



On the Quarantine FRONTLINE

We hear plenty, and rightly so, of the efforts of our defence force troops in East Timor, Afghanistan and other parts of the world. We don't hear much, however, of the efforts of a group of lower profile but very important 'troops' also operating on and to the north of Australia's borders—the people implementing the Northern Australian Quarantine Strategy. *About the House* travelled with parliament's Public Accounts and Audit Committee to investigate.

Story and photos: Geoff Dodd





Committee Chair, Bob Charles (centre) examines a mosquito trap at Cairns port.



NAQS coordinator Shayne Ahboo (right) explains the fly trapping equipment to committee members Alex Somlyay and Alan Griffin.



An illegal vessel beached at Masig (Yorke) Island.

Screw-worm fly. Mango pulp weevil. Melon and papaya fruit fly. Asian honey bee. Giant African snails. Rabies. Dengue fever. Japanese encephalitis. Foot and mouth disease.

All lurking just to our north in south-east Asia, along with an array of other diseases, pests and weeds. Posing multi-million dollar threats to livestock, crops, native flora and fauna, tourism and public health, many of these nasties are on the march southwards.

Standing in their way is a team from the Australian Quarantine and Inspection Service (AQIS); staff of the *Northern Australian Quarantine Strategy* (NAQS).

NAQS is a three-pronged strategy operating right across the top of Australia (and further north in neighbouring countries), from Broome in the west to Cairns in the east.

It combines border controls, scientific research and public awareness to protect Australia's environment, agricultural and horticultural industries, and animal, plant and human health.

The NAQS team—some 31 operational and 20 scientific staff—has a particular focus on improving the integrity of the quarantine border in the Torres Strait and on Cape York Peninsula, the closest parts of Australia to any other nation.

In fact, it's difficult to appreciate just how close Australia is to Papua New Guinea (PNG) until you're there.

Looking across the five-kilometre stretch of water between the Australian Torres Strait island of Saibai and the Western Province of PNG, it's as if you could throw a stone across. You can certainly navigate a boat across. In fact, you can travel right around the Torres Strait islands by small boat. The dinghy or tinny is known as the "Torres Strait ute", and the approximately 100 islands of Torres Strait provide stepping stones to the Australian mainland (it is 160 kilometres from PNG to the tip of Cape York).

This geographic proximity presents a challenge, with the ever-present danger of pests and diseases in PNG moving across, either on the wind (mosquitos can be carried hundreds of kilometres), within foods or food scraps, within traded goods, on animals, soil or on people.

The 1985 Torres Strait Treaty allows free movement of traditional peoples from the Western Province of PNG in and out of the Torres Strait Protected Zone (see map, page 17). In 2000–2001 there were some 2,700 such movements. There is a list of items that can and cannot be traded, and large shore-side signs clearly illustrate this.

The potential threat posed by that traditional movement is increasing with the escalating

movement eastwards of people, animals and goods within Indonesia, and in particular the establishment of significant cattle populations on islands of eastern Indonesia. Additional dangers are also being posed now by increases in illegal fishing and illegal immigration, and also international yachting. All have the potential to inadvertently introduce pests or spread diseases.

[A man, believed to be Indonesian, was recently found on Masig (Yorke) Island in the middle of Torres Strait, where he was nabbed by the local Quarantine officer, Hilda Mosby. He had sailed from the PNG island of Daru in a home-made vessel, which remains beached on Masig (see photo above).]

The potential damage from such incursions is enormous; at risk are billions of dollars of horticultural and agricultural industries, as well as public health. This is why quarantine is so important, and why it received its share of an extra \$600 million granted to border agencies in the 2001/2002 federal budget. It is Australia's quarantine function—one arm of which is the Northern Australia Quarantine Strategy—that is being scrutinised by the Public Accounts and Audit Committee.

So, how does the NAQS system operate?

NAQS is tasked with identifying quarantine risks to northern Australia, and providing early warning of quarantine pest incursions.

First, risk analysis is conducted to identify the pest and disease risks which exist in the region. Scientists are sent into the field within Australia and our near neighbours. From this research and analysis a disease and pest target list is created.

Ongoing monitoring and surveillance strategies and control programs are then developed and implemented.

Monitoring occurs in northern Australia, and off-shore, in PNG, East Timor and Indonesia, under special memoranda of understanding. Methods of monitoring include establishing 'sentinel' herds of cattle and pigs, which are bled regularly to check for blood-borne diseases; trapping wild birds for similar testing; trapping flies and other insects, such as mosquitos; visiting and testing commercial and domestic animal herds; and targeting and autopsying animals.



Nigel Scullion (Senator for NT) and John Cobb (Member for Parkes, NSW) inspect a fly trap on Saibai Island.



Saibai Island (right) and Papua New Guinea (in the distance)—separated by only a narrow stretch of water.



Containers on the dock at Cairns seaport.



An AQIS officer inspects a container.

The frequency with which animals and traps are checked depends on the risk level assigned to the area; NAQS breaks its area of operations into five different risk zones, from very high to very low.

Survey frequencies are graded accordingly, from once every five years for the very low risk zones to two or more times a year for the very high risk zones. These are usually general surveys of cultivated and naturalised plants and animals, with particular emphasis on target organisms.

High risk areas also include ports where goods are unloaded. All containers entering from identified risk areas are now cleaned

externally, and those from high-risk areas are also cleaned internally.

The giant African snail is often found in containers unloaded in Townsville and Darwin, but so far has not been found in Cairns.

“I’ve been looking for giant African snails for 10 years, and never found one,” a hose operator told *About the House*. “I tell you what I have found though. Cats. The silly buggers at the other end sometimes throw cats into the containers. They think it’s funny. I can tell you it’s not. Those things can carry all sorts of bugs and diseases.”

Two weeks after the committee’s visit, a black-spined toad was found aboard a bulk

carrier from east Indonesia. The toxic cousin of the cane toad, the black-spined toad is known as an explosive breeder with a talent for establishing in new environments.

Also trapped at Cairns seaport was an Asian tiger mosquito. This mosquito poses a significant public health threat. It carries dengue fever, can out-compete all native mosquito species, and is capable of living in cooler climates—meaning it could easily spread south into NSW if it enters unchecked. The mosquito caught in the trap at Cairns port is believed to have arrived via a cargo vessel from Indonesia.

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The Nasties

Screw-worm fly

A blow-fly, it lays its eggs on the edge of any wound on a warm-blooded animal. When the eggs hatch into maggots, they screw their way into the wound, infesting it. Cases of screw-worm fly are prevalent in livestock, but have also been recorded in humans. Could cost our livestock industries up to \$500 million a year.

Red banded mango caterpillar and mango pulp weevil

Has been detected on several Torres Strait islands and on the tip of Cape York. Transported inside the fruit and hard to detect from the outside, the caterpillar’s potential to damage Australia’s mango crop is high. The mango pulp weevil lives in the pulp of the mango. Also difficult to detect, it makes the fruit inedible.

Sugar cane stem borer

Bores through the stems of sugar cane, causing them to collapse, and acting as an entry point for disease and mould. Occurring in PNG near the Torres Strait, it has the potential to devastate Queensland’s sugar cane crops.

Banana skipper butterfly

A major pest of banana plants, capable of stripping crops. Another problem for bananas is black sigatoka, a fungal disease. Black sigatoka has been overcome by switching cropping to cooking bananas, but these are particularly vulnerable to the banana skipper.

Asian honey bee

Can carry harmful mites capable of destroying native and commercial hives and the honey industry. It is established on three of the northern Torres Strait islands.

Citrus canker

A menacing bacteria which causes serious damage to citrus plants and fruit, destroying the value of up to 50% of the fruit on affected trees. It can be controlled via spraying, but this is expensive.

Siam weed

An aggressive and invasive weed which can out-compete almost any other flora and take over entire plantations and grazing areas, rendering them useless for agriculture. The seed can easily be hidden in soil or attached to clothing or machinery. Present in East Timor.

Japanese encephalitis

Potentially a fatal disease of humans and horses. Its primary hosts are pigs and wild water birds. It is transferred via the bite of mosquitos.

Melon fly and papaya fruit fly

Melon fly is a major threat to Australian horticulture, particularly cucumbers, pumpkins, squashes, rockmelons and watermelons. Papaya fruit fly is a threat to all fruit. Each has wide distribution in PNG, and the papaya fruit fly has been found in Torres Strait.

Rabies

A fatal viral disease of all warm-blooded animals. It affects the nervous system and is spread in saliva through the bite or a scratch from infected animals. It is present in islands near East Timor.

Foot and mouth disease

A highly infectious virus affecting cloven-footed animals such as cattle, buffalo, pigs and sheep. Spread easily through air, saliva, milk, on wind, by touch or on equipment or clothing, it is highly contagious and, as seen in the UK, devastating.



Inquiry secretary, John Carter, has his bag searched after being stopped by an AQIS sniffer beagle.

An enhanced surveillance program was put into place at the docks once the mosquito was discovered in the daily checking of the traps.

Similar checking by local quarantine officers goes on every day in high-risk areas, such as Saibai, where Ron Enosa also carries out dinghy surveillance and cargo inspection, and issues animal permits.

NAQS operations and scientific officers conduct regular 'extension' activities in neighbouring countries.

NAQS officer Peter Pedersen, who briefed the committee in Cairns (turning at least one committee member squeamish with some graphic descriptions and a colourful slide show) is currently on a six-month posting in East Timor.

Mr Pedersen is helping to set up a quarantine service in East Timor, which will protect both Australia and our close neighbour from exotic pests present in other nearby countries. For his first month, he was living in a modified shipping container.

The third aspect of NAQS is public awareness.

NAQS staff regularly make quarantine awareness presentations to schools, communities, rangers, police, health workers, commercial fishermen, tour operators and pastoralists. They are also involved in regular radio broadcasts on quarantine issues, maintain an FM radio network at six strategic locations on Cape York Peninsula, and have an extensive system of signage throughout the Torres Strait and Peninsula area.

Shayne Abhoo is the NAQS operations coordinator for the Torres Strait area.

The 27-year-old Thursday Islander did all his schooling on the Island, before completing a Bachelor of Applied Science at the Queensland University of Technology in Brisbane, majoring in biology and minoring in aquaculture.

"When I was at school, Quarantine used to be the popular work experience place to get into," Shayne says. "But I could never get in.

"Then at my second year at Uni I was a bit strapped for cash and was looking for ways to supplement my income. I won a cadetship with Quarantine, and things started from there. I like the job, and I feel I'm doing something worthwhile."

To the outside observer, perhaps the most impressive thing about the whole program is its integration within the culture of the islands. Everybody seems to know about it; everybody is part of the 'Top Watch' team.

"Not only that," Shayne Abhoo says, "we have a full complement of indigenous staff here [21 Torres Strait islanders operate the service on the islands]. That helps us with getting out into the community. It's certainly paying dividends."

Certainly Shayne seems to know everybody in the Torres Strait.

When returning from the Torres Strait, the committee landed back in Cairns. Who was waiting? Quarantine. With a sniffer dog (one of 71 now in operation at ports around Australia). Inquiry secretary John Carter was stopped, as was NAQS head Robert Murphy.

It turns out they had been carrying oranges in their bags several days before the inspection tour began, the scent of which the beagle was still able to sniff out.

"At least we know it's working," was Dr Carter's embarrassed comment. And Australia can be grateful for that. ■

Links and contacts

Public Accounts Committee
Quarantine Inquiry

Visit: www.aph.gov.au/house/committee/jpaa/Aqis/inqinde2.htm

Phone: (02) 6277 4576

Email: jcpa@aph.gov.au

Australian Quarantine and
Inspection Service

Visit: www.aqis.gov.au



The red imported fire ant. Photo: Queensland Department of Primary Industries

Fire Ants

On 22 February last year Brisbane was invaded. Two outbreaks of red imported fire ants—an aggressive invader described by the Queensland Department of Primary Industries as "worse than the rabbit or the cane toad"—were discovered in different parts of Brisbane.

The red fire ant is a danger to local fauna and to Australian lifestyles. A prodigious spreader, it takes over backyards and community areas, rendering them unsafe for play or use. Once disturbed, swarms of fire ants will cover people or animals in moments. They then bite in unison, and repeatedly.

The fire ant also poses a huge threat to agriculture, with the potential to make arable land unusable. The estimated cost of a full-blown outbreak is more than \$8.9 billion over 30 years.

Fire ants travel by flight (up to two kilometres) or in soil. The first outbreak was discovered at the port of Brisbane; it has now been cleared up via an extensive eradication plan. The second outbreak was in Brisbane's western suburbs. Some 440 people are working on the ongoing \$145 million, three-year fire ant eradication program there. Disconcertingly, the two outbreaks were unrelated, the port outbreak being an ant from the USA, the suburban outbreak an Argentinian variety.