**Mortality Report 81 - Buffalo exported by sea to Vietnam in August 2019**

**Summary**

On 6 August 2019, South East Asian Livestock Services Pty Ltd (SEALS) exported 809 slaughter buffalo and 1,629 slaughter cattle to Vietnam. The journey was completed in 9 days and the buffalo were discharged in Hon La, Vietnam over 13 and 14 August 2019.

A mortality rate of 0.74 per cent (6 head) was reported for the buffalo. This exceeds the reportable mortality level of 0.5 per cent on voyages of less than 10 days as prescribed by the *Australian Standards for the Export of Livestock* (ASEL).

On investigation by the department, to the mortalities could not be attributed to a common cause. Three appeared to be related to injuries, with sea conditions and temperament of the buffalo potentially contributing to these.

An Independent Observer (IO) accompanied the voyage and was directed to monitor, observe and report on activities in approved export programs for the purpose of ensuring the health and welfare of the livestock during the course of the export activities.

**Information reviewed**

The department reviewed the mortality incident by assessing the following information:

1. report from the exporter
2. daily reports and the end of voyage report
3. documents from the Australian Government Accredited Veterinarian (AAV) who prepared the consignment
4. report from the Master of the vessel
5. documents and information from the regional department veterinary officer (DVO)
6. records from the registered premises (RP)
7. department records from previous and subsequent voyages.
8. IO report (IO summary report is [available here](https://www.agriculture.gov.au/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/independent-observations-livestock-export-sea/report-167))

**Background**

Exports of slaughter buffalo to Vietnam by sea commenced in February 2014. Between the commencement of slaughter buffalo exports and this mortality incident there have been 61 consignments to Vietnam carrying a combined total of 19,758 buffalo.

There have been three reportable mortality incidents for slaughter buffalo exported to Vietnam by sea prior to this incident (Report #57 (October 2014), Report #71 (December 2017) and Report #75 (August 2018)). None of these occurred on the vessel involved in this incident.

An accredited stockperson accompanied the voyage and worked with the Master of the vessel and the crew to manage the health and welfare of the livestock on board. They are also are responsible for reporting to the department.  The department also required an IO to accompany the consignment.

**Investigation Findings**

**The Livestock**

The consignment consisted of 809 slaughter buffalo averaging 445 kilograms bodyweight.

**Preparation in the registered premises**

Two registered premises (RP) were used for preparing the buffalo in this consignment. The RPs are located in the Northern Territory and are routinely used to prepare livestock including buffalo for export. 813 buffalo arrived at the RPs between 27 May and 31 July 2019 and were held until 5 August 2019.

The required time for buffalo to be held in an RP for short haul voyages with multiple port discharges is one clear day (a clear day does not include the days on which the livestock arrived at and departed from the premises).  The buffalo in the consignment exceeded the ASEL requirements for the minimum length of time that livestock must remain in an RP prior to export. SEALS advised that they prefer that buffalo are in the RP for an extended time adjust to the conditions and feed prior to loading.

During this period, the weather was fine with a maximum temperature of 34°C (Bureau of Meteorology, 2019). An AAV examined 569 buffalo at one RP on 3 August and 244 head at the other on 5 August. One buffalo was rejected as it was lame. On 5 August 2019 the remaining buffalo were trucked to Darwin for loading.

**The vessel**

The vessel involved in this incident is a purpose built livestock carrier and is used for livestock export to a range of markets including Brunei, China, Indonesia, Pakistan, Philippines, Sarawak and Vietnam. There have been no reportable mortality incidents on this vessel prior to this voyage.

**Loading onto the vessel**

Based on the information received from the exporter and the department veterinary officer, the department determined that loading was conducted in accordance with ASEL. During loading one buffalo broke its leg and was subsequently euthanised. There was one downer on the truck which was also euthanised and another buffalo refused to leave the truck so the exporter returned it to the RP. The exporter reported that loading of livestock was interrupted by loss of tide but resumed at the earliest opportunity. Livestock were loaded during the cooler parts of the day.

**Conditions during the voyage**

An experienced on-board accredited stockman was engaged for this shipment and was responsible for managing livestock health and welfare as well as reporting to the department. The department reviewed the daily and end of voyage reports provided by the head stockman. The stockman reported that sea conditions varied from slight to very rough over the course of the voyage. The temperature ranged from 25 to 30°C and humidity increased slightly from 77 to 80 per cent. Sea conditions experienced throughout the voyage ranged from slight conditions for the first few days to very rough around day 6 which correlates to one buffalo sustaining a broken leg. The stockman also noted that the first few days the buffalo were very wild and not settling well, which was confirmed by the IO. The IO also reported possible overstocking of buffalo pens at the outset of the voyage.  Attempts were made on day 3 to reduce stocking densities by moving buffalo, however the IO reported some pens may still have been overstocked.

**Mortalities and treatments**

There was a total of six mortalities during the voyage in the consignment of 809 buffalo, leading to a final mortality rate of 0.74 per cent. The first mortality was recorded on day one of the voyage. Of the six mortalities, five occurred at sea with the one occurring in port during discharge of the vessel. Details of mortalities are presented in Table 1.

| Table 1: Break up of buffalo mortalities by day and cause. |
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| **Date** | **Voyage Day** | **Sea/Port** | **Number of mortalities** | **Cumulative Mortality** | **Cause of mortalities** |
| 07/08/2019 | 1 | Sea | 1 | 1 | Misadventure – euthanised. |
| 08/08/2019 | 2 | Sea | 0 | 1 |   |
| 09/08/2019 | 3 | Sea | 0 | 1 |   |
| 10/08/2019 | 4 | Sea | 2 | 3 | Unknown |
| 11/08/2019 | 5 | Sea | 0 | 3 |   |
| 12/08/2019 | 6 | Sea | 2 | 5 | Broken leg- euthanised, Pneumonia - euthanised |
| 13/08/2019 | 7 | Sea | 0 | 5 |   |
| 14/08/2019 | 8 | Sea | 1 | 6 | Unknown – possible trampling |

The properties of origin and/or line of buffalo did not appear to be a contributing factor to the mortalities as the mortalities occurred in buffalo sourced from four different properties.

During the voyage, antibiotics were administered to one buffalo who was a downer. The animal was not responsive to treatment and was euthanised the next day.

It was not possible to determine whether the mortalities were related to the IO’s comments regarding overstocking of buffalo pens.

**Exporter’s Actions**

In response to the mortality event SEALS undertook an internal review of their pre-export and voyage management arrangements specifically for buffalo.  After their review they concluded that:

* ASEL requirements were more than sufficient to ensure appropriate pre-export and voyage management of buffalo.
* SEALS would continue to exceed time in Registered Premises as much as possible to quieten livestock.

The department required an AAV to accompany the next consignment with buffalo to Vietnam. The consignment was completed in November and resulted in a reportable mortality incident. ([See report 82](https://www.agriculture.gov.au/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-mortalities)).

**Australian Maritime and Safety Authority Evaluation of the Vessel**

AMSA did not conduct an investigation when the vessel returned to Australia due to the low number of mortalities. There was no evidence of any issues relating to Marine Order 43.

**Conclusions**

The department’s review of the information provided indicates that all buffalo were prepared and managed in accordance with ASEL. After review and analysis of the reports from the stockman, exporter and IO which detailed the clinical signs and illnesses of the buffalo on board, the department concluded there was no common cause the mortalities could be attributed to.