**Mortality Report 83 - Cattle exported by sea to Brunei in March 2020**

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[**Summary**](https://www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-mortalities/cattle-brunei-report-83)

On 23 March 2020, South East Asian Livestock Services Pty Ltd (SEALS) exported 797 slaughter cattle to Brunei. The journey was completed in 8 days and discharged in Brunei on 30 and 31 March 2020.

A mortality rate of 0.63% (5 head) was reported. The mortality rate exceeded the reportable level of 0.5% on voyages of fewer than 10 days as prescribed by the *Australian Standards for the Export of Livestock version 2.3* (ASEL).

All five of the mortalities were reported as being euthanasia of downer cattle (recumbent and unable to rise). Two of the mortalities occurred during the voyage itself; the remaining three mortalities occurred in port during discharge.

The department required an Australian Government Approved Veterinarian for future SEALS voyages.

[**Information reviewed**](https://www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-mortalities/cattle-brunei-report-83)

The department reviewed the event by assessing the following information:

1. reports from the exporter
2. daily reports, the end of voyage report from the accredited stockperson who accompanied the consignment on board the vessel
3. load plans and ship space calculations from the exporter
4. documents from the Australian Government Accredited Veterinarian (AAV) who prepared the consignment
5. reports from the Master of the vessel
6. documents and information from the regional department veterinary officer (RVO)
7. records from the registered premises (RP)
8. department records from previous and subsequent voyages
9. the exporter’s approved arrangement and approved management plans
10. report from the Australian Maritime Safety Authority (AMSA) regarding its investigation into the vessel
11. weather records from the Bureau of Meteorology

[**Background**](https://www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-mortalities/cattle-brunei-report-83)

Prior to this voyage, SEALS has exported 86 consignments of slaughter cattle to Brunei with a total of 71,659 cattle.

SEALS has reported 9 prior notifiable mortality incidents. Two notifiable incidents in 2017 (report #68) and 2019 (report #82) occurred on the same vessel as this incident.

| Table 1: Previous reportable mortality reports for SEALS     |
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| **Year** | **Report #** | **Species** | **Market** |
| 2011 | 41 | Cattle | Brunei Darussalam |
| 2014 | 50 | Cattle | Vietnam |
| 2014 | 55 | Cattle | Vietnam |
| 2014 | 57 | Buffalo | Vietnam |
| 2017 | 68\* | Cattle | Brunei Darussalam and Sarawak |
| 2018 | 76 | Cattle | Philippines |
| 2018 | 77 | Buffalo | Indonesia |
| 2019 | 81 | Buffalo | Vietnam |
| 2020 | 82\* | Buffalo | Vietnam |

\*Reports 68 and 82 occurred on the same vessel as this event.

[**Investigation Findings**](https://www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-mortalities/cattle-brunei-report-83)

**The livestock**

The consignment consisted of 797 slaughter cattle (654 cows and 143 steers) averaging 420kg. The cattle were sourced from 5 properties located in the Northern Territory.

**Preparation in the registered premises**

One RP was used for this consignment. It is located in the Northern Territory and is routinely used to prepare livestock for export. The cattle entered the RP on 17 and 20 March 2020.

During this period, the weather was fine with a maximum temperature of 34.9°C and a minimum temperature of 24.0°C recorded at the nearby Darwin weather station (Bureau of Meteorology, 2020). There was no rainfall during this period.

The RVO inspected the cattle on 23 March 2020 (the day of export). The RVO rejected just under 200 Angus cattle as a large number of them displayed excessive salivation and/or clear nasal discharge, increased respiratory rates and/or open mouth breathing.

On 23 March 2020, the remaining 797 cattle were transported to Darwin for loading. All cattle were treated for parasites with moxidectin while loading.

**The vessel**

The vessel involved in this incident is a purpose-built livestock carrier used for livestock export to a range of markets in South East Asia including Brunei Darussalam, Indonesia, Sarawak (Malaysia) and Vietnam. There have been two previous notifiable mortality incidents on this vessel (Reports #68 and #82) involving cattle exported to Brunei Darussalam and Sarawak in April 2017, and buffalo to Vietnam in November 2019.

**Loading onto the vessel**

Loading started at 7:40 pm on the 23rd of March 2020.

The on-board stockperson noted all cattle had ample space with roughly 800m2 unused space remaining, and suggested the cows appeared agitated but hoped they would settle once the voyage got under way.

**Conditions during the voyage**

An on-board accredited stockperson was engaged for this shipment. The stockperson is responsible for reporting to the department and works with the Master of the vessel and crew to manage the health and welfare of the livestock on board.

The Master and stockperson reported that sea conditions were slight [wave height of 0.5 to 1.25m] throughout the voyage.

The temperature ranged from 30 to 33°C and humidity between 76 and 80%. The wet bulb temperature did not rise above 28°C. The ventilation system was effective and no evidence of heat stress was noted. The stockperson reported that the respiratory character and faeces were normal throughout the voyage.

During loading, the stockperson noted the non-slip flooring surface in some pens was showing signs of wear and not providing adequate grip. The stockperson provided more sawdust to address any slipping that may occur.

**Mortalities and treatments**

There were a total of 5 mortalities in the consignment of 797, leading to a final mortality rate of 0.63%. The first mortality was recorded on day 6 of the voyage. The reportable level for mortalities (0.5%) on voyages of 10 days or more was reached on day 8 during discharge.

All mortalities were cows. The mortalities came from 2 properties. The mortalities occurred on 4 of the 5 decks and all from different pens of the vessel.

All mortalities were euthanased due to inability to stand and unlikely to recover. All were reported as being due to splayed hips. Two cattle were euthanased during the voyage and three during discharge as they had splayed hips and were in too much discomfort to stand and travel by truck to the feedlot. No post-mortem inspections were carried out.

Treatments administered to the cattle during the voyage included Meloxicam (anti-inflammatory), Alamycin (antibiotic), Dexapent (anti-inflammatory and glucogenic steroid injection) and Minbal (mineral injection).

The stockperson believed that the cows splayed their hips because the non-slip surface of the flooring lost grip in some areas of the vessel, and that the cows had too much space and were too mobile in their pens. The stockperson suggested that by having too much room, the cows were not able to support each other when they slipped and therefore caused injury to themselves or other cows in the pens.

Following the discharge of the livestock in Brunei, the stockperson visited the feedlot and reported that all cattle were calm, active and mobile, and no further cattle required euthanasia.

[**Exporter’s Actions**](https://www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-mortalities/cattle-brunei-report-83)

The department required SEALS to provide details of how they will mitigate the risk of another mortality event on any future voyages of cattle.
SEALS proposed the following actions:

* Pen cattle more firmly but in accordance with ASEL requirements.
* Lay down extra bedding in any pens which appear slippery.

[**Department Actions Taken to Date**](https://www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-mortalities/cattle-brunei-report-83)

In response to this event and previous notifiable incidents, the department required an AAV for future SEALS voyages and required additional monitoring and reporting for subsequent voyages on the vessel for other exporters.

[**Australian Maritime and Safety Authority Evaluation of the Vessel**](https://www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-mortalities/cattle-brunei-report-83)

AMSA conducted a remote investigation into the vessel when it returned to Australia in April 2020 to mitigate risks presented by COVID-19. AMSA concluded that all livestock services were operating satisfactorily during the voyage. There was no evidence noted to indicate the high mortalities were due to the vessel's non-compliance with [Marine Order 43 (MO43)](https://www.amsa.gov.au/vessels/standards-regulations/marine-orders/).

[**Conclusions**](https://www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-mortalities/cattle-brunei-report-83)

Reports from the on-board stockperson and exporter indicated that the cause of the mortalities in all cases was euthanasia due to inability to stand. A definitive cause for the cattle becoming recumbent and being unable to stand could not be determined but was likely due to musculoskeletal injuries.