

DRAFT CHAPTER 7.2

ANIMAL WELFARE DURING TRANSPORT

Article 7.2.1.

Introduction

Ensuring good *animal welfare* during transport is ethically important and economically beneficial. This contributes to improved animal production and performance, a reduction in the use of *veterinary medicinal products*, improved food safety, and consequently enhanced economic returns. The implementation of *animal welfare* measures contributes to the improvement of *animal handlers'* wellbeing, health and safety.

When incorporating these guidelines into national regulatory frameworks, consideration should be given to factors including geographical and climatic conditions, *means of transport*, type of production system, and species-specific requirements.

Journeys may involve different *means of transport* from the point of origin to the point of destination. Accordingly, consideration should be given to *journey* preparation, fitness to transport, and land transport to and from the airport or seaport.

Article 7.2.2.

Purpose and Scope

This chapter provides guidance on good *animal welfare* practice during transport. It also identifies *hazards* to *animal welfare* during transport. It provides animal-based measures to assess the level of welfare and recommends remedial and corrective actions to be applied when necessary.

This chapter applies to national and international transport by land, water, and on foot of the following domesticated *animals*, cattle, buffaloes, camels, sheep, goats, pigs, poultry, and equines. It may be largely applicable to some other animals, e.g. deer, other camelids, and ratites, in the context of a commercial activity.

United States	Comment category: Addition Proposed amended text: This chapter applies to national and international transport by land, water, and on foot of the following domesticated <i>animals</i>, cattle, buffaloes, camels, sheep, goats, pigs, <u>rabbits</u>, poultry, and equines. It may be largely applicable to some other animals, e.g. deer, other camelids, and ratites, in the context of a commercial activity. Rationale: The addition of rabbits to this list is consistent with the rest of the chapter. Supporting evidence: N/A
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Specific air transport guidance can be found in the International Air Transport Association (IATA) Live Animals Regulations (LAR).

Wildlife may need different conditions. The guidance for the transport of these species can be found at the Convention on International Trade of Endangered Species (CITES) guidelines for land and sea transport.

Article 7.2.3.

Definitions

For the purpose of this chapter:

ASSEMBLY CENTRE

means any place where animals from different sources are temporarily collected to form a consignment to be sold or redirected to other site(s) (e.g. auction markets, sale barns, and facilities holding animals for an abattoir).

CONTINGENCY PLAN

means a plan outlining the steps to be taken to address unexpected events that may occur during the journey, including emergencies, that could put *animal welfare* at risk.

JOURNEY ORGANISER

means a person or company responsible for ensuring the planning and the necessary logistical arrangements for the entire *journey* are made in advance, including those necessary to safeguard the animals' welfare. This can be an exporter or importer, transporter, freight forwarder, owner, *animal handler*, or driver.

ROLL-ON ROLL-OFF VESSEL

means a vessel with facilities to enable road or rail vehicles to be driven and off the vessel.

United States	Comment category: Addition Proposed amended text: means a vessel with facilities to enable road or rail vehicles to be driven <u>on</u> and off the vessel. Rationale: The addition of “on” provides clarity and is consistent with “roll-on roll-off vessel”. Supporting evidence: N/A
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REST STOP

means a *resting point*, where animals are unloaded from the vehicle into an intermediary facility in order to prevent the animals from suffering and exhaustion.

TRANSPORT PROCESS

means the period that includes the planning and preparation of the *journey*, the *journey* itself, and the post-*journey* period.

TRANSPORTER

means any person or company transporting animals on its own account or on behalf of a third party.

Article 7.2.4.

Hazards to animal welfare

A wide variety of *hazards* have an impact on *animal welfare* during the different stages of animal transport. [EFSA, 2022].

These *hazards* can have negative impacts on the welfare of the animals, such as injuries, *distress*, morbidity and mortality, that can be assessed through animal-based measures. In the absence of feasible animal-based measures, resource-based and management-based measures may be used instead.

Hazards to animal welfare can be minimised by appropriate design, maintenance, and use of premises, facilities, and *means of transport*; appropriate choice of equipment; good planning, coordination, monitoring, handling, and transport practices; and proper training and competency of personnel.

Common *hazards* that can negatively impact *animal welfare* throughout all stages of the *journey* include:

- a) selection and transport of unfit or compromised animals;
- b) exposure to a novel environment;
- c) mixing of unfamiliar and different categories of animals;
- d) inappropriate animal handling or restraint;
- e) inadequate provision of feed and water;
- f) inappropriate design or maintenance of facilities or *means of transport*;
- g) inappropriate *space allowance*;
- h) poor driving or piloting;
- i) exposure to unfavourable microclimatic and environmental conditions;
- j) poor ventilation and air quality;
- k) exposure to excessive noise or vibration;
- l) insufficient number or duration of rest periods;
- m) prolonged *journey* times;
- n) inappropriate road quality or rough water conditions.

Hazards specific to a particular stage of the *journey* are provided in the articles that follow.

Article 7.2.5.

Measures to assess animal welfare during transport

The welfare of animals during transport should be assessed using animal-, resource- or management-based measures. The routine use of feasible animal-based measures is recommended, and the appropriate thresholds should be adapted to the different conditions in which animals are transported.

The *Competent Authority* should collect data on the business operators involved in the transport of animals to define target and threshold values for the purpose of implementing the provisions of this chapter. It is recommended that target values or thresholds for animal-based measures be based on current scientific evidence and appropriate national, sectoral, or regional standards. Whatever the basis of the measure, if welfare outcomes are unsatisfactory, Members should consider and implement the necessary changes to resources or management to improve the welfare outcomes.

United States	Comment category: Addition Proposed amended text: The <i>Competent Authority</i> should collect data on the business operators involved in the transport of animals to define target and threshold values for the purpose of implementing the provisions of this chapter. It is recommended that target values or thresholds for animal-based measures be based on current scientific evidence and appropriate national, sectoral, or regional standards. Whatever the basis of the measure, if animal welfare outcomes are unsatisfactory, Members should consider and
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	implement the necessary changes to resources or management to improve the animal welfare outcomes. Rationale: Addition of “animal” is consistent with the language used throughout this chapter. Supporting evidence: N/A
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If the set threshold of an animal-based measure is exceeded, an investigation should be launched, and corrective actions should be taken.

Animal-based measures that can be used to assess *animal welfare* throughout the journey are provided in the relevant articles of this chapters.

Animal-, resource-, and management-based measures specific to a particular stage of the *journey* are provided in the articles that follow.

Article 7.2.6.

Training and competence of personnel

All personnel responsible for animals have a crucial role to play in ensuring good *animal welfare* during transport. Their training should emphasise the importance of *animal welfare* and their responsibility in contributing to *animal welfare* during transport.

Competencies may be gained through a combination of practical experience and regular formal training. These competencies should be assessed by the *Competent Authority* or by an independent body recognised by the *Competent Authority*, and written evidence of competence should be provided, with limited period of validity.

The training should cover subjects that include the following, in respect of the species and category of animals [CHAR, 2023]:

- a) relevant *Competent Authorities* and applicable transport regulations, and associated documentation requirements;
- b) animal behaviour, physiology and in particular drinking and feeding needs, and the concept of stress;
- c) the welfare-related requirements of different animal species and categories for the selection of suitable and safe *means of transport*;
- d) assessment of animals' fitness for transport of the animals (their ability to withstand the rigors of transport);
- e) animal handling, restraint and space requirements and methods for the loading, confinement, transport and unloading of animals;
- f) identifying and managing risk factors for animals during a *journey*, such as long-distance transport, adverse weather, and animal-associated factors such as pregnancy, very young or old, and lack of body covering;
- g) the relevant contingency plan including management of injured or sick animals;

United States	Comment category: Addition Proposed amended text: h) emergency plans for trailer accidents
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	Rationale: This addition incorporates the need for those persons involved in the transport of animals to have training that specifically addresses how to handle a situation that involves a trailer accident. Supporting evidence: Technical Large Animal Emergency Rescue, Rebecca Giminez [Husted], Tomas Giminez, and Kimberly A. May; 2008, Wiley-Blackwell.
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- h) effective monitoring of animals during loading, confinement, transport and unloading;
- i) general disease prevention procedures, including cleaning and disinfection.

Article 7.2.7.

Responsibilities of persons involved in the journey

General considerations

Once the decision to transport the animals has been made, the welfare of the animals during their *journey* is a very important consideration and is the joint responsibility of all authorities and people involved. These responsibilities are described in more detail in this article.

A *journey* should not commence until all relevant documentation listed in Article 7.2.10 has been accepted by the *Competent Authority* at the point of departure and destination, including the transit countries, where applicable.

1. Competent Authorities

The responsibilities of *Competent Authorities* include:

- a) establishing minimum standards for *animal welfare* during transport, including requirements for inspection of animals for the fitness of transport during the journey and appropriate certification and record keeping;
- b) setting standards for facilities, *means of transport* and *containers* for the transport of animals;
- c) setting standards for the competence of farm managers, *animal handlers*, transporters, drivers, pilots, masters and managers of facilities in relevant issues in *animal welfare*;
- d) ensuring that *Competent Authority* staff receive appropriate and ongoing training for their role(s) in enforcing in *animal welfare* standards during transport;
- e) ensuring that all stakeholders relevant to the journey are informed of relevant *animal welfare* issues;
- f) implementing of the standards, including through accreditation or interaction with other organisations;
- g) ensuring that sufficient and competent staff are available to implement and enforce *animal welfare* standards during transport;
- h) monitoring and evaluating the effectiveness of *animal welfare* standards;
- i) monitoring and evaluating the use of *veterinary medicinal products*;
- j) giving animal consignments priority at border inspection posts to avoid unnecessary delay;

- k) taking actions in the event of a refusal to allow the completion of the *journey* in accordance with Article 7.2.25;
- l) being prepared to work with the transporter and all relevant personnel to resolve any emergency situation arising during a *journey*;
- m) communicating with other relevant *Competent Authorities*, including those in exporting, transit or importing countries, before, during, or after the *journey* regarding *animal welfare* jurisdiction and responsibilities, and any situation that may represent significant risk to *animal welfare*.

2. Journey organisers

The *Journey* organisers, as defined in this chapter, should be responsible for scheduling and further logistical aspects of the *journey*.

Their other responsibilities may include:

- a) ensuring that all other persons involved in the *journey* are clearly aware of the whole *journey*, and are each assigned to their respective responsibilities in advance so that it is clear who is responsible for the tasks listed in this article, throughout the entire *journey*;
- b) ensuring the availability of suitable facilities at the start and at the end of the *journey* for the assembly, loading, transport, unloading and holding of animals, including facilities for any rest stops, transfers and *resting points* during the *journey* and emergency planning;
- c) ensuring suitable *means of transport* and *containers* with adequate space and ventilation according to the species to be transported;
- d) ensuring the presence of sufficient and competent staff during loading and unloading operations;
- e) ensuring that all necessary administrative arrangements and *animal health* precautions are made in advance to minimise the duration of the *journey* and manage the most common *animal welfare* and *animal health* risks;
- f) providing information to the *Competent Authority* regarding any emergency during the *journey*;
- g) ensuring that a contingency plan is in place for the *journey* with a clear indication of the roles of the different actors through the entire *journey* (e.g. watering or feeding).

3. Farm or other animal facility managers

The farm or other animal facility managers should be responsible for:

- a) communication with the *journey* organiser when applicable;
- b) assessing and advising on the health, welfare and fitness for transport of the animals, and segregation of animals into compatible groups in preparation for the *journey*;
- c) ensuring compliance with any required veterinary or other certification;
- d) the presence of an adequate number of competent *animal handlers* for the species being transported during the loading and/or unloading, including catchers for poultry and rabbits;
- e) ensuring that loading and unloading facilities are well maintained and appropriate for the species;
- f) ensuring that the appropriate equipment, emergency procedures, necessary veterinary care and veterinary assistance as appropriate for the species and the *journey*.

4. Animal handlers

Animal handlers should be responsible for:

United States	Comment category: Addition Proposed amended text: <i>Animal handlers</i> should be responsible <u>and have a required minimal level of training</u> for: Rationale: This addition provides clear language that animal handlers should be required to have a minimal level of training to ensure competence of the animal handler's ability to ensure good animal welfare practices during transport. Supporting evidence: N/A
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- a) the welfare of the animals while in their care during transport;
- b) appropriate handling and care of the animals during the *journey*;
- c) taking prompt action to address any potential *animal welfare* or *animal health* issues;
- d) identifying animals that may unfit for transport and report concerns promptly.

United States	Comment category: Addition Proposed amended text: identifying animals that may <u>be</u> unfit for transport and report concerns promptly. Rationale: The addition of "be" is necessary for sentence completion. Supporting evidence: N/A
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5. Managers of intermediary facilities

Managers of intermediary facilities (facilities that temporarily house animals during a *journey* such as assembly centres, airport facilities, quarantine centre, border inspection posts, resting points, or markets) should be responsible for:

- a) providing suitable premises for *loading and unloading*;
- b) providing species-specific suitable facilities for accommodating the animals, which provide sufficient space, protection from adverse weather conditions, bedding when required, and proper ventilation;
- c) providing suitable and accessible water and *feed* when required;
- d) the health, welfare and fitness for transport of the animals, and segregation of animals into compatible groups in preparation for further transport;
- e) providing an adequate number of competent *animal handlers* to load, unload, drive and hold animals in a manner that causes minimum stress and injury;
- f) minimising opportunities for disease transmission;
- g) having in place a contingency plan and any necessary resources;
- h) providing veterinary care when required;
- i) providing competent staff to allow the emergency *killing* of animals when required;
- j) ensuring proper rest times and minimal delay during stops;

- k) ensuring sufficient space for all animals to lie down at the same time at resting points;
- l) ensuring the keeping of the applicable records as required.

6. Transporters

The responsibilities of transporters in ensuring the safe transport of animals include, but are not limited to:

- a) ensuring suitable and safe *means of transport* for the species and categories of animals being transported;

United States	Comment category: Addition Proposed amended text: a) ensuring suitable, and safe and <u>mechanically sound</u> <i>means of transport</i> for the species and categories of animals being transported; Rationale: This addition incorporates mechanical failure, which has been identified as an important consideration associated with vehicle accidents. Supporting evidence: The Large Truck Crash Causation Study by the U.S. Federal Motor Carrier Safety Administration, 2007, https://www.fmcsa.dot.gov/safety/research-and-analysis/large-truck-crash-causation-study-analysis-brief Livestock Vehicle Accidents in Spain: Causes, Consequences, and Effects on Animal Welfare Genaro C. Miranda-de la Lama,1 Wilmer S. Sepúlveda,2 Morris Villarroel,3 and Gustavo A. María; Journal of Applied Animal Welfare Science,14:109–123, 2011.
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- b) ensuring *containers* are suitable;
- c) ensuring the health, welfare, and verifying the fitness for transport of the animals, and segregation of animals into compatible groups in preparation for the *journey*;
- d) ensuring trained staff to handle and transport animals properly;
- e) complying with local regulations regarding animal transport;
- f) ensuring the safe transport of the animals;
- g) monitoring the animals and the environment throughout the *journey*;
- h) addressing the specific needs of different types of animals during the *journey*;
- i) ensuring the availability of a contingency plan;
- j) ensuring the proper cleaning and disinfection of the *means of transport* and/or *containers* as required;
- k) complying with international regulations and standards regarding animal transport;
- l) keeping and communicating all records as required by Competent Authority.

7. Drivers

The responsibilities of drivers include:

United States	Comment category: Addition Proposed amended text: The responsibilities <u>and required minimal level of training of</u> drivers include: Rationale: This addition provides clear language that drivers should be required to have a minimal level of training to ensure competence of the driver's ability to ensure good animal welfare practices during transport. Supporting evidence: N/A
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- a) complying with local and international regulations and standards regarding animal transport;
- b) ensuring the fitness for transport of the animals;

United States	Comment category: Deletion Proposed amended text: b) ensuring the fitness for transport of the animals; Rationale: Recommend removing this because it is not a reasonable responsibility for a driver and is already addressed under animal handler. Supporting evidence: N/A
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- c) making decisions to protect the welfare of the animals according to the *journey* and contingency plan, including decision making on routes to avoid poor roads, escape bad weather such as storms at sea, or undertake rest stops or break stops as required.

8. Master of the vessel and pilot of the aircraft

- a) the Master or pilot should be responsible for making decisions to protect the welfare of the animals according to the contingency plan.
- b) making decisions to protect the welfare of the animals according to the *journey* and contingency plan, including decision making to escape bad weather such as storms at sea or air.

Article 7.2.8.

Contingency plan

All stakeholders involved in the *journey* should ensure that a contingency plan in place for every *journey*. In the case of repeated routine *journeys*, the same contingency plan may be used, provided all contact details are up to date. In the case of multiple pick-ups or drop-offs, a single plan that is sufficient for unexpected events is required per *journey* to cover the whole *journey*.

Transporters and other personnel involved in the *journey* should be aware of potential risks and be familiar with the contingency plan so that they can respond in an appropriate and timely manner in the event of an emergency. Existing contingency plans should be reviewed and updated regularly. Plans may vary according to the type of transport, species and category of animal, animal type, climactic conditions, and the nature and duration of the *journey*. The key to creating an effective contingency plan anticipates events that could occur and identifies in advance the actions to be taken to address each situation.

Examples of unexpected events to consider when outlining appropriate actions or responses include, but are not limited to:

- a) natural disasters;

- b) extreme weather events;
- c) road closures, detours, or unexpected construction (causing delays);
- d) transport accidents;
- e) changes to the planned destination (e.g., due to plant shutdown, consignment refusal, border crossing delay);
- f) the *journey* taking longer than expected, or delays in loading or unloading;
- g) mechanical breakdown or equipment failure;
- h) sudden illness or incapacity of the transport operator;
- i) animals becoming unfit for transport during *journey*; animals becoming fearful or aggressive during transport;
- j) animals requiring euthanasia;
- k) contamination of feed or water;
- l) disease outbreaks;
- m) loss or escape of animals;
- n) mass animal casualties;
- o) rejection of the consignment on arrival or at the *border inspection post*.

The contingency plan should outline the actions to be taken to reduce or mitigate avoidable harm or suffering to animals in the event of an emergency.

Examples of factors to consider when outlining appropriate actions or responses to an emergency include, but are not limited to:

- a) contact details of the *Competent Authorities*;
- b) for international transport, the contact details of a National contact point on long distance transportation;
- c) contact details for emergency services in the transport region(s);
- d) alternate route(s) to avoid prolonged stops in the event of accidents, road closures or extended delays;
- e) location or contact details of repair services (*means of transport* and equipment);
- f) location or contact details of alternate *means of transport*;
- g) location of emergency holding areas for animals (e.g., auctions or other *slaughterhouses/abattoirs*);
- h) location of emergency feed and water sources;
- i) planned route to keep the vehicle moving in the event of delays, where mechanical ventilation isn't available or operational.

Article 7.2.9.

Planning the journey

Proper *journey* planning is essential to minimise suffering and to facilitate a smooth transport process.

Comprehensive planning is key to minimising the *risk* of injury or undue suffering during or after a *journey* [FAWAC, 2007].

Planning should ensure the following in advance of the *journey*:

- a) selection of appropriate *means of transport* to the species and categories of animals;
- b) coordination of the different stages of the *journey* to prevent avoidable delays;
- c) documentation to accompany the *animals* in accordance with the requirements of the transit and destination countries;
- d) the selection of the best route, considering weather conditions and species-specific requirements;
- e) appropriate preparation of the *animals* for the *journey*;
- f) appropriate loading and unloading facilities;
- g) arrangements for bedding, resting, feeding and watering the *animals* during the *journey* as required;
- h) selection of trained or experienced personnel to handle or drive the *animals*;
- i) provision of appropriate conditions in the animal's compartment during the *journey*;
- j) contingency planning;
- k) implementation of biosecurity measures to minimise the *risk* of disease transmission;
- l) availability of intermediary facilities or rest stops, according to the estimated needs for rest stops.

The use of tranquilisers or other medications should not be a routine practice when transporting animals. Such drugs should be limited to situations where a specific issue has been identified and should be used only under veterinary supervision, in accordance with applicable regulations and manufacturer's instructions.

Where animals need to adapt to a novel diet or a new method of feed or water supply for a long-distance *journey*, an adequate adaptation period should be provided before transport begins. Animals that are unable to adapt should not be transported.

Article 7.2.10.

Documentation

Documentation plays an important role in facilitating adequate planning and control of animal transport, particularly for complex *journeys* [Animal Transport Guides Project, 2017]. Animals should not be loaded until the documentation required, according to national legislation or international requirements is complete. For international transport this should include an *international veterinary certificate* issued by the Veterinary Authority. The documentation required for a *journey* may vary depending on its length, complexity and *animal welfare* risk.

Agreements covering sanitary and trade aspects should include provisions addressing the responsibilities and actions in the event of rejection of any animal consignments, with proper consideration to the welfare of the animals.

The documentation accompanying the consignment may include, as appropriate:

- a) confirmation of acceptance of the consignment by the *Competent Authorities* at the destination;
- b) a *journey* travel plan, including the date, time and place of *loading*, *unloading* and any *resting points*;
- c) number and type of animals;

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- d) additional veterinary certification, sanitary requirements and other customs documentation, when required;
 - e) proof of competencies of the person(s) responsible for the welfare of the animals during transport;
 - f) *animal identification* to allow *animal traceability* to the premises of departure and, where possible, to the premises of origin;
 - g) details of any animals considered at particular *risk* of compromised welfare during transport;
 - h) documentation of the location of any planned rest stops, and access to *feed* and water;

- i) for multiple day *journeys*, a daily record of inspection and all relevant events, including morbidity and mortality and actions taken, Veterinary Medicine Products provided, feed and water offered and estimates of consumption, climatic conditions, rest stops, travel time and distance, mechanical failure of the *means of transport* and delays due to other causes;
- j) a contingency plan;
- k) written procedures for the care of animals, established prior to the *journey*, defining the requirements to be met, the responsibilities of the parties involved, the monitoring to be carried out and the corrective measures to be taken. These procedures should cover, at a minimum the environment, feeding and watering when applicable, bedding management, animal treatment and humane killing.

Article 7.2.11.

United States	Comment category: General Proposed amended text: We recommend a review and consolidation of Article 7.2.11 through 7.2.20 of the general “animal welfare concerns” and “animal-based and other measures” that apply to all situations into Article 7.2.5, while adding only situation and species-specific concerns to the appropriate section of the chapter, as necessary. Rationale: Articles 7.2.11 through 7.2.20 include repetitive lists of “animal welfare concerns” and “animal-based and other measures. A review and consolidation of these lists will reduce the redundancy and improve the flow and clarity of the chapter. Supporting evidence: N/A
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Journey duration and requirements for water, feed and rest

The welfare impact of animal transport is complex, involving multiple stressors, many of which increase together with *journey* duration [EFSA, 2022].

When determining the *journey* duration, the main consideration is how long the animals can be without feed, water and rest, without compromising their welfare.

Requirements for feed, water and rest depend on the species and animals' category (e.g. pregnant animals, unweaned animals, lactating animals, end of career animals and other categories (see Article 7.2.13) of animals, their physiological condition, environmental conditions, the distance to be travelled (length of the *journey*), and the ability to provide feed and water through the *journey*.

Longer *journeys* increase risks to *animal welfare*; therefore, all necessary arrangements should be made in advance to minimise *journey* duration and meet the animals' needs throughout the *journey*. *Journey* duration should be adapted to the needs of the species and categories of animals. Moreover, feed, water and rest should be provided at appropriate intervals according to the species and categories of animals and *journey* duration.

Provisions applicable to shorter *journeys* may differ from those of longer *journeys*, particularly regarding the need for feed, water and rest.

For longer *journeys*, rest stops may alleviate travel-related stress.

1) Animal welfare concerns

Potential welfare concerns associated with *journey* duration include:

- a) prolonged hunger and thirst;
- b) heat or cold stress;

- c) injuries and other transport-related diseases (e.g., respiratory disorders);
- d) reduced ability to rest due to *journey* duration;
- e) lack of adequate and accessible equipment to feed and water the animals;
- f) poor maintenance of feed and water equipment;
- g) insufficient number of *animal handlers* to provide feed and water;
- h) insufficient space to rest, drink and eat during the *journey*.

2) Animal-based measures

United States	Comment category: Addition Proposed amended text: <u>Animal-based and other measures</u> Rationale: This edit provides consistency in the language used throughout the chapter and encompasses the non-animal-based measures such as the access to feeder, drinkers and bedding. Supporting evidence: N/A
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Animal-based measures that may be used to assess welfare during transport include:

United States	Comment category: Addition Proposed amended text: Animal-based and other measures that may be used to assess welfare during transport include: Rationale: This edit provides consistency in the language used throughout the chapter and encompasses the non-animal-based measures such as the access to feeder, drinkers and bedding. Supporting evidence: N/A
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- a) signs of thirst, dehydration and hunger;
- b) injuries;
- c) nasal and ocular discharge;
- d) dull and unresponsive *animals*;
- e) aggressive behaviour;
- f) morbidity and mortality;
- g) signs of fatigue and exhaustion;
- h) feed and water intake;
- i) access to feeder, drinkers and bedding;

- j) signs of heat or cold stress.

4) Recommendations

Journeys should be kept as short as possible and be adapted to the animal species' and categories' needs for feed, water and rest. Animals should be transported without delay and using the most direct route to the place of destination.

Journey duration should be estimated carefully and should include regular scheduled rest stops or breaks stops, as well as any transfer from the *means of transport*. Depending on the *journey* duration, animals should be unloaded, rested, fed and watered in appropriate facilities. Such rest stops should allow for checking the fitness for transport of the animals, checking and cleaning the *means of transport*, and supplying the animals with sufficient feed and water until the next stage of the *journey*.

Taking into account the species, age and condition of the transported animals, they should be provided with:

- a) feed of an appropriate type and quantity to prevent hunger;
- b) prolonged fasting should be avoided;
- c) rest that is appropriate for their species, age and condition in order to prevent them from experiencing exhaustion.

Animals should be monitored throughout the *journey* for signs of hunger, thirst and exhaustion. Water should not be withdrawn until immediately prior to loading and should be offered at intervals appropriate to the species and category of the animals and their needs. In periods of high heat, while it should be sufficient, water should be provided carefully and gradually to avoid water intoxication (hyponatremia due to overhydration).

When water is required during the *journey*, vehicles should have water tanks with an adequate capacity for the number of animals transported and the duration of the *journeys*.

4) Species-specific recommendations or means of transport-specific recommendations

- a) Day-old chicks should arrive at the destination within 72 hours after hatching.
- b) Monogastric animals should be fed and watered more frequently than ruminants due to their digestive physiology.
- c) When feed is withdrawn before transport for food safety purposes for poultry and pigs, it should be for the shortest time possible.
- d) Feed and water should not be withdrawn prior to longer-distance transport of cattle, sheep, goats, camels and horses.
- e) Lactating animals will have a higher water requirement and should be watered more frequently.
- f) Unweaned animals should be transported with the dam, or if they are travelling alone, they should be fed with milk replacer frequently, depending on the species and age.
- g) Pigs, poultry, dairy cows, sheep and goats normally lie down during transport; thus, they should be provided with enough space to allow all animals to lie down without lying on top of each other.
- h) During the *journey*, camelids should be restrained in a manner that allows natural movement and does not forced them in a sitting position to prevent discomfort, injury and exhaustion.

United States	Comment category: Editorial Proposed amended text: h) During the <i>journey</i> , camelids should be restrained in a manner
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	that allows natural movement and does not forced them in a sitting position to prevent discomfort, injury and exhaustion. Rationale: This edit provides a clear sentence structure. Supporting evidence: N/A
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Article 7.2.12.

Fitness for transport

Correct assessment of the fitness for transport of animals before departure is essential to ensuring their welfare during *transport*. Animals that are not fit for transport should not be loaded.

During a *journey*, *animals* may be exposed to conditions that may compromise their welfare. Selecting *animals* that are in suitable condition for the transport is therefore critical to minimise these risks.

1) Animal Welfare Concerns

Failures in the assessment of the fitness for transport of animals can arise as a result of:

- a) failure to identify animals that are unfit prior to departure;
- b) failure to adjust travel conditions to meet the species' or category's needs, or to account for prevailing weather conditions;
- c) failure to recognise animals that have become unfit during transport.

2) Animal-Based Measures

Indicators that could be used to assess the fitness for transport of animals before *loading* and during the *journey* may include:

- a) severe injuries and lameness;
- b) severe bleeding;
- c) coughing, nasal and ocular discharge;
- d) diarrhoea;
- e) poor body condition;
- f) aggressive behaviour;
- g) vocalisation indicative of *distress*;
- h) non-ambulatory animals;
- i) signs of heat or cold stress (e.g., panting, sweating, excessive salivation, huddling, or shivering);
- j) prolapse;
- k) presence of pregnant animals in the final 20% of their gestation period at the time of arrival at the final destination for transport by water.

3) Recommendations

Before loading, each animal should be inspected by a veterinarian or *animal handler* or driver to assess its fitness for transport. Animals should be assessed using the measures mentioned in point 2).

Animals that are unfit to travel include, but may not be limited to:

- a) those animals that would be the final 10% of their gestation period for transport by land, or in their final 20% of their gestation period for transport by water;
- b) animals that are unable to stand unaided and bear weight on each leg;
- c) animals that cannot be moved without causing them additional suffering;
- d) animals with severe prolapse;
- e) newborns with an unhealed navel;
- f) females travelling without their offspring which have given birth within the previous 48 hours;
- g) animals that are hobbled to aid in the treatment of an injury;
- h) those injured during handling in preparation for crating;
- i) those that are sick, injured, weak, disabled, or fatigued;
- j) those that are emaciated.

If an *animal* is deemed unfit to travel or becomes unfit during transport, the person in charge (e.g. *veterinarian*, *animal handler*, driver) should take immediate measures to avoid unnecessary suffering. These may include treatment on the spot, transport to a veterinary facility for treatment or killing the animal according to Chapter 7.6. Animal welfare at the time of killing for purposes other than slaughter.

Animals that are vulnerable leading to a reduced ability to cope with demands of transport, and those that are at particular risk of suffering poor welfare during transport and that may require special conditions (e.g., modified such as in the design of facilities or *means of transport*, or additional *journey* requirements such as additional bedding, extra space, or segregation or increased monitoring) and additional attention during transport may include:

- a) obese animals;
- b) unweaned or young animals;
- c) excitable or aggressive animals;
- d) animals with little prior contact with humans;
- e) females in heavy lactation;
- f) females transported with their nursing offspring;
- g) animals with minor lameness affecting their balance;
- h) animals with a history of exposure to stressors or diseases, infections or infestations prior to transport;
- i) animals with unhealed wounds from recent surgical procedures (e.g., dehorning).

United States	Comment category: Addition Proposed amended text: i) animals at the end of their designated productive life cycle and other culled animals Rationale: This addition incorporates those animals that have completed their designated productive life cycle and are no longer economically viable for the primary purpose they were raised for. These animals may have a reduced ability to cope with the demands of transport and therefore should be included in this list of vulnerable animals. Supporting evidence: Grandin, T. (2026). Transporters may reduce the transport of unfit cattle and pigs when the animals have greater economic value. Frontiers in Animal Science, 7, 1779849. Herskin, Mette S., and Todd Duffield. Animal Transport and Related Management. Frontiers in Veterinary Science 7 (2020): 614317. Herskin, Mette S., et al. Transport of cull animals—are they fit for it?. Animal lives worth living. Wageningen Academic, 2019. 325-325
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4) Species or means of transport-specific recommendations

- a) Domestic birds showing poor feather cover should not be transported.
- b) During cool and cold weather, wet birds should not be transported because they are not able to maintain their body temperature.
- c) Stressed pigs should only be transported once they have completely recovered.
- d) Pregnant animals that would be in the final 20% of their gestation period at the planned time of unloading at the place of destination should not be transported by water.

Article 7.2.13.

Selection of compatible groups

Animals may experience significant stress when removed from their accustomed social group and placed in another group [EFSA (2022) Welfare of cattle during transport].

1) Animal welfare concerns

Mixing unfamiliar cattle, pigs, sheep, or goats from different social groups before or during *transport* can pose a significant *risk* of threatening and fighting behaviour [Consortium of the Animal Transport Guides Project, 2017] leading to fear, *pain*, injuries, inability to rest, and fatigue. Repeated regrouping of *animals* before and during *transport* may lead to abnormal behaviour and affect *animals'* metabolism and immune systems [EFSA (2022) Welfare of cattle during transport].

2) Animal-based measures

Animal-based measures that may assist in selecting or assessing and reselecting, group compatibility include:

- a) aggressive behaviour observed prior to transport, taking into account species, breed, sex, temperament and purpose of use;
- b) presence of horns capable of causing injury;
- c) skin lesions due to fighting;

- d) animal vocalisation indicative of *distress*;
- e) injured or non-ambulatory animals;
- f) animals failing to settle;
- g) fatigue and exhaustion;
- h) mortality;
- i) tail or ear biting in pigs.

3) Recommendations

- a) Animals should be transported in small compatible groups that are accustomed to each other, to prevent fighting and aggressive behaviour.
- b) Where it is envisaged that unfamiliar animals are to be grouped and transported in the same compartments, they should be as similar in species, size, sex, category, and age. Grouping should be carried out as far in advance of the transport as possible, and ideally these groups would be maintained throughout the entire *journey* to reduce stress.
- c) Aggressive animals should be separated from other animals to prevent injury or fear in the *means of transport* and in *resting points* and assembly centres.
- d) Animals with horns long enough to cause injury should only be transported in groups if they have been reared together and are accustomed to each other. In general, horned animals should not be transported in a group.
- e) Sexually mature males should not be placed with females, except in cases where males and females are accustomed to one another and where separation would cause *distress*.
- f) Tied and untied animals should be transported in separate compartments.
- g) Planning should, where possible, allow animals to remain in the same small groups when unloaded at *resting points* and reloaded back for onward transport.
- h) Avoiding or mitigating additional stressors (e.g. poor handling, heat or cold, lack of space, hunger, thirst or sensory overstimulation) may reduce group-related stress where animals are not fully compatible.
- i) *Animal handlers* should be trained to recognise signs of group incompatibility and animal behaviour should be monitored during transport with adjustments made as necessary.

4) Species-specific or means of transport-specific recommendations

When grouping animals, species-specific social and behavioural needs should be considered.

Article 7.2.14.

Handling

Handling includes, but is not limited to, capture, restraint, movement, inspection, and other related procedures such as identification, weighing, or sampling. Handling may be manual, mechanical (e.g., performed using automated equipment or systems), or the combination of both.

This Article should be read in conjunction with relevant Articles of Chapter 7.5 Animal welfare during slaughter.

1) Animal welfare concerns

Inappropriate handling may expose animals to welfare risks, including fear, *pain*, injury, exhaustion and *distress*. Factors that may contribute to compromised welfare during handling include:

- a) use of inexperienced or untrained *animal handlers*;
- b) sudden intrusion into the animals' flight zone or incorrect positioning of *animal handlers* in relation to their visual field (e.g., approaching from directly behind or in front of the point of balance);
- c) inappropriate use of physical force, goads, and other handling aids;
- d) excessive shouting or noise;
- e) inappropriate handling or restraint;
- f) poor design or maintenance of handling facilities;
- g) poor design of *means of transport* that prevents adequate monitoring and handling;
- h) insufficient number of *animal handlers*;
- i) animals with limited prior exposure to human contact;
- j) lack of, or inappropriate, monitoring of handling during the *journey*.

2) Animal-based and other measures

Animal-based measures that may be used to assess welfare during handling include:

- a) animals baulking, running, slipping or falling;
- b) frequency of aggressive behaviour towards *animal handlers* (e.g. rearing, kicking, or biting);
- c) frequency of avoidance behaviour, including refusal to move forward or moving away from the *animal handler*;
- d) mounting, piling, or overlaying of animals;
- e) vocalisation indicative of *distress*;
- f) signs of respiratory distress;
- g) bruised carcasses and compromised meat quality parameters;
- h) injuries to animals or *animal handlers*;
- i) mortality.

Other measures include:

- a) inadequate facilities;
- b) inappropriate *animal handler* behaviour, including the misuse of handling equipment;
- c) evidence of insufficient *animal handler* training or competence;
- d) absence of records relating to equipment servicing or maintenance;
- e) excessive time taken for loading or unloading.

3) Recommendations

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- a) *Animal handlers* should be properly trained in non-coercive methods and tools to move animals. They should not use violent means to move animals, or hurry animals and should avoid shouting, kicking, or use other means likely to cause *distress*, fear, or *pain*.
 - b) *Animal handlers* should not stand between an animal and where they want to move to, as this may cause the animal to balk. *Animal handlers* should make use of the flight distance and the animal's point of balance, located at the shoulder, positioning themselves behind it to encourage forward movement and in front of it to encourage backward movement.
 - c) Animals should be handled calmly, as they are more easily led or driven than if they are excited, and should be moved in small groups, as this decreases fear and makes use of their natural tendency to follow other animals.
 - d) Mechanical handling aids should be used so as to encourage and direct movement of the animals without causing *distress*, fear, or *pain*. Preferred mechanical aids include panels, flags, plastic paddles, flappers (a length of cane with a short strap of leather or canvas attached), plastic bags, and rattles.
 - e) Electric goads should not be used or should be used only as a last resort to move animals provided that the animal is able to move forward freely (e.g. no obstacles or other animals) and is not injured. Their use should be limited to low-voltage goads applied to the hindquarters of adult pigs and large ruminants only, and never to sensitive areas (eyes, mouth, ears, ano-genital region, udders, or belly). Electric goads should not be used on equids, camelids, ratites, sheep and goats, pregnant animals, calves, or piglets. Shocks should not be used repeatedly even if the animal fails to respond and should not last longer than one second.
 - f) The use of well-trained dogs and leader sheep to help with the movement of cattle and sheep is acceptable but should be minimised.
 - g) Animals should not be forced to move faster than their normal walking pace to minimise injury from crowding, slipping, or falling.
 - h) Animals should not be grasped, lifted or restrained in a manner that causes *pain*, suffering and injury (e.g. bruising, fractures, dislocations).
 - i) Ramps or lifts should be used when the vehicle and the unloading dock are not of the same height. Ramps and lifts should be positioned so that the animals can be handled safely, their gradient should not be so steep as to prevent animals from moving, and solid side barriers should be in place. There should be no gap between the vehicle and unloading dock.
 - j) The design of the facilities should promote the natural movements of animals and, as far as possible, minimise human interaction.
 - k) Handling and restraining systems should be appropriate for the species being transported.
 - l) Assembly, loading, and unloading facilities, including ramps, should be fit for the species being transported.
 - m) The design of the *means of transport* should allow monitoring of the animals during transport.
 - n) During flights, *animal handlers* or grooms should have access to monitor the animals in the cargo hold.
 - o) During *journeys* by water, *animal handlers* should have access to animals to inspect and take care of them.
- 4) Species-specific recommendations
- a) Horses, Dromedary and Bactrian camels [Le Meur et al. 2024] should be previously trained for loading, transport and unloading using positive reinforcement training or habituation.
 - b) Sheep should never be lifted by the wool.
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- c) Sheep, llamas, alpacas, guanacos, and vicuña should be moved in a manner that is in keeping with their gregarious tendencies. Animals may become agitated if singled out for attention and will strive to rejoin the others.
 - d) Pigs should be moved calmly, using boards or paddles, maintaining appropriate group sizes, and minimising noise and sudden movements.
 - e) Birds should not be picked up by their head, neck, one wing, or tail feathers. Catching should be carried out by skilled *animal handlers*, and every attempt should be made to minimise stress and fear reactions and injury. Birds should be in an upright position after being placed in the *container*, and the *container* should be handled, moved, and securely positioned on vehicles in a manner that minimises injuries and stress to the birds.
 - f) Rabbits should be removed from the husbandry cages individually by holding and lifting by the neck (scruff) by one hand, with support of the body with the other hand [European Commission 2017].

Loading and unloading

Loading and unloading are stressful for animals during transport, as they are moved through unfamiliar environments and subjected to increased handling. Proper handling and well-designed facilities are key to minimising risks during these stages.

This Article should also be read in conjunction with relevant Articles of Chapter 7.5 Animal welfare during slaughter.

1) Animal welfare concerns

Animals may be exposed to several *hazards* to *animal welfare* during loading and unloading, including but not limited to:

- a) inadequate loading and unloading facilities, ramps or operations;
- b) improper planning of loading and unloading operations;
- c) improper handling of the animals;
- d) exposure to extreme weather conditions;
- e) inadequate ventilation and lighting;
- f) delays or rushing at loading and unloading;
- g) inadequate supply of water, feed and bedding;
- h) repeated loading and unloading on the same *journey*.

2) Animal-based and other measures

Animal-based measures that may be used to assess welfare during loading and unloading include:

- a) baulking, mounting, piling, or overlaying of animals;
- b) vocalisations indicative of *distress*;
- c) signs of respiratory distress;
- d) bruised carcasses and compromised meat quality parameters;
- e) injuries to animals or *animal handlers*;
- f) morbidity and mortality.

Other measures include:

- a) poor design and maintenance of loading and unloading facilities;
- b) inappropriate gradient of ramps inside and outside of the *means of transport*;
- c) excessive use of handling aids;
- d) excessive time taken for loading or unloading.

3) Recommendations

- a) Animals should be moved using handling techniques that take into account their species-specific behaviour.
- b) Loading and unloading operations should be carefully planned in advance, to minimise delays, rushing and unnecessary handling.
- c) Animals should be loaded and unloaded promptly. This is facilitated by scheduling the arrival and departure of the animals to ensure that there are sufficient personnel and adequate space in loading and unloading facilities and *means of transport*.
- d) Loading and unloading should be supervised or conducted by sufficient numbers of competent *animal handlers*. The animals should be loaded and unloaded quietly and without unnecessary noise, harassment, or force.
- e) Animals that are likely to cause injury or *distress* to other animals should be kept separate prior to and during loading into transport *containers*. This includes animals known to be aggressive, with horns, antlers, or tusks.
- f) During extreme weather conditions, consideration should be given to rescheduling the loading or unloading of animals.
- g) The facilities for loading and unloading, including the collecting area, races and loading ramps, should be designed and constructed to account for the needs and abilities of the animals with regard to dimensions, slopes, surfaces, turns, absence of sharp projections, flooring, etc.
- h) Loading and unloading facilities should be illuminated to allow the animals to be observed by *animal handlers*.
- i) Loading and unloading facilities should have non-slip flooring to facilitate safe movement of animals.
- j) Recommendations for ventilation during loading, unloading, and the *journey* are provided in Article 7.2.20.
- k) Animals should only be loaded if they comply with the sanitary and customs requirements of the transit and importing countries.
- l) Animals should only be loaded in *means of transport* that are clean, disinfected, and fit for purpose.

4) Species-specific recommendations or means of transport-specific recommendations

- a) Horses, Dromedary and Bactrian camels should be previously trained for loading and transport and unloading using positive reinforcement training or habituation. [Dai et al, 2029, 2020, 2025; Masebo et al. In revision].
- b) Horses should not be tied with loose head restraints, ensuring that their heads do not remain in an elevated or restricted position, as this increases the risk of respiratory disorders. [Takahashi et al, 2025, Padalino et al., 2018].
- c) Vessels should carry suitable equipment for loading and unloading. It is advisable to have a backup ramp on board of the vessel in case of failure if the main ramp breaks down. The vessel ramps used for loading and unloading should be compatible with the handling, loading and unloading equipment or facilities at the seaports.

Environmental conditions

Environmental management is required to ensure that animals are not exposed to conditions that represent a risk for their welfare during transport. The environment within the *means of transport* can be affected by multiple factors, including ambient temperature and humidity, solar radiation, precipitation and storms or other extreme weather events, design of the *means of transport*, stocking density, bedding material, and airflow. Transporters should ensure that each animal in the load has adequate protection from adverse environmental conditions during transport, loading, unloading, and at rest stops.

1) Animal welfare concerns

Animals may be exposed to *animal welfare hazards* due to exposure to extreme weather conditions and inadequate environmental management, including:

- a) fluctuations or extremes in temperature, humidity or ammonia levels within the *means of transport*;
- b) exposure to wind chill on a moving *means of transport*;
- c) exposure to the elements resulting in wet animals;
- d) the absence of forced ventilation or climate control in a stationary *means of transport*;
- e) exposure to high wind, wave motion or air turbulence;
- f) exposure to volatile materials, such as vehicle fumes, carbon dioxide, and ammonia;
- g) exposure to dust and airborne debris;
- h) inappropriate or non-functional fans, openings, or other means of ventilation.

2) Animal-based and other measures

Animal-based measures that may be used to assess the impact of environmental conditions include:

- a) signs of heat stress such as panting, open-mouth breathing, sweating, excessive salivation, or skin discoloration (e.g. in pigs);
- b) signs of cold stress such as shivering, hunching, cold extremities, huddling or piling;
- c) frostbite;
- d) instability or recumbency of animals, such as from bad roads, storms at sea or air turbulence;
- e) injured, non-ambulatory, or fatigued animals;
- f) morbidity and mortality.

Other measures relevant to environmental management include:

- a) availability and adequacy of environmental protection, including from extreme weather;
- b) air quality within the *means of transport* including ammonia levels;
- c) air temperature, relative humidity and ammonia level;
- d) presence and functioning of appropriate ventilation equipment;
- e) space allowance;

- f) temperatures within the *means of transport*;
- g) loading and unloading area free of ice.

United States	Comment category: Addition Proposed amended text: g) loading and unloading area free of ice <u>or other environmental conditions that destabilize the animals when loading or unloading.</u> Rationale: This addition incorporates additional environmental conditions, other than ice, that may lead to destabilization of animals when loading or unloading. Supporting evidence: N/A
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3) Recommendations

- a) Transporters should consider the external temperatures and the weather conditions, as well as the available protections and load characteristics, before undertaking a *journey* and plan the *journey* accordingly.
- b) Transporters should monitor changing weather conditions and internal temperature during the *journey* and adjust the weather protection equipment or environmental controls as required.
- c) The *means of transport* should have methods of environmental protection or control that are suitable for the whole *journey*, as vehicles may pass through different climate zones and weather conditions during one *journey*.
- d) During extreme temperatures, transporters should minimise the time that the vehicle remains stationary.
- e) The *means of transport* should be equipped with systems to monitor internal temperature and humidity during the *journey*, particularly in the highest-risk areas within the *means of transport*.
- f) Upon arrival, and before unloading at the destination, appropriate environmental conditions should be maintained through the use of ventilation, shade, shelters, and covers.
- g) Transporters should know the weather protection requirements of the species they are transporting, as well as their species-specific ideal temperature range, and plan the *journey* and *journey* conditions accordingly.
- h) The rest stops facilities should have methods of environmental protection or control that are suitable for the different climate zones and weather conditions during one *journey*.

United States	Comment category: Editorial Proposed amended text: h) The rest stops facilities should have methods of environmental protection or control that are suitable for the different climate zones and weather conditions during one <i>journey</i>. Rationale: Typo Supporting evidence: N/A
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- i) To prevent suffering due to excessive heat and humidity, transporters should consider:
 - loading at night, and transporting during cooler periods of day or at night;
 - driving animals around to provide passive ventilation to the animals if waiting to unload;

- during breaks, parking vehicles at right angles to the wind to allow airflow amongst animals, opening and closing ventilation apertures, and possibly parking under shade;
 - installing fans to provide active ventilation to animals;
 - providing the animals access water to drink;
 - using sprinklers or misters where appropriate (if humidity is low);
 - increasing the space allowance to improve better thermoregulation;
 - removing manure deposits when possible.
- j) For longer *journeys*, the *means of transport* may be equipped with forced ventilation and other systems to monitor and regulate the microclimatic conditions within the load.
- k) To prevent suffering due to extreme cold weather, transporters should consider:
- utilising weather protection equipment on transport vehicles (e.g. winter boards, bedding, tarps), and adjusting ventilation openings;
 - prioritising the sides and rear of the vehicle and trailer when adding environmental protection and in vehicle design, as this is where cold air and precipitation will be worse;
 - avoiding loading during the coldest part of the day;
 - providing additional room to allow animals to move away from the sides of the vehicle;
 - avoiding overcrowding, as animals can easily become too warm, causing them to sweat, which will lead to condensation and wet animals;
 - parking vehicles at an angle to protect the animals from the prevailing winds and precipitation.
- 4) Species-specific recommendations or means of transport-specific recommendations
- a) Pigs are especially vulnerable to heat and cold stress and may require misters/sprinklers for cooling in low humidity. For pigs transported by road, the use of bedding should be limited in warm or hot weather.
- b) The following animals are known to be vulnerable to cold stress, and depending on the design of the conveyance, may require additional winter protection to reduce exposure to the cold: pigs, shorn sheep, dairy cows, calves and birds.
- c) Birds should be kept dry during the loading process, especially in colder weather. Wet birds should not be transported in colder conditions and additional protection should be provided if birds become wet during loading or transport.
- d) In the open decks of livestock vessels and roll-on–roll-off vessels, the animals should be protected from adverse weather.
- e) Animals transported in crates (poultry, rabbits) are more susceptible to heat and cold stress and require extra considerations and monitoring during transport.
- f) Routes should be selected or adjusted to consider avoidance of adverse weather or other events such as fires or floods for land *journeys*, or storms for sea and air *journeys*.

Article 7.2.17.

Space allowance

Sufficient space allowance is a critical factor aspect to ensure the welfare of animals during transport, as this directly impacts the animals' capacity to maintain balance, rest, and thermoregulate. Space allowance for

each animal should be calculated taking into account the species' and categories' specific needs as well, factors such as the prevailing climatic conditions, *journey* duration, the *means of transport*, and the size and type of the *container*.

1) Animal welfare concerns

Animals may be exposed to several *animal welfare hazards* due to inappropriate space allowance, including:

- a) inadequate space for animals to lie down, stand up and move freely;
- b) inadequate headroom;
- c) failure to adjust space allowance to account for weather conditions;
- d) failure to adjust space allowance to account for species-specific thermoregulatory needs.

2) Animal-based and other measures

Animal-based measures that may be used to assess adequacy of space allowance include:

- a) signs of fatigue and exhaustion;
- b) behaviours indicative of thirst and hunger;
- c) feed and water intake;
- d) frequency of falls and loss of balance events;
- e) signs of heat stress;
- f) injuries or bruising;
- g) abnormal head position or inability to adopt natural posture;
- h) inability to lie down or stand up during transport;
- i) mounting, piling or overlaying of animals;
- j) mortality;
- k) signs of respiratory distress.

Other measures include:

- a) floor space measurement per animal;
- b) overhead height measured from the highest point of the tallest animal;
- c) air temperature, relative humidity and presence of noxious gases.

3) Recommendations

- a) Space allowance should be determined based on multiple factors including facility design, ventilation, air temperature and humidity, waste accumulation, group composition, the need to provide feed, water and rest during travel, the *means of transport*, and the duration of the *journey*.
- b) The number of animals that can be transported on a *means of transport* or in a *container* should be determined before loading.

- c) Animals should be transported with enough space to maintain balance and maintain their preferred position, including being able to lie down or stand up, and they should be able to adjust their body position to protect themselves from other forms of harm.
- d) Adequate space should be allowed for animals to access drinkers and feeders.
- e) Adequate overhead height should be provided so that each animal can be able to assume its natural standing position (or sitting position for poultry) without touching the ceiling, and there should be sufficient headroom to allow adequate airflow over the animals to ensure comfort and minimise injuries. Headroom should be increased in hot/humid conditions.
- f) When animals lie down, they should all be able to adopt a normal lying posture, without being on top of one another, and allow necessary thermoregulation.
- g) Minimum space allowances should be based on current scientific evidence and appropriate regional, national or sectoral standards.
- h) Space allowances should be adjusted in both hot and cold conditions. Depending on vehicle design, the space allowance may should be adjusted in extremely or low ambient temperatures to allow adequate thermoregulation.
- i) Fixtures and fittings within the *means of transport* or *containers* should be taken into account when calculating the actual available space. If the walls, ceiling, or floor have protrusions or internal ramps that project into the animal compartment, the space thus occupied should not be included in the calculation of space allocated to the animals. If any such protrusions could cause injury to animals, that part of the *means of transport* or *container* should be covered, or separated and not used for animal transport.
- j) Space allowance should be adjusted for vulnerable animals, (e.g. cull dairy cows, fully-feathered poultry, end-of-lay hens, and animals with physiological conditions such as advanced pregnancy, recent parturition, or illnesses or injuries that do not render them unfit for transport). In general, longer *journeys* require a higher allocation of space per animal than short *journeys*.

4) Species-specific recommendations or means of transport-specific recommendations

Cattle:

Horned *animals* may require at least 10% more space, as horns can cause bruising.

Sheep and goats:

Space should be adapted to the presence of horns or wool.

Pigs:

Pigs are more vulnerable to heat stress and the effects of humidity than most other farm *animals* [EFSA (2022) Welfare of pigs during transport] and close attention should be paid to ensuring adequate space and ventilation during transport, and particularly when the *vehicle* is loaded but not moving.

Horses:

When horses are transported in individual stalls, space is primarily determined by the correct placement of the partitions rather than the floor area as such. [Consortium of the Animal Transport Guides Project. (2017) Guide to good practices for the transport of horses destined for slaughter.] Horses should have enough space to balance, put their head down at the level of the withers, urinate and thermoregulate.

Unhandled horses should be transported in a small group composed of compatible *animals* [EFSA (2022). Welfare of equidae during transport].

Poultry:

Birds should have enough space that they can all sit on the floor of the *container* at the same time. The height

of the *container* should allow birds to sit in a natural position without touching the ceiling.

Some categories of poultry, such as fully feathered pullets and end-of-lay hens, may require more space.

Rabbits:

Rabbits should have enough space that they can all sit on the floor of the *container* at the same time. The height of the *container* should allow rabbits to sit with their ears extended in a comfortable position. [EFSA 2022 - Welfare of domestic birds and rabbits transported in containers]

For long *journeys* or *journeys* in hot, humid conditions where rabbits need to stretch out in recumbency, increases of space by 10% to 20% may be appropriate. [EFSA 2022 - Welfare of domestic birds and rabbits transported in containers].

Article 7.2.18.

Condition of the means of transport

The design and maintenance of the *means of transport* should ensure the safety and good welfare of the animals.

1) Animal welfare concerns

Animals may be exposed to several *hazards* to *animal welfare* as a result of improper conditions of the *means of transport*, including but not limited to:

- a) improper design and maintenance of the *means of transport*, e.g. the presence of gaps, corrugated patterns and steps;
- b) inadequate structure of the *means of transport* (e.g., sharp protrusions, sharp angles, open sides, short sides);
- c) slippery and rough floor surfaces;
- d) insufficient deck height;
- e) inadequate penning and partitions between compartments;
- f) poor vehicle suspension;
- g) lack or insufficient bedding material;
- h) inadequate lighting;
- i) poorly designed drinking devices, too few drinking devices, or devices designed for other species or age categories;
- j) lack of proper ventilation and heating systems.

2) Animal-based measures

- a) injuries or bruising
- b) signs of heat stress (e.g. panting, open-mouth breathing, sweating, excessive salivation, or skin discoloration (pigs));
- c) signs of cold stress (e.g. huddling, shivering, hunched posture, cold extremities);
- d) animals slipping and falling;
- e) posture changes;

- f) signs of fatigue or exhaustion e.g. inability to walk or move, unsteadiness, swaying, resting the head on partitions or other animals;
- g) latency to stand up after a falling event;
- h) respiration rate;
- i) nasal and ocular discharge.

3) Recommendations

The design of the *means of transport* should be appropriate for the species, size, category and weight of the animals to be transported and should be designed, constructed, maintained and used in such a way to:

- a) avoid injury and suffering of the animals;
- b) ensure the safety of animals, prevent animals escaping or falling out, and be able to withstand the stress of movements;
- c) provide protection from adverse weather conditions;
- d) provide sufficient lighting to allow inspection and care of the animals during transport, with additional lighting where necessary during the loading and unloading of the animals at night;
- e) provide access to the animals for inspection and cared for during the *journey*;
- f) ensure good mechanical and structural condition;
- g) avoid injury to drivers and *animal handlers* while carrying out their responsibilities.
- h) vehicles should be designed so that the faeces or urine from animals on upper levels do not soil animals on lower levels, nor their feed and water. This condition is not applicable for poultry.

4) Species-specific recommendations or means of transport-specific recommendations

Species -specific

Ruminants, pigs and equidae:

- On vehicles with lifting platforms and upper floors, these structures should have safety barriers to prevent animals from falling or escaping while being loaded or unloaded.
- Horses should not be transported in multi-deck vehicles.

Poultry and rabbits:

- Solid, safe, undamaged and clean *containers* should be used. Whenever *containers* get damaged, they should be repaired or replaced.
- The floor of *containers* should prevent birds from slipping and faeces from building up.
- During the *journey*, *containers* should be properly secured to prevent movement, falling down and disturbance of birds and rabbits.
- Side covers should be used in case of cold weather to protect all the animals and especially for birds at the back of the vehicle, which are more exposed to cold.
- For day-old chicks, the vehicles should have temperature and, if available, humidity sensors.

Transport-specific recommendations

Transport by land:

- Vehicles should be visibly marked to indicate the presence of live animals, including specific marking for wild or dangerous animals.
- Vehicles should be equipped with movable partitions that allow the creation of separate compartments whenever needed. Partitions should be strong enough to withstand the weight of the animals, prevent injury, and prevent negative interactions between neighbouring animals.
- Partitions should be designed for quick and straightforward operation and should be placed in a way to avoid animals getting trapped or to impair ventilation.
- Vehicles should have appropriate suspension systems, to reduce vibration and the stress of the animals.
- Poor driving or piloting should be avoided.
- Poor quality of roads being traversed should be considering minimising *animal welfare* consequences.

United States	Comment category: Editorial Proposed amended text: Poor quality of roads being traversed should be considered editing <u>to</u> minimiizesing <u>izing</u> <i>animal welfare</i> consequences. Rationale: Edited for clarity. Supporting evidence: N/A
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- When appropriate, suitable and dry bedding should be added to vehicle floors to assist absorption of urine and faeces, minimise slipping by animals, promote animal comfort and resting, and protect animals from adverse weather conditions.
- Vehicles should allow easy and effective cleaning and disinfection in order to minimise the likelihood of the spread of infectious disease during transport and maintain optimal conditions within the means of transport.
- The buildup of faeces and urine should be prevented during a *journey*.

Transport by water:

Livestock vessels

- All the pens or compartments where animals are transported should be clearly identified.
- A vessel floor plan with the available surfaces for the animals in each pen should be present on board.
- Strength for pen rails and decks should be appropriate to the transported animals.
- The side walls of the pens should be designed to prevent animal escape, without compromising their access to feeders and drinkers.
- Vessels should have effective ventilation to meet variations in climate and the thermoregulatory needs of the animal species being transported, even when the vessel is stationary.
- The decks of the vessels should be equipped with a forced ventilation system with sufficient capacity for adequate air exchange.
- The ventilation system should guarantee a minimum of air flow in each pen. Airflow should be monitored in multiple locations.

- There should be additional fans as well as parts to fix existing fans in the event of a breakdown.
- On each deck there should be equipment to measure temperature, humidity and gases such as ammonia in the high-risk areas.
- Vessels should be equipped with water tanks and water production systems that have the capacity to store or produce the amount of water needed for the species, type and number of animals, as well as the maximum *journey* duration, plus at least 3 days' spare supply of water.
- Animals should have easy access to an adequate and sufficient number of drinkers to provide a continuous freshwater supply to each pen. Alternative pumping equipment should be available to ensure water supply in the event of failure of the primary pumping system.
- Vessels should carry from the time of departure sufficient feed to cover the minimum daily feed for the intended *journey* plus at least three days' spare supply of feed.
- Suitable bedding, such as straw or sawdust, should be added in an appropriate quantity to the vessel floors to assist absorption of urine and faeces, minimise slipping, injuries, abrasions, lameness and faecal coating, as well as protect animals from adverse weather conditions.
- The bedding material should be monitored routinely (at least daily) to ensure consistency and depth is appropriate to mitigate risks to the health or welfare of the livestock.
- Feed and bedding should be stowed in a way to ensure protection from fire hazards and seawater and not impair the ventilation.
- The drainage system should be of appropriate capacity to drain fluids from pens and decks under all conditions. Drainpipes and channels should collect the fluids in wells or tanks from where sewage can be discharged by means of pumps or ejectors. Alternative pumping equipment should be available to ensure drainage in the event of failure of the primary pumping system.
- On the animal pens, sufficient passageway and ramp lighting should be provided to allow the animals to see the feeders and drinkers, *animal handlers* to inspect and take care of the animals, and the proper movement of the animals.
- Emergency lighting should be available in case of a failure of the main electrical installation, and sufficient portable lighting should be provided to allow the attendant adequate inspection and care of the animals.

United States	Comment category: Editorial Proposed amended text: Emergency lighting should be available in case of a failure of the main electrical installation, and sufficient portable lighting should be provided to allow the attendant <u>animal handler</u> adequate inspection and care of the animals. Rationale: This edit keeps consistency with the terminology used in this chapter. Supporting evidence: N/A
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- A firefighting system should be appropriately installed in all livestock areas, and fire equipment within the livestock areas should comply with the most recent International Convention for the Safety of Life at Sea (SOLAS) standards regarding fire protection, fire detection and fire extinction.
- The ventilation, lighting, fresh water supply and production and drainage systems used for livestock should be equipped with a monitoring, control and alarm system in the wheelhouse.
- A primary source of power should be sufficient to supply continuous power for the ventilation, lighting, freshwater production and supply, and drainage system. A secondary source of power should be sufficient to replace the primary source of power for a continuous period of three days.

- The ramp used for loading and unloading animals on the vessel should have sidewalks to allow the easy handling of the animals and protect people during the loading operations.
- Special attention should be given to the effect of the sea tides on the ramp inclination in order not to impair the movement of the animals and the ramp safety.
- The vessel should have enough hospital pens in each deck to separate animals that need special attention or treatment.
- The vessel should have on board *veterinary medicinal products* and veterinary equipment to treat the animals and an appropriate means of killing the animals in case of need in accordance with Chapter 7.6, that is sufficient and suitable for the species and number of livestock carried. Any equipment that is not in good working condition should be repaired or replaced before departure.
- *Veterinary medicinal products* and veterinary equipment should be stored and used according to any applicable veterinary directions and/or manufacturers' recommendations.

Roll On-Roll Off vessels

- When vehicles are carried on board ferries, facilities for adequately securing them should be present.
- On enclosed decks, the vessel should be equipped with an appropriate forced ventilation system, an alarm system, and an adequate secondary source of power in case of failure.

Transport by air

- Live animals should not be loaded with any other cargo that adversely affects the health and welfare of the animals (e.g. causing them *pain*, suffering and harm).
- Live animals should not be loaded or transported in the immediate vicinity of heated or frozen *containers*. They should be loaded separately from other animals or cargo that have different temperature requirements.
- *Containers* with animals should be placed on the aircraft in such a way as not to compromise ventilation.
- In cargo holds where animals are transported, it should be ensured that the environmental conditions are appropriate for the species and type of animals being transported.

Containers

- *Containers* in which animals are transported should be visibly marked, indicating the presence of live animals and with a sign indicating the top of the *container* (Regulation 1/2005).
- During transport and handling, *containers* should be kept in an upright position.
- *Containers* should be secured so as to prevent displacement due to the movement of the *means of transport*.

Article 7.2.19.

Intermediate facilities

Journeys often involve stops in intermediate facilities such as assembly centres, resting points, markets, auctions, airport and seaport facilities, quarantine, or border posts. Breaks during *journeys* allow animals to recover from the stress and associated welfare consequences of transit.

1) Animal welfare concerns

Animals may be exposed to several welfare *hazards* while at intermediate facilities, including:

- a) loading and unloading operations;

- b) inappropriate animal handling;
- c) use of unfamiliar and inappropriate water and feeding devices;
- d) insufficient resting intervals and duration;
- e) poorly designed or maintained facilities;
- f) poor biosecurity and exposure to pathogenic agents;
- g) exposure to extreme weather;
- h) delays in loading and unloading;
- i) prolonged interval between milking for lactating animals;
- j) variation in microclimatic conditions;
- k) exposure to noxious gases and excessive noise (e.g. facilities at airports);
- l) availability of equipment to euthanize animals;

United States	Comment category: Addition Proposed amended text: l) <u>lack of</u> availability of equipment to euthanize animals; Rationale: This addition clarifies that it is the lack of available equipment to euthanize animals that is the hazard. Supporting evidence: N/A
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- m) mixing of unfamiliar groups and different categories of animals;
- n) exposure to a novel environment.

2) Animal-based and other measures

Animal-based measures:

- a) injuries;
- b) vocalisations indicative of *distress*;
- c) mortality;
- d) animals slipping or falling;
- e) overcrowding;
- f) signs of heat or cold stress.

Other measures:

- a) poor condition of the facilities (e.g. presence of sharp or protruding objects, areas where animals can get trapped, non-slip flooring, unloading/loading ramps);
- b) access to euthanasia equipment;

- c) use of inappropriate handling techniques such as use of goads, yelling, hitting, and striking animals;
- d) access to sufficient amount of potable water for all animals;
- e) access to sufficient and appropriate feed for all animals;
- f) environmental protection (shelter, shade, wind protection, bedding, mud);
- g) evidence of training of the personnel handling animals.

3) Recommendations

- a) Facilities should be able to schedule the arrival and departures for efficient unloading and loading of animals and to ensure there is enough room for accommodating all animals arriving at the facilities.
- b) The loading and unloading of animals should be kept to a minimum and implemented in accordance with Article 7.2.15.
- c) Facilities should be designed for the species and category of animals that will use them.
- d) Facilities should provide feeding, watering and, when relevant, milking devices that correspond to the needs of the animals that will utilize the facilities.
- e) Staff should be competent and trained to handle animals in accordance with Article 7.2.14.
- f) Facilities should ensure protection from adverse weather conditions in accordance with Article 7.2.16.
- g) Facilities should allow for separation of animals from different consignments and categories and ones that are incompatible by nature.
- h) All facilities should be maintained and repaired as needed to prevent injury and entrapment.
- i) The facility should have access to equipment or methods suitable for euthanising all types of animals.
- j) Facilities should provide have access to safe feed and water in accordance with Article 7.2.11.
- k) Facilities should allow for easy cleaning and disinfection and have access to the equipment required to clean them.
- l) Facilities should have a biosecurity plan in place to mitigate the risk of the spread of disease.

4) Species-specific recommendations for intermediate facilities:

The intermediate facilities should allow for feeding of unweaned animals with milk or milk replacer at regular intervals.

Transport on foot (transhumance)

In many parts of the world, animals are often moved on foot. This can be an everyday activity for pastoral animals or can be seasonal, when animals are moved from one pasture to another, which may be in spring and summer (i.e. transhumance), or it can also be a way for animals to be moved for selling or slaughter purposes where other means of transport are not available.

Irrespective of the purpose or the frequency of these movements, the welfare of those animals moved on foot should be protected.

1) Animal Welfare Concerns

Animals may be exposed to several *hazards to animal welfare* when moving on foot, including:

- a) failure to identify fitness for transport and consequently allowing unfit animals to walk over long distances;
- b) exposure to extreme weather conditions;
- c) fatigue or exhaustion;
- d) difficult or challenging terrain;
- e) lack of feed or water access over long distances;
- f) inappropriate feeding, resting and milking facilities;
- g) lack of veterinary care due to remote locations;
- h) predation;
- i) inappropriate use of *veterinary medicinal products*;
- j) prolonged *journey* duration;
- k) inappropriate handling;
- l) failure to identify animals that become unfit during transport;
- m) animals being overloaded with cargo.

2) Animal-Based and Other Measures

Animal-based measures include:

- a) *distress* vocalisation;
- b) signs of heat or cold stress;
- c) signs of fatigue or exhaustion;
- d) thirst and hunger behaviours;
- e) feed and water intake;
- f) poor body condition or signs of dehydration;
- g) falling frequency and balance loss events;
- h) lameness, injuries or bruising;
- i) morbidity or mortality.

Other measures include:

- a) availability of food and water;
- b) distance walked;
- c) presence of shelter, feeders and drinkers along the route.

3) Recommendations

- a) The *journey* should be planned to provide access to feed, water and shelter in accordance with Articles 7.2.11 and 7.2.16..
- b) The *journey* duration should be kept to a minimum depending on the species-specific ability to walk and carry goods.
- c) Only fit animals should be moved, and vulnerable animals that may have a reduced ability to cope with the stressors of transport should not be allowed to be moved on foot.
- d) Milking devices should be available along the route to correspond to the needs of the animals.
- e) Animals should be monitored regularly for fatigue, *distress* and injuries.
- f) Measures should be in place to protect animals from predators.

Article 7.2.21.

Actions in the event of a refusal to allow the completion of the journey on an international transport journey

The welfare of the animals should be the first consideration in the event of a refusal to import.

When animals have been refused import for reasons other than sanitary, the *Veterinary Authority* of the importing country should communicate officially without delay the reasons for their refusal to the *Veterinary Authority* of the exporting country and transit countries. The *Veterinary Authority* of the importing country should make available suitable isolation facilities to allow the *unloading* of animals from a *means of transport* and their secure holding under official control and considering their welfare, pending resolution of the situation.

In the event that the animals cannot be unloaded and remain on the *means of transport*:

- a) the *Veterinary Authority* of the importing country should allow providing the *means of transport* with water, feed and appropriate care of the animals, as necessary.
 - b) the *Veterinary Authorities* of the exporting and importing countries should make contact with all the involved parties to take immediate action to solve the emergency through the contingency plan designed for this purpose.
 - c) ensuring proper animal care, taking immediate action through a contingency plan, and establish a communication mechanism among the relevant authorities to coordinate an appropriate solution to the importation rejection.
 - d) if no timely solution is found and the welfare of the animals can no longer be ensured, animals should be killed without delay in accordance with Chapter 7.6. Killing of animals for purposes other than slaughter.
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