed information about the

distribution and prevalence of many endemic diseases, let alone either qualitative or quantitative information about their quarantine related problems:

- what exotic diseases are important to them? and why? what measures should they take to achieve biosecurity?

It is in Australia's interests to improve the regional development of quarantine capability with the logical flow-on of improving Australia's preparedness to respond to any threat to its biosecurity.

We need to develop a culture of working together with these countries in helping to protect their biosecurity and in turn our own. This will necessitate technology transfer as well as an extension of Australia's surveillance activities to pre-border regions.

The Northern Australian Quarantine Strategy now extends via cooperative agreements to Indonesia and Papua New Guinea. However, pre-border surveillance activities must be structured in the most optimal way and be sufficiently comprehensive to produce quantifiable data that can be subjected to appropriate analysis and interpretation.

It follows that it is in Australia's own national interest to protect these regions, particularly those in which it trades and may trade in the future. This will require an extension of current surveillance activities in cooperation with countries in the region. Better network capacity in regional countries will enhance liaison on quarantine issues especially those concerned with common threats. The provision of technical assistance from Australia in regional countries will enable our quarantine service to identify and respond to diseases from the region that threaten Australia's agricultural industries.

A future extension of pre-border quarantine activities will be enhanced by further developing links with organisations such as ACIAR, as well as international agencies such as FAO and WHO.

In this context the example of East Timor is an immediate concern. The social disruption and lack of facilites and expertise in East Timor will pose disease problems well beyond the limited abilities of the new government. The incidence of Malaria, encephalogenic viruses and animal diseases will increase, and the close proximity of this Country and our frequent contacts will necessitate heightened quarantine surveillance. However, such surveillance would be immeasurably assisted by a program of disease monitoring and control in East Timor. Such a program should be an urgent Australian Government priority as part of our aid and development programs for this new but vulnerable State.

Australian Wildlife

Australian quarantine should play a more active role in monitoring the disease status of Australian wildlife. At present this is largely restricted to targeted species often in border areas where the risks of entry of exotic diseases is greatest. A more comprehensive

surveillance strategy is required in which organisations such as AQIS coordinate surveillance of wildlife diseases with state and territory conservation agencies in order to determine what diseases are carried by Australia's indigenous and introduced fauna. This is essential in terms of evaluating the susceptibility of wildlife to exotic diseases but also in terms of endemic diseases and conservation. Three recent examples of parasitic diseases emphasise this need. Firstly, the discovery of *Trichinella* in Tasmanian marsupials, the significance of which has increased with the discovery of other species of this parasite in Papua New Guinea and New Zealand. Secondly, the reported occurrence of *Leishmania* in East Timor which if confirmed raises the question of the susceptibility of native fauna to such diseases and their potential role as reservoirs. Thirdly, the recent finding of an exotic species of *Babesia* in dogs in Australia, which raises the question of whether Australian wildlife could act as reservoirs as recently shown to be the case with wildlife in the USA. Finally, in terms of conservation, a recent study undertaken in Indonesia by Australian researchers has demonstrated how exotic diseases, such as Surra, could devastate our wildlife populations (Reid *et al.* 2001)

Education and training

Perhaps the biggest threat to Australia's future quarantine function is a national decline in education and research training. This is particularly so in infectious disease disciplines such as parasitology, as well as epidemiology in the context of emerging and exotic disease surveillance. Australia needs a strategic national approach to training and education. This should ensure a steady supply of graduates at different vocational levels in order to meet the needs of organisations such as AQIS as they re-focus their activities over the next decade. It is not just a question of being able to supply organisations charged with Australian Quarantine and Biosecurity with appropriately trained personnel, but also personnel with the necessary expertise to extend Australia's quarantine surveillance activities to pre-border areas in terms of both implementation and training. Unfortunately, we have already seen the demise of departments specialising in areas of infectious diseases in Australia, such as Parasitology in Queensland, and appropriate training in medical schools is minimal. This situation must be addressed if we are to provide Australian quarantine with the appropriate capability both offshore and within Australia.

References

Cohen, M.L. (2000) Changing patterns of infectious disease. *Nature* 406,762-767

Reid, S.A. *et al*. (2001) The susceptibility of two species of wallaby to infection with *Trypanosoma evansi*. *Aust. Vet. J.* 79, 285-288.

Sandeman, S and Warner, L (Eds) (2002) An Investment in Human and Animal Health: Parasitology in Australia. *FASTS Occasional Paper Series*. No.4. Federation of Australian Scientific and Technological Societies. Deakin West, ACT.