



Department of Agriculture and Water Resources: Regulator's response to the McCarthy Review into the export of sheep to the Middle East during the northern hemisphere summer

- Footage, released in April 2018, showing conditions for animals on a ship carrying live sheep to the Middle East on five consecutive voyages between May and November 2017 was deplorable and exposed unacceptable animal welfare outcomes. The Australian Government condemns cruelty to animals and has taken this new information very seriously.
- The McCarthy report was commissioned to assist in the development of a new regime for the operation of this trade in the northern hemisphere summer. The Final Report of the McCarthy Review was provided to the Minister for Agriculture and Water Resources on 11 May 2018.
- The government has made it clear that its policy is to continue the live sheep trade to the Middle East, including during the coming northern summer, and strongly supports the development of effective measures to manage heat stress for sheep in this trade.
- Under the framework established under the *Export Control Act 1982* and *Australian Meat and Live-stock Industry Act 1997*, the Department of Agriculture and Water Resources, as the regulator, has responsibility for setting operating rules for exports and therefore for responding to the recommendations in the McCarthy Review. In doing so, the Department has taken the interests of the industry, animal welfare and the government's policy into account.
- On this basis, the Department supports the recommendations from the McCarthy Review and will be working to implement them, following further public consultation and testing of the findings relating to heat stress risk assessment (Recommendations 3 – 5, 7 and 8). A detailed response to each recommendation is attached. Steps will be taken to implement most measures immediately for the forthcoming northern summer period and the remainder will be subject to further public consultation with the community generally, animal science and welfare experts and industry.
- The McCarthy Review represents a significant shift in the regulation of live sheep exports and the Department acknowledges that changes will have significant implications for all parties associated with this trade. The two most significant immediate recommendations relate to stocking density and a revised heat stress assessment model.
 - On **stocking density**, the Review has recommended that that an 'allometric' approach be adopted for the forthcoming northern hemisphere summer. This will increase the space for sheep on board vessels by between 11 to 39 per cent, depending on their weight, compared to the stocking density requirements under the Australian Standards for the Export of Livestock (ASEL).
 - On the **heat stress risk assessment** model, the Review recommends moving from an assessment based on mortality to one based on animal welfare, with a risk threshold of a 2 per cent probability that 5 per cent of sheep on a voyage experience heat stress. This

represents a significant shift from current standards and will have significant further implications for stocking densities.

- The Department supports having industry move from a risk assessment based on mortality to a risk assessment based on animal welfare. However, this recommendation should be subject to further testing and consultation before its implementation. In the short time available during the review, Dr McCarthy was not able to consult and fully test his analysis and findings on this issue, so the Department will undertake that consultation process over the next three months before considering the results.
 - This critical proposal involves a new regulatory model and warrants an opportunity for all interested parties to contribute to the development of a new approach.
- The Report recommends a number of other measures which will apply to the forthcoming northern hemisphere summer including:
 - independent auditing of vessel ventilation systems;
 - reduced notifiable mortality level for sheep travelling by sea to the Middle East from two to one per cent;
 - checks on animal weights to assess the accuracy of proposed load plans and heat stress risk assessments; and
 - improved bedding arrangements on voyages through the use of sawdust.
 - The Department will continue to collaborate with the Australian Maritime Safety Authority, where needed, in giving effect to the recommendations of the Report including accelerating the phasing out by 1 January 2020 of transitional arrangements that allow vessels constructed or converted before May 2004 to meet a lower minimum air speed across livestock pens, carry livestock in two tiers, or meet lower ventilation requirements on open decks.
 - The Department's detailed response to each of the McCarthy review's recommendations is attached.



McCarthy Review recommendations and Regulator’s response

RECOMMENDATION	RESPONSE
<p>Recommendation 1 – Compliance The Department of Agriculture and Water Resources (the department) must ensure that exporters, through their approved arrangements, comply with any legislative requirements, ASEL and any other conditions of their approved arrangements.</p>	<p>Support. Additional information received from Independent Observers (including footage from these observers), and improved Australian Government Authorised Veterinarian (AAV) reporting requirements will support verification and compliance activities. Conditions will be applied to require exporters to take account of the additional reporting information when preparing future voyages to ensure the health and welfare of animals during voyages. Legislative amendments proposed by the Government will strengthen available penalties for non-compliant exporters and improve powers available to address non-compliance.</p>
<p>Recommendation 2—Stocking Densities Based on the available science, and as an interim measure, sheep destined to the Middle East from Australia during the northern hemisphere summer should be allocated space allometrically using a k-value of 0.033 or such further space as required by the industry heat stress risk assessment model. Use of this allometric stocking density should be reviewed by the ASEL Review Technical Advisory Committee and/or an independent taskforce at the end of the forthcoming northern hemisphere summer.</p>	<p>Support. Allocating space on vessels allometrically and a review of the impact of the model by the ASEL Review Technical Advisory Committee at the end of this year’s northern hemisphere summer.</p> <p>Do not support at this stage allocating further space through a revised industry heat stress risk assessment model until further public and expert consultation and analysis is undertaken, see Recommendations 4 and 12 below.</p>
<p>Recommendation 3—Heat Stress Risk Assessment Industry should move from a risk assessment based on mortality to a risk assessment based on animal welfare.</p>	<p>Support. The department agrees that mortality, in isolation, is an insufficient measure of animal health and welfare. The department proposes further public consultation and analysis to assess the specific heat stress risk assessment settings are required to give effect to this (see Recommendation 4 below). Additional information is also becoming available from Independent Observers and there is research currently underway to identify animal welfare indicators that could be used for this purpose (see Recommendation 6).</p>

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<p>Recommendation 4—Heat Stress Risk Assessment As an interim measure, it is recommended that the risk be set at a 2% probability of 5% of the sheep becoming affected by heat stress (Heat stress score 3—see Table 1). These settings should be reviewed by the ASEL Review Technical Advisory Committee at the end of this northern hemisphere summer period and again, annually by an independent taskforce.</p>	<p>Support, subject to testing and consultation. The department will adopt a heat stress risk assessment approach to managing animal welfare outcomes. Dr McCarthy has not been able to consult and test his analysis on this issue in the short time available during his review, so the department will undertake that process over the next three months. This critical proposal by Dr McCarthy involves a new regulatory model and warrants an opportunity for all interested parties to contribute to the development of a new approach.</p>
<p>Recommendation 5—Heat Stress Risk Assessment That the required changes to the industry HSRA model be made immediately and then included in Version 5 of the HSRA model.</p>	<p>Support, subject to further testing and consultation (see Recommendation 4).</p>
<p>Recommendation 6—Heat Tolerance Level As an interim measure, industry should adopt Table 1 (of this review)—‘An amalgamation of heat stress indicators’ to determine the acceptable heat tolerance level.</p>	<p>Support. Table 1 of the review provides a single standardised system for accredited veterinarians on vessels to assess degrees of heat stress in sheep. Further review and assessment of the scores and related symptoms of heat stress should be conducted after the northern hemisphere summer trade, as additional information becomes available, by the ASEL Review Technical Advisory Committee. This includes outcomes of research on animal welfare indicators being undertaken by Murdoch University, funded through the industry research and development program, as well as information gained from Independent Observers and other enhanced monitoring activities.</p>
<p>Recommendation 7—Heat Stress Risk Assessment A future version of the industry HSRA model to be developed, adopted and used by industry during the northern hemisphere summer of 2019 should have the capacity to assess:</p> <ul style="list-style-type: none"> a) the duration of time that sheep are exposed to high heat loads without respite 	<p>Support. Development of a future model should also consider additional inputs, including investigating alternate ventilation measures, and the use of animal welfare indicators. This will also be informed by the further consultation and analysis on heat stress risk assessment (see Recommendation 4).</p>

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<p>b) ventilation design rather than assessing risk based on airflow alone</p> <p>In addition, the way in which the model manages open decks should be reviewed.</p>	
<p>Recommendation 8—Heat Stress Risk Assessment A future version of the industry heat stress risk assessment model to be developed, adopted and used by industry during the northern hemisphere summer of 2019 should reassess:</p> <p>a) the ‘heat tolerance’ level</p> <p>b) the probability risk settings.</p>	<p>Support. As per Recommendation 7 the future model should also consider additional inputs, including investigating alternate ventilation measures, and the use of animal welfare indicators. This will also be informed by the further consultation and analysis on heat stress risk assessment (see Recommendation 4).</p>
<p>Recommendation 9—Pen Air Turnover The report strongly supports the recommendation from the ASEL Review Technical Advisory Committee that a vessel’s pen air turnover be independently audited before travelling to the Middle East in the 2018 northern hemisphere summer.</p>	<p>Support. The Australian Maritime Safety Authority (AMSA) will provide information on actual ship ventilation equipment and pen area to calculate pen air turnover (PAT). This information will need to be verified by appropriately qualified mechanical engineers. This will validate the accuracy of the PAT entered into the Heat Stress Risk Assessment model. The department will work with AMSA to implement this recommendation by 1 July 2018 or as soon as practicable.</p>
<p>Recommendation 10— Register of vessels A relevant government agency should maintain a register of vessels whose pen air turnover (PAT) information has been certified following auditing and verification.</p>	<p>Support. AMSA maintains records of shipboard equipment and pen area dimensions in the vessel’s equipment register, and confirms the ongoing condition/performance through audit. The department will maintain a register of vessel PAT audits. Proposed timeframe is by 1 July 2018 or as soon as practicable.</p>
<p>Recommendation 11—Verification of PAT information It would be a condition of an approved arrangement that all livestock vessel’s PAT information has been independently verified where the vessel is destined for the Middle East during the northern hemisphere summer.</p>	<p>Support in part. The department will consider the most appropriate means of giving effect to this. Requirements for independent PAT verification and assurance can be imposed on exporters and others under a range of powers available under the legislative framework, including through licensing requirements or future standards orders made by legislative instrument.</p>

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<p>Recommendation 12—Curfew adjustments for stocking density</p> <p>The weight of animals for the purposes of stocking density should specify curfew and adjustments should be made to reflect a 12-hour curfew (i.e. the livestock industry standard).</p>	<p>Support. There is a need to standardise weight estimates for loading and input into the heat stress risk assessment model. However, the department considers it preferable to extend this recommendation further to include an estimate of arrival weight in the Middle East, the point at which the sheep experience high heat and humidity. For example, for a 50kg sheep, assuming an average weight gain of 100 grams per day, per animal, would increase in weight on a 24 day voyage by 2.4 kilograms. The department will take this into account in addition to the allometric space calculation (see Recommendation 2).</p>
<p>Recommendation 13—Compliant loading of animals</p> <p>Authorised officers should check and verify the weights of sufficient animals to be satisfied that the vessel is to be or has been loaded in a way that is consistent with a compliant heat stress risk assessment and ASEL. This may be conducted at any point in the supply chain.</p>	<p>Support. A check of animal weights is currently undertaken by department veterinary officers through a sample inspection and review process at registered premises prior to loading. This is to assess the accuracy of the exporter’s proposed load plan and heat stress risk assessment.</p> <p>With the addition of Independent Observers on all voyages, part of their role is to conduct a full check of the load plans, enabling further verification of the live weights of the animals on board, as well as further verification of the condition score, class of animal and coat length specified in the exporter’s heat stress risk assessment.</p>
<p>Recommendation 14—Use of sawdust</p> <p>There is no need for sawdust for bedding under normal circumstances on sheep voyages but the use of sawdust strategically before and/or during the voyage should be included in an exporter’s heat stress management plan, if required, for targeted areas on the vessel.</p>	<p>Support. The department is currently placing conditions on some voyages to the Middle East to require carriage of additional bedding to improve the environment for livestock.</p>
<p>Recommendation 15—Purchase lines</p> <p>Both the Australian Government Accredited Veterinarian (AAV) and the Independent Observer (IO) should be given information regarding the purchase lines of all sheep included in the consignment (i.e. the denominator) to identify ‘line</p>	<p>Support in part. There may be benefit in industry investigating line effects. Accredited veterinarians could collect information for exporters to feed into industry research. The Independent Observer’s role is to report on the effectiveness of exporter arrangements for managing animal health and welfare on voyages.</p>

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<p>effects' within the mortality pattern on board. This can be encoded if confidentially is an issue. Line effects identified over the course of the voyage should be investigated once the voyage has been completed.</p>	
<p>Recommendation 16—Roles and responsibilities With the advent of IOs, a taskforce should be established to determine the roles and responsibilities of AAVs, IOs and accredited stockmen. This responsibility may fall to the ASEL Review Technical Advisory Committee.</p>	<p>Support. The department is currently developing an ongoing Independent Observer program, including further articulating their roles and responsibilities. The key purpose of Independent Observers is to report on the performance in the delivery of animal health and welfare outcomes during voyages. The ASEL Review Technical Advisory Committee is also examining the roles and responsibilities of AAVs and stockmen by end 2018.</p>
<p>Recommendation 17—Animal carcasses All livestock vessels traveling to the designated special zones in the Middle East during the northern hemisphere summer should be equipped with a serviceable hogger and/or a refrigerated container of suitable size to hold animal carcasses whilst in port (or at sea if required). This requirement should be included in an approved arrangement and AMSA should be notified of the requirement.</p>	<p>Support in part. The department will pursue with industry those measures that address this outcome noting that AMSA Marine Order 43 does not require vessels to be equipped with hoppers. If such equipment is on board, it must be listed on AMSA's record of vessel equipment and checked as part of their inspection/survey regime. Refrigerated containers, if used, need to be stowed and secured. AMSA advises most livestock vessels are not designed for the carriage of containers.</p>
<p>Recommendation 18—Reportable mortality level The reportable mortality level for sheep exported by sea to the Middle East should be reduced from 2% to 1%.</p>	<p>Support. This will be implemented immediately for all future voyages.</p>
<p>Recommendation 19—Daily reporting The use of both a panting score and a heat stress score should be a mandatory requirement in the daily report. A training module may be required to ensure that score allocation is consistent across industry.</p>	<p>Support. This will be implemented immediately for all future voyages. The department will test with AAV's the need for further training.</p>

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<p>Recommendation 20—Automated watering systems All vessels carrying sheep to the Middle East during the northern hemisphere summer should have automated livestock watering systems.</p>	<p>Support. This will be implemented immediately for all future voyages.</p>
<p>Recommendation 21—Heat Stress Management Plan A meaningful heat stress management plan could be a part of an exporter’s approved arrangement. This plan should address the contingencies outlined in this review.</p>	<p>Support. This will be implemented immediately for all future voyages.</p>
<p>Recommendation 22—First port of unloading Where Kuwait is one of the vessel’s destination ports, this should be the vessel’s first port of unloading.</p>	<p>Support. This has already been implemented for voyages travelling to or through the Middle East.</p>
<p>Recommendation 23—Monitoring equipment All vessels travelling to the Middle East during the 2019 northern hemisphere summer and after should have automated continuous environmental monitoring equipment installed as a condition of any approved arrangement.</p>	<p>Support in principle. Further work is required to investigate the feasibility and practicality of currently available or new/upcoming technology to monitor and report on environmental conditions. Effective application of these technologies will be a critical consideration in the department’s consultation on the review’s heat stress management recommendations.</p>