



NAQS animal health surveillance activities 2019 – 2020

This document provides a reconciliation of the NAQS animal health operational activities delivered for 2019-2020. Detail about risk area profiling methodology, reconciliation with prior year activities, and timing for each activity is not included here and can be found in other NAQS program documents. Further detail on specific activities can be found in each NAQS survey report and other end of year reporting documents.

Surveillance activity summary

A total of 182 animal health related surveillance activities were planned for 2019-2020 (Table 1). A total of 139 activities were delivered (76%), including 3 unplanned activities (1 x opportunistic *Culicoides* trapping and 2 x disease investigations). These activities were focused in key risk areas (Figure 1) for national and NAQS priority animal diseases (Northern Australia Quarantine Strategy Risk Review 2019, AusVet), and include feral animal surveys, domestic animal surveys, avian influenza wild bird surveys, sentinel herd blood collections, *Culicoides* (midge) trapping, screw worm fly trapping and mosquito trapping surveillance activities (Figure 2).

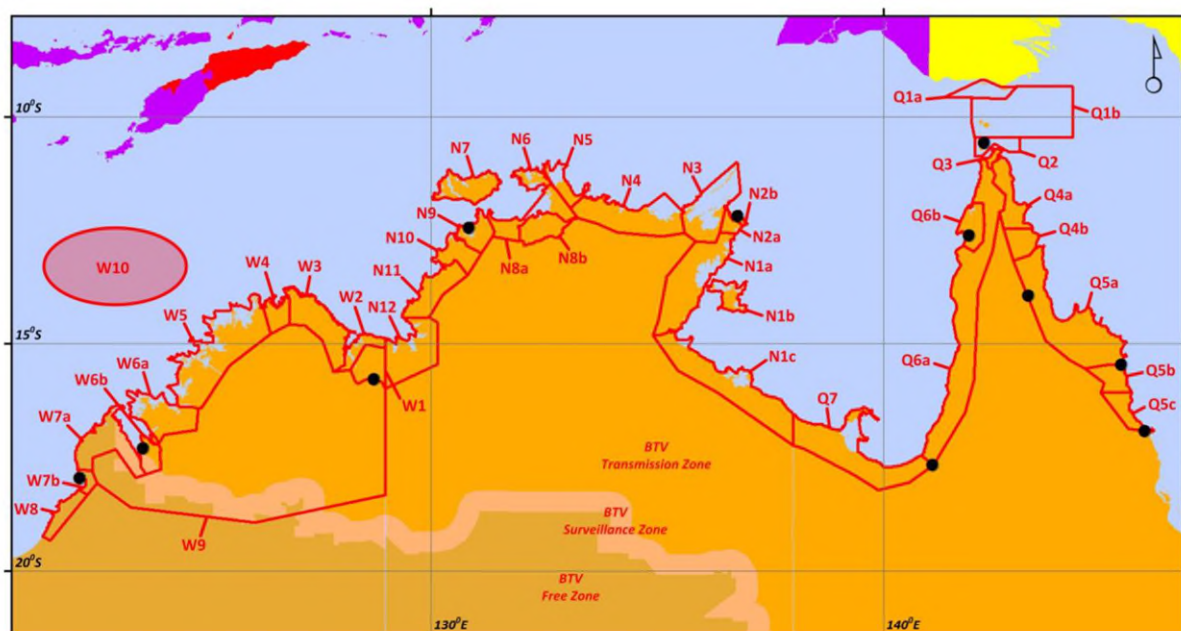


Figure 1 NAQS risk areas

Disease investigations were also conducted as part of feral animal surveys whenever signs of clinical disease or gross pathology were detected; these investigations were considered part of the survey and not counted as separate activities.

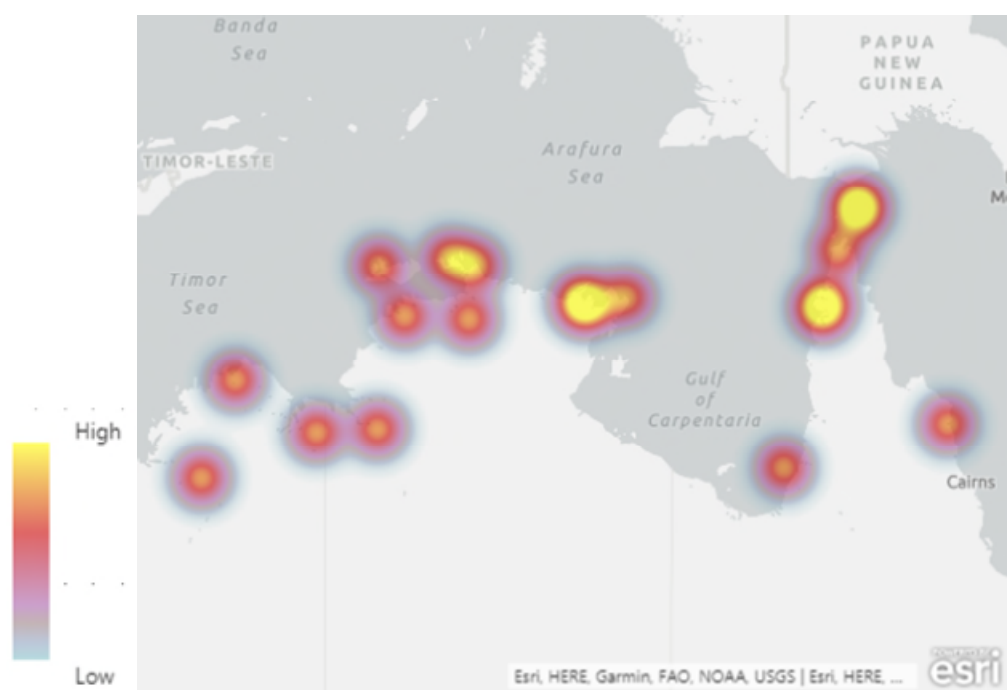


Figure 2 Heat map demonstrating where effort was focused for NAQS animal health surveillance activities 2019-20

NAQS survey activities are subject to a range of unique operational challenges and may be disrupted, postponed, or not undertaken as planned. The two main reasons why activities were not undertaken in 2019-20 were the target animal species being unavailable to sample (e.g. destocking of a sentinel herd, delays in transport of cattle to a sentinel herd site, rainfall impacting on wild bird presence), and logistical or other operational constraints (e.g. flooding, equipment failure). COVID-19 related travel restrictions and financial constraints each accounted for 5 planned activities not being delivered.

To cover off on any residual risk associated with not undertaking these activities, general surveillance outcomes are being pursued including:

- Heightened community engagement across northern Australia to raise awareness of emerging risks (e.g. African swine fever, *Ehrlichia canis*).
- Further engagement (on biosecurity issues) of private veterinarians through the Northern Australia Biosecurity Surveillance Significant Disease Investigation Network (NABSnet)
- Planned digital learning package development that will cover aspects of animal biosecurity in northern Australia.

Table 1 Detailed description of NAQS animal health surveillance activities planned and delivered in 2019-20

State	NAQS risk area	Risk	Activity	Location	Number of activities planned	Number of activities delivered	% (delivered / planned)
NT	N12	MEDIUM	Feral animal survey	Pearce Point to western border of Legune Station	1	0	0%

State	NAQS risk area	Risk	Activity	Location	Number of activities planned	Number of activities delivered	% (delivered / planned)
NT	N1aN2a	MEDIUM	Feral animal survey	Port Bradshaw to Cape Wilberforce	1	0	0%
NT	N2	MEDIUM	<i>Culicoides</i> trapping	Garrithiya	12	12	100%
NT	N2	MEDIUM	Sentinel herd blood collection	Garrithiya	12	12	100%
NT	N3N4	HIGH	Feral animal survey	Cape Wilberforce to Cobourg Peninsula	1	1	100%
NT	N4	HIGH	<i>Culicoides</i> trapping	Howard Island	0	1	100%
NT	N5	HIGH	<i>Culicoides</i> trapping	Gunbalanya Station	12	8	67%
NT	N5	HIGH	Feral animal survey	King River to Cobourg Peninsula Fence including Croker and Goulburn Islands	1	1	100%
NT	N5	HIGH	Sentinel herd blood collection	Gunbalanya Station	12	11	92%
NT	N6	HIGH	<i>Culicoides</i> trapping	Cobourg Peninsula	12	12	100%
NT	N6	HIGH	Feral animal survey	Cobourg Peninsula	1	1	100%
NT	N7	HIGH	<i>Culicoides</i> trapping	Melville Island	12	11	92%
NT	N7	HIGH	Feral animal survey	Tiwi Islands (Melville and Bathurst Islands)	1	1	100%
NT	N8b	MEDIUM	Feral animal survey	Kakadu National Park	1	1	100%
NT	N9	LOW	Avian influenza survey	Koolpinyah Station	2	1	50%
QLD	Q1aQ1b Q2Q3	MEDIUM	Domestic animal survey	Torres Strait and Northern Peninsula Area.	1	1	100%
QLD	Q1b	LOW	Feral animal survey	Moa and Badu Islands	1	0	0%
QLD	Q3	HIGH	<i>Culicoides</i> trapping	Seisia	12	8	67%
QLD	Q3	HIGH	Disease investigation	Seisia	0	1	100%
QLD	Q3	HIGH	Mosquito trapping	Northern Peninsula Area (NPA)	9	10	111%
QLD	Q3	HIGH	Screw worm fly trapping	Northern Peninsula Area (NPA)	4	4	100%
QLD	Q3	HIGH	Sentinel herd blood collection	Seisia	12	9	75%
QLD	Q3Q6a	HIGH	Feral animal survey	Northern Peninsula Area (NPA)	1	1	100%

<i>State</i>	<i>NAQS risk area</i>	<i>Risk</i>	<i>Activity</i>	<i>Location</i>	<i>Number of activities planned</i>	<i>Number of activities delivered</i>	<i>% (delivered / planned)</i>
QLD	Q4b	HIGH	Feral animal survey	Portland Roads, Lockhart River and Pascoe Farms	1	1	100%
QLD	Q5a	MEDIUM	Avian influenza survey	Atherton Tablelands	2	1	50%
QLD	Q5a	HIGH	Feral animal survey	Lakefield and Princess Charlotte Bay	1	0	0%
QLD	Q6	MEDIUM	<i>Culicoides</i> trapping	York Downs Station	12	10	83%
QLD	Q6	MEDIUM	<i>Culicoides</i> trapping	Merepah Station	12	0	0%
QLD	Q6a	MEDIUM	Feral animal survey	Porpuraaw and Aurukun	1	0	0%
QLD	Q6a	MEDIUM	Sentinel herd blood collection	York Downs Station	12	12	100%
QLD	Q6a	MEDIUM	Sentinel herd blood collection	Merepah Station	12	1	8%
QLD	Q6aQ7	MEDIUM	Feral animal survey	Kowanyama to southern Gulf of Carpentaria	1	0	0%
QLD	Q6b	HIGH	Feral animal survey	Mapoon and Napranum	1	1	100%
WA	W1	LOW	Avian influenza survey	Kununurra	1	0	0%
WA	W4	LOW	Serosurveillance herd blood collection	Kalumburu	2	2	100%
WA	W7a	LOW	Feral animal survey	Dampier Peninsula	1	0	0%
WA	W7b	LOW	Avian influenza survey	Broome	1	3	300%
WA	W9	MEDIUM	Disease investigation	Warmun	0	1	100%
WA	W9	MEDIUM	Feral animal survey	West Kimberley Pastoral Region	1	0	0%
TOTAL					182	139	76%

Disease exclusion data

NAQS conducts exclusion testing for several pests and diseases as part of its routine surveillance activities. A summary of pests and diseases routinely tested for each NAQS surveillance activity can be found in Table 2. Additional disease exclusion testing is conducted for any disease investigations conducted by NAQS; any national notifiable disease investigation (NNDI) data is reported to NAHIP for domestic animals, and to eWHIS for wild (including feral) animals.

Table 2 Routine pest and disease testing and reporting for NAQS routine animal health surveillance activities

Activity	Routine pest and disease testing	Data reporting (surveillance program)	Surveillance program
Avian influenza wild bird survey	Avian influenza	eWHIS	National avian influenza in wild birds (NAIWB) program
<i>Culicoides</i> trapping	Species identification for detection of bluetongue virus vectors	NAHIS	National arbovirus monitoring program (NAMP)
Domestic animal survey	Aujeszky's disease (pigs) Classical swine fever (pigs) <i>Ehrlichia canis</i> (dogs) Japanese encephalitis (pigs, horses) Surra (<i>Trypanosoma evansi</i>) (all mammals)	NAHIS	National animal health information program (NAHIP)
Feral animal survey	Aujeszky's disease (pigs) Classical swine fever (pigs) Surra (<i>Trypanosoma evansi</i>) (all mammals)	NAHIS	NAHIP
Mosquito trapping	Flaviviruses: • Barmah Forest virus • Japanese encephalitis virus • Kunjin virus • Murray Valley encephalitis virus • Ross River virus	Queensland Health	(Queensland) Mosquito borne diseases surveillance program
Screw worm fly trapping	Species identification to rule out screwworm fly (Old and New World)	NAHIS	Screwworm fly surveillance and preparedness program (SWFSPP)
Sentinel / serosurveillance (cattle) herd blood collection	Bluetongue virus Japanese encephalitis Surra (<i>Trypanosoma evansi</i>)	NAHIS	NAMP + NAHIP