

LiveCorp Submission

September 2019

Monitoring and reporting during livestock export voyages

An Inquiry by Interim Inspector-General of Live Animal Exports

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Summary

This inquiry by the Interim Inspector General of Live Animal Exports (IIGLAE) seeks to assess the effectiveness and efficiency of monitoring and reporting procedures instituted by the department for livestock export voyages by sea.

A core problem faced by this review into the effectiveness, efficiency, timeliness, independence and transparency of monitoring and reporting during livestock export voyages is that a well-defined regulatory objective for animal welfare outcomes on a voyage, apart from mortalities, does not exist. Statements from a recent review into livestock export standards are explicit about this problem:

“Ideally, voyage reporting on the welfare of livestock would be based on a broad set of health and welfare measures (morbidity data) in addition to a mortality rate. However, measures of welfare are complex, requiring multiple measurements over time, and vary with many factors including livestock class and preparation and environmental context. These measures [i.e. welfare measures other than mortalities] have not yet been clearly identified and described ... nor adequately validated to determine thresholds to act as triggers for action”.

The lack of a clear objective on the animal welfare outcomes required by the regulator from live export voyages is a principal underlying reason why so much data is collected and reported on each voyage – with collection and reporting of about 7,000 pieces of data proposed for a voyage of 15 days. It may also underlie the increasing use of photos and videos by the regulator (i.e. we do not know how to measure welfare, but we know bad welfare when we see it).

Although, in the absence of a clear regulatory objective, it is impossible to comment on the effectiveness of the regulatory compliance monitoring and reporting arrangements, some conclusions can be drawn about its efficiency. Several reasons exist to draw the conclusion that current arrangements are inefficient:

- There is considerable redundancy in compliance monitoring and reporting between the Independent Observers and the AAVs / accredited stockpersons (almost a doubling up).
- Inadequate standardisation exists in the methods used to report to the regulator.
- Storage of, and access to, collected data is below what is needed in order to put it to maximum use.

This submission concludes that the effectiveness of monitoring and reporting requirements could be improved by:

- removing redundancies in monitoring and reporting arrangements;
- adopting a risk-based approach to monitoring compliance;
- limiting data collection and reporting to what is needed to check compliance (“must have” data versus “like to have”);
- creating “carrot” incentives for compliance in addition to the existing “stick” incentives (e.g. differential charging arrangements for Independent Observers when compliance is achieved);
- imposing standardisation in the collection of a limited amount of data relevant to the regulator in discharging its regulatory duties; and
- storing this data centrally, making it accessible and producing reports from it that improve the transparency of the trade to the public.

1 Introduction

The Australian Livestock Export Corporation Limited (LiveCorp) welcomes the opportunity to provide a submission to the review being undertaken by the Interim Inspector-General of Live Animal Exports (IIGLAE) into the effectiveness, efficiency, timeliness, independence and transparency of monitoring and reporting for livestock export voyages by sea.

1.1 About LiveCorp

LiveCorp is a not-for-profit industry body funded through statutory levies collected on the live export of sheep, goats, and beef cattle, and a voluntary levy collected on live dairy cattle exports. LiveCorp is one of the 15 Australian rural Research and Development Corporations (RDCs), being the only RDC focused solely on the livestock export industry.

LiveCorp is well placed to provide informed comments on matters to be considered in the current review. Over many years LiveCorp has taken an active interest in monitoring and reporting arrangements for livestock export voyages by sea. Among other things, LiveCorp has:

- Produced a national livestock export industry sheep, cattle and goat transport performance report each year using data collected in monitoring reports on live export voyages.
- Used data collected by Australian Government Accredited Veterinarians (AAVs) in submissions to inquiries on the Australian Standards for Export of Livestock (ASEL) and the Heat Stress Risk Assessment (HSRA) model and for other research.
- Has initiated wide ranging research to improve both the type of animal data collected on live export voyages and the methods used to collect this data. This research is ongoing.

1.2 Outline of this submission

This submission is arranged as follows:

- In Chapter 2 current monitoring and reporting arrangements as directed and used by the department are outlined.
- Chapter 3 contains a discussion about the processes the department might use to identify the critical data it needs to monitor compliance and suggests what this data might be.
- Chapter 4 subjects the current departmental systems to two tests:
 - Are the most efficient mechanisms being used for compliance monitoring and reporting?
 - Are the most efficient systems being employed to store data collected through compliance reports and make it accessible for regulatory and other purposes? Is maximum use being made of the data required under regulation (which is expensive to collect)?
- Chapter 5 outlines risk-based processes for compliance monitoring and reporting which represent best regulatory practice and balance monitoring and reporting needs against costs.
- Chapter 6 outlines significant opportunities that exist for resource rationalisation in compliance monitoring and reporting onboard livestock export vessels
- Chapter 7 addresses specific issues in the scope of this inquiry.

2 Observations on the efficiency of data currently being collected on live export voyages

Before directly examining the effectiveness, efficiency, timeliness, independence and transparency of monitoring and reporting on livestock export voyages to ensure compliance with Australian legislation and national and international animal welfare standards, it is important to first outline what current processes entail.

2.1 Three largely separate processes currently used to monitor compliance with legislation and standards

Since April 2018 three interrelated, but separate, processes have been used by the Government for livestock export voyage monitoring and reporting to ensure compliance with legislation and welfare standards.

2.1.1 Master's report

Historically, two processes have been used.

Under Marine Order 43, after completion of a voyage on which livestock have been carried, the Master of a vessel must give a report in an approved form to:

- a) the Department of Agriculture; and
- b) AMSA.

The Master's report contains information on daily mortalities and "temperature and humidity ... recorded within the livestock house at noon", as well as wind speed and direction and the ship's course.

A template of the report of the Master of a vessel carrying livestock is shown in Appendix 2A.

2.1.2 AAV's / Accredited stockperson's report

Additional to the Master's report, a report has been required by the department from an AAV or accredited stockperson. Where an AAV is required to accompany the consignment, that person is responsible under Australian Government legislation for the monitoring and regular reporting to the department of consignment conditions on board from loading to disembarkation. If an AAV does not accompany the consignment, reports must be provided by the accredited stockperson.

For voyages of ten days or more, daily reports must be provided by the AAV / accredited stockperson as well as an End of Voyage (EOV) report. For voyages of duration of less than 10 days only an EOV report is required.

Regulations specify that data contained within the AAV / accredited stockpersons reports must be accurate and reliable and include the health, welfare and mortalities of livestock during the export voyage, conditions on board, epidemiological data and other relevant information.

A primary responsibility of the AAV / accredited stockperson is, therefore, to provide independent reporting to the regulator in keeping with the statutory requirements of ASEL. The AAV / accredited stockperson also has a number of other responsibilities including:

- maintaining an overview of the provision of adequate livestock services (fodder, water and ventilation) in keeping with the statutory requirements of AMSA;

- maintaining an overview of the management of all the livestock on board the vessel;
- providing care and husbandry to specific groups of livestock within the consignment (as directed by the exporter);
- identifying, removing and/or providing appropriate treatment to sick animals within these specified groups of animals;
- overseeing the treatment of sick animals in the consignment as a whole; and
- ensuring that sick or injured animals that are judged to be unlikely to recover are euthanized in a humane manner.

2.1.3 Independent Observer’s report

Since April 2018, in addition to the independent reports provided by AAVs / accredited stockpersons, Independent Observers have been placed on all voyages to provide additional assurance of the effectiveness of exporter arrangements in managing animal welfare. Although the responsibilities of Independent Observers have never been made public, from careful examination of reports produced, Independent Observers appear to be monitoring general compliance, as well as collecting similar data to that collected by AAVs / stockpersons.

Summary reports by Independent Observers (in contrast to reports from AAVs / accredited stockpersons) are made public. However, in practice this has often been a considerable time after the voyage occurred. When the writing of this submission commenced (September 2019), the Independent Observers reports for some 2018 voyages still had not been released, while reports for only 8 of 67 voyages in 2019 had been released. However, in the last several weeks a number more have been published.

2.2 Data currently collected on livestock export voyages and that proposed in the ASEL Review

Table 2.1 lists data to be reported by the AAV / accredited stockperson for voyages of 10 days or more under current ASEL 2.3 arrangements and under changes to ASEL proposed from the most recent review. It can be seen that very extensive data is collected and reported to the Government.

The amount of data that is reported by the AAV / accredited stockperson varies by the length of the voyage and other voyage, vessel and livestock characteristics. However, for a voyage with the following characteristics:

- 15 days duration;
- using a vessel with 12 decks (with fore and aft sections being considered separate “decks”, as reflected in current practice);
- carrying sheep and cattle; and
- with mortalities well below the notifiable rate

over 1,000 separate data items currently need to be reported to Government. Under proposed changes to ASEL the number of separate data items to be reported would increase to about 7,000 for this voyage – a seven-fold increase.¹

¹ The 7,000 calculation includes taking measurements from two pens per deck for a number of animal welfare attributes (although variations in animal classes could require more than two pens per deck to be monitored).

Table 2.1 Current data collection requirements under ASEL and proposed requirements

Information item	ASEL 2.3	Data proposed
1. Veterinarian's name / AAV accreditation #	✓	✓
2. Stockman's name	✓	✓
3. Vessel name	✓	✓
4. Voyage number	✓	✓
5. Planned voyage duration, including load and discharge days		✓
6. Departure port(s)	✓	✓
7. No of animals loaded by port and species	✓	✓
8. Date of report	Daily	Daily
9. Day of voyage (must be consistent with day used by vessel Master)	Daily	Daily
10. Vessel position	Daily	Daily
11. Vessel ETA at next port	Daily	Daily
12. Daily environmental & other recordings – per deck or bridge		
▪ Average dry bulb temperature for each deck	Daily	Daily ^a
▪ Average wet bulb temperature for each deck	Daily	Daily ^a
▪ Relative humidity for each deck	Daily	Daily
▪ Respiratory character / pant score for each deck	Daily	See 13.
▪ Time in last 24 hours that fans were operational		Daily
▪ If above <24 reason for fans not being operational		Daily
▪ Bridge dry bulb temperature	Daily	Daily
▪ Bridge wet bulb temperature	Daily	Daily
▪ Bridge relative humidity	Daily	Daily
▪ Conditions e.g. Sea swell (1) calm, (2) moderate, (3) rough		Daily ^b
▪ Faeces - average for each cattle deck: (1) normal, (2) sloppy, (3) runny diarrhoea, (4) like sheep pellets	Daily	See 13.
▪ Feed consumption - average per head	Daily	Daily
▪ Water consumption - average per head	Daily	Daily
▪ Issues with feed & water (including sufficiency & maintenance issues)	✓	✓ See 13.
13. Detailed animal health & welfare measures - 2 representative pens for each species per deck		
▪ Pen ID		Daily
▪ Breed / line in pen		Daily
▪ General pen demeanour - (1) alert, (2) active, (3) lethargic, (4) anxious, (5) dull, (6) other		Daily
▪ Fodder type - (1) pellets only / (2) pellets mixed with chaff		Daily
▪ Feeding behaviour - (1) mild to no jostling, (2) most jostling/lunging, (3) aggressive/smothering		Daily
▪ Comment on trough space (1) adequate, (2) inadequate		Daily
▪ Water quality (1) clean, (2) moderately clean (3) dirty		Daily
▪ Comment on any water supply issue		Daily
▪ Faeces type - (1) normal, (2) sloppy, (3) runny diarrhoea, (4) firm pellets		Daily
▪ Manure pad score - (1) dry, (2) tacky (3) sloppy		Daily
▪ Panting score – scale 0 to 4		Daily
▪ If panting >= PS2, % panting at each score		Daily
14. Basic health related information		
▪ Number euthanised per day by species	Daily	See 16
▪ Number dying by natural causes per day by species	Daily	See 16
▪ Comment on causes of mortality	Daily	See 16
▪ Sick pen report, including medications and treatments	✓	See 16
▪ Number of births	✓	See 17
▪ Number of abortions	✓	See 17

Table 2.1 (cont.)

15. Detailed health related information		
▪ Deck ID		Daily
▪ Pen ID		Daily
▪ Animal tag ID		Daily
▪ Species / class (e.g. sheep / slaughter)		Daily
▪ Clinical sign		Daily
▪ Treatment / actions taken		Daily
▪ For sheep to Middle East # of sheep showing clinical signs of scabby mouth		Daily
16. Detailed mortalities report		
▪ Deck ID		Daily
▪ Pen ID		Daily
▪ Animal tag ID		Daily
▪ Species / class (e.g. sheep / slaughter)		Daily
▪ Number euthanised		Daily
▪ Number found dead		Daily
17. Detailed births / abortions report		
▪ Deck ID		Daily
▪ Pen ID		Daily
▪ Animal tag ID		Daily
▪ Births by day		Daily
▪ Abortions by day		Daily
▪ For each abortion estimated stage of pregnancy		Daily
18. Comments, including issues from daily meeting, general conditions, including deck conditions	Daily	Daily
19. Relationships with master/crew/accredited stock person/accredited veterinarian	✓	✓
20. Discharge port(s)	✓	✓
21. No of animals unloaded by port and species	✓	✓
22. Comments on discharge operations	✓	✓
23. Actual voyage duration, including load and discharge days		✓
24. Average daily mortality rate		✓

Notes:

^a If panting of score 3 or 4 is recorded wet and dry bulb temperatures must be taken twice daily near those pens.

^b In the proposed changes to ASEL sea conditions are presented just as an example – comments are to be made on further unspecified environmental conditions.

Given, for example, 150 voyages per year of 10 or more days, currently 150,000 data items are collected each year, which will increase to about 1,000,000 data items in the future. This is a very substantial amount of data to be reported, managed and consumed and raises questions about whether all of this data is necessary for the regulatory management of livestock export voyages and to check compliance.

2.3 Redundancy between reports

Considerable redundancy exists between the regulated reports.

- Mortality information is contained in the Master's report, plus the daily and EOV reports produced by the AAV / accredited stockperson. From an examination of the Independent Observer reports it is highly likely that mortality information is also routinely collected and reported by these personnel.
- There is redundancy in information reported on environmental conditions between the Master's report and the reports by the AAV / accredited stockperson. Again it is highly likely that the Independent Observer also collects and reports this information.

- There is redundancy between much of the information contained in the daily and EOV reports produced by the AAV / accredited stockperson. Particularly under the proposed changes to ASEL (but also currently), much data is repeated in the daily and end of voyage (EOV) reports. For instance, under the proposed changes to ASEL, information must be included in the EOV report on:
 - number of livestock born during the voyage, and the dam(s) by species, class and ear tag;
 - number of abortions during the voyage, and identities of the dam(s) by species, class and ear tag; and
 - number of mortalities (per day, by deck/tier, species and class of livestock) including reasons (where known), pen ID and tag numbers and separate identification of animals that were euthanised, including pen ID and tag numbers (with details provided of post-mortems if conducted);

Yet all of this data is available from the proposed daily reports. Similar redundancy (although to a lesser extent) exists within the current version of ASEL.

Why there is such a large degree of redundancy between various reports is unknown. However, it is assumed that an efficient reporting system would remove redundancy of data between reports.

2.4 Redundancy between roles and responsibilities

There also appears to be considerable overlap between the roles and responsibilities of AAVs / accredited stockpersons and Independent Observers. A primary responsibility of both these roles seems to be reporting accurate and reliable information on *“the health, welfare and mortalities of livestock during the export voyage, conditions on board, epidemiological data and other relevant information”*. This overlap suggests a significant opportunity exists for resource rationalisation in the activities directed by the regulator to monitor compliance. This issue is discussed further in Chapter 6.

2.5 Conclusion

A very substantial degree of effort and resources is currently devoted to monitoring and reporting on compliance to standards during livestock export voyages.

A large gap exists between the degree of effort and resources devoted to monitoring and reporting on compliance when livestock are transported by sea compared to transport by any other mode.

For all other modes, except air, regulated monitoring and reporting mechanisms are either non-existent or minimal. This means that for other modes even basic performance measurement is impossible – for instance, information on the number of livestock mortalities by road or rail does not exist. The same comments hold true to checking compliance with *“Australian legislation and national animal welfare standards”* across other parts of the supply chain.

In contrast to other modes of transport and other parts of the supply chain, regulations currently require extensive, detailed data to be collected and reported when livestock are transported by sea – and proposals are under consideration for this data collection to be very substantially increased in the future.

Evidence has been presented in this chapter that the *“requirements, and management, of monitoring and reporting during livestock export voyages by sea”* are inefficient, with the following points particularly relevant:

- significant overlap (almost a doubling up) exists in the assignment of responsibilities between the AAV / accredited stockperson and the Independent Observer for monitoring and reporting on compliance and collecting relevant data;
- the same data has to be reported to the regulator in slightly different formats a number of times; and
- The amount of data required on each voyage is vast with over 1,000 pieces of data (many of which are multidimensional) often required on voyages of 10 days or more, with proposals existing for this data requirement to increase seven-fold in the near future.

■ **Appendix 2A: Template for ship Master's report**



MASTER'S REPORT CARRIAGE OF LIVESTOCK

This Master's Report is to be sent to:

Manager, Ship Inspection and Registration
Australian Maritime Safety Authority
livestock@amsa.gov.au
Nearest AMSA office

AND

Livestock Export
Department of Agriculture and Water Resources
livestockexp@agriculture.gov.au

Note: Failure to correctly complete this form, or a delay in its transmission to AMSA may result in a delay at the commencement of the next voyage.

SHIP AND VOYAGE DETAILS	
SHIP DETAILS	
Name of ship [REDACTED]	
Ship's flag [REDACTED]	
IMO number [REDACTED]	Voyage number [REDACTED]
Name and Address of Shipowner / Manager Box will expand as required	
Name and Address of Livestock Exporter / Shipper Box will expand as required	
GENERAL REPORT OF VOYAGE	
Weather conditions [REDACTED]	
Breakdowns [REDACTED]	
Duration of voyage (days) [REDACTED]	

LOADING AND DISCHARGE DETAILS				
LOADING				
Port(s) & No. Loaded by Species*	Date(s) and Time(s) of			
	Commencement	Completion		
Box will expand as required	[REDACTED]	[REDACTED]		
DISCHARGE				
Port(s) & No. Discharged by Species*	Date(s) and Time(s) of			
	Commencement	Completion		
Box will expand as required	[REDACTED]	[REDACTED]		
OVERALL MORTALITY				
Species*	Average Weight (kg)	No. Loaded	Mortality	
			(Heads)	(%)
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

* Note: Cattle and Buffalo to be separately listed.

PERSON IN CHARGE OF LIVESTOCK

Name [REDACTED]	Qualifications [REDACTED]
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MASTER'S SIGNATURE

Signature [REDACTED]	Date [REDACTED]
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3 Identifying critical data necessary for discharge of regulatory functions, rather than regulating the collection of a surfeit of data

3.1 Introduction

Chapter 2 outlined the very substantial amounts of data currently collected on each livestock export voyage, particularly voyages of ten days or more duration. Attention was also drawn to current recommendations to increase the amount of data collected on each voyage (by as much as seven-fold). Finally, the significant levels of redundancy in voyage reporting between that undertaken by the AAV / accredited stockperson and the Independent Observer were identified.

In this chapter we attempt to identify a subset of data that should be collected by the regulator to ensure satisfactory welfare outcomes are achieved on livestock export voyages.

3.2 Outcomes based reporting required

In submissions to the ASEL and HSRA inquiries, LiveCorp has consistently stated that the focus of the regulator in terms of livestock export voyages should be on welfare outcomes achieved, rather than the means used to achieve these outcomes. This advocacy of an outcomes-based approach is not new. A generally accepted characteristic of good regulation is that:

“Regulators, instead of focussing on prescribing the processes or actions that firms must take, should step back and define the outcomes that they require ... to [be] achieved. Firms and their management will then be free to find the most efficient way of achieving the outcome required”².

An outcomes-based approach to ASEL has been advocated for almost 15 years by independent researchers³ and was promised by the Government in the recently completed ASEL review. However such an approach has yet to be delivered in the live export standards. The current review by the IIGLAE provides an opportunity to at least implement an outcomes-based reporting system.

The current ASEL regulations including, to a degree, the reporting requirements, rely on a prescriptive approach. As such, they provide detailed information about the actions that should be taken by exporters at each stage of export. This is in direct contrast to an outcome-based approach, where emphasis is placed on outcomes rather than suggested actions. In other words, outcome-based standards describe the results of actions (that is, outcomes) that should be achieved, rather than the actions themselves.

An outcomes-based approach to live export voyage regulation would rely on several essential elements, including:

- Agreed outcomes, as they relate to animal health and welfare to be achieved on the livestock export voyage;
- Defined performance targets, as they relate to the agreed outcomes; and
- A compliance monitoring and management framework that provides an accurate picture of performance against those defined targets and agreed outcomes, and sets appropriate incentives and remedial / punitive mechanisms.

² Black, J., 2007, *Principles Based Regulation: Risks, Challenges and Opportunities*, London School of Economics and Political Science.

³ See, for example, Whan, I., More, S., Byant, A. and Bladeni, S, 2003, *Review of the Australian Livestock Export Standards*, Final Report for Project LIVE.117, Meat & Livestock Australia, November.

The challenge for both the wider ASEL regulatory model, and for the reporting requirements being considered in the current inquiry, is to define the necessary outcomes to be achieved and the performance targets associated with each outcome.

It appears that the public is overwhelmingly interested in welfare outcomes achieved on livestock export voyages, rather than the actions taken to achieve (or not achieve) these outcomes. Welfare outcomes should also be the focus of the regulator.

3.3 What are the outcomes that the regulator wants achieved?

LiveCorp has searched for concise, precise and quantifiable statements from the regulator on required animal welfare outcomes from a livestock export voyage, however has been unable to identify them.

Some *guidance* on required outcomes is to be found in ASEL 2.3. In terms of onboard management of livestock, apart from complying with reporting requirements, ASEL, lists the following required outcomes:

- The voyage is completed safely.
- Adequate livestock services are maintained throughout the voyage.
- Onboard care and management of the livestock is adequate to maintain their health and welfare throughout the voyage.

These required outcomes, however, are too general to be of much use.

In terms of precise, quantifiable outcomes, as pointed out in the Moss Review and other documents, the main focus has been on mortalities. Here precise outcomes have been defined (using the ASEL Review recommendations in the material presented below):

- that voyage mortalities should not exceed:
 - 1 per cent, or three animals, whichever is the greater, for sheep, goats, camelids and deer; and
 - 0.5 per cent, or three animals, whichever is the greater, for cattle and buffalo; and
- and that average daily mortalities should not exceed:
 - 0.05 per cent, or three animals, whichever is the greater, for sheep, goats, camelids and deer; and
 - 0.025 per cent, or three animals, whichever is the greater, for cattle and buffalo.

Arguments contained in the ASEL and HSRA Reviews (especially the latter) seemed to suggest that a performance animal welfare target should also be set for panting scores. For instance, the HSRA Review draft report stated that open mouth panting for sheep, if it occurred “through the day and night” represented an unacceptable welfare outcome. The HSRA Technical Reference Panel, however, failed to define a performance target for panting.

The ASEL Technical Advisory Committee also did not define outcome targets for animal welfare other than for mortalities. The final ASEL Review report notes the following⁴:

- *“Ideally, voyage reporting on the welfare of livestock would be based on a broad set of health and welfare measures (morbidity data) in addition to a mortality rate”.*

⁴ ASEL Review Technical Advisory Committee, 2018, *Review of the Australian Standards for the Export of Livestock: Sea Transport—final report*, Department of Agriculture and Water Resources, Canberra, December, p37.

- *“However, measures of welfare are complex, requiring multiple measurements over time, and vary with many factors including livestock class and preparation and environmental context”.*
- Welfare measures other than mortalities *“have not yet been clearly identified and described ... nor adequately validated to determine thresholds to act as triggers for action”.*
- *“Thus the need to continue with notifiable mortality rates per consignments remains in the short term”.*

3.4 Suggestions on data to be collected

In the absence of clearly defined statements from the regulator on the welfare outcomes to be achieved during livestock export voyages it is difficult to be definitive about the data to be collected and included in reports to Government.

Until further research is conducted and animal welfare outcomes are clearly defined, given the expense involved in data collection, there is merit in limiting the number of items that must be measured. In this regard, the ASEL Technical Advisory Committee in requiring over 7,000 pieces of data be collected on a 15 day voyage, may have placed an imposition on the industry that cannot be justified in terms of compliance monitoring and the costs / benefits.

A data collection and reporting framework predicated on an outcomes-based framework is likely to be much more closely aligned with the original ASEL daily and EOV reports than those suggested in the ASEL Review recommendations, focussing on key factors such as:

- mortalities;
- respiratory character / pant scores per deck;
- feed consumption - average per head;
- water consumption - average per head; and
- issues with feed & water (including sufficiency & maintenance issues)

3.5 Conclusion

In scientific work a strict process is followed: a hypothesis is made and then data collected against that hypothesis. An analogous process needs to be followed by the regulator in collection of data for livestock export voyages. First, the regulator needs to decide what outcomes should be achieved and then data collected against those outcomes.

A question must be raised about whether regulations should require any data to be collected by AAVs / accredited stockpersons (or alternatively IOs). The question is: does the regulator routinely refer to this data in determining whether welfare outcomes on a voyage have been satisfactory? If the regulator now relies almost exclusively on the report of the Independent Observer when making this determination, the usefulness of the AAV / accredited stockperson reports are questionable. Potentially while ever Independent Observers are placed on a voyage, requirements for other data collection seem unnecessary and could arguably be removed without impact.

4 Observations on efficiency of data collection and data dissemination / use

4.1 Introduction

As pointed out in Chapter 2, current regulations require that over 1,000 data items be reported on voyages of 10 days or more and the number of data items to be reported will increase to over 7,000 under proposed changes. Given this volume of data, for the regulator's "*management, ... monitoring and reporting during livestock export voyages by sea*" to be considered effective and efficient well-developed systems are required for data collection, storage, access and dissemination. In this chapter systems used by the regulator for data collection, storage, access and dissemination are examined for efficiency and effectiveness.

Invariably the expense of collecting data is considerably greater than the costs of establishing efficient storage and access systems. This is because data collection (especially when involving animal welfare) requires ongoing human involvement given the current state of measurement technologies. In contrast, software to allow efficient data storage and access, once created, can be used over many years. Due to these factors, especially when the amount of data involved is large (as it is for voyage reporting), for a system of reporting and monitoring to be considered efficient, an efficient database needs to have been created and be in use.

Generally, an efficient database system exhibits the following characteristics:

- Mechanisms are available to allow new data to be uploaded into the database easily and integrity checks on this data to be conducted;
- Efficient mechanisms are available to allow relevant data subsets to be extracted, analysed and presented.

LiveCorp is aware (through the Moss Review) that reports by AAVs / accredited stockpersons are loaded by the regulator into a central database known as Tracking Animal Certification for Export (TRACE). LiveCorp has very limited knowledge of this database. From available information, however, it appears that this database is relatively restricted in its capabilities.

4.2 Efficiency in data collection and uploading

From the information available to LiveCorp, systems in use to allow uploading of new AAV / accredited stockperson data are likely to be cumbersome.

Efficient uploading of data into a central database invariably involves the use of standard templates or online / automated entry systems. LiveCorp is aware that livestock voyage data collected by AAVs / accredited stockpersons is currently being reported to the regulator in a variety of non-standardised formats. LiveCorp has, therefore, formed the conclusion that the upload capabilities of livestock voyage database system being used by the regulator are likely to be inefficient.

Efficient collection also involves collecting data once and then manipulating it to serve a variety of purposes. As pointed out in Chapter 2, the same data would appear to be collected at least twice – by the AAV / accredited stockperson, as well as the Independent Observer (and in some cases, the Master).

Additional to the above, reports required by the regulator involve items of collected data being reported in relatively raw forms (e.g. daily mortality data) and then manually manipulated by the AAV / accredited stockperson and reported in other forms – for instance, an aggregated form (e.g. mortalities for the voyage as a whole). An efficient system would involve database procedures being used to automatically manipulate collected data into a variety of forms (e.g. aggregating daily mortality data into voyage mortality data).

Finally, best practice involves undertaking possible data validity checks at the first point of entry. The regulator has not developed systems to allow this to occur.

Consideration also needs to be given whether the regulator needs to prescribe how data is collected (e.g. whether regulation needs to specify that data is to be collected by an AAV / accredited stockperson). Increasingly automated systems may play a part in collecting higher quality data than can be collected through human measurement. A superior approach may be for the regulator to specify the type and quality of data it requires and allow exporters to employ a variety of mechanisms to achieve this.

In this context, the need for Independent Observers on livestock export voyages may be questioned. Independent Observers are extremely expensive – for a 10 day voyage costing \$20-25,000. Similar compliance checks may be made by placing video cameras at strategic points around the vessel and either streaming this information to Australia or, if this is not possible, employing tamper proof mechanisms to store the information for later analysis.

4.3 Efficiency in data analysis and reporting

An efficient database system also allows easy extraction of data relevant for particular purposes and aggregation of information in a variety of ways.

The Moss Review, however, noted that *“there is no capability in the department data base ... to aggregate information”*. It also noted:

“Although AAV reports are loaded onto TRACE, the reporting has not been analysed systemically. It is apparent that analytical and data literacy as a skillset of LAE Branch staff members is limited”.

Given the lack of capability in the above areas, LiveCorp has concluded that the mechanisms to allow data to be extracted, analysed and reported in different forms are likely to be inefficient / inadequate. This capability needs to be able to put into context the data collected, including assessing the limitations on the interpretation of data (in terms of reliability, statistical significance etc.).

LiveCorp notes that it is only through the existence of an efficient database system that maximum use can be made of the data by the regulator, including extracting relevant data for notifiable incidents, tracking exporter performance and identifying risk profiles for particular voyages, vessels and livestock types. Equally, given the expense of collecting the data, there is merit in making non-confidential elements generally accessible for the purposes of public reporting, research and performance measurement. Currently data is only available to the exporter and the department. Only if maximum use is made of expensive data collected can the system for reporting and monitoring be considered as effective and efficient.

4.4 Actions being undertaken by the industry

Historically AAV / accredited stockperson reports have only been available to the exporter associated with the voyage and the department. However, within the last twelve months exporters did share with LiveCorp the AAV / accredited stockperson data for a number of voyages to allow LiveCorp to refer to this data in submissions on the trade. The availability of this data revealed to it the lack of standardisation in the AAV / accredited stockperson reports, inhibiting data aggregation and analysis. A heavy resource allocation was required by LiveCorp to rearrange data into a common format.

As a result of this work LiveCorp is currently developing a standard Excel template for recording of AAV / accredited stockperson data. LiveCorp hopes that this standard Excel template will be trialled on sheep voyages to the Middle East once trade re-commences after 23 September. The Excel template, as well as creating a standard interface for data input, also has some reporting functions with graphical data displays. These graphical displays make it easier for the AAV / accredited stockperson to detect any incorrect data entries, as well as providing an alert mechanism for possible emerging issues.

A longer term project by LiveCorp has involved the development of a mobile phone app to allow AAVs / accredited stockpersons to record data for daily and EOVS reports. The app restricts the data that can be entered to valid values and performs certain additional integrity checks. When Internet connections are available data from the app is uploaded into a central SQL database. A number of reporting functions have been developed within this database.

The mobile phone app has been trialled on a number of cattle shipments, with success, and limited trials have occurred with sheep shipments. Issues are still being encountered with the usability of the app for sheep shipments given the amount of data that is now required to be collected.

4.5 Conclusion

In this chapter, systems used for data collection, storage and dissemination have been examined for efficiency and effectiveness. Although LiveCorp has only a limited knowledge of these systems, from available evidence, there appear to be shortcomings / inefficiencies. Of particular concern are the overlaps in data collection efforts and compliance checks, redundancies in reporting and the inaccessibility of the data (externally, and it seems in some cases, internally).

LiveCorp is now working on a number of improvements in the way AAV / accredited stockperson data is collected and reported. Looking to the future, it is vital that regulations over methods of data collection do not prevent engagement of new technologies that may reduce costs and be more accurate.

5 Balancing the regulatory need to monitor compliance against costs

5.1 Introduction

LiveCorp notes that, with the exception of daily reports not being required for voyages of less than 10 days and other relatively minor variations (e.g. on the need for an AAV to accompany the vessel), compliance checks and reporting requirements do not vary across all livestock export voyages. In particular:

- An Independent Observer is placed on all livestock export regardless of characteristics and risks (unless otherwise specified by the Department, or where there is insufficient room for an IO on the vessel – in this case the Accredited Stock Person acts as the IO).
- Daily reports and an EOV report are required on all voyages of 10 days or more, regardless of the past history of these voyages and the performance record of the exporter involved.
- Under the ASEL Review recommendations, an AAV must accompany all voyages of 10 days or more unless otherwise agreed by the department, regardless of any explicit consideration of performance and risks. The department has yet to release guidance on when it might agree that an AAV does not accompany a voyage of 10 or more days.

5.2 Compliance monitoring activities should be based on risk

For compliance monitoring to be invariant regardless of the risk of regulatory issues arising does not represent best regulatory practice. Under best regulatory practice, risk is heavily factored into where compliance monitoring and reporting is directed. Examples of this readily come to mind:

- Road speed cameras to monitor compliance with regulations are generally located in areas with a high safety risk. For instance, strict guidelines are used by Road Authorities for the placement of fixed speed cameras based on the crash history of the site (with deaths and injuries considered separately) and past speed surveys showing a history of non-compliance⁵.
- The Australian Taxation Office (ATO) has a sophisticated process for identifying areas of highest risk of non-compliance with taxation regulations and calibrates compliance monitoring and audits against these risks. Each year the ATO publishes the *Compliance Program* which articulates the identified compliance risks and priorities. Although not published, the compliance treatments for those risks over the coming year are also determined. Those businesses identified as higher risk of non-compliance, or 'outliers', are more likely to be audited than those of lower risk. This risk based approach is used because the ATO recognises:
 - The ATO has limited resources and to be effective and efficient those resources need to be directed into areas where risks of non-compliance are greatest.
 - The ATO also recognises that compliance monitoring, particularly ATO audit activity, involves affected businesses with substantial costs. Business administrative costs, both direct and indirect, are increased. Businesses expend resources in responding to information requests and incur costs in engaging professional advisers to assist with the conduct of the audit and consideration of technical positions. For overall economic efficiency audits are best directed into areas where risks of non-compliance are greatest.

⁵ For example, see Auditor-General of New South Wales, 2011, *Performance Audit: Improving Road Safety – Speed Cameras*, Audit Office of New South Wales, July, <https://www.audit.nsw.gov.au/our-work/reports/improving-road-safety-speed-cameras>.

- Focussing ATO resources on industries and business types that are of highest risk of non-compliance encourages compliance by similarly placed industries and business types.

Further examples also readily exist in food safety, border protection and biosecurity.

It is indeed rare to find instances where systems to monitor regulatory compliance are not heavily based on risk considerations.

Based on best regulatory practice, the compliance monitoring activities in the livestock export industry, including the placement of Independent Observers on vessels, should be based on risk. Factors that the regulator may care to consider when judging the risk are of non-compliance include:

- the voyage type;
- characteristics of the livestock being carried;
- environmental conditions likely to be encountered; and
- the performance history of the exporter.

These risks should be assessed systematically using transparent procedures with compliance measures imposed proportionate to the risks. The fact that this has not been done, except to a minimal degree, raises questions about the effectiveness and efficiency of regulatory compliance monitoring activities.

5.3 Equitable systems are needed to pay for compliance monitoring activities

Just as it is rare to find instances where systems to monitor regulatory compliance are not heavily based on risk considerations, it is also rare for the business to pay for the compliance activities by the regulator irrespective of whether the business has been found to be compliant or non-compliant.

Consider the two examples provided in Section 5.2:

- A compliant road user does not pay for the police and systems that monitor road speeds. If the road user is compliant with the road speed the user incurs no costs at all. It is only if the user is found to be non-compliant (i.e. in breach of speed rules) that penalties are imposed.
- Similarly, a taxpayer found to be compliant with the taxation laws does not pay for ATO audits. Certainly, as noted previously, the taxpayer may incur some costs responding to the audit, but at least one of those costs is not paying for the ATO auditors. It is only if the taxpayer is found to be non-compliant that penalties imposed and demands issued for payment of back taxes.

For live exports, the system imposed is very different to the two examples given above. Exporters directly pay for compliance monitoring activities irrespective of whether they are compliant or non-compliant. As pointed out in Chapter 2, the costs of Independent Observers are very significant indeed. Not only must the exporter pay for the wages and on-costs of the Independent Observers but must also meet the costs of return flexible business class airfares.

Importantly, the exporter must meet the costs of Independent Observers regardless of whether any issues were uncovered with ASEL compliance on the voyage or not. Effectively this is analogous to a tax compliant business having to pay for the costs of ATO auditors.

That exporters have to pay for these costs irrespective of whether compliance has occurred seems unreasonable and inequitable. Incentives for compliance would be created by differentially charging for Independent Observers dependent on compliance findings.

6 Establishing clear roles and responsibilities for AAVs / accredited stockpersons and Independent Observers

6.1 Introduction

In Chapter 2 it was noted that there appears to be considerable overlap between the roles and responsibilities of AAVs / accredited stockpersons and Independent Observers.

The genesis of the Independent Observer program was the community reaction to a 60 Minutes story regarding shipments of sheep to the Middle East. The McCarthy Report notes that the department took immediate action to add an independent department veterinarian to upcoming voyages to the Middle East as an observer, *“to monitor and record the health and welfare of the animals on board”*.

Similarly, a primary responsibility of the AAV is to report accurate and reliable information on *“the health, welfare and mortalities of livestock during the export voyage, conditions on board, epidemiological data and other relevant information”* – i.e. monitoring compliance.

It was noted in Chapter 2 that this overlap presents a significant opportunity for resource rationalisation in the activities directed to monitor compliance. This chapter contains a suggestion on how this rationalisation might occur.

6.2 Redundancy in monitoring regulatory compliance

Reasons underlying the decision by the previous Minister and regulator to assign responsibilities to two people on board live export vessels to monitor compliance with animal welfare standards are unknown to LiveCorp. LiveCorp, however, presumes that this decision was either related to a view that:

- The compliance monitoring activities of AAVs / accredited stockpersons could not be trusted; and/or
- With other duties the AAVs / accredited stockpersons have an inability to monitor compliance.

LiveCorp would challenge both these possible presumptions.

6.2.1 The Farmer Review

With respect to the first of these presumptions, the lack of independence of AAVs / accredited stockpersons has been raised for many years as an issue by those opposed to the trade.

Bill Farmer, in his review, directly addressed the independence issue. Farmer concluded that the vast majority of AAVs conducted their work diligently as required under legislation – that the independence issue, in the main, appeared to be *“a problem of perception”*. Farmer did, however, draw attention to allegations made by three former AAVs that exporters had *“attempted to influence their voyage reports, and that following unfavourable reports, their employment had been reduced or terminated”*. Attention was also drawn to a claim by one former AAV that an exporter had changed the mortality figure in his report.

Farmer concluded that a proportionate response to this minority of cases was to require AAVs to report directly to the department, with a simultaneous report to the exporter.

In addition, Farmer suggested that:

- As part of formal AAV accreditation, AQIS could include conditions specifying that the AAV would discharge his/her duties in accordance with the Australian Public Service Code of Conduct and would do so without fear or favour.
- Periodic on board auditing of AAVs be considered. Under current arrangements, we understand that AAVs are desk-audited annually. Farmer recommended that additional random, targeted on-site audits, by experienced AQIS officers, auditors, should be considered if there was concern about non-conformance with ASEL or the Approved Export Program, including inadequate reporting. Consideration could also be given to auditing during part or all of a voyage.

Farmer considered posting Independent Observers on vessels (although he did not use this term) but rejected this possible change in compliance monitoring arrangements on a number of grounds including costs, flexibility, and usefulness to exporters.

6.2.2 The Moss Review

Moss also considered the independence of AAVs / accredited stockpersons.

Moss observed that “AAVs appear have an inherently conflicted role. While they are required to report to the department on animal welfare issues, they are either employed, or engaged by exporters or contracted on a consignment by consignment basis” (our emphasis).

Independent Observers were already in place at the time of the Moss Review and Moss did not comment on roles and responsibilities. Instead Moss focussed on improvements to reporting procedures, including creating an ability for Independent Observers and AAVs to contact the department at all times to address welfare issues that may arise.

6.2.3 Reports by Independent Observers

LiveCorp has examined several of the Independent Observer reports made public to date (noting a number have been released as this submission has been being finalised). These reports praise the work of AAV and accredited stockpersons. Comments on AAVs found in Independent Observer Reports published to date are contained in Appendix 6A. No comments were found by LiveCorp in the Independent Observer Reports to suggest that:

- AAVs or accredited stockpersons felt under pressure to misrepresent the situation on board vessels;
- AAVs did not have the capacity to prepare reports to Government as well as conduct their other duties – i.e. AAVs, like an increasingly large number of employees in workplaces can multitask.

6.3 Conclusion

The redundancy that currently exists in monitoring compliance to animal welfare standards on board vessels is imposing unnecessary and burdensome costs on the industry. Currently a number of Asian importers of Australian livestock are actively threatening to secure supplies from South America due to the costs associated with Australian supplies. AAVs and stockpersons have historically monitored compliance on board vessels and the vast bulk of evidence is that they have completed these tasks diligently. As evidenced from Independent Observer reports, AAVs have the capacity to both monitor compliance and report to the regulator, as well as undertake their other duties.

Historically AAV reports have not been made public, but there may be merit under a redefined compliance monitoring system to make summary reports public as Independent Observer reports are made public now.

A role may still exist for Independent Observers into the future. However, if a future role for Independent Observers does exist it should be confined to periodically auditing the work of AAVs (as Farmer recommended), with audit frequency based on risk and a focus on areas where performance has been below standards set.

Appendix 6A: Extracts from Independent Observer reports on AAVs

This Appendix contains extracts from Independent Observer reports on the work of AAVs. These extracts are from all Independent Observer reports that had been published at the time of preparing this submission and that contained comments on the work of AAVs.

“An Australian Government Accredited Veterinarian (AAV) and two LiveCorp Accredited Stockpersons were on board responsible for implementing the exporters’ procedures to ensure the health and welfare of the livestock throughout the voyage to completion of discharge. The AAV was an experienced, practical and competent veterinarian who has a long history of working in the Australian and international livestock industry, both in the private and public sectors. ... Management meetings were held each morning with the Master, the Chief Officer (CO), AAV, Head stock person, the Independent Observer and others to discuss and review all aspects of stock management. The IO determined that the relevant procedures relating to the management of livestock exported by sea were consistent with ASEL” (Report No 1).

“There was an experienced Accredited Australian Veterinarian (AAV) and LiveCorp Accredited Stockperson on board responsible for implementing the exporters’ procedures to ensure the health and welfare of the livestock throughout the voyage, until completion of discharge. ... The AAV, stockperson and the vessel’s crew managed the health and welfare well, including the treatment of animals in hospital pens or humane euthanasia when required. ... The experienced AAV and stockperson communicated well with the crew in order to maintain the health and welfare of the cattle in line with ASEL requirements” (Report No 2).

“An Australian Government Accredited Veterinarian (AAV) and two LiveCorp Accredited Stock people oversaw arrangements to maintain the health and welfare of the livestock throughout the voyage until unloading. The vessel’s crew, AAV and Stock people managed the health and welfare of animals well” (Report No 3).

“An Australian Government Accredited Veterinarian (AAV) and one LiveCorp Accredited Stockperson (stockperson) were on board responsible for implementing the exporters’ procedures to ensure the health and welfare of the livestock throughout the voyage to completion of discharge. The AAV was experienced on livestock vessels, completing a number of voyages with both cattle and sheep to the Middle East and Asia. The stockperson had extensive experience (over 20 years) on livestock vessels and is especially competent with sheep. Management meetings were held each morning with the master, CO, AAV, stockperson and bosun to discuss and review all aspects of stock management including the feeding regime, daily water calculations, hospital pen management and plans for discharge. The AAV and IO both took readings with hand held temperature devices in the pens. Most of the time, pen temperatures were about one degree less than the walk ways (where ship thermometers are placed) as ventilation is directed into the pens. .;; Euthanasia was performed by the AAV with a captive bolt gun and recorded in the daily reports. The AAV, stockperson and two exporter representatives assisted discharge and monitored animal welfare and handling practices” (Report No 4).

“The vessel had a total of 67 personnel on board. This included 17 animal husbandry crew, two LiveCorp Accredited stockpeople, and one Australian Government Accredited Veterinarian (AAV). The IO’s impression was the crew show a high level of skill and were dedicated to the welfare of the animals. They worked calmly around the cattle and were open to receiving guidance. Educational videos on animal welfare are played for the crew during the voyage. The IO noted the stock people and the AAV displayed experience and attention to detail. Sick animals were detected early from

subtle signs and attended to in a timely manner. Hospital pens were usually located in high traffic areas, so were frequently observed. The cattle exhibited few stress indicators. ... A meeting was held at 10.00am every day and involved the Master, Chief Officer (CO), AAV and both stock people. The Bosun would attend, depending on availability of other officers. Two wet and dry bulb thermometers were located on each deck, with measurements taken every four hours. ... The observer determined that the relevant procedures relating to the management of livestock exported by sea were consistent with ASEL and good animal welfare outcomes for the cattle being transported. Mortality rates reported were accurate. The crew displayed a knowledge of and dedication to animal welfare that appears genuine and consistent. Their attentiveness and dynamic modification of processes with the aim of maximising animal health appeared to be an ingrained habit” (Report No 6).

“The vessel had an Australian Government Accredited Veterinarian (AAV) on board who had greater than eight years’ experience in long haul voyages. There was also a LiveCorp Accredited Stockperson (stockperson) on board with 25 years’ experience in long haul voyages. ... The IO observed that all crew were kind when handling livestock. The CO was noted to be very diligent and encouraged crew to work to their full potential. The Master, CO, AAV and stockperson were all extremely proactive in mitigating potential risk. The observer determined that the relevant procedures relating to the management of livestock exported by sea were consistent with ASEL and additional conditions of export” (Report No 7).

“The Australian Government Accredited Veterinarian (AAV) is an experienced, practical and competent veterinarian who has a long history of working in the Australian and international livestock industry, both in the private and public sectors. There were two LiveCorp Accredited Stockmen on board. Both Stock people were experienced, capable and committed to the welfare of the sheep and cattle on this voyage. ... Each day at 10.30 am there was a management meeting attended by the Master, Chief Officer, AAV, Stockperson and sometimes the Bosun (or Tindal) also attends if required. At these meetings the stockperson would initially report on general health and treatments, then the AAV would issue feeding instructions. On-board ship management operations were raised by the CO (i.e. deck wash plan) and then an update on trip status from the Master. An opportunity then rose to broach any issues. After the daily meeting the AAV would meet the CO to prepare the daily report. Temperatures were taken on each deck with fixed hygrometers in place. The accuracy of these was regularly monitored by the AAV throughout the journey. The IO did not note any health and welfare issues. The crew performed their duties to a high standard ensuring health and welfare of all livestock was maintained throughout the voyage. ... There were no noted problems with regards to the health and welfare of animals at discharge. ... The IO determined that the relevant procedures relating to the management of livestock exported by sea were consistent with Australian Standards for the Export of Livestock (ASEL)” (Report No 8).

“The Australian Government Accredited Veterinarian (AAV) had substantial qualifications and experience relevant to the role. They actively applied their expertise through data analysis of the sheep mortalities and the production of comprehensive daily reports. A LiveCorp Accredited Stockperson (stockperson) also accompanied this voyage and was involved the overall functional management of the husbandry and intensified care of the livestock. Meetings occurred daily at 10 am with the CO, AAV and stockperson. ... The AAV, stockperson and the vessel’s crew managed the health and welfare well, including the treatment of animals in hospital pens or humane euthanasia when required. The experience and commitment of the stockperson resulted in the early identification and care of shy feeders. This had a substantial impact in reducing morbidity. The experienced AAV and stockperson collaborated with the vessel officers’ well to maintain the health and welfare of the livestock in line with ASEL requirements” (Report No 9).

“There was an experienced Australian Government Accredited Veterinarian (AAV) and a LiveCorp Accredited Stockperson (stockperson) on board responsible for implementing the exporters’ procedures to ensure the health and welfare of the livestock throughout the voyage. ... The Master chaired daily meetings with the CO, AAV, stockperson, Bosun and the IO to review on board operations to ensure the health and welfare of animals. The IO assessed the crew to be mindful of the welfare of the animals when carrying out their tasks. ... The AAV, stockperson and the vessel’s crew managed the health and welfare well, including the treatment of animals in hospital pens or humane euthanasia when required. ... There was an instance of poor animal handling by one of the importing country stock people when discharging the cattle which was swiftly, and professionally, addressed by the AAV. ... The experienced AAV and stockperson worked well with the crew to maintain the health and welfare of the cattle and sheep in line with ASEL requirements” (Report No 10).

“The LiveCorp Accredited Stockpersons and crew were on alert for animals in need of care and intervention. During loading some pens were stocked with too many cattle and others with too few. This was evident on the first day. The two LiveCorp Accredited Stockpersons on board spent the first day at sea walking the vessel together, checking on all the cattle and the crew’s performance and moving cattle from overstocked pens to the less stocked ones. After their adjustment, the IO believed the pens were stocked accurately and according to the load plan. The space allocation was noted as sufficient.”...” The LiveCorp Accredited Stockpersons are proactive and they gather information from their start time and attend to problems immediately. They then report these at the daily meeting, in addition to progress if a problem has been found” (Report No 11)

“An Australian Government Accredited Veterinarian (AAV) and LiveCorp Accredited Stock person (stock person) accompanied the consignment. ... The AAV and stock person had similar routines and worked together as a team. The AAV liaised closely with the Bosun and Chief Officer (CO) with regards to livestock management. Daily meetings were held each morning with the Master, CO, AAV, stock person and the observer to discuss weather forecast; deck temperatures, conditions and wash down schedules; fodder, sawdust and water consumption; livestock status, general health and treatments; and any issues identified. ... The AAV and stock person were actively involved in deck wash down. All decks were washed three times during the voyage. The observer determined that the relevant procedures relating to the management of livestock exported be sea were consistent with the ASEL” (Report No 12).

“The Australian Government Accredited Veterinarian (AAV) worked very hard and professionally. The LiveCorp Accredited Stockperson’s communication skills and ability to manage this trip was exemplary, and their work ethic and aptitude were very good. The junior stockperson was hard working, thorough and very capable. Daily meetings were held at 10:00am attended by the AAV, stock people, Master, CO and observer. The boson attended on non-deck washing days. Daily reports were lodged by the CO at midday after the AAVs input. Recordings of temperature were taken every four hours on all decks and a daily average recorded for each deck. ... The AAV collated data on a spreadsheet designed to keep track of fodder and chaff consumed and remaining on board. .. The health and husbandry of the cattle was very well managed by professional crew under the supervision of a competent and diligent AAV, stock people and Master. Unloading was performed efficiently and no health or welfare concerns were observed during the process. The AAV stayed on board until the last animal left the vessel. ... The observer found the overall management of the vessel could not be faulted” (Report No 20).

“Some but not all nose bowls had water at the time of loading. The observer raised the ASEL requirement to feed and water cattle within 12 hours of loading with the LiveCorp Accredited stockperson (stockperson) and this requirement was met within the specified time.” (Report 22)

“There were two very experienced LiveCorp Accredited Stock people on board responsible for implementing the exporters’ procedures to ensure the health and welfare of the livestock throughout the voyage. Both stock people demonstrated experience in live export and a knowledge of factors and conditions which need addressing to maintain good standards of animal health and welfare aboard live export voyages.” (Report 23)

“The crew included an experienced LiveCorp Accredited Stock person (stock person) who had worked on livestock vessels for many years. The observer considered the stockperson to have good skills and provided high level of care for the cattle. The stockperson worked well with the crew and the crew were competent animal handlers.” (Report 24)

“The LiveCorp Accredited Stockperson (stockperson) was diligent and provided high level of care for the cattle.” (Report 26)

“The crew included an experienced LiveCorp Accredited Stock person (stock person). The observer noted the stock person was competent and had animal welfare as his highest priority. The stock person performed the role in a manner that caused minimal disturbance to livestock. Treatments were administered as required. Tired and weaker cattle were rotated in and out of hospital pens to ensure easier access to feed and water.” (Report 30)

“The crew included an experienced AAV that demonstrated a high level of knowledge in animal husbandry and welfare and commitment to accurate record keeping. The crew included a LiveCorp Accredited Stock person (stockperson) who had lifelong exposure to sheep farming. The AAV and stockperson worked well together as with the vessel management and crew. ... A daily meeting was held every day at 10.00am and involved the Master, Chief Officer (CO), stockperson, AAV, bosun and the observer. The AAV and stockperson was aware that a route diversion to avoid adverse conditions and delays in berthing at the destination port could cause an extended length of voyage. The AAV and stockperson considered these factors and the remaining fodder when deciding each daily sheep ration. Temperature readings were taken daily from each deck around 10.00am. The observer noted that there was little variation over the day and there was no major inconsistency between the temperature readings on the daily report and in situ thermometers. ... The AAV and stockperson were integral to the unloading process and the unloading process was efficient once it commenced. The AAV and stockperson worked together and demonstrated high level of knowledge in animal husbandry and welfare as evidenced by managing the appropriate feeding arrangements for the rams, managing the available fodder for the duration of the voyage in accordance with ASEL and appropriate management of the unloading process” (Report No 31).

“The crew included an experienced LiveCorp Accredited Stock person (stock person) and two additional Australian stock persons. The stock persons handled stock during loading, voyage and Independent Observer summary report on MV Rahmeh 2 discharge with skill and demonstrating genuine care. The three stock persons were swift to identify animals requiring treatments and they were performed in an appropriate manner. Shy feeders were also identified and transferred to a separate pen to encourage feeding.” (Report 35)

“The MV Al Shuwaikh had an Australian Government Accredited Veterinarian (AAV) on board who had extensive experience in long haul voyages. There was also a LiveCorp Accredited Stockperson (stockperson) on board with over 20 years’ experience in long haul voyages. The AAV and

stockperson demonstrated a strong understanding and commitment to the welfare of the livestock during the voyage. On each day of the voyage at approximately 10.00am, a meeting was held to discuss mortalities, fodder and water issues, environmental parameters, pad conditions or any other issues. The meeting was attended by the AAV, stockperson and members of vessel management team. The AAV and stockperson spent sufficient time walking the decks, checking conditions and behaviour of stock to identify shy feeding lines. The livestock were fed in accordance with ASEL for each classes of livestock. The AAV and stockperson had the appropriate skills and judgement to relate the feeding regime and trough management to the condition of the stock in specific pens. ... The observer determined that the relevant procedures relating to the management of livestock exported by sea were consistent with ASEL. The observer did not observe any deficiency of the undertakings of the AAV in relation to the activities in the approved export program” (Report No 36).

“Two LiveCorp Accredited Stockpersons (stockpersons) accompanied the consignment. During the voyage the stockpersons first priority was animal welfare.” (Report 40)

“A very experienced Livecorp Accredited Stockperson (stockperson) accompanied the consignment and was responsible for the health and welfare of the livestock. The stockperson demonstrated a genuine care of the livestock and was constantly monitoring the cattle and looking for signs of lameness, injuries, checking water and feed availability.” (Report 41)

“An Australian Government Accredited Veterinarian (AAV) was present on the voyage and had been on the vessel during two recent long haul voyages. In addition to the AAV, the crew included four LiveCorp Accredited Stockpersons (stockpersons). Three of the stockpersons had extensive experience accompanying stock on livestock voyages and the fourth stockman had a smaller number of livestock voyages. ... The AAV, stockpersons and all the feeding crew demonstrated commitment and energy to the required husbandry tasks. Thirty eight crew members were dedicated to providing feeding, water, trough cleaning and maintenance services to the livestock. A meeting was held at 10.00am every day and was chaired by the AAV. All sections of the ship’s management contributed to the operational issues and updates. The observer noted that the AAV was fully committed to livestock health and welfare for this voyage. The AAV and the stockpersons demonstrated commitment and energy. Feeding, water trough and deck cleaning were performed punctually as were veterinary interventions. The voyage seem well managed and animal welfare was prioritised. Livestock management and husbandry were of high standard” (Report No 42).

“There were two experienced LiveCorp Accredited Stock persons (stock persons) on board each having worked on over 60 live animal export voyages and both having extensive knowledge and experience of the land based cattle industry. They were responsible for managing the loading and unloading, coaching staff on animal handling techniques, administering treatments and the overall health and welfare of the cattle.” (Report 43)

“The officers and the crew worked well with the two LiveCorp Accredited stockpersons (stockpersons). The head stockperson had extensive export voyage experience and was effective in managing the health and welfare of the cattle. The second stockperson had been on several voyages and was proactive in identifying livestock that required treatment and maintaining feed, water supplies and pad conditions. The stockpersons effectively communicated with the officers and crew.” (Report 45)

“An experienced LiveCorp Accredited Stockperson (stockperson) accompanied the voyage who was responsible for the health and welfare of the livestock and who had worked on livestock vessels for

many years. The observer considered the stockperson highly competent and animal welfare was their highest priority” (Report 46)

“An experienced LiveCorp Accredited Stockperson (stockperson) accompanied the voyage responsible for the health and welfare of the livestock, who had worked on livestock vessels for many years. The stockperson provided appropriate care and management of all livestock whilst on the vessel.” (Report 48)

“The crew included two experienced LiveCorp Accredited Stock persons (stock person). The stock persons demonstrated a genuine care for the animal’s welfare.” (Report 53)

“An Australian Government Accredited Veterinarian (AAV) was present on the voyage. In addition to the AAV, the crew included three LiveCorp Accredited stockpersons (stockpersons). The three stockpersons oversaw a team of 33 persons who loaded, unloaded, fed, watered and cleaned troughs. ... The AAV and stockpersons inspected the cattle daily and provided any necessary treatments for sick and injured cattle. A meeting was held at 10.00am every day and discussed estimated time of arrival in the next port, route logistics and overarching management issues of the voyage. The Master, CO, vessel engineers, bosun, three stockpersons, AAV also attended the daily meeting. The feed consumption was calculated each day by the AAV and CO and feed budgets revised if necessary to accommodate for potential delays of arrival or unloading. There were three or four fixed thermometers per deck which were read four times a day by the CO or his delegate. The AAV, stockpersons and crew displayed competency throughout the voyage. Sufficient number of experienced staff were on board to feed water and manage the cattle. Sick or injured cattle were identified, isolated, treated or euthanised if required. The ships master and officers worked well with the crew to deliver the cattle to the ports in good condition despite the extended length of the voyage. Sufficient number of experienced staff were on board to feed, water, handle the cattle, identify unwell cattle, isolate and administer treatments. Overall livestock management practices were observed to meet the ASEL requirements” (Report No 54).

“The MV Al Shuwaikh had an Australian Government Accredited Veterinarian (AAV) on board who was diligent and hardworking. There was also a LiveCorp Accredited Stockperson (stockperson) on board with over 20 years experience in long haul voyages. The lack of livestock handling by some of the crew was appropriately managed by the CO, bosun, stockperson and AAV. On each day of the voyage at approximately 10:00am, a meeting was held attended by the CO, bosun, AAV, stockperson, and observer to discuss mortalities, hospital cases, stocking densities, feed water issues. Twice daily the AAV and stockperson went on rounds to inspect livestock, check conditions and behaviour of stock, identify shy feeders and check feed and water processes. Once rounds were completed, both the AAV and stockperson took an active role in other daily tasks. The AAV was available if needed at night. ... The crew recorded temperature and humidity measurements every 4 hours on each deck. The stockman and AAV performed morning and afternoon rounds to check mortalities, identify sick animals, check hospital animals, administer treatments or euthanasia, check pen and deck conditions. In addition the crew identified sick animals and moved them to the hospital pens. The officers (bosun and CO) walk the decks to check mortalities, sick animals and conditions and liaise with the AAV. During discharge in Kuwait and UAE, on a couple of occasions, the animal handling was more forceful than necessary by the wharf crew. The AAV intervened to modify the behaviour. Overall the discharge went smoothly but slowly. The AAV was efficient and thorough. The AAV, stockperson, officers provided leadership and acted with animal welfare as a priority. The crew treated the animals with a gentle manner and were fastidious with feed and water supply to animals. The observer had no areas of major concern” (Report No 57).

“An experienced LiveCorp Accredited Stockperson (stockperson) accompanied the voyage who was responsible for the health and welfare of the livestock. The stockperson was professional and proactive, self-motivated and displayed a consistent concern for animal welfare and treating cattle.” (Report 60)

“A LiveCorp Accredited Stockperson (stockperson) was present on the voyage. The stockperson was experienced and was observed to have a genuine care for livestock welfare. The master and his officers were very helpful in assisting the observer with any concerns or questions. All livestock crew and the stockperson were observed to be professional, and to be vigilant in ensuring that Australian Standards for the Export of Livestock (Version 2.3) 2011 (ASEL) requirements were met.” (Report 64)

“Two LiveCorp Accredited stockpersons (stockpersons) and an Australian Accredited Veterinarian (AAV) accompanied the voyage and were responsible for the health and welfare of the cattle. The master and CO interacted very well with the observer, AAV and stockpersons. The stockpersons were observed to be very experienced having worked on many livestock vessels for a number of years. The observer noted that the stockpersons were highly competent and had the welfare of the animals as the number one priority. The crew usually commenced the feeding plan at approximately 7am each morning. The bosun informed the crew of the daily work schedule, which was based on previous daily meeting outcomes. The AAV, stockperson, CO and bosun discussed pen conditions at each daily meeting. The observer informed the senior stockperson, and the AAV, that the assistant stockperson had been observed exhibiting behaviour towards some cattle that was non-compliant with ASEL requirements regarding the implementation of procedures to ensure the health and welfare of the livestock during the morning procedure of standing the cattle up. The senior stockperson and AAV discussed the issue with the assistant stockperson, which resulted in no further instances observed during the voyage. Apart from the incident outlined above, the stockpersons were observed to undertake their roles in a manner that caused minimal disturbance to livestock. Treatments and medications were administered as required by the AAV and senior stockperson daily at 1pm. Most treatments were administered within pens or hospital pens. The discharge was supervised for the duration by the stockpersons and the AAV. Discharge was undertaken professionally, with animal welfare a priority. The exporter arrangements were observed to be implemented during the voyage and to be compliant with ASEL requirements. .. The welfare of the cattle was always observed to be priority one. The observer noted this was a successful voyage.” (Report No 94).

“The Australian Government Accredited Veterinarian (AAV) was suitably qualified and experienced in their role and demonstrated good work practices throughout the voyage. The LiveCorp Accredited stockperson (stockperson) who accompanied this voyage demonstrated their experience, tending to the livestock with care and working well with the AAV and crew. ... Meetings were held daily at 10:00am with the CO, AAV, stockperson and IO to discuss the running of the livestock decks. Thermometers were located on each deck. The AAV monitored the wet and dry bulb temperatures daily. The observer stated livestock treatments were managed well by the AAV, stockperson and crew. Shy feeders were identified early by the stockperson and cared for accordingly in hospital pens. Treatments were administered by the AAV and euthanasia performed humanely. There were no animal welfare incidents observed by the observer from loading through to discharge. The AAV, stockperson, Master and crew showed a genuine interest in the health and welfare of the livestock throughout the voyage. The observer determined that exporter voyage instructions and specific management plans were observed to be implemented and compliant with ASEL requirements” (Report No 123).

“The Australian Government Accredited Veterinarian (AAV) and two stockpersons were experienced and very effective at locating livestock requiring attention and promptly providing treatment. A daily meeting took place each morning to discuss any issues regarding animal health and welfare, vessel function, weather and port arrival times. The AAV inspected all livestock pens each morning and subsequently attended to any health and welfare issues. The stockpersons inspected their assigned cattle pens each morning and performed treatments as required. The AAV and stockpersons repeated their livestock patrol activities throughout the afternoon, as well as moving stock as required. The AAV and stockpersons promptly treated all sick or injured livestock with appropriate medications. Humane euthanasia was performed as required. Overall, the AAV, stockpersons and crew were observed to perform their jobs and functions in accordance with Australian Standards for the Export of Livestock (Version 2.3) 2011 (ASEL). The exporter arrangements were observed to be implemented during the voyage and to be compliant with ASEL requirements” (Report 127).

7 Comments on specific items included in the scope of the review

In this chapter we comment on specific items included in the scope of the IIGLAE's review.

7.1 Scope 2: *“The extent to which monitoring and reporting provides assurance of compliance”*

As pointed out in Chapter 2, an extraordinary degree of effort and resources is currently devoted to monitoring and reporting on compliance to standards during livestock export voyages. The effort devoted to monitoring compliance to standards on livestock export voyages far exceeds the effort for other modes of transport and in other sections of the supply chain.

The inclusion of Independent Observers and AAVs / accredited stockpersons on every voyage, with a legislated responsibility to provide accurate and reliable reports on the health and welfare of livestock and conditions on board the vessel, provides an extremely high level of assurance of compliance with the legislation and standards. With two people on board every vessel monitoring compliance, if deviations occur from legislation and standards, almost certainly they will be detected.

However, the costs of assigning two people on board every vessel with a primary responsibility to monitor compliance are substantial and are adversely affecting the competitiveness of the industry. A proportionate compliance monitoring system would be based on an assessment of risk. High levels of assurance from compliance monitoring could be achieved through other less costly mechanisms, such as use of modern technology or occasional auditing by Independent Observers of the work of AAVs.

7.2 Scope 3: *“The extent to which monitoring and reporting requirements support or contribute to the mitigation and management of risks”*

Monitoring and reporting can contribute to the mitigation of risks in two ways:

- First, by enforcing constant observation and measurement well designed monitoring and reporting systems allow risks to be identified and addressed as they emerge. Many Independent Observer reports, for instance, refer to the importance of the daily meetings between the ship's Master, the ship's officers and the AAV / accredited stockpersons. Pen conditions, livestock conditions and other issues are discussed in these daily meetings, with work schedules based on meeting outcomes.

AAVs and stockpersons are extremely experienced and are best placed to determine appropriate courses of actions when issues arise. However, the Moss Review noted that *“While on board vessels, IOs and AAVs would benefit from being able to report on matters and discuss them with the department in real time. An arrangement for IOs and AAVs to contact the department at all necessary times would increase the department's situation awareness and facilitate timely reporting”*. The Moss Review went on to recommend that *“That the department make arrangements to enable on-board Australian Government Accredited Veterinarians and independent observers to contact the department at all times, including when necessary through the Australian Maritime Safety Authority response centre”*.

If implemented, the cost implications, challenges and benefits from a 24 hour contact arrangement would need to be thoroughly investigated, including whether the skills required to guide or direct an AAV or IO exist within the department on a continually accessible basis.

- Second, through appropriated storage of data from all voyages and from data aggregation and analysis, conditions which result in systematic variations in risk profiles can be identified, potentially resulting further improvements in management and regulation. As noted in Section 4.3, this capacity does not seem to exist currently with the way voyage data is being stored, but industry is working on improvements in this area.

7.3 Scope 4: “The department’s processes for engagement and consultation with industry, other Australian Government agencies and stakeholders such as vessel operators, in managing animal welfare issues”.

The department regulates exporters, registered premises and AAVs – it has limited engagement directly with ship-owners as they fall outside its regulatory remit. However, this presents shortcomings as although the department may in the course of its monitoring and data collection identify welfare issues related to vessel infrastructure or items under the control of the ship owner (such as the crew, on-board systems, etc), the communication is channelled through exporters rather than directly to ship-owners. We understand that there is communication to AMSA if there are items identified. However, AMSA’s scope to act is equally limited by the constraints of its regulation. We believe that there may be scope for the engagement and consultation between the department and ship-owners to be improved – even if only from an information sharing perspective.

7.4 Scope 5: “The roles and responsibilities of persons directly responsible for managing and reporting of animal welfare issues during a voyage, including: Independent observers, AAVs, Accredited stockpersons, Vessel Masters”.

See comments made in Chapter 6.

7.5 Scope 6: “Examine the efficacy, timeliness and transparency in the department’s management and use of reports, including the extent to which they contribute to strategic risk-based regulatory practice and informing improvements in the management of animal welfare”.

Comments on the delay in publishing Independent Observer reports were made in Section 2.1.3.

Comments have been made in Sections 7.2 and 4.3 on the apparent inability to use data collected and reported by the AAVs / accredited stockpersons to improve strategic risk-based regulatory practice.

It was suggested in Chapter 6 that there may be merit, under a redefined compliance monitoring system, to make summary AAV reports public as Independent Observer reports are made public now.

The main regulatory use for AAV data seems to be when investigations into notifiable incidents are needed. It has previously been noted, this limited function is not using data collected to its full potential.

It is also noted that current regulations allow both welfare performance on individual voyages to be investigated and action taken if necessary (under the notifiable incident provisions) and an exporter's performance over time to be assessed. Under Approved Arrangements the following provision exists:

An exporter's mortality rate will be reviewed against its 12-month rolling average every six months, at the time of audit. If an exporter's mortality rate has significantly increased above its average over the past 12 months, the department will notify the exporter and an internal system review may be required. If an exporter's mortality rate continues to increase over subsequent six-monthly periods and exceeds the industry average, a performance or system audit may be conducted by a departmental auditor. The outcomes of the audit may recommend corrective actions be implemented or a change in the exporter's performance rating if it is found that increased mortalities are due to issues in the sourcing, preparation, transport and/or loading of livestock.

The regulatory focus in terms of performance seems to be on individual voyages and notifiable incidents. A more productive regulatory focus, however, in terms of "greater transparency" and providing "industry with means of demonstrating continual improvement" (two of the three reasons given in the ASEL review for lowering of the notifiable mortality rate) may be on performance over time using existing provisions in Approved Arrangements.

7.6 Scope 7: "The department's management and use of reports to increase community and industry confidence in the effectiveness of its regulation in achieving the objectives of the legislation".

Voyage reports are raw data and very few community members will be able to meaningfully interact or interpret the data. In fact, it is likely that based on the data currently collected that it would be open to misinterpretation.

To extend public transparency on live export voyages, the department should be responsible for developing a structure that collates and interprets both the Independent Observer reports / footage / photos and the voyage report data in a way that is accessible to the community and puts it in an appropriate statistical context.

Such a report would greatly enhance the accessibility to the community and serve to increase transparency for normal voyages without affecting frankness or unnecessarily creating the regulatory need to publish substantial new materials.

7.7 Scope 8: "The cost effectiveness to government and industry of monitoring and reporting requirements".

Questions exist over the cost effectiveness of monitoring and reporting requirements.

Current arrangements are expensive and involve redundancy with two persons on board all vessels responsible for monitoring and reporting.

The main use by the department of the data collected by AAVs seems to be when notifiable events occur. This use is very limited - e.g. in 2017 there were 4 investigations out of about 275 voyages. More efficient methods may exist for gathering information for notifiable incident investigations. If this is to be the main use of the data (e.g. by limiting the amount of data routinely collected, but conducting detailed interviews with the AAV and the ship's Master in the event of an investigation).

The cost effectiveness of monitoring and reporting requirements could be improved by:

- removing redundancies in monitoring and reporting arrangements;
- adopting a risk based approach to monitoring compliance
- creating “carrot” incentives for compliance in addition to the existing “stick” incentives (e.g. differential charging arrangements for Independent Observers when compliance is achieved);
- imposing standardisation in the collection of a limited amount of data relevant to the regulator in discharging regulatory duties (“must have” versus “like to have”);
- storing this data centrally, making it accessible and producing reports from it that improve transparency of the trade to the public.