

NAMP TECHNICAL COMMITTEE – MEETING RECORD

Tuesday 25th – Wednesday 26th August 2020 | Teleconference

In attendance: Ian Langstaff (Chair – AHA), Mikhaila Nye (Record – AHA), Emily Seas (AHA), Andrew Moss (Aus. Gov.), Adam Robinson (Aus. Gov.), Skye Fruean (NAQS), Stacey Anderson (Aus. Gov., NAQS; Day 1), Glenn Bellis (NAQS), Debbie Eagles (ACDP), Deborah Finlaison (NSW), Peter Kirkland (NSW), Adrian Nicholas (NSW), Lorna Melville (NT), Kitman Dyrting (NT), Ellie Hills (NT), Bruce Hill (Qld), Ralph Stutchbury (Qld), Trent Scholz (SA), Debra Grull (Tas), Karen Moore (Vic), Marion Seymour (WA), Tristan Read (ACDP), Wayne Collier (Livecorp, SC Industry Rep), Imogen Goode (Livecorp, SC Industry Rep; Day 1)

Apologies: Cassandra Wittwer (NAQS)

Meeting objectives:

1. Identify matters to consider and tools required for revising the NAMP technical strategy.
2. Develop a technical strategy and monitoring plan for 2021-22.
3. Review monitoring results for 2019-20 and finalise monitoring plan for 2020-21.

Arrival, outline and zoom housekeeping (I Langstaff, M Nye)

I. Langstaff welcomed the Committee to the 2020 Technical Committee Teleconference and introduced the agenda for the two days. M Nye explained zoom housekeeping requirements.

1.1 Progress on 2019 TC meeting action list (E Sears)

- E Sears explained 2019 actions advising the Committee that all action items have been completed.

Conclusion

Update on action items accepted as written.

1.2 Questions and comments on virology and entomology reports

NSW Report (D Finlaison)

- D Finlaison highlighted the importance of the budgeted sites NSW has, and the need to maintain this number going forward, particularly along the zone boundaries, as evidence for trade partners.
- Discussion around increased scrutiny of the zone and that monitoring in the marginal areas will be of continuing and potentially greater importance going forward. False certifications, and large changes to the zone were identified as concerns.
- Discussion between the Committee about if transmission is occurring later in the season in NSW than previously. D Finlaison advised the Committee that transmission was normal given the weather conditions experienced, and that NSW encourage that end of season sampling is undertaken once cold weather hits.
- No other concerns or recommendations were raised, and the NSW report was taken as read.

NT Report (L Melville & G Bellis)

- L Melville advised the Committee that a replacement has been found for the Berrimah sentinel herd and that the level of BTV transmission this year has been low.
- No other concerns or recommendations were raised, and the NT report was accepted as read.

Qld Report (B Hill)

- B Hill advised the Committee that COVID-19 has restricted the collection of samples, with 25% of sampling affected.

- B Hill raised the concern that the BTV zone area in Qld is too large to maintain with only budget sites, resulting in the reliance on non-budget sites. In order to maintain the buffer zone along the border, more budget sites may be needed in the future.
- No other concerns or recommendations were raised, and the Qld report was accepted as read.

SA Report (T Scholz)

- T Scholz reported to the Committee that SA has been under budget for entomology and sentinel serology the season due to drought events and COVID-19. SA is hoping to pick up the sampling missed in the 2020-21 season.
- No other concerns or recommendations were raised, and the SA report was accepted as read.

Tas Report (D Grull)

- No concerns or recommendations were raised, and the Tas report was accepted as read.

Vic Report (K Moore)

- K Moore reported to the Committee that there was no insect collection at Cann River due to bushfires. In addition, four of the sentinel herds had less than the required 10 cattle for follow-up bleeds; these had been removed due to farm management decisions.
- K Moore noted that COVID-19 has not been an issue for Vic.
- No other concerns or recommendations were raised, and the Vic report was accepted as read.

WA Report (M Seymour)

- M Seymour advised the Committee that there has been underactivity due to COVID-19, particularly in areas that are indigenously owned and run, but have substituted these sites successfully. There was also underactivity in the West Pilbara due to drought.
- M Seymour advised that a vector was collected at a sentinel site in the Pilbara. Follow up with the same herd was not possible, but samples from sero-surveys around that site have been negative for BTV and Akabane. It is suspected that the vector blew in with a cyclone.
- M Seymour raised a concern about the number of vectors south of the transmission line. M Seymour feels that there are enough sites in the area but wanted to make the Committee aware that an additional site south of the zone line may be necessary in the future.
- No other concerns or recommendations were raised, and the WA report was accepted as read.

ACDP Report (D Eagles)

- D Eagles spoke to the paper provided, highlighting the success in getting isolates from PNG and Timor sites. Serotype 5 and 16 were obtained from PNG and serotype 1 from Timor, showing the importance of those sites.
- D Eagles mentioned to the Committee that ACDP was able to obtain an isolate out of one of the Kalumburu herds for the first time (2019-20 season).
- D Eagles also reported that ACDP obtained a BTV 15 isolate out of Cooktown herd, and the Committee advised that there was also evidence of a BTV 15 isolate near Makai from serology.
- D Eagles updated the Committee on the whole genome sequencing work at ACDP and the Nextstrain database, which has been delayed slightly due to COVID-19.
- Discussion by the Committee on the BTV 15 isolate at Cooktown around the epidemiology of this serotype. ACDP will be performing genome sequencing and further work on BTV 15 and other isolates in the future.
- No other concerns or recommendations were raised, and the ACDP report was accepted as read.

Reference Entomology Report (G Bellis)

- G Bellis advised the Committee that *Culicoides nudipalpis* was detected at three sites in the NT, but there have been no further detections at those three sites, so appears to have not persisted.

- Sequencing of the CO1 gene was not able to clarify if these detections represented a single population spreading domestically or three separate incursions.
- No other concerns or recommendations were raised, and the Reference Ento report was taken as read.

NAQS Report (S Fruean)

- S Fruean highlighted concerns for the Seisia sentinel herds which have been suffering from dog attacks. Help from the local council is not possible, and the erecting of fences will be expensive. The Committee agreed that the situation is not acceptable but that the site is important. The Committee noted that the site may be replaced by sites further down in the Cape area. The Committee agreed to continue the discussion offline.
- S Fruean raised concerns to the Committee about how Kalumburu is reported in the budget but the Committee agreed that the budget is correct, as serosurveys do not receive a farmer allowance.
- S Fruean asked the Committee for clarity on endemic arbovirus testing and if BEF and AKA testing is required from NAQS. The Committee agreed that BEF and AKA testing by NAQS should be discontinued for Yorke Downs and Seisia.
- No other concerns or recommendations were raised, and the NAQS report was accepted as read.

Conclusion

The Committee noted the overview of the virology and entomology reports, noting further discussion around the NAQS Seisia site is needed. The virology and entomology reports were taken as read.

Actions

- i. S Fruean and B Hill to continue discussion around Seisia and possible replacement sites.

1.3 NAMP Activity Summary 2019-20 (E Sears)

- The Committee agreed to skip the review of the activities summary. E Sears to circulate the summary to the Committee for review out of session.

Conclusion

NAMP 2019-20 Activity Summary to be reviewed by the Technical Committee out of session.

Actions

- ii. E Sears to circulate the NAMP 2019-20 Activities Summary to the Committee for out of session review.

2.1 Australian Government Update (A Moss)

- A Moss spoke to the paper provided. It was noted that NAMP continues to be an important market access program and accurate mapping of areas in Australia that are free from BTV virus transmission is still very important.
- A Moss reported that trade continues to be strong in Australia, regardless of COVID-19, both air cargo and ship live export, and reproductive material for both exports and imports. A Moss confirmed that the positive BTV detection (clinical disease seen in sheep) in Qld has had a minor impact on trade and was dealt with bilaterally on certificates.
- A Moss noted that NAMP may need to be involved in monitoring of other arboviruses in the future and mentioned the spread of lumpy skin disease across Asia and China to Taiwan, which has caused some concern as it is expected to come close to Australia's borders. The Committee discussed lumpy skin disease and if there is a role for NAMP in monitoring for it. The Committee

agreed that there is not currently, but there might be in the future. The Committee agreed that more work would need to be done on the potential vectors before monitoring could be started.

- A Moss updated the Committee that the temporary BTV zone in Vic is still not accepted by China as a BTV transmission free area and animals from there are not accepted for export.
- A Moss questioned the Committee about the budget and if it is indexed. I Langstaff confirmed that it is indexed.
- A Moss noted the importance of adequate resourcing and adequate monitoring to define the zone boundary and suggested future modelling may be beneficial to determine what resources may be needed over the next ten years. The Committee discussed current modelling that has been conducted.
- A Moss commented on the tightening of import requirements for livestock and reproductive materials and the policy review of import risk assessment for bovine semen. A Moss reported on achievements supported by the NAMP including live export of sheep to Saudi Arabia and cattle to Japan. NAMP is also supporting negotiations in the Mercosur countries, South America, USA, Peru, Chili, Paraguay and Guatemala.
- A Moss advised the Committee that future increased monitoring into the Simbu group, BEF and EHD may need to be conducted in order to secure North America and Mexico for trading, and make the overall NAMP more robust as trade varies over time.
- The Committee discussed the relationship between BTV, Simbu and EHD distribution and the continued work being performed to map these relationships. D Finlaison noted that there is a project underway which includes validation of an EHDV ELISA and determining the distribution of EHDV in NSW based on 10 years of results from NAMP samples from 2009-2018. Work on this project has been delayed by COVID-19. Review of initial results indicated lower than optimal specificity of the EHDV ELISA. Further calibration of the assay with locally-bred cattle samples from animals in Tasmania seems to have resolved this issue.
- P Kirkland mentioned to the committee that an additional Simbu virus was turned up in Australia last year, bringing the total number of Simbu viruses in Australia to eight.

Conclusion

The Australian Government report and feedback was noted by the Technical Committee. The Committee agreed that no change to the monitoring plans is currently needed.

Actions

- iii. I Langstaff to investigate the progress of the University of Melbourne modelling project.
- iv. D Finlaison to include a note about the additional Simbu virus found in Australia in the NSW report.
- v. D Finlaison/P Kirkland to provide final report on the EHDV study.

2.2 Topics for Discussion (Committee)

Important changes in the distribution of NAMP viruses and their vectors.

- The Committee discussed the southerly spread of *Culicoides fulvus* in Qld and the recent detections of *Culicoides nudipalpis* and BTV-15 previously in the meeting. No further comments or questions were raised.

New information about the competency of Australian vectors.

- The relationship between *Culicoides fulvus* and BTV-15 have not yet been investigated. The Committee discussed future directions of BTV genome sequencing and phylogenetic analysis and how this may contribute to an understanding of BTV epidemiology.

- The Committee discussed the issues with ethanol compliance with CASA IATA regulations as everything must be heat sealed. The Committee discussed the use of propylene glycol as a replacement for ethanol.

Inclusion of other arboviruses, such as epizootic haemorrhagic disease virus (EHDV) or Schmallenberg viruses, or members of the Simbu group (including Aino, Douglas, Peaton and Tinaroo viruses).

- P. Kirkland advised the Committee that they perform testing for Schmallenberg and Simbu.
- No further action needed

Criteria and protocols for the follow-up of routine and non-routine detections. Are they appropriate?

- No feedback provided

Response to detections of BTV from outside NAMP. Any process, administration, or communications issues to address? Feedback? Any changes in understanding of the epidemiology of BTV in Australia?

- A Moss highlighted that the current processes are acceptable and that any problems or detections that end up in NAMP do not cause big issues with export as they are handled between the Commonwealth and the relevant state.

Relative emphasis on serosurveillance and sentinel herds for the detection of changes in the distribution of endemic BTV, AV and BEFV. Is it appropriate?

- A Moss highlighted that sentinel herds are definitive, whereas serosurveys are indicative. Sentinel herds are far more robust than serosurveys, although serosurveys are easier and cheaper for remote areas. Fine tuning of the barrier ideally requires sentinel surveillance, but serosurveys are better than no surveillance.

Number and location (by state and territory, or more specifically) of sentinel herds, serosurveillance herds and vector monitoring sites.

- Issues surrounding number and location of monitoring herds and sites were highlighted during the summary report discussions. This question was not discussed.

Do monitoring plans put forward by individual states and territories provide the most efficient and effective approach? Consider the monitoring plans of individual states and territories in the context of a national strategy.

- A Moss highlighted that the states/territories judgement should be trusted, but that the coordination allows for other jurisdictions to comment and to challenge the effectiveness, which all ensures the monitoring being conducted is targeted and warranted.

Enrolment criteria for animals within serosurveillance herds. Are they appropriate? Width of the border between the BTV Transmission Zone and the Buffer Area. Is it appropriate?

- D Finlaison questioned the older age of some animals being tested and what the Operations Plan specifies. This will be discussed as part of the zone change proposals in 5.1.

Conclusion

The Committee agreed that no actions are required in response to the technical strategy discussion and that current monitoring activities are sufficient. Investigation into the use of propylene glycol to replace ethanol in sampling.

Action

- vi. R Stutchbury to send samples to G Bellis in propylene glycol to determine if the morphology is affected and if the samples can still be tested by PCR, and report back to the Committee.

2.3 Other technical strategy matters (Committee)

- A Moss questioned the Committee about big changes to the zone boundary which poses concern for export to markets such as China, as the animals must be selected 6 months before export and be in the BTV free zone for 6 months. If the zone changes while the animals are in export quarantine so that they now originate from a property that is not in the BTV free zone they can no longer be exported. A Moss suggested creating a bigger buffer zone to avoid trapping people.

The Committee agreed that creating a larger buffer zone would exclude more people than what a large zone change would cause and is not the answer. Increasing awareness of NAMP so producers are aware of the process and requirements was agreed to be the best option to reduce adverse effects of changing the zone boundary.

Conclusion

The Committee agreed that altering the size of the buffer zone would exclude more people than a large zone change and noted that increasing awareness is the most suitable solution at this stage.

3.1 Review of the risk register (I Langstaff)

- I Langstaff spoke to the risk register, leading the discussion on risks of medium concern and higher.
- Additional risk- the Committee discussed the risk of having not enough sentinel herds to inform the BTV transmission zone boundary, making the program less valuable. This risk is mitigated by the buffer zone at 50km and this should not be changed.
- Additional risk – Loss of expertise from the program, particularly *Culicoides* entomology. There is often insufficient work from NAMP to justify only working on NAMP. The Committee discussed a need for funding to pay for people to focus on NAMP. NAMP budget for entomology work is one mitigating control.
- Additional risk – big jumps in zone boundary are a threat to industry confidence in NAMP. This can be mitigated in part by utilising local expertise in zone boundary placement.
- Risk 3, 8 and 9- No comments from the Committee
- Risk 11- The Committee noted that it is important that trading partners are aware that there are limitations of the program and recognise the limitations of stock identification systems.
- The risk of inadequate funding was acknowledged (risk #10) whilst noting that maintaining export is a government priority. I Langstaff noted for Steering Committee to discuss.

Conclusion

Three additional risks (insufficient sentinel herds, loss of expertise, boundary jumps) suggested for inclusion in the register.

Action

- vii. I Langstaff to review the risk register considering the suggested additions.

4.1 Monitoring Plans - recommendations and proposed changes for monitoring in 2020-21 (Committee)

- Langstaff introduced new budget layers in the interactive NAMP-info system. Advised to select the data range by the budget year-end date, i.e. 30 June 2020 for the 2019-20 period.
- B Hill noted that the approved entomology site at Camoweal is not on the map, but that the registration of this site is on hold until the first trap collection is sent through.
- E Sears noted that the NAQS sites are yet to be entered for 2020-21.

Conclusion

The Technical Committee accepted that the budget maps correctly show monitoring sites for 2020-21, with the exception that NAQS sites are yet to be finalised.

Action

- viii. S Fruean to advise AHA on NAQS sites for 2020-21

4.2 Monitoring Plans - forecast/propose any changes to activities for 2021-22 (Committee)

- S Fruean advised the Committee that NAQS is still looking for alternative sites to replace or supplement Kalumburu, and possibly Seisia. Merapah has come back on for 20-21 so will see how it goes. No other anticipated changes.
- B Hill highlighted the size of the monitoring area in Qld and questioned if there are currently enough sites to cover this area. The committee agreed that relocating sites from the coast to cover the zone boundaries in Qld was not viable due to the need to detect spread on the coast. B Hill requested more sentinel sites be budgeted for Qld for next season, particularly for the area South of Townsville on the coast.
- D Finlaison noted that there is not currently a site south of the border in NSW from the confirmed BTV site in Qld and suggested that one might be needed in the future.

Conclusion

The Technical Committee noted that the 2020-21 monitoring plan is the forecast plan for 2021-22 with the exception that additional sites may be required in Qld.

5.1 Changes to the bluetongue zone map (All coordinators)

- D Finlaison presented two zone change proposals for the expansion of the BTV Transmission Zone in the northern tablelands region - one west of Tamworth and the other south of Inverell.
- B Hill presented one zone change proposal for the expansion of the BTV Transmission Zone in the Windorah region of south-western Qld.
- Discussion was had about historical data, patterns of other arboviruses, entomology and geographical features.
- The Technical Committee supported the NSW and Qld proposals as provided noting that if zone boundary smoothing is needed for the NSW change, the proposal should be reviewed by the committee.

Conclusion

The Technical Committee endorsed the two zone changes proposed by New South Wales and one zone change proposal for Qld.

Action

- ix. AHA to have the proposed transmission zone boundary changes prepared in NAMP-info for checking by Qld and NSW.

5.2 NAMP-Info database issues and development requirements (All coordinators)

- Discussion on the need for the "date last positive" heading in the *NAMP Coordinators Data Entry Workbook* for VNT, with agreement that this heading may not be required.
- G Bellis proposed to add more *Culicoides* species to the selection list for uploads to NAMP-Info.
- The Committee noted that some of the old entomology data in NAMP is incorrect. The committee agreed that data should be screened for obvious inaccuracies before release to interested parties. The Committee reiterated the requirement that publications consisting of data from NAMP must be approved by the NAMP Technical Committee as part of the data sharing agreement.
- The committee discussed the mapping of the distribution of Simbu, BTV and EHDV as a future goal, and noted that the upload of EHDV data in the *NAMP Coordinators Data Entry Workbook* is already possible.
- The Committee noted that there is published literature from James Maclachlan on BTV occurrence in Vic.

Conclusion

The Technical Committee advised on any NAMP-Info issues or development requirements.

Action

- x. AHA to review the 'date last positive field' in the data entry workbook.
- xi. A Nicholas and R Stutchbury to provide feedback to G Bellis on required additions to the species list.
- xii. A Moss to circulate BTV report from James Maclachlan to the committee for comment.

5.3 Propose changes to the annual NAMP report (All coordinators)

- The Committee discussed the usefulness of the report, reaffirming that it is needed and is valued by program partners, but that it may not be widely used internationally.
- B Hill noted there is difficulty explaining the cause and effect of weather patterns on vector distribution. B Hill suggested to the committee that installation of small weather stations at select locations would gain more accurate readings of weather conditions at the sites specifically and may enable more accurate reporting on the relationship between weather and vector movements. The Committee agreed that the section in the report on weather conditions is important to include.
- The committee discussed providing follow up information to the collaborators involved in the NAMP and identified that reports and feedback are valued by those collaborators.

Conclusion

The Technical Committee supported the continued publication of the annual NAMP report, with no changes.

6.1 Draft Management report to Steering Committee (I Langstaff)

- I Langstaff spoke to the paper provided, summarising the content and inviting feedback.
- Measures of target outcomes were explained. W Collier advised the Committee that the measures listed for livestock exporters reflect the benefits sought by exporters and were achieved.
- The Committee noted that the Technical Committee played an important role in the management of clinical BTV detected in Qld. Also highlighted was the early warning component of NAMP, and the detection of sero-positive animals in remote locations, which demonstrates the functionality of NAMP.
- Tas identified that it has been difficult to get results from vets that do livestock export testing.

Conclusion

The Technical Committee supported the draft management report, noting a few additions to be made.

Action

- xiii. I Langstaff to include additional output measures in the management report as discussed.

7.1 Other Business (Committee)

- The Committee acknowledged the work of A Nicholas in NAMP and wished him all the best in retirement. The Committee also recognised the work of L Melville and awaits confirmation of a retirement date.
- Qld raised an interest in exploring avenues of collaboration between NAMP in Qld and Qld Health for arbovirus surveillance.

- I Langstaff advised the Committee of correspondence from Mark Stevenson on the University of Melbourne Project. A model has been developed to simulate BTV transmission and has been included in the AADIS model. The Committee expressed an interest in monitoring progress on BTV transmission modelling and noted that no-one in the NAMP TC is a member of the AADIS Advisory Committee.

Action

- xiv. S Fruean to provide information on AADIS Advisory Committee and I Langstaff to seek a connection for NAMP, possibly through AHA.

Date and time of next meeting: TBA August 2021.

Meeting close: 1:10 pm

NAMP TECHNICAL COMMITTEE – ACTION REGISTER

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#	ACTION	WHO	BY	STATUS
i.	S Fruean and B Hill to continue discussion around Seisia and possible replacement sites.	S Fruean and B Hill	1 Oct 2020	
ii.	E Sears to circulate the NAMP 2019-20 Activities Summary to the Committee for out of session review.	E Sears	1 Sep 2020	Complete
iii.	I Langstaff to investigate the progress of the University of Melbourne modelling project.	I Langstaff	1 Oct 2020	
iv.	D Finlaison to include a note about the additional Simbu virus found in Australia in the NSW report.	D Finlaison	1 Oct 2020	Complete
v.	D Finlaison/P Kirkland to provide final report on the EHDV study.	D Finlaison/P Kirkland	1 Oct 2020	
vi.	R Stutchbury to send samples to G Bellis in propylene glycol to determine if the morphology is affected and if the samples can still be tested by PCR, and report back to the Committee.	R Stutchbury	1 Oct 2020	
vii.	I Langstaff to review the risk register considering the suggested additions.	I Langstaff	1 Oct 2020	
viii.	S Fruean to advise AHA on NAQS sites for 2020-21.	S Fruean	1 Oct 2020	
ix.	AHA to have the proposed transmission zone boundary changes prepared in NAMP-info for checking by Qld and NSW.	AHA	1 Oct 2020	
x.	AHA to review the 'date last positive field' in the data entry workbook.	AHA	1 Oct 2020	
xi.	A Nicholas and R Stutchbury to provide feedback to G Bellis on required additions to the species list.	A Nicholas and R Stutchbury	1 Oct 2020	
xii.	A Moss to circulate BTV report from James Maclachlan to the committee for comment.	A Moss	1 Oct 2020	
xiii.	I Langstaff to include additional output measures in the management report as discussed.	I Langstaff	1 Oct 2020	
xiv.	S Fruean to provide information on AADIS Advisory Committee and I Langstaff to seek a connection for NAMP, possibly through AHA.	S Fruean	1 Oct 2020	Complete