

# Animal welfare on sea vessels and criteria for approval of livestock authorisation

Workshop on Animal Welfare during Transport  
of 25 May 2021



**Protection of Animals during Transport**





RESEARCH FOR ANIT COMMITTEE

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## **Abstract**

This research project was commissioned by the European Parliament's Committee of Inquiry on the Protection of Animals during Transport (ANIT). The paper provides an analysis of the legal framework for the transport of animals on livestock vessels and related operations. Shortcomings of the system currently in place are identified, examples of good practices worldwide are described, and case studies are presented. Policy recommendations and short-term goals for the EU Commission and Members States are outlined.

This document was requested by the European Parliament's Committee of Inquiry on the Protection of Animals during Transport (ANIT).

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## LIST OF ABBREVIATIONS

<b>AMSA</b>	Australian Maritime Safety Authority
<b>ASEL</b>	Australian Standards for the Export of Livestock
<b>CA/CAs</b>	Competent authority/authorities
<b>DAFM</b>	Irish Department of Agriculture, Food and the Marine, Agriculture House
<b>DG MOVE</b>	Directorate-General for Mobility and Transport
<b>DG SANTE</b>	Directorate-General for Health and Food Safety
<b>EMSA</b>	European Maritime Safety Agency
<b>ESCAS</b>	Exporter Supply Chain Assurance System
<b>EU</b>	European Union
<b>FOC</b>	Flag of convenience
<b>GISIS</b>	Global Integrated Shipping Information System
<b>IACS</b>	International Association of Classification Societies
<b>IMO</b>	International Marine Organisation
<b>ISM Code</b>	International Safety Management Certification
<b>LSI</b>	Livestock Weather Safety Index
<b>MARPOL</b>	International Convention for the Prevention of Pollution from Ships
<b>MS/MSs</b>	Member State/States
<b>NGO</b>	Non-governmental Organisation
<b>OIE</b>	World Organisation for Animal Health
<b>PSC</b>	Port State Control
<b>PSCO</b>	Port State Control Officer
<b>SOP</b>	Standard operating procedure
<b>SRP</b>	Ship risk profile

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## APPROACH AND METHODOLOGY

This research project has been prepared as a response to the ANIT Committee's request for information on the subject of particular welfare needs in sea transport of animals.

It provides information to Members of the ANIT Committee on the requested subject. The study compiles information on the *status quo*, legal framework and shortcomings. The general objective of this project is to provide a technical overview analysing the state of play of implementing EU animal welfare rules on sea vessels, in particular the criteria used by national authorities to grant certificates of approval of livestock vessels, sea transporters' authorisations and journey approvals, identifying the most important differences in these criteria. In the research project, livestock vessels currently operating from EU ports and approved by the EU are analysed, focusing on the main characteristics of these vessels and their deficiencies that lead to impaired animal welfare. The main shortcomings in the implementation (enforcement and infringements of Council Regulation (EC) No. 1/2005) of EU animal welfare rules in sea transport are identified, including related procedures at exit ports, on livestock vessels and after arrival in third countries. The environmental impact of the trade in live animals by sea is identified.

Based on the outcomes and the lessons learnt from the research project, policy recommendations have been provided in order to improve EU animal welfare standards in sea transport, and short-term goals for the EU Commission and the Member States (MSs) to improve transport of live animals by sea have been suggested.

For purposes of this research study, only animal transport livestock vessels have been analysed, meaning vessels used or intended to be used for the carriage of domestic equidae or domestic animals of bovine, ovine, caprine species. This research project does not include the analysis of sea transport by other means of transport (such as roll-on-roll-off vessels or vessels carrying animals in moveable containers) or intra-EU livestock vessel transports.

Standard literature research has been deployed, using EU official sources, websites and publications; peer-reviewed journals and books; and EU-funded projects' technical reports. Moreover, maritime sources have been analysed (THETIS database, Marine Traffic, vessel tracker, European Maritime Safety Agency, International Maritime Organisation-Global Integrated Shipping Information System, Marine Incident Safety, Mediterranean Memorandum, Paris Memorandum, but also media and specialized sources on maritime information). Academic literature on animal welfare needs during transport has been analysed<sup>1</sup>, focusing on cattle and sheep in general, without going in detail into categories within species. European Food Safety Authority reports on animal welfare during long-distance transport have been used. Due to the scarcity of scientific research on animal welfare during sea transport from Europe, most data and studies referred to are from Australia. For data related to the EU, this study had to be largely based on grey literature of NGOs, especially for the sea leg of the journey and transport by road in third countries. Several vessel cases studies have been described to illustrate different problematic areas.

Concerning procedures of vessel approval, journey approval and port procedures, the study is based to a large extent on the Overview Report on Welfare of Animals Transported by Sea and audits performed by DG SANTE in Spain, Croatia, Slovenia and Romania, as these MSs sent almost 90% of the consignments and animals leaving EU ports in 2017. To better understand the processes in EU ports, a questionnaire has been prepared and sent to all MSs with ports approved for export of livestock, but

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<sup>1</sup> Keywords used: animal welfare, animal export, livestock vessels, sea journey, Regulation 1/2005, competent authorities, infringements, deficiencies, detentions, dead bodies/carcasses.

only one MS (Romania) replied. Due to this transparency deficit, a thorough analysis of EU exit ports' procedures has not been possible.

Good and better practices from MSs have been provided based on analysis of Standard Operating Procedures, the Network Document and DG SANTE audits. A questionnaire launched by the Portuguese Presidency in 2021 to the 27 MSs on the evaluation and revision of Regulation (EC) No 1/2005, with special focus on sea transport on livestock vessels, has been analysed. Australian official documents and legislation have been analysed in order to find best solutions and provide suggestions for improvement of EU law. Animal protection legislation in third countries to which EU animals are exported has been analysed briefly.

Difficulties in the research were encountered due to lack of databases or platforms sharing information on vessels and/or numbers of animals exported by sea. The authors' questionnaire to MSs with exit ports was aimed at closing this gap but failed as only 1 out of 7 MSs replied.

## EXECUTIVE SUMMARY

### KEY FINDINGS

- Transport of live animals by sea to third countries is an area where efficient control of Member States involved and the European Commission, and data on the welfare of animals are lacking. The system in place seems incapable of guaranteeing animal welfare stipulated by EU legislation. Its shortcomings on several levels can lead to animal suffering, unfair competition among Member States and loopholes that may be abused by operators.
- Most of the exported animals are transported in inadequate livestock vehicles: only 6% of 78 EU-approved livestock vessels were purpose-built to transport animals, majority are older than the average age of vessel scrapping, and 69% fly substandard flags (most black-listed). In the years 2019-2020, 2,504 deficiencies were found in EU-approved livestock vessels, many posing a threat to animal welfare, health and safety. Since 2017, livestock vessels worldwide have remained the No. 1 vessel category for number of detentions (as a result of serious deficiencies).
- Fitness of animals for transport by sea is not always verified. Conditions in which they are carried on vessels are usually unknown, as is information on numbers and causes of mortalities. In most cases, their welfare in third countries from unloading from the vessel until they reach their destination is not verified.
- The shortcomings need to be remedied by sourcing relevant data through feedback, monitoring, scientific research and audits; by imposing stricter requirements; by ensuring better and harmonised enforcement; by providing procedures and feasible legal tools for authorities involved. Revised and clear regulation with more provisions on sea transport is needed. Trainings and a higher level of expertise need to be organised, especially for expert teams approving livestock vessels.
- Sea transport of animals is a topic which seems neglected by scientific research, EU institutions, competent authorities and Member States, leading to the problems identified and explained herein.

This research study presents an analysis of EU export of live animals by sea from the perspective of animal welfare and procedures that affect it more or less directly, such as vessel approvals or controls at exit points. The conclusion indicates the need to improve and harmonise existing procedures.

### Livestock vessels and their deficiencies

As of the date of this research study, 78 EU-approved livestock vessels are in operation. The majority of these vessels are older than the average age of vessel scrapping, and only two are not yet at the “high risk” age according to Paris MoU risk profiling. Most (73 out of 78) had been used to transport other cargo, and at the end of their careers were converted to transport live animals. Such conversion does not take into account the needs and behaviour of animals during transport by sea (an under-researched area), or which species will be transported. Only 6% of the EU-approved vessels were originally built to transport animals, also without considering species-specific needs. Only 2 EU-approved livestock vessels fly a European flag, while 69% fly substandard flags (most black-listed, some grey-listed). Being the only vessel category that carries a living, sentient cargo, livestock vessels should be required to fly white-listed flags only and be classed by highest performing societies.

In the years 2019-2020, 2,504 deficiencies were found in EU-approved livestock vessels, many posing a threat to animal welfare, health and safety. In general, livestock vessels have remained a No. 1 category for the number of detentions (as a result of serious deficiencies) in the years 2017-2019 worldwide.

Based on deficiencies found in the last 2 years, more than half of the vessels operating in the EU pose a serious welfare risk for the animals transported.

### **Livestock vessel approval by the EU**

Despite poor performance with regard to major international standards, these vessels remain approved by the EU to transport live animals, posing a high risk for the animals, crews and maritime environment. This is caused by shortcomings of the system in place. The standards of vessel approval procedures differ considerably among Member States: they are not harmonised and not applied consistently. The responsible competent authorities frequently lack resources (time and/or personnel) to carry out a proper inspection of a vessel. They are not suitably qualified and experienced to assess the necessary technical systems of vessels, which are nevertheless critical for the welfare and health of animals. Detailed procedures should be drafted to help with inspections, and sufficient resources are necessary to guarantee proper inspection quality.

Livestock vessels are controlled by two types of inspecting bodies: Port State Control (PSC) inspectors for marine safety, and veterinary competent authorities for approval as a livestock vessel and before each loading of animals. The two services do not share a communication platform. Veterinary authorities seem not to use the vessel deficiency database, and therefore approve very substandard vessels to carry live animals. On the other hand, PSC inspectors do not directly include animal welfare in their inspections and do not know what is required to ensure it. Communication failure also exists among Member States in regard to checks performed by veterinary competent authorities, which may lead to transporters using this gap to apply for approval in ports with less strict requirements. Member States with exit ports approved for livestock should immediately notify all competent authorities of all Member States involved of any problems with vessels. PSC inspectors and veterinary authorities should cooperate to avoid approval of substandard vessels. Preloading inspections of vessels in EU ports for the approval of a journey are likewise deficient, with similar problems and similar solutions needed.

### **Deficient checks**

The quality of documentary checks before journeys is frequently insufficient, missing important elements, such as identification of a transporter for the sea part of the journey (to be held responsible for any shortcomings), or taking into account weather along the whole route until the final destination in the third country. As a result, many competent authorities, both at the place of departure and in port, approve the transport with incomplete or incorrect documentation, putting animal welfare at risk, for example due to heat stress. After arrival of animals in EU ports, their fitness for further transport is not always verified. Animals are routinely not unloaded into stables before loading onto the vessel. Their inspection is only possible during reloading from truck to vessel, in gangways and on ramps, with many animals moving at the same time, making a proper check for any unfit individuals difficult.

Vessel deficiencies, incorrectly organised journeys, deficient checks of fitness of animals for further transport, and defective documentation are further aggravated by the fact that neither the competent authorities at the place of departure, nor those at the EU exit port detect and report these administrative deficiencies. As a result, they remain uncorrected. Lack of feasible contingency plans also has the potential to negatively affect animal welfare when unexpected situations arise. Journey-specific contingency plans are not always required from organisers and transporters. Contingency plans for all stages of the transport should be required, designed, and used as a practical, feasible tool to prevent animal suffering. The welfare of exported animals remains largely unknown during the sea

part of the journey and during transport in the third country to the final destination. On board vessels and in third countries there are no EU representatives to ensure animal welfare according to EU law until the animal reaches its destination. This fact itself should prevent competent authorities from approving exports of live animals until a system is in place to guarantee compliance with EU regulations. Moreover, protection of animals at sea is needed on a level similar to protection of animals transported by road, where extensive control has been mandated. On livestock vessels, there is no control of conditions in which animals are transported. Veterinary care on vessels is lacking despite the long duration of these journeys. Member States do not routinely ask for feedback information regarding injuries, diseases, and mortalities during sea transport and immediately after it.

### **Law enforcement problems**

Competent authorities from Member States involved in exporting live animals by sea confirm that difficulties in enforcing Regulation No. 1/2005 exist, and that there are doubts regarding how to enforce parts of it. They identified several enforcement challenges, extreme temperatures, and lack of communication between Member States and third countries being most important ones. Moreover, crew training and competence, the organiser's obligations, the sea transporter's obligations and the definition/identification of the transporter and organiser, were identified by them as the most difficult points to enforce in relation to transport by livestock vessel.

### **Public health and environmental concerns**

Long-distance transport of live animals inherently poses serious risks for animal and public health due to possible spread of diseases. Moreover, lack of data and control of procedures applied on board livestock vessels leads to questions about illegal disposal of carcasses and uncontrolled disposal of manure of growing numbers of animals transported over marine protected zones: the Mediterranean and Black Seas.

**The shortcomings need to be remedied by sourcing relevant data through feedback, monitoring, scientific research and audits; by imposing stricter requirements; by ensuring better and harmonised enforcement; by providing more clear procedures and feasible legal tools for authorities involved.**



# 1. LIVESTOCK VESSELS OPERATING FROM EU PORTS

## KEY FINDINGS

- Livestock vessels exporting animals to third countries approved by European Member States operate despite several concerns and risks related to welfare of animals, safety for crews and the environment. They are the only vessel category that carries a living, sentient cargo, yet the number of deficiencies found by Port State Control inspections is so high that livestock vessels worldwide remained the No. 1 category for the number of detentions in the years 2017-2019. EU-approved livestock vessels regularly have deficiencies identified, some of them resulting in detentions and even temporary bans from the Paris Memorandum of Understanding (Paris MoU) ports. Many deficiencies pose a threat to animal welfare, health and safety.
- The age of the fleet (average of 41 years), registration under substandard, black-listed flags and classification by high-risk classification societies explain why most EU-approved livestock vessels are categorised in the high-risk profile according to Paris MoU calculations.
- This situation is aggravated by the fact that most livestock vessels have been converted from other purposes (e.g., car carriers). Some refitting is illegal and missed by inspecting bodies, resulting in more welfare concerns, some of them leading to catastrophes, killing the animals transported and the crew.

## 1.1. Background

The EU exports large numbers of livestock by sea, mainly to the Middle East and North Africa. The demand for live animals in third countries has been growing in recent years, including breeding animals, animals for fattening and for immediate slaughter.

According to DG SANTE, 2,868,570 sheep and cattle were exported by sea from Croatia, France, Ireland, Portugal, Romania, Slovenia and Spain in 2018. A total of 658 vessels departed from EU ports in 2018 [1] (See Table 1). Data for 2019 and 2020 could not be provided in this research project, as only one out of seven MSs with exit ports replied the authors' questionnaire (Romania). Romania and Spain are the main exit points of EU animals exported to third countries by sea. According to DG SANTE, in 2018 Romania sent 56% and Spain 28% of EU sheep/goats to third countries. In the same year Spain sent 28% and Croatia 21% of EU cattle to third countries [1]. The main importing countries in 2018 were Lebanon, Jordan, Israel, Libya (see Table 2 and Table 3). Later, trade with Saudi Arabia and Turkey started. Due to lack of data provided by most MSs involved in the trade, the authors could not make an analysis of Eurostat data from CAs for years 2019 and 2020, therefore countries such as Saudi Arabia (currently an important importer) are not analysed in this report.

Data from Eurostat and from DG SANTE audits are not easily comparable (see Table 4) (Figure 1) (Figure 2). Eurostat only provides general export numbers, without distinguishing sea exports from ones by road. Moreover, DG SANTE audit reports were based on official replies provided by CAs at exit ports, while data from Eurostat come from the TRACES<sup>2</sup>. According to DG SANTE, consignments and animals are not always entered in TRACES [1], and this underreporting could also explain the lack of match of data from these two sources. Lack of public and precise data could indicate an inadequate control and insufficient traceability of animals exported to third countries.

<sup>2</sup> TRACES [TRACES | Food Safety \(europa.eu\)](https://traces.eurostat.eu)

Please note that export of EU animals to third countries (4,504,992 ovines, pigs and bovines in 2019) is only a fraction of the number of animals transported within the EU (44,657,715 ovines, bovines, and pigs moved between MSs)<sup>3</sup> [2]. In this research study, only animals transported on livestock vessels have been analysed, that is only vessels approved for the carriage of domestic equidae or domestic animals of bovine, ovine, caprine species. This research project does not include the analysis of sea transport by other means of transport, such as roll-on-roll-off vessels, or vessels carrying animals in moveable containers. Therefore, data on animals exported to third countries with such transport methods have not been included here, nor the intra EU transports by sea (for example roll-on-roll-off vessel transports between Ireland and UK with the EU, or transport in moveable containers between the Azores to Portugal).

Most livestock vessels used in the EU have pens for animals in their lower decks which protects animals from weather but requires proper mechanical ventilation. To operate in the EU, livestock vessels need a certificate of approval granted by a Member State's (MS) competent authority (CA) or a body designated by that MS. The approval is valid for a maximum of five years; it should become invalid as soon as the vessel is modified or refitted in a way that affects animal welfare. The CA is also required to inspect livestock vessels before any loading of animals [1].

This chapter analyses 78 EU-approved livestock vessels currently (February 2021) operating from European ports to third countries, with certificates of approval granted by CAs from the following ports: Tarragona and Cartagena (Spain); Sète (France); Setúbal and Sines (Portugal); Raša (Croatia); Greenore, Waterford, Cork and Foynes (Ireland); Midia and Braila (Romania); and Koper (Slovenia). The capacity of EU-approved livestock vessels varies, the biggest ones able to transport approximately 18,000 cattle or 75,000 sheep [1]. The duration of journeys<sup>4</sup> is also highly variable and can extend to several weeks. Age of the vessel, type of engine and weather conditions influence journey duration.

## 1.2. EU-approved livestock vessels

### Age and conversion to a livestock vessel

The average age of EU-approved livestock vessels is 41 years (7 to 57). 16 (21%) of these vessels are 50 years old or older. In 2019, the average age of world fleet vessels scrapped worldwide because of the increasing risks of mechanical and structural failure was 30 years. Vessels that are converted and EU-approved as livestock vessels are on average 29 years old at the time of conversion [3]. A vessel age of 12 years or more is considered a high risk in Paris MoU risk profiling<sup>5</sup>.

Livestock vessels are usually converted from general cargo vessels [3]. Of 78 EU-approved livestock vessels, only 5 (6%) were built for that purpose: *Bahijah*, *Brahman Express*, *Gelbray Express*, *Ocean Drover* and *Ocean Swagman*. The remaining 73 (94%) have been converted, which means their design does not take into account the welfare, needs and safety of animals (see Table 5) (see Figure 5 and Figure 6). Reworks to maximize the number of animals transported are sometimes done without the approval of a classification society (see Case study 6. *Queen Hind*). Conversions of vessels require relevant structural changes which can lead to disastrous accidents, such as the example of *Al Salam Boccaccio* which caused the loss of 1,031 persons, including some crew members [3].<sup>6</sup>

<sup>3</sup> For more general data about EU animal movements (INTRA-EU and EXTRA-EU), please see: [2020\\_01\\_27\\_efa\\_transport\\_white\\_paper\\_0.pdf \(eurogroupforanimals.org\)](#) pages 8-9; 16-17 and 75-77.

<sup>4</sup> Journey is "the entire transport operation from the place of departure to the place of destination, including any unloading, accommodation and loading occurring at intermediate points in the journey" (Reg. 1/2005).

<sup>5</sup> <https://www.parismou.org/>

<sup>6</sup> [https://safety4sea.com/wp-content/uploads/2019/11/Panama-Maritime-Authority-Preliminary-investigation-report-on-the-sinking-of-Al-Salam-Boccaccio-98-2006\\_08.pdf](https://safety4sea.com/wp-content/uploads/2019/11/Panama-Maritime-Authority-Preliminary-investigation-report-on-the-sinking-of-Al-Salam-Boccaccio-98-2006_08.pdf)



## Flags

The flag state of a commercial vessel is the state under whose laws the vessel is registered or licensed. The flag state has the authority and responsibility to enforce regulations on vessels registered under its flag, including those relating to inspection, certification, and issuance of safety and pollution prevention documents [4].

Under the Paris MoU, the EU is engaged in identifying substandard flags. Yet, out of 78 EU-approved livestock vessels, only 31% (24) are flagged under the “whitelist” of the Paris MoU, representing so-called quality flags<sup>7</sup>. This means that the majority of vessels operating in the EU (55%) are listed under substandard, blacklisted flags: Togo and Comoros ranked as high risk (22 vessels), and Palau, Tanzania and Sierra Leone ranked as medium to high risk (21 vessels). Furthermore, 12% (9 vessels) under Lebanese flag are ranked as grey-list and 2% (2 vessels) of the vessels are not even ranked by the Paris MoU. The flags of the Comoros, Moldova, Tanzania, and Togo have recorded the highest number of bans among vessels worldwide. Only 2% (2 vessels) have a European flag (Luxembourg) [3].

Moreover, EU-approved livestock vessels are often registered under a flag of convenience (FOC), a business practice whereby a vessel is registered in a country other than that of the vessels' owners.<sup>8</sup> This is done to reduce operating costs or circumvent the regulations of the owner's country. FOC registries are criticized for allowing vessel owners to be legally anonymous and difficult to prosecute in civil and criminal actions. Some FOC vessels have been found to be connected with crime, substandard working conditions and negative impact on the environment [5] (see Table 6).

## Classification societies

Only 23 (29%) of EU-approved livestock vessels have been classed by elite classification societies - members of the International Association of Classification Societies (IACS) and ranked as high-performing by Paris MoU standards (except the medium-performing Croatian Register). The remaining 53 EU-approved livestock vessels have been classed by a non-IACS society ranked as medium-performing (42 vessels) to low or very low (11 vessels) according to the Paris MoU. 2 vessels are classed by a society not ranked by the Paris MoU [3]. Some medium-performing classification societies have issued certificates for substandard vessels that were banned, multi-detained or abandoned [6]. Some classification societies established in the EU certify vessels on behalf of black-listed countries, contributing to the trading on substandard vessels which have been temporarily or permanently banned from the EU, or detained on several occasions in Paris and Black Sea MoU signatory states. According to EU DG MOVE<sup>9</sup>, it is up to EU MSs to stipulate any legal requirements for the establishment and operation of classification societies on their territory, if such societies provide services only to vessels flagged under a third country flag [3] (see Table 6).

## Livestock vessel owners

67 (86%) EU-approved livestock vessels are officially owned by a shell company, usually registered in a tax haven such as Panama, the Marshall Islands, Liberia, or the Seychelles. They are also single-vessel companies, a trick used by shipowners to prevent the possible seizure of another vessel in case of a fine or commercial dispute. Real owners (referred to as managers) are established in Lebanon, Turkey, Jordan, Libya, the United Arab Emirates, Honduras, Australia and some EU MSs<sup>10</sup>. 65% of EU-approved livestock vessels are owned by companies operating from Lebanon (29), Romania (8), Turkey (7) and

<sup>7</sup> Panama, Singapore, Luxembourg, Liberia and Marshall Islands.

<sup>8</sup> Wikipedia. Bernaert, 2006, p. 104. [https://en.wikipedia.org/wiki/Flag\\_of\\_convenience](https://en.wikipedia.org/wiki/Flag_of_convenience)

<sup>9</sup> The Directorate-General for Mobility and Transport is responsible for EU policy on mobility and transport.

<sup>10</sup> Romania, Denmark, Greece, Croatia, Germany, Netherlands.

the United Arab Emirates (7) [3] (see Table 6). Most are small shipping companies operating only a few vessels or even only one. Their limited financial resources cannot ensure proper maintenance of vessels or proper working and living conditions for the crews. Only 3 companies<sup>11</sup> own or operate a fleet of ten vessels or more. Out of 78 EU-approved livestock vessels, only 21 (27 %) belong to shipowners based in the EU. Only 2 fly the flag of an EU MS: Luxembourg. 11 fly the blacklisted flags of Tanzania, Sierra Leone, the Comoros, Togo and Palau. The owners of these 11 vessels are established in the EU [3], but for financial reasons they register their vessels in non-EU countries, which allows them to circumvent European standards as regards wages and social protection for crews.

### 1.3. Deficiencies, detentions and bans of livestock vessels

Livestock vessels are subject to two types of inspections: inspections required for all vessels, performed by Port State Control (PSC) authorities, and inspections aimed specifically at livestock vessels, performed by veterinary authorities (or designated bodies) for certification and every time before an animal consignment is loaded. This chapter covers PSC inspections. For veterinary inspections (see chapter 2.3.2 and see chapter 2.4.2).

THETIS<sup>12</sup>, an information system hosted by the European Maritime Safety Agency (EMSA), informs national PSC authorities which vessels are due for an inspection, providing data that include reports of previous inspections within the Paris MoU region. PSC inspections are based on the IMO and ILO Conventions<sup>13</sup>. A PSC inspection includes both examination of documents under the Paris MOU and a general inspection of several areas on board to verify whether the overall condition of the vessel complies with that required by the Conventions. In case of deficiencies, the Port State Control Officer (PSCO) will issue a report indicating follow-up actions to be taken, and the inspection results will be recorded in the database. If the initial inspection shows that the condition of the vessel, its equipment, or its crew does not meet requirements, a more detailed inspection or even an expanded inspection will be performed [4]. Please note that the age of 12 years or more automatically qualifies a vessel for an expanded inspection [4], meaning that 97% (76) of the EU-approved vessels fall into this category [3] (see Table 5).

#### 1.3.1. Deficiencies on EU-approved livestock vessels

Deficiencies (e.g. in Certificates and Documentation, Safety of Navigation or Working-Labour-Living Conditions)<sup>14</sup> identified during an inspection are included by the PSC inspector in the inspection report, specifying when the deficiency should be rectified. Depending on the deficiencies, some vessels are eligible for re-inspection after 3 months [4].

In the years 2019-2020<sup>15</sup> alone, 2,504 deficiencies were reported for EU-approved livestock vessels<sup>16</sup> [3]. Despite poor performance according to major international standards, these vessels remain approved by the EU to transport live animals, posing a high risk for crews, EU animals and the maritime environment. Some deficiencies have a direct impact on the welfare of animals on board: 55% of

<sup>11</sup> Livestock Express BV, Unifleet Management Co SA and Coral Technical Services.

<sup>12</sup> THETIS: a new information system, which will support the New Inspection Regime for Port State Control. [THETIS - THETIS Community \(europa.eu\)](https://thetis-emsa.europa.eu)

<sup>13</sup> IMO Conventions cover responsibility for the safety and security of Shipping and the prevention of marine pollution by vessels. ILO Conventions cover a wide area of social and labour issues including basic human rights, minimum wages, industrial relations, employment policy, social dialogue, social security, etc.

<sup>14</sup> Paris MoU – Overview list of Deficiency Codes. [Members of DBM FORUM Mailing list as at 7 November 2000](#)

<sup>15</sup> Or in the last 2 years of the vessel's life.

<sup>16</sup> 2/3 of vessels had deficiencies in 7 main categories: Certificates and documentation (91% vessels); Safety of navigation (90%); Fire safety (85%); Maritime Labour Convention-2006 (78%); Lifesaving appliances (78%); Working-living conditions (68%); Pollution prevention (64%). More than half had deficiencies in 6 other categories.

vessels operating in the EU have structural conditions deficiencies (risk of injuries due to rusty or broken parts, fractures if deck flooring is deficient, potential drowning if the vessel sinks) and 59% - propulsion and auxiliary machinery deficiencies (risk of the vessel being stranded related to potential shortage of feed, lack of drinking water, ventilation system failure, etc.). Based on deficiencies found in only the last 2 years, more than half of the vessels operating in the EU pose a huge welfare risk for the animals transported. Fire Safety deficiencies were found in 85% of EU-approved livestock vessels, which can have dramatic consequences for animals, especially those in pens close to the engine room, with the upper deck loaded with hay [3] (see Table 7) (see Case study 7. *Queen Hind*).

Please note that PSC inspections do not cover areas such as shortage of feed and water, ramps for the animals, etc. Therefore, many deficiencies with a direct impact on the animals can only be identified by veterinary CAs in exit ports when issuing a certificate of approval (under Art. 19 of Reg. 1/2005) or during the inspection before each loading (under Art. 20 of Reg. 1/2005). Based on deficiencies found in the last 2 years, more than half of the vessels operating in the EU pose a serious welfare risk for the animals transported [7].

### 1.3.2. Detentions and bans of EU-approved livestock vessels

When deficiencies are found, the PSCO determines whether to detain the vessel until the deficiencies are rectified or to allow it to sail with certain deficiencies that do not present an unreasonable risk to the safety, health or the environment, having regard to the particular circumstances of the intended journey<sup>17</sup> [4]. Worldwide, livestock vessels have remained a No. 1 category for the number of detentions in the years 2017, 2018 and 2019 [7] (see Figure 5 and Figure 4). The 78 EU-approved livestock vessels have had 411 known detentions in their lifetime, including before conversion. Only 5 (6%) have never been detained<sup>18</sup>: *Bahijah*, *Brahman Express*, *Elevation*, *Ocean Swagman* and *Queensland*. 53 (68%) EU-approved livestock vessels have been detained 3 or more times in ports worldwide. 9 vessels (12%) have been detained more than 10 times: *Abdullah*, *Anakin*, *Barhom III*, *Etab*, *Janay*, *Jersey*, *Mariona Star*, *Seastar Livestock*, and *Uranus II* [3] (see Table 8).

Only in the last 2 years<sup>19</sup>, 21 EU-approved livestock vessels were detained (totalling 26 detentions): *Al Mabrouka 10*<sup>20</sup>, *Alkhairat 9*<sup>21</sup> (twice), *Atlantic M*, *Bruna*, *Elbeik*, *Etab* (three times), *Gulf Livestock 2*, *Holstein Express*, *Janay*, *Karazi*, *Maysa*, *Mira*, *Phoenix I*<sup>22</sup>, *Queen Hind*<sup>23</sup>, *Sarah M*, *Spiridon II*, *Suha Queen II* (twice), *Trust 1*<sup>24</sup>, *Uranus II* (twice), *Uranus L*, *Zad Elkhir*<sup>25</sup> [3].

Even though most livestock vessels operating in the EU have been detained at least once in recent years, the competent veterinary port authorities issue journey approvals and allow loading of animals onto these vessels. This can lead to catastrophic consequences, as was the case of *Queen Hind* with almost 14,600 sheep drowned<sup>26</sup> (see Figure 16). This vessel was converted only 2 years before the

<sup>17</sup> When a PSCO considers a detention, he/she will apply the following criteria: 1) vessels, which are unsafe to proceed to sea, will be detained upon the first inspection irrespective of the time the ship will stay in port; 2) The vessel will be detained if the deficiencies on a ship are sufficiently serious to merit a PSCO returning to the ship to be satisfied that they have been rectified before the ship sails. More detailed information on detentions and actions taken by the port State can be found here: [Information on detention and action taken](#) | Paris MoU

<sup>18</sup> Nevertheless, in 2019-2020, these non-detained vessels had a total of 32 deficiencies.

<sup>19</sup> In the past 2 years 2019-2020 or in the last 2 years of their trading life for ships that have been scrapped or declared a total loss or in the latest 2 years with reported inspections.

<sup>20</sup> Latest inspection in 2017.

<sup>21</sup> Latest inspection in 2018.

<sup>22</sup> Scrapped in 2020.

<sup>23</sup> Total loss in 2019.

<sup>24</sup> Latest inspection in 2018.

<sup>25</sup> Scrapped in 2020.

<sup>26</sup> <https://animalsaustralia-media.org/uploads/queen-hind/>

accident (in 2017) and since 2015 flew a Palau flag (blacklisted, medium to high risk) with 3 detentions in the past related to deficiencies in safety of navigation and ISM and emergency systems. Despite this history, *Queen Hind* was authorized by Romania in March 2019 and made 11 journeys to the Middle East before capsizing [3] (see Case study *Queen Hind* 2; 6; 7; 12).

A vessel can be refused access to ports in the Paris MoU region (banning of the vessel)<sup>27</sup> for three reasons: when a vessel has been detained 3 times within a period of 36 months (when flying a blacklisted flag) or when a vessel has been detained 3 times within a period of 24 months (when flying a grey list flag); when a vessel jumps a detention, when a vessel does not call at the agreed repair yard following a detention [4]. In recent years (2011-2020), 9 EU-approved livestock vessels have been banned for up to 1 year<sup>28</sup> from Paris MoU ports for multiple detentions: *Blue Moon*, *Elbeik*, *Jersey*, *Julia L.S.*, *Nader-A*, *Suha Queen*, *Talia*; *Uranus II* and *Etab* [3] (see Table 9) (see Case study 1. *Etab*).

## 1.4. Vessel risk profile and accidents with livestock vessels

### Ship Risk Profile of EU-approved livestock vessels

To select vessels for inspections, the Paris MoU uses a risk-based system called Ship Risk Profile (SRP). It is based on type of vessel, age, and performance of the flag, classification society and the International Safety Management (ISM)<sup>29</sup> [4]. Age over 12 years, medium to very high-risk/black-listed flags, low or very low performing classification society, low or very low performing ISM manager are considered to be significant risk factors. On 10 February 2021, an analysis of the Paris MoU vessel risk profile performed by an EU NGO concluded that 17 (22%) of EU-approved livestock vessels should be considered as high-risk vessels: *Abdullah*, *Anakin*, *Apus*, *Barhom*, *Barhom II*, *Bruna*, *Etab*, *Harmony Livestock*, *Lady Maria*, *Lady Rasha*, *Mariona Star*, *Pacific M*, *Sea Star Livestock*, *Suha Queen II*, *Taiba*, *Trust I*, and *Unimar Livestock* [6]. All these vessels have been classed by a medium, low, or very low performing classification society, fly a black-listed flag, were built over 40 years ago, and have been converted from their original purpose. Some flags such as Jordan, or classification societies such as Conarina, evade the Paris MoU ratings due to insufficient number of inspections. Therefore, livestock vessels like *Dragon* do not have a risk profile [3]. Among ranked EU-approved livestock vessels, 43 (55 %) had ISM company deficiencies<sup>30</sup> in 2019-2020, and the ISM manager of 33 (42 %) was ranked as low or very low performing at report publication date [3]. Again, most other ISM managers cannot be ranked due to lack of data.

### Accidents with EU-approved livestock vessels

28 (36%) of EU-approved vessels have suffered major incidents, failures, or loss. The incidents include engine failure with or without livestock on board, fire, collision, oil spill during bunkering, stability problems, and deaths of animals during a voyage. This seems to correlate with propulsion and auxiliary machinery deficiencies reported by PSC inspections in 46 (59%) EU-approved livestock vessels. It must be borne in mind that with livestock vessels any failure and/or delay of a journey jeopardises the welfare, health and lives of the animals transported. Engine problems can result in lack of ventilation or water supply, and any delay may result in lack of feed. Livestock vessels are also more subject to corrosion because of acidity of litter soiled by animal manure [3]. Fire on board happens frequently, which seems to correlate with the fact that in 2019-2020, 85% of EU-approved livestock vessels had Fire Safety deficiencies identified during PSC inspections (see Table 7) (see Case study 2. *Accidents: Express 1; Girolando Express; Nabolsi 1; Ocean Drover; F.M.Spiridon; Mariona; Bahijah; Britta K; Queen Hind*)

<sup>27</sup> Under section 4 of Paris MoU, Art. 16 of EU Council Directive 2009/16/EC, the ship will be refused further access to any port and anchorage in the Paris MOU region, except the port and anchorage of the ship's flag State.

<sup>28</sup> Two of them were banned for 12 months, seven for 3 months.

<sup>29</sup> ISM: Code provides an international standard for the safe management and operation of ships at sea.

<sup>30</sup> The Company Performance Calculator evaluates the performance of ISM companies referred in the MoU: <https://www.parismou.org/inspections-risk/ship-risk-profile/company-performance-calculator>

## 2. LIVESTOCK VESSEL APPROVAL AND JOURNEY AUTHORISATION

### KEY FINDINGS

- Existing law governing the transport of live animals by sea is insufficiently detailed, unclear and poorly enforced. It is supplemented by recommendations that are not legally binding, incorporated in national law by some Member States only, which leads to unfair competition. In most Member States, procedures for competent authorities are lacking or too general.
- Standards for vessel approval are uneven among Member States, there is a lack of a shared EU database of vessel deficiencies and of publicly accessible information on vessels. Communication between competent authorities is insufficient. Competent authorities in ports lack technical expertise to verify all systems on vessels and approve vessels that cannot guarantee animal welfare. Crew competence is usually not verified.
- Sea journey authorisation in the EU is also characterised by uneven quality of checks. Veterinary authorities in ports lack resources for thorough checks. Facilities for animals in ports are insufficient. In places of departure, journeys are approved without taking into account weather, while EU animals are exported to countries with climate extremely different from that of the EU. Feasibility of contingency plans of the transporter and the organiser is frequently not verified. Contingency plans at ports do not cover emergencies sufficiently. At sea and in third countries there is no control over animal welfare. Exports are approved even to countries in a state of civil war.

### 2.1. Legal context

Export of live animals from the EU by sea is governed by Reg. 1/2005<sup>31</sup> and Reg. 2017/625<sup>32</sup> on Official controls (hereafter: OCR).

In ports, checks at the exit point are performed under Art. 21 of Reg. 1/2005. CAs verify validity of the transporter's authorization (for both the journey by sea and by road), fitness of animals to continue the journey and whether the journey exceeds 8 hours ([see chapter 3](#)). For such journeys, the provisions of Art. 14 and Annex I, Chapter VI of Reg. 1/2005 apply.

Livestock vessels, being a means of transport, must always comply with point 1, Chapter II, Annex I of Reg. 1/2005 (basic requirements: safety, adequate flooring, loading ramps, partitions, prevention of escape; protection from extreme temperatures, precipitation, wind; access to animals for care; headroom allowing to keep natural position and adequate circulation of air; disinfection; proper quality of air). For journeys of more than 10 nautical miles, additional requirements are verified by CAs before the vessel's certificate of approval is issued: a documentary check under Art. 3; 5; 19; Annex I Chapter II, III and IV of Reg. 1/2005, and a vessel inspection under Art. 3; 5; 19; Annex I Chapter I Point 4, Chapter II, III and IV of Reg. 1/2005.

Each journey must be approved before loading. The CA performs documentary checks in advance of arrival of the livestock vessel under Art. 3; 5(3); 5(4); 14(1)(a),(b),(d); Annex I, Chapters I (Point 4), II and IV of Reg. 1/2005 and a pre-loading inspection under Art.20(1) to determine if the vessel is properly

<sup>31</sup> Council Regulation (EC) No. 1/2005 <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32005R0001>

<sup>32</sup> Regulation (EC) 2017/625 on Official controls: <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32017R0625>



authorized, check maintenance of animal compartments, quality and quantity of food and water arrangements for the animals transported. After satisfactory results of preloading inspection and confirmation of fitness of animals to continue the journey, the CA allows the loading of animals under Art. 20(2) of Reg. 1/2005. Under recital 40 of OCR, exporting MSs have prepared written procedures for effectiveness and consistency of official controls called Standard Operating Procedures (hereafter: SOPs).

## 2.2. Recommendations/Guidelines

Besides legislation, recommendations, and guidelines on the transport of animals by sea have been published. They present more details and suggest good, better and best practices to be followed. Legally they are not binding, however, and only some MSs follow them. This leads to unfair competition within the EU due to an unequal level of national requirements ([see chapter 2.3 and 2.4](#)).

### 2.2.1. The Network Document and OIE guidelines

For approval and inspection of vessels, a Network Document on Livestock Vessels<sup>33</sup> (hereafter: Network Document) was drafted in 2014 by the MSs' National Contact Points. It was based on the Irish Regulation and updated in 2019 based on Portugal's experience in integrating this document<sup>34</sup>. It outlines tasks for the authorities to authorise a transporter for the sea journey; approve a vessel; approve journey planning; and inspect the vessel before and during loading. Its final section describes requirements for communication between officials who carry out these controls. The Network Document provides "good practice"<sup>35</sup> and "better practice"<sup>36</sup> recommendations for enforcement of Reg. 1/2005. Templates for approvals, certificates and reports are provided in its Annexes.

World Organisation for Animal Health (OIE) welfare Guidelines<sup>37</sup> for transport of animals by sea (hereafter: OIE Guidelines) were intended as minimum standards for developing countries. However, compared to Reg. 1/2005, the Irish Regulation and the Network Document, only OIE Guidelines contain detailed requirements on: needs and behaviour of animals; responsibilities; competence; journey planning and vessel construction; documentation; pre-journey period including fitness for travel; loading procedures including handling and facilities; travel part including treatment of sick or injured animals and documentation thereof; unloading and post-journey handling; what to do in the event of refusal to allow the importation of a shipment and species-specific issues [8].

In the Animal Transport Guides Project<sup>38</sup>, DG SANTE developed Guides to Good and Better Practice for road transport of farm animals. No guidelines for transport by sea were drafted.

### 2.2.2. Recommendations from DG SANTE audits

In 2018 and 2019, four audits of animal welfare during sea transport were carried out in Romania, Slovenia, Croatia, and Spain<sup>39</sup> by DG SANTE<sup>40</sup>. The audits also pointed out the need to guarantee

<sup>33</sup> Network Document on Livestock Vessels. Guidance prepared by MS NCPs and supported by DG(SANTE).

<sup>34</sup> [https://ec.europa.eu/food/sites/food/files/animals/docs/aw\\_platform\\_res-lib\\_npc-activities.pdf](https://ec.europa.eu/food/sites/food/files/animals/docs/aw_platform_res-lib_npc-activities.pdf)

<sup>35</sup> In this research study 'good practice' is used when a practice is introduced to enforce the current EU law.

<sup>36</sup> In this research study 'better practice' is used when a practice goes beyond the minimum standard required by EU law.

<sup>37</sup> OIE, Terrestrial Animal Health Code, Chapter 7.2., Transport of Animals by Sea.

[https://www.oie.int/fileadmin/Home/eng/Health\\_standards/tahc/current/chapitre\\_aw\\_sea\\_transpt.pdf](https://www.oie.int/fileadmin/Home/eng/Health_standards/tahc/current/chapitre_aw_sea_transpt.pdf)

<sup>38</sup> <http://www.animaltransportguides.eu/>

<sup>39</sup> These countries sent approximately 87% of the consignments and 89% of the animals from EU ports in 2017.

<sup>40</sup> DG(SANTE) 2019-6449, DG(SANTE)2018-6447, DG(SANTE)2018-6446, DG(SANTE) 2019-6898.

suitable qualifications for staff approving and authorising livestock vessels. All recommendations<sup>41</sup> should have been implemented by now.

The EU Commission has also contacted EMSA to involve it in supporting MSs' inspections of livestock vessels with the aim of harmonising inspection procedures, increasing transparency of the outcome of inspections, and improving vessel standards [1].

### 2.2.3. Standard Operating Procedures in MSs

Some MSs that are exit points for sea transport of live animals have Standard Operating Procedures SOPs related thereto. Only the procedures of Ireland<sup>42</sup> and Portugal<sup>43</sup> are sufficiently thorough to be an example of best practices. SOPs of other MSs are too general, their authorities lack procedures to enforce Reg. 1/2005<sup>44</sup> and OCR<sup>45</sup>, and the insufficient procedures pose a serious risk to animal welfare during sea transport. Only some MSs (such as Spain<sup>46</sup> or Romania<sup>47</sup>) have the SOPs publicly available, but only in their national languages.

Ireland has detailed legislation<sup>48</sup> for vessel approval and inspection and detailed SOPs to minimise risk to animal welfare during sea transport. It holds the master of the vessel legally responsible for all procedures involved in the planning and sea transport of the animals. Irish Regulations exceed by far the requirements of Reg. 1/2005.

## 2.3. Livestock Vessel Certificate of Approval

To operate in the EU, livestock vessels need a certificate of approval granted by a MS [1]. 78 livestock vessels have been approved by: Croatia (3 vessels); France (11); Portugal (10); Romania (47); Slovenia (1); Spain (6); Ireland (5). Five vessels have double certificate approvals (as a result of stricter requirements of Ireland) (see Table 6). 60% of vessels operating in the EU have been approved by Romania [1].

There is no public list of EU-approved vessels. Each MS compiles its own list, and authorities rely on certificates presented by organisers [1]. Only Romania<sup>49</sup> and Slovenia<sup>50</sup> have a public list of vessels certified by them, but only in their national languages. This is against recommendations of the Network Document: *"The competent authority shall record the certifications of the approval of livestock vessels in an electronic database, in a manner enabling them to be rapidly identified, in particular in the event of failure to comply with the requirements of this Regulation"*. It is particularly important that CAs record the details of livestock vessels which have failed to gain approval in the electronic register of livestock vessels available to all MSs and list the reasons for refusal in the comments section [9]. MSs do not have access to the inspection results from authorities in other countries [1].

<sup>41</sup> Romania: [https://ec.europa.eu/food/audits-analysis/audit\\_reports/details.cfm?rep\\_id=4275](https://ec.europa.eu/food/audits-analysis/audit_reports/details.cfm?rep_id=4275)

Croatia: [https://ec.europa.eu/food/audits-analysis/audit\\_reports/details.cfm?rep\\_id=4100](https://ec.europa.eu/food/audits-analysis/audit_reports/details.cfm?rep_id=4100)

Slovenia: [https://ec.europa.eu/food/audits-analysis/audit\\_reports/details.cfm?rep\\_id=4075](https://ec.europa.eu/food/audits-analysis/audit_reports/details.cfm?rep_id=4075)

Spain: [https://ec.europa.eu/food/audits-analysis/audit\\_reports/details.cfm?rep\\_id=4121](https://ec.europa.eu/food/audits-analysis/audit_reports/details.cfm?rep_id=4121)

<sup>42</sup> Irish SOPs for DAFM staff on the approval and operation of dedicated livestock vessels, Dublin 2017.

<sup>43</sup> Requisitos transporte navios gado, DGVA 2020.

<sup>44</sup> Council Regulation (EC) No 1/2005, <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32017R0625>

<sup>45</sup> Regulation (EC) 2017/625: <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32017R0625>

<sup>46</sup> Documento (mapa.gob.es)

<sup>47</sup> [http://www.ansvsa.ro/download/ghiduri\\_-\\_toate/ghid\\_bunastare\\_animale/Transport-Ghid-Regulamentul-1\\_2005-privind-protectia-animalelor-in-timpul-transportului.pdf](http://www.ansvsa.ro/download/ghiduri_-_toate/ghid_bunastare_animale/Transport-Ghid-Regulamentul-1_2005-privind-protectia-animalelor-in-timpul-transportului.pdf); [http://www.ansvsa.ro/download/ghiduri\\_-\\_toate/ghid\\_bunastare\\_animale/Transport-Ghid-privind-protectia-si-bunastarea-animalelor-in-timpul-transportului.pdf](http://www.ansvsa.ro/download/ghiduri_-_toate/ghid_bunastare_animale/Transport-Ghid-privind-protectia-si-bunastarea-animalelor-in-timpul-transportului.pdf)

<sup>48</sup> S.I. No. 356/2016 - Carriage of Livestock by Sea Regulations, 2016.

<sup>49</sup> Romanian National Sanitary Veterinary and Food Safety Authority <https://domino.iqm.ro/ansv/ansvsa.nsf/MTN>

<sup>50</sup> Slovenian Ministry of Agriculture, Forestry and Food <https://www.gov.si teme/prevoz-zivali/>

The price of vessel approval differs substantially among MSs, ranging from zero (France<sup>51</sup> and Slovenia<sup>52</sup>) to €10,000 (Ireland)<sup>53</sup>. The approval is valid for a maximum of five years and is considered invalid as soon as the means of transport is modified in a way that affects the welfare of the animals [1]. The standards of vessel approval procedures differ considerably among MSs: they are not harmonised and not applied consistently. This could lead to variable enforcement of Reg. 1/2005 and therefore variable impact on the welfare of the animals transported in such vessels.

**Better practice. Ireland:** Irish procedures are such that it is in the operators' interest to present the vessel in good condition, as problems and delays increase the price of inspection<sup>54</sup>. **Better practice. Australia:** the Australian Certificate for the Carriage of Livestock (ACCL) required for a livestock vessel must be renewed every 12 months.<sup>55</sup>

### 2.3.1. Documentary checks prior to approval inspection

The Network Document describes requirements for livestock vessel approval in much more detail than Reg. 1/2005. It recommends that before issuing a certificate of approval for a vessel, the CA should verify that the applicant is an authorised transporter ([see chapter 2.4.1](#)) and should request from them:

- The applicant and livestock vessel details (including conversion date to livestock vessel, classification society, etc. ([see chapter 1](#));
- Confirmation that the vessel is not the subject of an application in another MS and that it does not already have an approval;
- A statement that any modifications of the vessel which affect animal welfare will be immediately notified to the CA issuing the certificate of approval;
- A plan of the vessel with the layout of the pens for animals with lighting, water, drainage, fire-fighting and ventilation systems;
- Information on how the systems for water, drainage, fire-fighting and ventilation operate and that power sources are capable of operating them;
- Confirmation by a classification society approved by a CA that the strength calculations of pen rails and decks were verified;
- Copies of Master's reports of the last five livestock shipments including mortalities [9].

**Good practice. Ireland:** the CA must receive the vessel's documents at least 3 weeks before the proposed date of the inspection of the vessel.<sup>56</sup> **Good practice. Portugal:** for vessel approval, the applicant must send all documents at least 15 days in advance and the inspection of the vessel must be done at least 4 days before the scheduled date of loading.<sup>57</sup>

Several recommendations of the Network Document are not enforced however, for example, it requires that the stability booklet must be accepted by a classification society [9] while there is evidence of additional decks added in some livestock vessels without acceptance of a classification society. This can lead to catastrophes such as the *Queen Hind* case ([see Case study 6. Queen Hind](#)).

<sup>51</sup> Data facilitated by veterinary authorities in charge of EU exit ports in France to WELFARM in November 2020.

<sup>52</sup> Data facilitated by veterinary authorities in charge of EU exit ports in Slovenia to Animal Welfare Foundation in November 2020.

<sup>53</sup> Data facilitated by veterinary authorities in charge of EU exit ports in Ireland during TAIEX Multi-country workshop on animal welfare during sea transport in June 2019: [Search \(europa.eu\)](#). Info gathered by Ethical Farming Ireland.

<sup>54</sup> Irish SOPs for DAFM staff on the approval and operation of dedicated livestock vessels, Dublin 2017.

<sup>55</sup> The Australian Standards for the Export of Livestock (ASEL) 3.1.

<sup>56</sup> Irish SOPs for DAFM staff on the approval and operation of dedicated livestock vessels, Dublin 2017.

<sup>57</sup> Portuguese Directorate-General for Food and Veterinary (DGVA). Requisitos transporte navios gado, DGVA 2020.



Moreover, vessels with stability problems are allowed to depart in rough seas, posing a risk to animals on board and crew. For example, *Sarah M*, *North Star 1* and *Shorthorn Express* due to their construction<sup>58</sup> should not depart when gales of force 6 or above are predicted. Despite this restriction, in 2020 *North Star 1* and *Sarah M* were allowed to depart from Ireland during a storm with gale force 8 winds [10]. Due to lack of publicly available data, the authors could not investigate or analyse similar cases in other MSs.

The classification society should be an IACS member [9], while only 23 (29%) of EU-approved livestock vessels were classed by such societies [3]. Only vessels which are not on the black flag list should be accepted [9]. Most of vessels operating in the EU (55%) fly blacklisted flags. Only 31% of EU-approved livestock vessels fly a flag from the whitelist [3] (see chapter 1.2).

Better practice. Ireland: for vessel approval, statutory certificates must be issued by an organisation with a high-performance level, and the vessel must be operated by a company with a performance level above “low or very low” (see chapter 1.2). For approval, the vessel must fly the flag of a country from the whitelist.<sup>59</sup>

### 2.3.2. Inspection of livestock vessels before approval

Where documentary checks are satisfactory, the CAs begin the inspection of the vessel. The main checks include:

- The vessel is appropriately designed, constructed, maintained and operated for the species and category of animals to be transported;
- There are no sharp edges, protrusions, gaps or spaces, or fittings within the livestock decks, pens, passageways or loading ramps which might cause injury to the animals, and there should be very little or no rust;
- The vessel can be readily cleaned and disinfected;
- Animals are protected from injury and exposure to weather;
- Ramp angles are appropriate for the species and category of animals to be transported, and fitted with side barriers to prevent animals escaping;
- Lifting platforms and upper floors have safety barriers;
- Passageways, doorways, and ramps provide sufficient height for an animal to move through without injury; pens have an anti-slip floor surface;
- Pens provide access to the animals so that they can be inspected and cared for;
- Hospital pens are designated on every deck;
- The lighting, water, drainage, fire-fighting, ventilation, and primary and secondary sources of power operate as declared;
- Moreover, other aspects of the vessel, less directly related to animal welfare, should also be checked, such as calculations of deck/rail strength, etc. [9].

Due to the specialist knowledge needed, the approval of a vessel is only possible with a qualified expert team consisting of a veterinarian, a marine surveyor and a marine technician [11]. According to DG SANTE [1], CAs inspecting livestock vessels usually lack adequate procedures or access to technical expertise to verify vessels' technical systems critical for animal welfare during a sea journey. Where

<sup>58</sup> Roll period under 15 sec causes the vessel to pitch and roll excessively posing risk to animal health and welfare.

<sup>59</sup> Irish SOPs for DAFM staff on the approval and operation of dedicated livestock vessels, Dublin 2017.

expert bodies are used to perform such inspections, the cost is much higher, and it takes much longer. The difference in approach to vessel inspections in different MSs (ports of Spain: 1-2 vets and sometimes livestock controllers perform the inspection; Romania: official veterinarians, representatives of the Romanian Naval Authority and independent authorised maritime inspectors; Ireland: one experienced Veterinary Inspector and one Marine Surveyor) leads to breaches of sincere cooperation and to unfair competition [11].

**Better practice. Ireland:** Irish Regulation<sup>60</sup> outlines on 24 pages specifications and equipment for vessels, covering stability requirements, fittings, design of pens/ stalls/ passageways for cattle and for sheep, electric power, ventilation, drainage, lighting, feed and water, veterinary equipment (medicines, captive bolt pistol, etc.). **Better practice. Australia:** livestock vessels must comply with AMSA Marine Order 43<sup>61</sup> which extensively covers requirements for ship certification (ACCL), equipment and safe operation.

According to the Network Document<sup>62</sup>, sufficient time (2 days) should be allowed for inspection of the decks and testing of equipment (at least 4 working days before the proposed day of loading). In some MSs such as Croatia and Romania the authorisation of the vessel lasts a few hours according to NGOs [11] (see Case study 3. *Al Shuwaikh; Bashar One Transport*) and in others - 3 full days, as in the case of Ireland. The size, but also the age of the vessel affects duration of inspection: the older the vessel, the more problems will be found on inspection and the longer the inspection takes, according to some experts in Ireland.<sup>63</sup> The inspection of 9 livestock vessels approved by Spain between 2017 and 2020 lasted only between 3h 45 min and 12 hours in total<sup>64</sup>, which is concerning, especially taking into account the age and size of these vessels.

**Better practice. Ireland:** the approval procedure lasts 2-3 days. Irish vessel approval represents the highest standard in the EU. It is very rare for a vessel to pass on the first inspection. Re-inspections to confirm recommended repairs and alterations prior to approval take at least one full day. Inspection includes starting up the ventilation system and checking the airflow on all parts of all decks, flooding the decks to check the drainage system, checking fan alarms, bilge alarms, emergency generators, strength of all pens and stalls, etc. Ireland is the only MS that requires that an official veterinarian travel on the first journey of a newly approved vessel to report on the animal welfare outcome.<sup>65</sup> **Better practice. Portugal:** if re-inspection is needed to check the requirements that were not met, the fees related to the inspection, technicians' time and travel to the port are charged for each return to the vessel. Certifications for systems on board (ventilation, water, etc.) are made in the inspectors' presence by private companies accredited by the CA for that purpose.<sup>66</sup>

The number of vessel detentions is directly related to impaired animal welfare. There seems to be a correlation between a MS' inspection standards and the number of detentions of approved vessels: 57% (27) of vessels approved in Romania had 3-9 detentions and 14% (7) had more than 10 detentions; on the other hand, 80% (4) of vessels approved in Ireland had only 1-2 detentions [3]. Romania approved 60% (47) of EU livestock vessels in recent years and has never denied any vessel approval.<sup>67</sup>

<sup>60</sup> S.I. No. 356/2016 - Carriage of Livestock by Sea Regulations, 2016.

<sup>61</sup> Australian Maritime Safety Authority (Cargo and cargo handling — livestock) 2018.

<sup>62</sup> Network Document on Livestock Vessels. Guidance prepared by MS NCPs and supported by DG(SANTE).

<sup>63</sup> According to information provided by CAs from Ireland in 2020 to Animal Welfare Foundation.

<sup>64</sup> Information provided by Spanish CAs: Generalitat de Catalunya Departament d'Agricultura, Ramaderia, Pesca i Alimentació and Comunidad Autónoma de la Región de Murcia Agua, Agricultura, Ganadería, Pesca Y Medio Ambiente.

<sup>65</sup> Irish SOPs for DAFM staff on the approval and operation of dedicated livestock vessels, Dublin 2017.

<sup>66</sup> Portugal Directorate-General for Food and Veterinary (DGVA). Requirements for exporting live animals on livestock vessels.

<sup>67</sup> Data provided by CAs in Romania on 07.04.2021.

Information about approval denials from other MSs has not been obtained. Communication about certificate withdrawals is critical to avoid a situation where vessel operators take advantage of uneven approval standards within the EU ([see Case study 4. Etab](#)).

Good practice. Portugal: suspended the certificate of approval for *Mira* in 2019 due to “severe and repeated non-compliance with Reg. 1/2005” and communicated this fact to other MSs.<sup>68</sup>

Nevertheless, in 2017-2018 in at least four MSs (RO, ES, HR, SL) authorities approved and/or permitted the use of substandard vessels that were not in compliance with EU animal welfare rules [1] ([see Case study 5. Alpha Livestock 19; Rabunion XX; Abou Karim I; Abou Karim II; Karim Allah; Phoenix I; Phoenix III; Talia; Sarah M](#)).

EU-approved *Unimar Livestock* and *Queen Hind* have been documented adding additional decks when transporting sheep ([see Figure 7](#)), and EU-approved *Apus; Pacific M; Omega Star; North Star 1; Taiba; Jersey* are highly suspected of the same. These decks are made of aluminium or wood and involve two problems. One is the increase of the loading surface area, leading to increase in cargo weight not considered during safety approvals or in the risk profile calculation, despite potentially disastrous consequences ([see Case study 6. Queen Hind](#)). The second problem is the material: wood is not allowed by e.g. Spain for sanitary reasons, while aluminium heats up easily and has a negative impact on animal welfare, especially in summer, which is when most vessels with additional metal decks transport sheep to the Middle East (for sacrifice festivals of Eid al-Adha<sup>69</sup> and Eid al-Fitr<sup>70</sup>). All vessels listed above were approved by Romania.

With the exception of Ireland and Portugal, the systems in place to approve livestock vessels are insufficient to minimise risks which can negatively affect animal welfare. The main reasons for this are that other MSs’ CAs use staff who are not suitably qualified and experienced to assess the necessary technical systems of vessels. They also do not allocate enough resources (time and/or personnel) to adequately carry out all the necessary tasks and do not provide sufficient support to their officials working at EU exit ports [1].

### 2.3.3. Crew members’ competence

Animal welfare is influenced by the interaction of the stockperson towards the animal [12]; hence good welfare requires skilled and conscious personnel [13]. Reg. 1/2005 requires that stockmen handle animals without causing suffering or fear but is not clear regarding requirements for crew competence. Its Art. 11 requires that “the applicants have submitted valid certificates of competence for (...) all drivers and attendants carrying out long journeys”. Art.17, however, only mentions the certificate of competence for drivers and attendants of road vehicles, not for journeys by sea.

The Network Document<sup>71</sup> recommends that during vessel approval the CA verify that the applicant’s ship’s crew is trained in relevant provisions of Annexes I and II of Reg. 1/2005. However, the crew are usually not European and do not have any official certificate. Livestock vessels may carry up to 60,000 animals on board. Their crew is responsible for live sentient cargo and for public health. Hence, they need extensive knowledge of the technicalities of the vessel (ventilation, water, etc.), animal behaviour (for proper handling, to detect abnormalities and ensure their own safety when handling), animal health (to detect early stages of diseases, prevent spreading and notify authorities at destination),

<sup>68</sup> Communication between Portugal and other Member States on 8 November 2019.

<sup>69</sup> Eid al-Adha, the Feast of the Sacrifice.

<sup>70</sup> Eid al-Fitr, the Festival of Breaking the Fast.

<sup>71</sup> Network Document on Livestock Vessels. Guidance prepared by MS NCPs and supported by DG(SANTE).

humanitarian emergency killing (recognising when it is needed and knowing how to use a killing instrument), public health (symptoms of zoonotic diseases, prevention<sup>72</sup>, public health risk). The crew must also be trained in the ISM manual<sup>73</sup>. However, there is no clear protocol established on what knowledge is needed and how to verify it. As a result, it is up to each inspector to decide and conclude if the crew is competent or not. Crew competence has a great impact on the welfare and health of the animals ([see Case study 7. Queen Hind; Trust I](#)).

**Better practice. Australia:** accredited stockpersons must be on board to care for the health, welfare, and physical needs of animals during loading, sailing and disembarking. On voyages of 10 days or more one registered veterinarian must be present.<sup>74</sup> **Better practice. Ireland:** requires the presence of an official veterinarian to control if the crew has adequate knowledge, but only on the first journey of a newly approved vessel.<sup>75</sup>

## 2.4. Journey Authorisation

Before approving any sea journey of over 10 miles, the CA must perform documentary checks before arrival of the livestock vessel, and then a pre-loading inspection of the vessel to determine whether the vessel still meets all the requirements to transport animals. If results of the documentary checks and pre-loading inspection are satisfactory and the animals are fit to continue the journey ([see chapter 3.2.2](#)), the CA allows the loading of the animals and authorizes the sea journey to the destination.

The process of approval of most journeys is defective at exit ports in the following aspects: quality of pre-loading inspections ([see chapter 2.4.2](#)); identification of an approved livestock vessel ([see chapter 2.3](#)); identification of the authorised transporter for the sea leg of the journey and taking weather conditions into account ([see chapter 2.4.1](#)).

In 2017 and 2018, a total of 868 and 658 vessels, respectively, departed from EU ports [1] ([See Table 1](#)). In 2019, Spanish CAs authorized 214 journeys (147,364 cattle and 754,028 sheep/goats)<sup>76</sup> and Romanian CAs - 208 journeys (1,700,427 sheep/goats 83,672 cattle)<sup>77</sup>. On the other hand, Ireland approved only 10 journeys in 2019 (24,456 cattle<sup>78</sup>).<sup>79</sup> The number of CA staff available to carry out animal welfare inspections has been substantially reduced in some MSs in order to cut costs [14]. This understaffing may hinder proper enforcement. Numbers of animals exported via a MS do not correlate with the number of inspectors or resources available at the port for approval of these journeys. For example, Ireland has the strictest regulation and more resources available for inspections, but approves few journeys, while Romania and Spain, who play the biggest role in sea trade, had the most problems identified by DG SANTE audits<sup>80</sup> in 2018, which translates into possible mistakes during approvals directly affecting a higher number of animals.

<sup>72</sup> Crew signing up for livestock voyages are not informed of potential disease risks from the cargo. They work in close proximity, in artificial, forced ventilation and handle and dispose of animals who have often died of infectious diseases.

<sup>73</sup> In order to comply with the ISM Code, the Company operating the vessel must be audited (after submitting their Safety Management System Manual (SMS) and approved by Flag Administration or Recognized Organisation (RO)).

<sup>74</sup> The Australian Standards for the Export of Livestock (ASEL) 3.1.

<sup>75</sup> Irish SOPs for DAFM staff on the approval and operation of dedicated livestock vessels, Dublin 2017.

<sup>76</sup> Data provided by CAs in Spain on 24.01.2020 to Animal Welfare Foundation.

<sup>77</sup> Data provided by CAs in Romania on 07.04.2021.

<sup>78</sup> Data provided by Ethical Farming Ireland.

<sup>79</sup> Due to lack of data provided by most MSs involved in the trade, the authors could not make a thorough analysis of number of vessels departing from EU ports in 2019 and 2020, therefore countries such as Saudi Arabia (currently an important importer) are not analysed in this report.

<sup>80</sup> (DG(SANTE) 2019-6898) [Work Programmes | Food Safety \(europa.eu\)](#); (DG(SANTE) 2018-6446) [Work Programmes | Food Safety \(europa.eu\)](#).

### 2.4.1. Documentary checks before the journey

Documentary checks before a sea journey are performed by CAs at the place of departure (where animals are loaded onto road vehicles to be transported to the port) and in the port. At the place of departure, the CA is primarily responsible for checking that the journey plan provided by the organizer complies with Reg. 1/2005 and is realistic. Validity of transporter's authorizations, drivers' certificates of competence, approval of the means of transport, and route planning are verified. The Journey Log<sup>81</sup> is presented by the organizer to the CA at least two working days before the planned date of departure [9]. Verification of journey plans plays a very important role in minimising animal welfare risk. Nevertheless, CAs at the place of departure frequently approve the transport with incomplete or incorrect documentation, for example contingency plans and vessel and transporter for the sea leg of the journey missing, and weather conditions not considered [1]. Moreover, the majority of journey logs wrongly indicate the port as the destination [1], and not the real final destination (quarantine, slaughterhouse, fattening farm in the third country). As a result, the sea leg of the journey and/or the road transport in third countries are excluded from verification of planning [11]. Some MSs such as Spain do not require journey logs at all for most consignments; as a result, proper verification of journey planning is impossible [15]. The CA at the port checks the vessel's approval certificate<sup>82</sup>; the stowage plan of the vessel (number of animals per weight band and distribution); changes to crew since approval of the vessel; the Master's report of the last voyage; the feed and water supplies calculation<sup>83</sup> and the organizer's loading plan [9].

**Better practice. Ireland:** the notification to load live animals must be sent to the CA at least 5 working days prior to the intended date of loading. The master's report for the last journey of each approved vessel must be returned to the CA within 7 days of completing the journey.<sup>84</sup> **Good practice. Portugal:** documents are provided to the CA one week before the road transport to the port, including estimated waiting in port. The vessel's certificate of approval must be provided 15 days prior to the scheduled date of loading. When the vessel is operating for the first time from Portugal and it was approved in another MS, additional documents are required regarding internal procedures for animal welfare, feeding, handling and emergencies. CA requests records of emergency care of animals and responsibilities regarding malfunctions or failure of equipment that affects animals and their welfare.<sup>85</sup>

### Verification of the sea transporter authorisation

The journey organiser is responsible for the animals' welfare throughout the journey. One of their responsibilities is to ensure that transporters have appropriate authorisation [1] and are indicated in Section 1 of the Journey log. The CA at the place of departure must verify it. The identification of an authorised transporter also for the sea leg of the journey is required by Reg. 1/2005<sup>86</sup>. The authority at the exit port should identify the transporter for the sea leg of the journey and make the transporter's name and authorisation number publicly available [9]. However, DG SANTE audits found that most approved journey plans did not identify the livestock vessel and the authorised transporter for the sea leg of the journey [1]. Romania is the only MS that requires indication of both in journey plans.<sup>87</sup>

<sup>81</sup> Journey log, under Reg. 1/2005, is required on long journeys (over 8 hours) and provides information on planning, details of the consignment and relevant information from the route.

<sup>82</sup> Authorities shall check that this is on the list of approved livestock vessels in CIRCA-BC.

<sup>83</sup> Minimum quantities of feed and water from Chapter IV, section 2, table 1 of Reg. 1/2005, plus 25% or three days' spare supply of bedding, feed and water, whichever greater.

<sup>84</sup> Irish SOPs for DAFM staff on the approval and operation of dedicated livestock vessels, Dublin 2017.

<sup>85</sup> Portugal Directorate-General for Food and Veterinary (DGVA). Requirements for exporting live animals on livestock vessels.

<sup>86</sup> Art. 5(1); Art. 6(1); Art. 11(1); Annex III (chapter II, point 3(1)).

<sup>87</sup> Information provided by CAs in Romania on 02.04.2021.



The absence of an authorised transporter for the sea leg of the journey creates legal uncertainty about who is legally responsible for, and can be held to account for, the wellbeing of the animals during the sea leg of the journey [1]. The transporter is also responsible for notification of any vessel modification to the CA that approved the vessel. When the transporter is not identified and therefore not liable for notifications, CAs are not up to date on the condition of the vessel approved by them.

Following recommendations of DG SANTE audits in this respect, in December 2019 Spain introduced an Integrated Journey Log (named CABI) which identifies the transporter for the sea leg of the journey. In Slovenia, the CAs stopped approving vessels because they were not able to identify transporters authorized for the sea journey<sup>88</sup>. Procedures of France, Ireland and Croatia remain unknown, as authorities of these MSs did not provide answers to the author of this study.

**Better practice. Portugal:** its system of official controls<sup>89</sup> holds the organizer responsible for organizing the entire journey, including the sea leg of the journey, and providing all necessary documents to CAs  
**Better practice. Australia:** the exporter is accountable, and the Exporter Supply Chain Assurance System (ESCAS) is implemented. Exporters must comply with Australian Standards for the Export of Livestock (ASEL)<sup>90</sup> and under Australian law, handling and slaughter in destination countries must comply with OIE Welfare standards.

Any transport authorized without a person legally responsible for the wellbeing of animals during the sea leg of the journey is in breach of Art. 5(1) of Reg. 1/2005 with serious consequences for animal welfare: non-existence of a legal person that the CA can act against when violations of Reg. 1/2005 are found; no contingency plans provided<sup>91</sup> and lack of training of the staff.<sup>92</sup>

### Approval of journeys without considering weather at destination

High temperatures are the main cause of animal welfare problems during journeys (see chapter 3.2.3). Problems arise during hot days in summer. This is due to the absence of cooling systems in livestock vehicles as a result temperature cannot be maintained within the required limits on hot days. Reg. 1/2005 does not specify temperature limits inside livestock vessels (it does so for road transport), although it requires that the organizer take weather conditions into account. ECJ<sup>93</sup> ruled that parts of journeys outside the EU also must be organised according to Reg. 1/2005 until the animals reach the destination. The destinations of most animals exported from EU by sea are countries of Africa and Middle East with extreme temperatures in summer months [16]. Often it is not possible to ensure the maximum temperature of 30°C during the unloading of the animals from vessels or loading on board trucks [11]. Yet neither CAs at departure, nor those at the EU exit port detect and report these deficiencies, thus they routinely remain uncorrected [1] (see case study 8. Summer 2020: 40 journeys authorized over 40°C).

<sup>88</sup> Information provided by CAs in Slovenia on 04.2020 to Animal Welfare Foundation.

<sup>89</sup> Portugal Directorate-General for Food and Veterinary (DGVA). Requirements for exporting live animals on livestock vessels.

<sup>90</sup> Australian Standards for the Export of Livestock (ASEL) 3.1.: <https://www.agriculture.gov.au/export/controlled-goods/live-animals/livestock/australian-standards-livestock>

<sup>91</sup> Article 11(b) of Reg. 1/2005.

<sup>92</sup> Article 6.4 of Reg. 1/2005.

<sup>93</sup> The Judgment of The European Court of Justice of 23 April 2015 No C-424/13 in regards on Protection of animal welfare during transport: <https://curia.europa.eu/juris/liste.jsf?num=C-424/13&language=EN>

**Better practice. Ireland:** the master of vessel must include temperature and humidity measurements taken on each livestock deck at noon in his report. For the pre-loading inspection, the master is required to provide to the CA a 96-hour weather forecast from the Irish Meteorological Service, just prior to sailing.<sup>94</sup> **Better practice. Portugal:** loading of the animals can start just 12 hours after the inspection of the vessel, thus avoiding unnecessary waiting in the port.<sup>95</sup> **Better practice. Australia:** stopped exporting sheep to the Middle East in summer and introduced additional conditions to voyages between May 1 and October 31 to better manage the risk of heat stress in sheep.<sup>96</sup>

In April 2018, Australia introduced new requirements for stocking density in sheep transport and other requirements were instituted to attempt to reduce risk during the summer period. As a result, exports of sheep to the Middle East in both 2018 and 2019 were significantly reduced. Spain and Romania took advantage of Australia's move and now are the countries exporting sheep to these hot countries in summer.<sup>97 98</sup> This new EU trade route to Saudi Arabia leads to legal and welfare concerns ([see Case study 9. Al Shuwaikh](#)). Some MSs have started to ban exports during heat waves in recent years, but these restrictions only apply to exports by road, not by sea; as a result, animals have still been exposed to extreme temperatures.

### Verification of contingency plans for the sea leg of the journey

Contingency plans are required or recommended in three situations: a) a transporter when applying for Type 2 authorisation presents contingency plans for emergency situations<sup>99</sup>; b) an organiser when applying for authorisation of a journey provides journey-specific contingency plans [9]; and c) CAs must have contingency plans for delays or other emergency situations<sup>100</sup>. CAs are also responsible for verifying to what extent the transporter's or organiser's contingency plan is feasible and detailed enough, and prepared for the specific consignment on the specific journey, where applicable.

The Network Document<sup>101</sup> only contains very basic recommendations for contingency plans provided by the transporter and/or organiser (problems during loading; delays; measures to protect the animals from the impact of adverse weather conditions and in the event that loading of the vessel is not possible due to a mechanical breakdown; dealing with sick/injured animals; disposal of carcasses). Lack of detailed requirements or clear protocols on verification of contingency plans is a weak point, leading to contingency plans being too general, not feasible, and/or not verified properly. Evidence indicates that for most journeys, journey plans approved by CAs at the place of departure are submitted by organisers/road transporters who do not have contingency plans in case loading of the vessel is delayed [1]. EU NGOs have documented recurring problems at EU exit points with delays of up to several days that remained unresolved by the authorities despite the obligation<sup>102</sup> to do so [11].

When applying for a certificate of approval for a vessel, the transporter must provide a contingency plan for emergencies when transporting bovines and ovines by sea. During this research project one contingency plan of EU approved vessels has been analysed. This contingency plan has clear protocols and detailed explanations on: environmental factors that influence animal health; signs of animal

<sup>94</sup> Irish SOPs for DAFM staff on the approval and operation of dedicated livestock vessels, Dublin 2017.

<sup>95</sup> Portuguese Directorate-General for Food and Veterinary (DGVA). Requirements for exporting live animals on livestock vessels.

<sup>96</sup> On 31 March 2020, Australia introduced a ban on exports of sheep to, or through, the Middle East from June 1 to September 14. This period is extended for Qatar (May 22 to September 22) and Oman (May 8 to September 14): <https://www.legislation.gov.au/Details/F2020L00389>

<sup>97</sup> <https://seradria.com/blog/romanian-sheep-export-saudi-arabia.html>

<sup>98</sup> <https://portalportuario.cl/puerto-de-tarragona-registra-una-de-las-cargas-de-animales-vivos-mas-grandes-de-su-historia/>

<sup>99</sup> Art. (11. (1) (iv)) of of Reg. 1/2005

<sup>100</sup> Art. 22 (1) of Reg. 1/2005 and Art. 5 of Regulation OCR Reg. 2017/625

<sup>101</sup> Network Document on Livestock Vessels. Guidance prepared by MS NCPs and supported by DG(SANTE).

<sup>102</sup> Art. 22 of Reg. 1/2005.

illness; signs of heat stress and of cold stress; breathing pattern; animal inspection and welfare assessment; preventive actions in case of unexpected increase in the duration of transportation; and adverse weather conditions during transport; accidents, diseases and injuries of animals; extreme aggression of an animal or group of animals; slaughter/death of animals and destruction/disposal of carcasses; action in case of fire on board; action in case of mechanical failure; delay in unloading the vessel in the non-EU country due to issues such as queries on the health status of the consignment. The contingency plan itself appears very detailed, but there is no system in place to control if it is put in practice. There is no veterinary control during the journey or on arrival at the destination, therefore it is not possible to verify if these protocols are used or remain only on paper. Doubts also exist whether crew members have enough knowledge and background ([see chapter 2.3.3](#)) to understand such technical and detailed plans, *inter alia* due to the language barrier. There are no protocols to verify if the crew has the knowledge covered by contingency plans.

When an animal leaves EU territory, the CAs lose all control and cannot assure the welfare of the animals until they reach their destination, which is against EU law. Lack of feasible, working contingency plans, aggravated by insufficient documentary checks and insufficient communication, can have a direct impact on the welfare of the animals ([see Case study 10. Elbeik; Karim Allah](#)). Within this research project a question was sent to CAs asking if they require from transporters contingency plans covering a re-import of animals that for any reason cannot reach their destination. Only the Romanian authorities responded, saying that if a consignment of livestock is refused by a third country of destination, it will re-enter the EU territory under the provisions of EU Commission Regulation 2019/2074<sup>103</sup>. The authors of this study could not find any case of animals returning for a re-import to the port of origin after a refusal of entry by a third country ([see Case study 11. Suez Canal blockage](#)).

#### 2.4.2. Pre-loading inspections of vessels before the sea leg of the journey

When the documentary checks are satisfactory, the CA shall inspect livestock vessels before any loading of animals in order to verify in particular that: the vessel is equipped with a supply of fresh water; carries a sufficient amount of quality feed that is protected from sea water, weather, and contamination; the vessel has been cleaned and disinfected; has been built and equipped for the number and the type of animals to be transported (ramps, pens, passageways, doorways, drinking equipment are appropriate to the species and type of animals and are in good repair) and verify that all of the equipment on the vessel is operational such that the lighting, drainage, fire-fighting, ventilation, and primary and secondary sources of power operate effectively [9]. As in the case of livestock vessel approval, this requires technical expertise. With the exception of Ireland and Portugal, the systems in place to inspect the vessels before each loading are insufficient to minimise the risks, which can negatively affect the welfare of the animals exported on livestock vessels. The main reasons for this are that MSs' CAs do not allocate enough resources (time and/or personnel) to adequately carry out all the necessary tasks, and do not provide sufficient support to their officials working at the EU exit ports [1] (for example, staff have checklists which repeat legal requirements, but do not contain a methodology to assess the requirements) ([see Case study 12. Queen Hind](#)). There are no protocols on the adequate number of official veterinarians who should be present during loading onto livestock vessels. The Network Document, even though SOPs of some MSs are based on it, does not provide a protocol harmonized among MSs on how to perform preloading inspections of vessels. As a result, different resources are available in ports (time and/or knowledge of the personnel), leading to uneven quality of checks and different inspection results for the same vessel ([see Case study 13. Karim Allah](#)).

<sup>103</sup> Commission Regulation (EU) 2019/2074 : <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R2074&qid=1618654455179>



DG SANTE auditors found that most of the reports from pre-loading inspections indicate that the vessel complied with the requirements. When they recorded deficiencies, the vessel was still allowed to transport animals, although deficiencies were not always corrected before departure [1]. Currently there is no official data base including such deficiencies. The audits also mention high pressure on veterinary officials at EU exit ports to allow loadings due to potential logistical and animal welfare problems if they delay a loading (including a threat of potential legal action if an export is stopped or delayed) and little, if any, support from their hierarchy to refuse a loading [1]. This pressure may be one reason why, despite infringements and shortcomings (see chapter 3.2), high temperatures (see chapter 2.4.1) and vessel problems (see chapter 1), loading of live animals on vessels is almost never refused [1]. Within this research project, a question was sent to MSs on how many times, between 2017 and 2020, they denied approval of a sea journey after pre-loading inspection. Only Romania responded, saying they did not deny any approval during that period. Uneven quality of checks leads to unfair competition among MSs, which is further aggravated by lack of communication among MSs (see Case study 14. *Julia LS*).

Inspections after loading are not required by Reg. 1/2005, but recommended in the Network Document, which says that the authority should check a selection of pens on board a vessel to verify compliance with stocking densities and that species and types of livestock are appropriately segregated [9] (see Figure 8). Post-loading inspection makes it possible to detect any omissions with potentially serious welfare consequences (overloading of pens; animals injured during loading; unfit animals; vessel stability problems; animals escaping from pens due to inappropriate pen construction for the type and/or category of animals; animals loaded in restricted areas like corridors or hospital pens) and as such should be included in procedures of every port of exit (see case study 13. *Karim Allah*). NGOs have reported that inspection after loading is not performed [17] [18] [19] and have detected cases of animals loaded in corridors [17] [18] [20].



### 3. ANIMAL WELFARE VS SEA TRANSPORT PRACTICE

#### KEY FINDINGS

- Deficiencies and infringements in the process of transport of animals by sea have been identified during EU audits and investigations performed by NGOs. They have negative effects on animal welfare, at times direct, at times indirect.
- Enforcement of binding law is unequal among Member States, resulting in uneven quality of checks performed by competent authorities. This pertains to checks at all stages of the journey: from the place of departure, through checks on arrival at the port, before and after loading on the vessel. Most Member States do not request feedback on the condition in which animals arrive. Mortalities on arrival in third countries and within a few days of arrival remain unknown; recording of infringements identified within the EU and communication among Member States is deficient. Animal welfare is not guaranteed as soon as animals leave the EU, despite the legal requirement to guarantee it until the animals' final destination.
- Increasing volumes of live animal export by sea pose environmental concerns for public health and marine life. Transportation of live animals on livestock vessels may be inherently related to violations of the law due to illegal disposal of animal carcasses in marine protected zones, such as the Mediterranean and Black Seas, and uncontrolled manure disposal. Enforcement of the law seems unfeasible under current circumstances and lack of data hinders investigation and potential prosecution of offending operators.

#### 3.1. Legal context

EU animal welfare rules are legislated in Reg. 1/2005 on the protection of animals during transport and related operations<sup>104</sup>:

- Art. 3 stipulates that *"No person shall transport animals or cause animals to be transported in a way likely to cause injury or undue suffering to them."*
- Art. 5.3.a requires that every organiser coordinate the journey so as not to compromise animal welfare; and that weather conditions be taken into account;
- Art. 6.4 requires that personnel handling the animals have received training on the relevant provisions of Annexes I and II;
- Art. 20.2 requires that before and during any loading/unloading of livestock vessels the CA verify whether the animals are fit to continue their journey and that these procedures comply with Annex I, Chapter III;
- Art. 21.3 requires that animals unfit for transport be unloaded, watered, fed and rested;
- Annex 1, Chapter I reiterates in detail the requirement of Art. 3 that all animals shall be transported in conditions guaranteeing freedom from injury or unnecessary suffering; prohibits transporting animals unfit for this purpose; specifies cases of lack of fitness; and requires that ill or injured animals receive proper care and/or be euthanized/killed without unnecessary suffering;
- Annex I, Chapter III, articles 1.8 and 1.9 require that animals be handled in a way not causing them unnecessary pain or suffering, and they specify practices explicitly forbidden during handling (kicking, striking, overuse of electric prods, etc).

<sup>104</sup> <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32005R0001>

All provisions of Reg. 1/2005 are interrelated, thus non-compliance with only one of them can lead to unnecessary suffering on many levels. The obligation to guarantee welfare until the final destination of the animals has been reinforced by the ruling of the European Court of Justice in case C-424/13<sup>105</sup> (hereafter: ECJ C-424/13).

## 3.2. Enforcement of animal welfare legislation

Numerous documents point out deficiencies and infringements in the process of transporting animals by sea. Enforcement of the binding law is unequal among MSs, resulting in uneven quality of checks performed by CAs. Some required procedures seem not to be performed at all. This chapter presents findings pertaining to infringements during subsequent stages of sea transport. Complaints have been filed by NGOs against all MSs with ports approved for livestock export (Spain, France, Croatia, Slovenia, Romania, Portugal and Ireland) due to systematic breaches of law during sea transport. All complaints remain open and under investigation by the EU Commission<sup>106</sup>. The 2020 Overview Report<sup>107</sup> by DG SANTE critically evaluates the system in place and its findings are in line with NGO reports and complaints.

### 3.2.1. Animal welfare during arrival in ports

Animals are brought to ports by road transport vehicles under relevant provisions of Reg. 1/2005. In Spain, Portugal, Ireland, France and Romania, where most animals are sourced nationally and transported by road under 8 hours, coordination of logistics appears to be better than when animals come from different MSs, which is the case of Croatia and Slovenia [1]. As mentioned in chapter 2.4.1, some MSs do not require Journey Logs; as a result, proper verification of journey planning is impossible [15]. Where a Journey Log is required, it is signed by the organiser of road journey who is not necessarily the organiser who made arrangements for transport by sea. This creates logistical problems, as no one is responsible for coordinating truck arrivals at the EU ports and taking care of animals in case of delays [1].

In southern EU ports temperatures frequently exceed 30°C – the maximum allowed temperature on board of a road transport vehicle (above which transport should not be approved) [1]. The temperature inside a parked vehicle is usually higher than outside<sup>108</sup> due to lack of ventilation system, or because the vehicles' ventilation systems are incapable of maintaining the required range of temperature [1]. NGOs have documented animals with heat stress signs inside road vehicles waiting in different EU ports [21], [22], [23].

**Good practice. Spain:** CAs require organisers to arrange gradual arrival of trucks [1]. The Port of Cartagena installed shadowing of road vehicles following complaints by an NGO concerning animals kept for several hours on road transport vehicles in the sun [22].

MSs report 97% compliance for transports arriving at ports [1]. This may be related to uneven and deficient quality of checks on road vehicles, further aggravated by insufficient reporting of infringements: *"Neither the CAs at departure, nor the ones at the EU exit port detect and report these administrative deficiencies, so they remain routinely uncorrected."* In 2018, only 31.6% of cattle consignments and 3.5% of sheep consignments exported by livestock vessels from the EU were entered in the TRACES system [1]<sup>109</sup>.

<sup>105</sup> <https://curia.europa.eu/juris/liste.jsf?num=C-424/13&language=EN>

<sup>106</sup> The complaint to the Commission filled out by Animal Welfare Foundation: CHAP(2018)00400, CHAP(2018)00401, CHAP(2018)00402, CHAP(2018)00403, CHAP(2018)00404, filled out by Plataforma Anti-Transporte de Animais Vivos: CHAP(2021)00008.

<sup>107</sup> DG(SANTE) 2019-6835 Overview Report on Welfare of Animals Transported by Sea.

<sup>108</sup> Usually is higher because Animals on board emit a lot of body heat.

<sup>109</sup> TRACES [TRACES](https://traces.euro.ipp.eu) | [Food Safety \(europa.eu\)](https://traces.euro.ipp.eu)

### 3.2.2. Animal welfare during loading procedures

After arrival at port, animals are usually reloaded directly from truck to vessels via ramps and gangways of varying quality [17], [18], [21], [22]. Ports either do not have stables to unload animals, or they have insufficient capacity for the number of animals. Where stabling is available, it is rarely used [1]. Without unloading to stables, animals cannot rest after road journey and be properly inspected, and any unfit animals cannot be isolated.

#### Inspection of the animals

Inspection of animals is usually done in gangways during reloading from truck to vessel and is difficult with many animals moving at the same time [1], frequently rushed by port personnel [17]. Where animals are inspected on trucks, port veterinarians usually lack equipment to check upper decks [1]. Long loading time also hinders proper quality of veterinary inspection [1]. Moreover, official records regarding checks of fitness of the animals at EU exit ports are in many cases poor or do not exist [1]. Checking fitness of the animals is generally a weak point, and under-reporting of unfit animals back to the MS of departure makes correction for the future impossible [1] (see [Case study 15. Lithuanian road consignments going to Slovenian port](#)). Problems with fitness for transport increase in probability with increasing length of journey by road, extreme weather, and deficient competence of attendants.

#### Euthanasia

Euthanasia is rarely performed in ports. This may be due to incorrect contingency plans for emergency situations [24] (see [chapter 2.4.1](#)). In countries where most animals come from the same MS, like Portugal or Romania, the shorter road transport may account for lower euthanasia numbers. In 2018-2020, in Romanian ports no animals were found unfit and euthanized<sup>110</sup>, and in Portuguese ports these values were very low (at most 5 animals)<sup>111</sup>. Slovenia euthanizes more animals (336 animals between 2015-2017)<sup>112</sup>, which may be related to the fact that these animals come from distant MSs and the Slovenian port has stables and corridors to properly individually inspect and detect any unfit animal.

Low euthanasia numbers may be also caused by underreporting of unfit animals. Veterinary authorities in Slovenia state they inspect all consignments [1] which is challenged by NGOs [25]. CAs in Spain admit<sup>113</sup> that animals are not always checked by veterinarians, as according to them port personnel have the knowledge to identify unfit animals.<sup>114</sup> NGOs have documented in Spanish ports cases of animals unfit for transport that were either loaded on vessels or loaded back on a truck with mechanical systems and transported to a slaughterhouse instead of being emergency euthanized in the port [22], [17]. As there is no database of animals declared unfit in most EU ports, data could not be analysed and verified more thoroughly. DG SANTE found inspections of animals in Spain and Croatia deficient either due to understaffing, and/or lack of resources [15], and/or lack of planning [24]. This can also contribute to underreporting of unfit animals. Lack of veterinary presence, poor quality of equipment and handling poses a risk of injury for animals loaded.

**Good practice. Ireland:** Loading procedures are fully supervised by veterinary and technical officers.<sup>115</sup>

<sup>110</sup> Data facilitated by CA in charge of EU exit ports in Romania in 2021.

<sup>111</sup> Data facilitated by veterinary authorities in charge of EU exit ports in Portugal in 2021.

<sup>112</sup> Data facilitated by veterinary authorities in charge of EU exit ports in Slovenia in 2021.

<sup>113</sup> (DG(SANTE) 2018-6446): [Work Programmes | Food Safety \(europa.eu\)](#)

<sup>114</sup> 2018-6446 - Annex – Comments: Work Programmes | Food Safety (europa.eu). In relation to (DG(SANTE) 2018-6446): [Work Programmes | Food Safety \(europa.eu\)](#)

<sup>115</sup> Irish SOPs for DAFM staff on the approval and operation of dedicated livestock vessels, Dublin 2017.

## Handling

When loading is delayed or incidents happen during loading, absence of contingency plans ([see chapter 2.4.1](#)) and of animal facilities at ports has a major impact on animal welfare. Few CAs, road transporters and transport organisers have contingency plans for these situations [1]. Animals escaping during loading or falling into water have been reported by different NGOs; after running in port and swimming in the sea, these animals were caught and directly loaded onto the vessel, without veterinary check of their health status [17], [21] ([see Figure 9](#)). This raises concerns regarding contingency plans and/or competence of staff handling the animals.

Although not found during DG SANTE audits, handling quality by port staff and crew during the loading process is frequently reported by NGOs to be in breach of Reg. 1/2005. Infringements include hitting and/or kicking the animals, stressing them by rushing, overuse of electric prods (too frequent impulses, too long impulses, applied on forbidden body parts like face or anus), use of force to lift animals that fell and refused to move [17], [21], [22]. Between 2017 and 2020, an NGO observed 94 loadings at Portuguese ports, and in almost half of them documented breaches of Reg. 1/2005, all related to handling of animals [26].

## Other problems during loadings

In 2020 an NGO reported that approximately 200 sheep, after loading onto a vessel, were reloaded back onto the truck to leave the port [17]. This suggests a failure of the CA to properly calculate loading densities in advance. Reloading of animals is related to two serious concerns: one is welfare-related, as animals are exposed to unnecessary stress and risk of injury, and the other is related to sanitary provisions: animals unloaded from a vessel are in fact re-imported to EU territory from a place that does not guarantee proper disinfection.

### 3.2.3. Animal welfare during sea journey

DG SANTE audits of sea transport cover conditions of transport by road to EU exit ports; official checks during loadings onto vessels and livestock vessel inspections, but only superficially cover conditions during sea transport itself due to lack of information. Neither MSs nor the EU Commission have information or statistics on health and welfare of animals during sea journeys [1]. This may be due to the lack of mechanisms enabling CAs to inspect animals' conditions during the sea journey. Moreover, most MSs do not receive any information from the transporter, ship's master or vessel operator [27]. The few available reports show that at sea transport animal health and welfare do not comply with OIE, veterinary and public health standards, the five freedoms<sup>116</sup> are often challenged [18], [28], [29] and animal welfare predominantly depends on the quality of the vessel [27].

Significant risks to animal welfare caused by transport in vessels include: clinical diseases evidenced by mortality level and animals in hospital pens on the ship; heat stress evidenced by respiration rate and "wet bulb" temperature (WBT)<sup>117</sup>, which includes temperature and humidity; problems related to loading density; high ammonia levels due to accumulation of excrements; and factors such as: food/water availability, injuries from infrastructure and design, shipping fever, stress, insufficient coordination of transport, motion sickness, mounting behaviour, noise and disturbance to lighting patterns.

<sup>116</sup> 'Five Freedoms': Freedom from hunger and thirst; Freedom from discomfort; Freedom from pain, injury and disease; Freedom to express normal behaviour and Freedom from fear and distress.

<sup>117</sup> Wet bulb temperature (WBT) is the lowest temperature to which air can be cooled by the evaporation of water into the air at a constant pressure.

## Mortality

Lack of inspection and veterinary presence, together with scarcity of public data, make it difficult to guarantee good welfare standards on livestock vessels. Currently, the main tool to evaluate animal welfare on board is the mortality rate [30]. This only estimates extreme events [31] and death during transport is usually preceded by a period of poor welfare [29]. During a journey from the EU to Egypt in 2016, of the 1,678 cattle on board, 9 animals died (0.5%), showing signs of respiratory distress or diarrhoea [18]. Data from the Australian Government<sup>118</sup> show several sea journeys to the Middle East with mortality rates above 3% and possibly much higher, as export reports are not completely reliable<sup>119</sup>. For Australia, sheep mortality is greatest on sea journeys to the Middle East, and certain ships can be identified as having higher mortality rates than others [32]. A greater proportion of deaths occurred on journeys from Australia to the Middle East (0.52%) than to South-east Asia (0.13%) [32]. An Australian NGO has compiled a timeline of events<sup>120</sup> pertaining to export of live animals, divided into events at sea, on land<sup>121</sup> and in the air. The timeline shows that despite improved regulations, animal mortalities on livestock vessels still occur. In the EU, such data are lacking, as only Ireland requires a record of mortality<sup>122</sup>, and Romania and Portugal receive feedback information from Israel<sup>123</sup>.

**Better practice. Australia:** Every six months, a report on mortalities on sea voyages containing the name of the exporter, voyage date, destination ports and details of animal consignment (species, number of animals) is published on Australian Ministry of Agriculture's website.<sup>124</sup>

Lack of a veterinarian on board and deaths of animals pose questions on how the animals died, whether their condition was assessed by a competent person and – if necessary – humanely killed [18]. A means of killing suitable for the species should be available to the attendant or the person on board who has the necessary skill to perform this task humanely and efficiently [9], however it is not certain whether CAs verify the crew's skills in ports (see chapter 2.3.3). On the vessel there is no one to ensure that killing is performed when suffering cannot be alleviated otherwise, and that it is humane.

**Better practice. Ireland:** Requires the presence of an official veterinarian, but only on the first journey of a newly approved vessel.<sup>125</sup>

The main causes of cattle death are heat stroke, trauma, and respiratory disease (shipping fever) [33]. The biggest contributor to sheep mortality is starvation due to inappetence<sup>126</sup>, which accounts for nearly half of all deaths, and/or salmonellosis (about a fifth of all deaths) [30]. Apart from mortalities, diseases and injuries are reported [18]. Israel's Agriculture Ministry admitted the high prevalence of these problems in animals imported by sea, confirming that 'common problems' include injury and suffocation from overcrowding, high temperatures, poor ventilation<sup>127</sup>.

<sup>118</sup> Department of Agriculture, Water and the Environment of the Australian Government. Consignments L363 (October 2006), L500 (May 2007), L006 (August 2010), L363 (2013), L500 (January 2014), L006 consignment 69 (August 2017).

<sup>119</sup> Dr Tony Hill, a veterinarian working for Emmanuel Exports, was required to falsify mortality figures on the Al Khaleej. Up to 2000 sheep died on the voyage but only 105 deaths were reported. Dr Peter Kerkenezov (veterinarian and ship captain) has also described animal cruelty on his two live export voyages. Vets Against Live Export said: "Concerns have been expressed that AAVs (AQIS-accredited veterinarian) are subject to pressure from an exporter to omit information from reports or document observations in a way favorable to the exporter, under threat of loss of contract." Independent Review of Australia's Livestock Export Trade 2011: <https://www.vale.org.au/in-depth.html>

<sup>120</sup> [https://www.rspca.org.au/live-exports-timeline-tragedy?fbclid=IwAR1oPMIFvE4\\_x9t3wzLgPTyFBNOkucz-VaD66L0Njkt9ns6DYAyVjqxcGos](https://www.rspca.org.au/live-exports-timeline-tragedy?fbclid=IwAR1oPMIFvE4_x9t3wzLgPTyFBNOkucz-VaD66L0Njkt9ns6DYAyVjqxcGos)

<sup>121</sup> Please note that events on land pertain to road transport of exported animals in third countries.

<sup>122</sup> Irish SOPs for DAFM Staff on the Approval and Operation of Dedicated Livestock Vessels.

<sup>123</sup> Data facilitated by CA in charge of EU exit ports in Romania, April 2021 and DGVA in Portugal in 2020.

<sup>124</sup> <https://www.agriculture.gov.au/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations>

<sup>125</sup> Irish SOPs for DAFM staff on the approval and operation of dedicated livestock vessels, Dublin 2017.

<sup>126</sup> Inappetence occurs primarily due to the animals being transferred from a pasture-based diet to a concentrate pellet, which they are not used to.

<sup>127</sup> <https://www.timesofisrael.com/in-first-agriculture-ministry-admits-to-cruel-conditions-on-animal-transport/>



## Heat stress

Heat stress causes mortality of transported cattle due to the combination of high humidity and temperature [34] plus solar irradiation [35] and the difference in climate from the place of origin. Furthermore, high stocking densities and lack of adequate ventilation or water supply elevate the risk of heat stress and mortality [32]. Heat stress starts at the WBT temperature in which the core body is 0.5°C above normal [36]. The body starts to evaporate water in order to lose heat, and the more the moisture is in the air, the less heat the animal is losing [37]. The Livestock Safety Index (LSI)<sup>128</sup> states that livestock are in danger at temperature of 26-28°C. In vessels departing from Australia, temperature is normally only registered once a day and per deck [38], which is not representative of the whole vessel situation. During a journey from the EU to Egypt, temperature, and humidity most of the time were on the level of heat stress danger [18]. Increased heart rate, sweating, respiratory alkalosis<sup>129</sup> and reduced feed intake are symptoms of thermal stress [35], [30], and increased respiration rate, panting and gasping are visible indicators of different grades of heat stress [38]. Accommodation of farm animals on upper decks exposes them to more thermal discomfort than on other decks [3]. Owing to lack of thermal and humidity data from all pens with animals, and lack of routine feedback of such data from the transporters, together with mortalities and causes thereof, corrections cannot be established by CAs.

## Ventilation vs. Ammonia

Poor ventilation (especially on decks without natural ventilation) and accumulation of manure increase levels of ammonia, an irritant the levels of which increase with WBT and bedding deterioration [39]. No official data are available on concentration of ammonia during sea journeys, but high concentrations were detected in a vessel from Ireland to Lebanon [40] and on five vessels from Portugal to Israel [41]. Inflammatory responses, such as coughing and ocular discharge, are symptoms of high ammonia levels exposure [42], [43]. An Israeli NGO documented the offloading of 730 livestock vessels<sup>130</sup> with European cattle often presenting coughing, ocular discharge, ocular damage and blindness [44] (see Figure 10). Infectious conjunctivitis (pinkeye), a frequent disorder in cattle on the ships, is also caused by the cattle's inability to escape from high wind movement, which often stirs up dust from the feed [32].

## Other stressors in transport

Journey duration can become a welfare risk when other transport stressors are present, such as fasting, weather conditions, stocking density or lighting schedule [34]. Circadian rhythm<sup>131</sup> synchronizes internal physiology and its changes impact the appropriate functioning of physiological systems [45]. Investigation by an NGO showed that light on decks was permanently on [18]. Journey duration can also have an impact on deterioration of bedding quality. An NGO showed very dirty and wet bedding in pens with cattle on 7<sup>th</sup> day of the journey, with many animals on lower decks covered with a faecal jacket [18] (see Figure 11). Other health issues detected are injuries, swollen legs, pneumonia, fractures, and others [38]. Some of them may be related to accommodation of farm animals on upper decks that exposes them to injuries and fractures when the vessel is subjected to side-to-side rolling in storms [3]. Some may be coming from fear and/or aggression reactions to new situation and unknown cattle around. Mounting behaviour, one of main reasons of fractures, may be a fear/aggression response to the stress and new environment, particularly dangerous if it happens during loading on the vessel, as

<sup>128</sup> The Livestock Weather Safety Index (LSI) quantitates environmental conditions using the temperature-humidity index (THI; Thom, 1959; NOAA, 1976) where  $THI = 0.8 * \text{ambient temperature} + ((\text{relative humidity}/100) * (\text{ambient temperature} - 14.3)) + 46.4$ .

<sup>129</sup> Respiratory alkalosis results from excessive ventilation (hyperventilation).

<sup>130</sup> 85% of which carried EU animals, data from 2018 until the end of February 2021.

<sup>131</sup> Circadian rhythm: rhythmic fluctuations in physiology of animals, mostly relating to sleep and wake cycles.

animals get their body parts caught in construction elements<sup>132</sup> [18]. Responses of livestock to new situations as opposed to familiar ones, named neophobia, are largely unexplored [46]. Some health issues could be treated or diminished with good management and handling by the crew. Most of them, however, are treated by untrained personnel or are slaughter findings [38] (see chapter 2.3.3), as high stocking density and inadequate facilities design hinder effective inspection of each animal [29].

In April 2021, New Zealand<sup>133</sup> decided to ban exports of live animals by sea citing reputational risk from poor animal welfare practice. In May 2020, Australia amended its laws to enhance protection of animals at sea, including temporary bans on transporting sheep to the Middle East during summer.<sup>134</sup> In the EU “the system in place is insufficient to minimise the risks that can negatively affect the welfare of the animals” [24].

### 3.2.4. Animal welfare on arrival in third countries

EU law protects animals until they reach their final destination, as was confirmed by the ECJ C-424/13<sup>135</sup>. However, there is no system to inspect welfare of EU animals in third countries, and no routine feedback is sought on their condition after a sea journey and arrival at destination [1], resulting in underreporting of injured/sick animals and mortalities. In 2018, 12 animals were found dead on-board *Beccaria* livestock vessel carrying cattle from Slovenia to Israel, and 40 more died during quarantine after arrival. These 40 deaths were also a consequence of sea transport [47]. This case raises justified concern that not only deaths on board are underreported (because the EU does not request this information), but also transport-related deaths of animals after arrival have never been researched.

In third countries receiving livestock from Western countries, the infrastructure in the port of arrival is unlikely to be as well organized as in the ports of origin. Offloading ramps, inspections and truck suitability and availability are all likely to be of lower quality than in Western countries [32]. At the port of arrival, it is important that the importing company coordinates well with the road vehicles, so that unloading is not delayed. Vehicles used to transport animals from ports to final destination would not be approved in the EU, as they pose a risk of injuries, expose animals to the elements and do not protect them from falling out. This information is not found in official data; however, when documenting the offloading of 730 livestock vessels<sup>136</sup> an Israeli NGO recorded European animals with limbs sticking out of the trucks, animals with limbs stuck between floor and wall of the trucks, and overcrowded trucks with sheep [44] (see Figure 13). Evidence of substandard road transport conditions of European animals in Turkey, Israel, the Palestinian territories, Egypt, Lebanon, Kuwait, and Jordan after sea journeys from EU ports between 2014 and 2019 is also available from another NGO<sup>137</sup> (see Figure 12).

Animal welfare regulations in third countries are often substandard compared to EU law or even non-existent. Where better animal welfare law has been passed, there is no certainty regarding its effective implementation, especially taking into account NGO reports (the main source of information regarding third countries due to lack of EU audits or research there). Lebanon in 2017 adopted an animal welfare law which prohibits “any act that may inflict distress, pain or suffering to animals or subject them to danger or torture” and requires transport by sea and land to be in accordance with the OIE Regulations and

<sup>132</sup> The solution would be a limit of the maximum height, providing the animals with sufficient space to move freely and maintain natural position, but preventing mounting.

<sup>133</sup> New Zealand only exports live animals for breeding, not for slaughter.

<sup>134</sup> <https://www.agriculture.gov.au/export/controlled-goods/live-animals/livestock/information-exporters-industry/sheep-to-middle-east>

<sup>135</sup> The Judgment of The European Court of Justice of 23 April 2015 No C-424/13 on Protection of animal welfare during transport. <https://curia.europa.eu/juris/liste.jsf?num=C-424/13&language=EN>

<sup>136</sup> 85% of which carried EU animals, data from 2018 until the end of February 2021.

<sup>137</sup> Animals International video on animal transport conditions in Israel, Jordan, Kuwait, Qatar & Turkey, 2016-2021: <https://vimeo.com/541729960>

requirements of the importing and exporting country.<sup>138</sup> In 2020, an NGO reported on handling and slaughtering practices in breach of the Lebanese law [48]. In Israel, animal transportation law was updated in 2020. It limits the transport of animals to 3 hours between 1 May to 31 October, and when the temperature is expected to exceed 32°C. Upon arrival of animals to Israeli ports, official veterinarians perform a check on animal welfare during the sea journey<sup>139</sup>. An NGO reported potentially unfit animals and temperatures between 33 and 36°C when European animals were unloaded in Israel [44]. In Egypt, the Constitution places responsibility for animal protection on the State. There are a few anti-cruelty provisions in the Agriculture Law (1966), however, there is no specific animal welfare law or regulations mandating appropriate housing, care, transport, or slaughter for farm animals.<sup>140</sup> Turkey in 2011 adopted a Regulation on Welfare of animals during transport, similar to Reg. 1/2005. It requires that “*Animals are transported in such a way that they will not feel unnecessary injuries or pain*” and legislates registration of transporters, certificate of competence for drivers, journey log, and approval of transport vehicles and livestock vessels<sup>141</sup>. In 2017, 6 years after adoption of this law, DG SANTE carried out a fact-finding mission in Turkey on animal welfare during transport and found “*a high risk of causing unnecessary pain and distress to animals, transported on this route during hot days*” [49].

Lack of sufficient legal protection of EU animals exported to third countries exposes them (besides extremely different climates) to abuse, deficient veterinary care and slaughter with cruel methods performed by incompetent and/or untrained staff [44]. An NGO carried out over 50 investigations documenting handling and slaughter practices against OIE standards in countries importing EU animals (Egypt, Jordan, Kuwait, Lebanon, Morocco, Palestinian territories, Qatar, Tunisia, Turkey, UAE) [50].<sup>142</sup> EU animals are also exported to countries in a state of civil war, such as Libya, where there is even less veterinary control than usual, and animal welfare cannot be guaranteed. This is against Art. 13 TFEU that requires that full regard be paid to the welfare requirements of animals.<sup>143</sup>

**Better practice. Ireland:** Is the only MS that has particular requirements for export of animals to Libya.<sup>144</sup>

### 3.2.5. Other problems related to livestock vessels

Livestock vessels also pose problems less directly related to animal welfare. Some are used for human trafficking at the end of their life, for example *Ezadeen* left by the crew adrift in the Mediterranean with 450 immigrants on board.<sup>145</sup> The Lebanese owner of the vessel owns 2 more EU-approved livestock vessels still operating [3]. Livestock vessels are also used for drug trafficking (see Case study 16. *Neameh; F.M.Spiridon; LSS Success; Uranus II*). The documented cases raise concerns regarding animal welfare being used to conceal illegal activities.

Long-distance transport of live animals also poses serious risks for animal and public health due to possible spread of diseases. Stress associated with handling and transport weakens the immune system, making animals more prone to diseases and more likely to infect others during the journey or after arrival, and in many cases (e.g. salmonellosis) this will also increase the risk to public health [34].

<sup>138</sup> [http://www.animalslebanon.org/pdf/Animal\\_Protection\\_and\\_Welfare\\_Law.pdf](http://www.animalslebanon.org/pdf/Animal_Protection_and_Welfare_Law.pdf)

<sup>139</sup> [https://www.moag.gov.il/vet/hukim/takanot/takanot\\_tzaar\\_baaley\\_haim/Pages/tzaar\\_baaley\\_haim\\_hovala.aspx](https://www.moag.gov.il/vet/hukim/takanot/takanot_tzaar_baaley_haim/Pages/tzaar_baaley_haim_hovala.aspx)

<sup>140</sup> <https://api.worldanimalprotection.org/country/egypt#:~:text=Animal%20welfare%20protections%20in%20Egypt,no%20specific%20animal%20welfare%20law>

<sup>141</sup> <https://www.resmigazete.gov.tr/eskiler/2011/12/20111224-2.htm>

<sup>142</sup> <https://www.animalsinternational.org> For more info, please contact: [enquiries@animalsinternational.org](mailto:enquiries@animalsinternational.org)

<sup>143</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:12012E/TXT&from=PL>

<sup>144</sup> Irish SOPs for DAFM staff on the approval and operation of dedicated livestock vessels, Dublin 2017.

<sup>145</sup> <https://www.independent.co.uk/news/world/europe/ghost-ship-human-cargo-worrying-new-trend-used-traffickers-exploit-people-desperate-flee-middle-east-9954935.html>

The FAO<sup>146</sup> has defined live animal transport as “*ideally suited for spreading disease*” given that animals originate from different herds or flocks and are confined together for long periods in a poorly ventilated stressful environment [51]. The living conditions of the crews on vessels are frequently below the standards of International Labour Organisation conventions [3]. In the last 2 years, 78% of the 78 EU-approved vessels had deficiencies under the Maritime Labour Convention 2006<sup>147</sup>; 78% deficiencies concerning life saving appliances; 68% on working-living conditions [3]. This may have an impact on the quality of care of the animals transported, but definitely contributes to impaired health status of crews. With over 60% of infectious diseases in humans being of animal origin, and a frequently dubious vaccination status of the crew, they are exposed to several health problems in substandard living and working conditions [52].

A WHO advisor has warned of the danger of live animal exports, saying the trade poses the risk of a “ghastly” disease outbreak and it should be stopped [53]. Approximately 75% of ‘new’ human pathogens reported in the past 25 years have originated in animals and the risk of zoonoses is predicted to continue to increase [54]. The SARS COV-2 pandemic also shows that live transport should be reduced to avoid the spread of diseases or new pandemics [2].

### 3.3. Environmental impact of livestock sea-trade

To protect the oceans and seas from contamination, the MARPOL 73/78 Convention was signed in 1973 and applies to all shipping worldwide. Its Annexes IV and V concern requirements and controls on operational discharges of effluent and animal carcasses<sup>148, 149</sup>.

Reg. 1/2005 in Art.11 imposes an obligation on transporters to have contingency plans in the event of emergencies, including procedures for managing sewage and animal carcasses. Art. 34 requires that means of transport be constructed in such a way to avoid leaking or falling out of animal faeces, litter, or feed, and must be cleaned and disinfected immediately after every transport of animals according to Reg. 1/2005.

Annex IV of MARPOL prohibits sewage release into the sea within a specified distance from the nearest land, unless otherwise provided.<sup>150</sup> Annex V forbids discharging animal carcasses in special areas: the Mediterranean and Black Sea.<sup>151</sup> Carcasses can be deposited at port reception facilities. According to MARPOL, vessels need to document details of waste disposal (including carcasses and manure) in a Garbage Record Book and to submit it to the Port State Control Officer of the signatory state. Before arrival in a port, ship operators should check the availability of a reception facility and any special handling requirements for that particular port. This information should be included in voyage planning according to Reg. 1/2005 and MARPOL.

<sup>146</sup> Food and Agriculture Organisation of the United Nations.

<sup>147</sup> <https://www.ilo.org/global/standards/maritime-labour-convention/lang-en/index.htm>

<sup>148</sup> Carcass – according to MARPOL terminology the expression “carcass” denominates bodies of animals loaded alive as cargo on board which perish during the journey or are

<sup>149</sup> <https://www.imo.org/en/KnowledgeCentre/ConferencesMeetings/Pages/Marpol.aspx>

<sup>150</sup> Regulation of Annex IV of MARPOL forbids discharging effluent into the waters unless the vessel has an approved treatment plant or is discharging via a comminuting and disinfecting unit (CDU) at a distance of >3nm from the nearest land, or untreated manure to the open sea at a distance of more than 12 nm from the nearest land while en route and proceeding at not less than 4 knots. <https://www.imo.org/en/OurWork/Environment/Pages/Sewage-Default.aspx>

<sup>151</sup> Special areas are defined in the MARPOL Convention that includes (*inter alia*): Mediterranean Sea area, Baltic Sea area, Black Sea area. <https://www.imo.org/en/OurWork/Environment/Pages/Special-Areas-Marpol.aspx>

## Disposal of animal carcasses

Very few ports for livestock vessels have carcass reception facilities, such as some ports in Spain, Egypt, or Israel<sup>152</sup> and not all of them accept animal carcasses for health reasons. For example, Israel does not accept animal carcasses [55]. Re-import to the EU of dead animals seems to be possible under specific circumstances described in the EU Regulations.<sup>153</sup> Under certain conditions, in exceptional situations only (where retention of carcasses on board could pose a risk for human and animal health due to high temperature and humidity), it is allowed to discharge carcasses split/cut in pieces at least 12 nm away from the nearest land. The procedure has to be entered in the Garbage Record Book. The exception does not cover carcasses of animals resulting from mortalities in excess of those generated during the normal operation of a ship. From welfare perspective, this exception should almost never be applied: if the temperature and humidity are so high that carcasses may pose a health threat, the welfare of animals is not safeguarded, and the journey should not have been approved<sup>154</sup>[56].

Despite lack of official data, illegal disposal of animal carcasses (carcasses discharged in special areas, without being treated, and potentially abusing the exception described above) seems to be a regular practise due to problems with reception facilities, additional expenses of carcass disposal, and requirements of EU law. This procedure has been reported by media and NGOs ([see Case study 17. More than 50 cases reported by media and NGOs since 2014](#)) (see Figure 14).

MARPOL violations have been reported as a formal complaint to the EU Commission in 2017 [57]. In 2020, EMSA was also notified of these serious environmental infringements [58]. No decision has been issued yet by the EU Commission or EMSA.

The problems described above remain unidentified in official documentation. This seems to be due by the fact that once EU animals leave European ports, the majority of MSs (except Ireland, see below) do not require feedback information on the number of injured, sick, or dead animals during sea transport, unloading or upon arrival at the destination in the third country [1]. Without information on number of dead animals it is not possible to control where animal carcasses were disposed of. Reports on injured, sick, or dead animals are required in intracommunity trade. In Europe, Irish CAs confirmed that during sea journeys to third countries in 2019 and 2020, 52 and 34 animals died on board, respectively. Ireland is not a major player in this trade, exporting annually about 20, 000 bovines.<sup>155</sup> Spain exports almost 150,000 bovines and over 750,000 ovines annually,<sup>156</sup> but Spanish authorities do not require such information, thus data about mortality are lacking.

NGO reports are in line with the results of the DG SANTE audit regarding lack of communication between EU MSs and countries of destination on the condition of animals on arrival. As a result, data are lacking, and drawing the consequences against entities responsible for violation of Regulation EC 1/2005 and MARPOL is severely hindered.

<sup>152</sup> Tarragona (Spain), Ashdod (Israel), Alexandria (Egypt), Global Integrated Shipping Information System (GISIS): <https://gis.isimo.org/Public/PRF/Browse.aspx>

<sup>153</sup> Art. 9(f) and Art. 41 of Reg. (EC) No 1069/2009, and from 21.04.2021: Art. 178 of Reg. (EU) No 2020/692.

<sup>154</sup> According to ANNEX 21 (point 2.12.6; 2.12.7; 2.12.8) of resolution MEPC.295(71).

<sup>155</sup> Data received from Irish Department of Agriculture, Food and the Marine by Ethical Farming Ireland.

<sup>156</sup> Data received from Spanish CAs by Animal Welfare Foundation (20.12.2019).



## Disposal of manure

Some ports in importing countries outside EU have reception facilities<sup>157</sup> for disposal of garbage<sup>158</sup>, such as Israel, Egypt, or Saudi Arabia<sup>159</sup> but not all of them accept manure for health reasons<sup>160</sup>. No EU ports accept animal waste coming from outside EU territory due to health rules<sup>161</sup>, and as Reg. 1/2005<sup>162</sup> requires cleaning and disinfecting the vehicle after every transport of animals or of any product which could affect animal health, vessels arriving in EU ports should be already cleaned and disinfected. In 2018, almost 700,000 cattle and over 2.2 million sheep were exported from the EU by sea [1], one journey lasting on average 5 days<sup>163</sup>. A cow is estimated to produce about 55 litres [59] and a sheep around two litres of manure per day. This means that during last 8 years an estimated 1,716,000,000<sup>164</sup> litres of sewage produced by cattle and sheep was accumulated on livestock vessels and could be discharged in the Mediterranean and Black Sea. Animal manure is usually mixed with pellet and straw, i.e., solid materials the disposal of which into sea is rigorously restricted. Please note that these figures do not include animals transported from South and North America to the Middle East or North Africa via the Mediterranean Sea (see Figure 15).

## Impact of sewage and animal carcass disposal into the sea

Besides producing garbage typical of all watercrafts, livestock vessels' cargo produces biological sewage. 50 percent of the wastewater entering the Mediterranean is untreated sewage<sup>165</sup> [60] and the Mediterranean Sea is considered to be the most polluted water in Europe [61]. Breaches of MARPOL lead to contamination of waters with different pathogens coming from animal manure, and microorganisms (including protozoa and bacteria) form dead bodies of animals [62]. These pathogens are a potential source of environmental pollution and infections in humans [63], especially when animals are ill or die on board. The most common hazard are zoonotic bacteria (*Salmonella* spp.<sup>166</sup>, *Campylobacter* spp.<sup>167</sup>, *Listeria monocytogenes*,<sup>168</sup> *Escherichia coli*<sup>169</sup>) from animal faeces [64]. Studies on faecal indicators, pathogenic bacteria and the *Perna perna*<sup>170</sup> mussel in the Southern Mediterranean found that the isolated bacteria were mostly potentially pathogenic<sup>171</sup> [65].

Livestock sea-trade is related to other pollution as well. In 2019 and 2020, 64% of vessels have been reported by PSC Officers to have other pollution deficiencies (such as segregation of oil and water ballast or quality of fuel oil)<sup>172</sup> violating the MARPOL Convention [3].

<sup>157</sup> Global Integrated Shipping Information System (GISIS): <https://gis.imo.org/Public/PRF/Browse.aspx>

<sup>158</sup> Garbage, as defined in MARPOL Annex V, means all kind of food wastes, domestic wastes and operational wastes, all plastics, cargo residues, incinerator ashes, cooking oil, fishing gear and animal carcasses generated during the normal operation of the ship and liable to be disposed of continuously or periodically, except those substances which are defined or listed in other Annexes to the Convention.

<sup>159</sup> Annex V - Regulation 1 - Definitions (marpoltraining.com):

[https://webaccounts.imo.org/Common/weblogin.aspx?App=GISISPublic&ReturnUrl=https%3a%2f%2fgis.imo.org%2fPublic%2fPRF%2fBrowse.aspx&error\\_message=interaction\\_required](https://webaccounts.imo.org/Common/weblogin.aspx?App=GISISPublic&ReturnUrl=https%3a%2f%2fgis.imo.org%2fPublic%2fPRF%2fBrowse.aspx&error_message=interaction_required)

<sup>160</sup> Information provided unofficially by captains of EU livestock vessels.

<sup>161</sup> Art 25, Chapter VIII of the Regulation 142/2011.

<sup>162</sup> Art.34, 2.1.a (ii) of EU 1/2005.

<sup>163</sup> Ship journeys between the ports of Southern Europe such as Sète (France), Tarragona (Spain), Cartagena (Spain), Koper (Slovenia), Rasa (Croatia), Midia (Romania), Sines (Portugal) and the ports in the Middle East last about five to eight days, if there are no major incidents.

<sup>164</sup> 700,000 cattle produce 38,500,000 litres of manure every day (700,000 animals x 55 litres). 2.2 million sheep produce 4,400,000 litres by sheep each day (2,200,000 animals x 2 litres). Multiplying this by the transport days (eg. 5 days) this means manure production of a minimum of 192,500,000 litres (38,500,000 litres x 5 days) of cattle manure and 22,000,000 (4,400,000 litres x 5days) litres of sheep manure.

<sup>165</sup> Including sewage from farms, houses, parks and beaches.

<sup>166</sup> *Salmonella*: bacteria that can cause severe disease: <https://www.cdc.gov/salmonella/general/index.html>

<sup>167</sup> *Campylobacter*: bacteria that infect humans and animals: <https://www.cdc.gov/campylobacter/symptoms.html>

<sup>168</sup> *Listeria monocytogenes*: bacteria causing listeriosis. It can be very dangerous for elderly people, pregnant women and newborn babies: <https://www.fda.gov/food/foodborne-pathogens/listeria-listeriosis>

<sup>169</sup> *Escherichia coli*: bacteria that can cause disease: <https://www.cdc.gov/healthypets/diseases/ecoli.html>

<sup>170</sup> A brown mussel harvested as a food it can accumulate large quantities of pathogenic microorganisms from the surrounding waters, thus acting as bio-indicator of coastal environments.

<sup>171</sup> Pathogenic bacteria such as *Escherichia coli*, *Salmonella*, *Staphylococcus*, *Klebsiella*, *Pseudomonas* and *Proteus*.

<sup>172</sup> Paris MoU - Overview of Deficiency Codes - 01 January 2021 (1).pdf





## 4. POLICY RECOMMENDATIONS AND SHORT TERM GOALS

### KEY FINDINGS

- The promotion of short-distance animal transport should become a priority, thus reducing the risk of disease transmission, which is higher with movement of animals over long distances, with potential negative effects on both animal and public health.
- The EU Commission should provide Member States with a set of more clear and legally binding rules than the current Regulation No. 1/2005 on animal transport. More specifically, these requirements shall cover improved procedures for livestock vessel approval; stricter requirements for livestock vessel construction (taking into account animal needs); veterinary supervision of sea journeys; detailed reporting of animal health status and mortalities; temperature and humidity measuring system; verification of crew competence; obligatory 24-hour rest of animals in port stables before loading onto vessel and more feasible contingency plans.
- Short term goals of the EU Commission should aim at: availability of quality data on animal welfare during sea journey and road transport in third countries; trainings for competent authorities; improving communication among port authorities and Member States; preventing disposal of animal carcasses and manure into the sea; sanctioning Member States not applying EU legislation; involving Port State Control authorities in checking aspects related to animal welfare and pollution with animal carcasses and manure.
- Short term goals of Member States should aim at: stricter transport authorisation procedures including thorough checks of transporters' certificates and contingency plans for different situations; stricter vessel approval procedures; suspending/withdrawing approvals of non-compliant vessels and efficient notification thereof; investing in port infrastructure ensuring animal welfare; requiring feedback information on animal health and mortalities on arrival at destination; before loading, verification whether the vessel complies with Reg. 1/2005; ensuring fitness of animals for further transport; cooperation with Port State Control in checking past deficiencies of vessels.

### 4.1. Policy recommendations

The transport of animals from the European Union is regulated by various legislative instruments, above all by Art. 13 of the TFEU<sup>173</sup> stipulating that the Union and its Member States shall pay full regard to the welfare requirement of animals as sentient beings<sup>174</sup>. Application of these standards in practice is only possible if the EU Commission provides appropriate legislative tools and Member States implement legislation evenly.

Besides raising concerns from an animal welfare perspective, transport of animals via sea - especially outside the Union - has a significant environmental impact. In order to achieve the objectives of the EU Farm to Fork Strategy<sup>175</sup> and the overarching EU Green Deal<sup>176</sup>, long-distance transport of animals within Europe and the transport of EU animals to third countries should be phased out; additionally, it must be assessed how current trade policies move towards the objectives of the two above-mentioned strategies, whose ultimate goal is to build a sustainable Europe.

<sup>173</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT>

<sup>174</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A12016E013>

<sup>175</sup> [https://ec.europa.eu/food/farm2fork\\_en](https://ec.europa.eu/food/farm2fork_en)

<sup>176</sup> [A European Green Deal | European Commission \(europa.eu\)](#)

Recital (5) of Reg. 1/2005 states that *“For reasons of animal welfare the transport of animals over long journeys, including animals for slaughter, should be limited as far as possible”*. Promotion of short-distance animal transportation would reduce the risk of disease transmission that is higher with movement of animals over long-distances, with potential negative effects on both animal and public health. It would also ensure a more efficient flow of foodstuffs, mitigating the impact of possible restrictions in the movement of human beings and animals due to disease outbreaks. The SARS COV-2 pandemic demonstrated to Member State governments and EU institutions how fragile our system is, due to its dependence on long-distance transport of farmed animals, and how much a local food chain is needed for food security reasons [2]. Short-distance transport via sea is likely to continue within the EU, especially because of some remote geographical areas. Therefore, the EU Commission should initiate hazard identification and *risk assessment* for sea transport of animal health and welfare, unfair competition, and environmental risks, as a basis for preventive policies, a legal framework and control measures.

In 2019, the European Parliament called on the EU Commission and the Member States to promote and shift towards the transport of meat and carcasses instead of live animals<sup>177</sup>. Evidence shows that such a shift is justified not only for animal health and welfare reasons, but also by environmental indicators, economic considerations, and existing practices<sup>178</sup>. The EU Commission should investigate possible tools for facilitating the trade in meat and animal products within the EU and outside.

In 2021, the Portuguese Presidency launched a questionnaire<sup>179</sup> to contribute to the planned evaluation and revision of Regulation (EC) No 1/2005, with questions on the strong and weak points of the Regulation, and with a special focus on sea transport on livestock vessels. All 27 Member States responded to the questionnaire. The results show that 70% of Member States are involved in combined road and sea transport by livestock vessels. The respondents' answers are in line with findings and recommendations of this research study. Several respondents identified extreme temperatures (very high or very low) as having a major impact on the welfare of the animals and stressed the importance of feedback on conditions during the journey and upon arrival of the animals. As regards transport by livestock vessel, crew training and competence (72%), organiser's obligations (67%), sea transporter's obligations (44%) and the definition/identification of the transporter and organiser (44%), were identified as the most difficult points to enforce. The respondents pointed to the need for improvement in several areas covered by this research study: contingency plans, records kept for the whole journey and communicated back to EU, livestock vessel approval processes including procedures specifying the vessel's technical requirements, the need for an animal welfare officer and a veterinarian on board, and verification of crew competence, communication among countries and harmonisation of checks.

With regard to the announced revision of Reg. 1/2005, the EU Commission should provide Member States with a set of clear and legally binding rules to regulate intra-EU sea transport of animals and related operations, including detailed requirements for the approval of vessels, reporting on animal health and welfare related issues, and measures to protect animals' well-being.

More specifically, these requirements shall cover:

- the approval of livestock vessels. Such requirements shall be based on Marine Order 43 of the Australian Maritime Safety Authority<sup>180</sup> and the World Animal Health (OIE) guidelines; only

<sup>177</sup> Council conclusions on animal welfare- an integral part of sustainable animal production- Council Conclusions (16 December 2019) 14975/19: [st14975-en19.pdf \(europa.eu\)](#)

<sup>178</sup> [Eurogroup for Animals A-strategy-to-reduce-and-replace-live-animal-transport.pdf \(eurogroupforanimals.org\)](#)

<sup>179</sup> Results of questionnaire to contribute to the planned evaluation and revision of Regulation (EC) No 1/2005 on the protection of animals during transport as regards long distance transport to third countries: [pdf \(europa.eu\)](#)

<sup>180</sup> Marine Order 43: [Marine Order 43 \(Cargo and cargo handling — livestock\) 2018 \(legislation.gov.au\)](#)

livestock vessels flying European and white-listed flags (Paris MoU) should be allowed to undergo the process of approval;

- an assessment should be shared with approach to the IMO, with the aim to provide input to the development of a global standard for all livestock vessels;
- the EU approval of vessels by a team of qualified experts (consisting of at least one marine surveyor, one marine technician, one veterinarian, and one behaviourist) attached to the EU central Authority and appointed to grant such approvals;
- the use of purpose-built or converted vessels, in which animal behaviour, welfare and needs have been incorporated in the vessel design,
- equipment of vessels with a sewage treatment plant and cold storage room to avoid sea pollution;
- the need for a veterinarian on board on each sea leg of the journey to treat or humanely kill injured or sick animals, and to ensure the ongoing monitoring of animal welfare and compliance with EU animal welfare and related law;
- mandatory reporting of illnesses/injuries and mortalities on vessels, during sea transport, unloading and onward transportation to the destination (as required by the Irish Regulation); the certificate of competence of each individual animal-handling crew member, covering animal behaviour and relevant provisions laid down in Annexes I, II, and IV of Reg. 1/2005;
- the preparation by veterinary competent authorities at the exit port of a report containing information about the animals loaded and their status, such as: (a) animals' characteristics (number, species, age and sex of the animals loaded), (b) individual animals' status (defined as general physical and psychological conditions to be assessed), (c) the number of animals refused at loading and reasons for refusal, and (d) the number of animals identified as unfit to continue the journey. This document could be checked on arrival in the third country by the official veterinarian and completed with the number of animals injured and/or dead. Within one month after completion of the journey such a report could be sent to the EU Commission and made publicly available on the DG SANTE website;
- mandatory measuring system and reporting on temperature and humidity in all the pens and decks of the livestock vessel where animals are located during the whole sea leg of the journey;
- a compulsory 24-hour rest of animals in ports' stables to enable the competent authorities conduct thorough inspection of animals' health and welfare as well as fitness to travel;
- the contingency plans for competent authorities at ports with procedures for emergencies and for the re-import of EU animals.

## 4.2. Short term goals to improve transport of animals by sea

Long-distance journeys of animals involving sea transport are approved by competent authorities in the EU, despite the fact that numerous reports by DG SANTE and NGOs point out deficiencies and infringements of Reg. 1/2005, indicating that animal welfare cannot be guaranteed during the journey.

To prevent unnecessary suffering of animals during the journey it is crucial that all Member States uniformly interpret and implement the provisions of Regulation 1/2005. Presently, implementation of this Regulation differs greatly among Member States, leading to unfair competition. The Union urgently needs to efficiently solve all current problems that have been identified, and to guarantee that Regulation 1/2005 is enforced by the EU Commission and uniformly implemented by Member States. The EU Commission is designing two projects for 2022 focussing on livestock vessels, aiming to improve contingency plans and the state of vessels through pre-loading inspections, and working with the European Maritime Safety Agency on procedures for livestock transport, allowing Member States

to see the history of vessels<sup>181</sup>. These two initiatives should take into account the recommendations of this chapter.

#### 4.2.1 Short term goals for the EU Commission

- The EU Commission should ensure quality data on animal welfare are available, for example by making audits and scientific research also during the sea journey and road transport at destination. Controls during the sea part of journey and in all destination countries should be performed as well.
- The EU Commission should facilitate trainings for staff of competent authorities to become qualified in strict implementation of Reg. 1/2005 and related procedures; facilitate tools to improve communication among port authorities and facilitate procedures for Member States to verify that Reg. 1/2005 has been complied with after animals leave EU territory, as set out in Art. 3 of Council Reg. 817/2010.
- To sanction Member States not applying EU legislation, the EU Commission should use its powers to initiate legal proceedings before the Court of Justice.
- The EU Commission should take immediate action to prevent livestock vessels from disposing of dead animals and manure into the sea, especially in protected areas.
- The European Maritime Safety Agency should advise the Port State Control authorities to inspect: if after the approval any additional structural changes have been made on a vessel that could have an impact on animal welfare; if livestock vessels treat sewage and dead animals according to the provisions of the MARPOL International Sewage Pollution Prevention Certificate; the records and confirmation of disposal of dead animals and excrement in the destination ports for the last 10 journeys; and check records in the Garbage Record Book and Garbage Management Plan for disposal of dead animals and manure.

#### 4.2.2 Short term goals for the Member States

The Member States and competent authorities at the place of departure and the exit point should put systems in place to ensure that EU animal welfare legislation is observed and enforced until the destination in a third country, in line with European Court of Justice ruling C-424/13<sup>182</sup>. The Member States shall implement the Network Document<sup>183</sup> as the minimum requirement for approval of vessels, remedy the shortcomings identified in DG SANTE reports<sup>184</sup> and allocate more resources and staff at exit points, ensure better training for competent authorities at exit points, and use experts in ports to improve compliance.

Competent authorities at the place of departure and the exit point (port) should:

- Consider weather conditions at all parts of journeys until animals reach the destination (this includes exit port, sea journey and destination country) when authorizing a transport;
- Require feedback information on the number of animals that become injured, ill, or die during sea transport, unloading or upon arrival at the destination in the third country;
- Have procedures to thoroughly check certificates for transporters by sea (Art. 11 of Reg. 1/2005);

<sup>181</sup> [https://multimedia.europarl.europa.eu/en/committee-of-inquiry-on-protection-of-animals-during-transport\\_20210419-1645-COMMITTEE-ANIT\\_vd](https://multimedia.europarl.europa.eu/en/committee-of-inquiry-on-protection-of-animals-during-transport_20210419-1645-COMMITTEE-ANIT_vd)

<sup>182</sup> <https://curia.europa.eu/juris/liste.jsf?num=C-424/13&language=EN>

<sup>183</sup> Network Document on Livestock Vessels. Guidance prepared by MS NCPs and supported by DG(SANTE).

<sup>184</sup> DG(SANTE)2019-6835, "Overview report on welfare of animals exported by sea," European Commission, 2019.

- Ensure valid contingency plans for different emergencies (mechanical breakdowns of vessels, delays during (un)loading, bad weather, ill/injured animals, emergency killing or euthanasia of animals in ports and the disposal of the carcasses, etc.);
- Invest in improvements of port infrastructure ensuring animal welfare (shade, stables, correct angle of ramps, systems to prevent animals from escaping, etc.);
- Ensure that Art. 19.1(c) of Reg. 1/2005 is taken into account before granting a new certificate of approval for problematic vessels. This is directed especially to competent authorities in Romania, the Member State issuing the highest number of certificates of approval;
- Suspend or withdraw the certificate of approval of non-compliant vessels, and notify all Member State contact points (NCPs) thereof without delay, as required by Art. 26.7 of Reg. 1/2005;
- Before loading takes place, verify that the vessel complies with Reg. 1/2005, in particular with its Art. 3 (c) (d) (e) (f) (g) and Art. 20.1 (a) (c) in connection with Annex I, Chapter IV, section 1, Art. 6, 8 and 2 (b);
- Ensure the fitness of animals for transport, and that loading operations are carried out in compliance with Reg. 1/2005;
- Check past deficiencies and detentions in the THETIS database EMSA with the help of the Port State Control (PSC).

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## ANNEX I. TABLES

**Table 1. Exports of cattle and sheep by sea from the EU to Third countries (2017-2018)**

	2017		2018		
Country	Number of animals	Number of consignments	Number of animals	Number of animals	Species
Croatia	67 205	78	65 269	98	sheep/goats
	107 843		129 403		cattle
France	5 548	69	2 323	64	sheep/goats
	61 998		69 625		cattle
Ireland	0	13	0	9	sheep/goats
	32 337		16 546		cattle
Portugal	155 534	32	276 390	44	sheep/goats
	58 374		69 710		cattle
Romania	1 162 737	200	1 254 530	179	sheep/goats
	127 285		83 982		cattle
Slovenia	21 924	71	17 978	64	sheep/goats
	84 795		77 013		cattle
Spain	826 916	172	626 390	200	sheep/goats
	181 571	233	179 411		cattle

Source: [DG\(SANTE\)2019-6835](#).

**Table 2. Exports of cattle by road and sea from the EU to Third countries (2017-2018)**

<b>CATTLE</b>	<b>Croatia</b>		<b>France</b>		<b>Ireland</b>		<b>Portugal</b>		<b>Romania</b>		<b>Slovenia</b>		<b>Spain</b>	
	<b>2017</b>	<b>2018</b>	<b>2017</b>	<b>2018</b>	<b>2017</b>	<b>2018</b>	<b>2017</b>	<b>2018</b>	<b>2017</b>	<b>2018</b>	<b>2017</b>	<b>2018</b>	<b>2017</b>	<b>2018</b>
<b>Lebanon</b>	34%	33%	19%	7%	-	-	-	-	-	-	46%	37%	22%	25%
<b>Egypt</b>	3%	6%	-	-	-	-	-	-	-	-	9%	6%	4%	-
<b>Jordan</b>	2%	-	-	-	-	-	-	-	7%	12%	1%	-	-	-
<b>Israel</b>	20%	23%	9%	3%	-	-	99%	97%	38%	44%	43%	53%	-	-
<b>Libya</b>	-	-	-	-	-	-	-	-	11%	21%	-	-	41%	32%
<b>Iraq</b>	-	5%	-	-	-	-	-	-	-	-	-	-	-	-
<b>Turkey</b>	41%	33%	-	1%	100%	93%	-	-	44%	22%	2%	-	20%	27%
<b>Morocco</b>	-	-	16%	15%	-	4%	1%	1%	-	-	-	-	7%	10%
<b>Senegal</b>	-	-	15%	23%	-	-	-	-	-	-	-	-	-	-
<b>Algeria</b>	-	-	40%	45%	-	-	-	1%	-	-	-	-	6%	7%
<b>Tunisia</b>	-	-	-	7%	-	2%	-	-	-	-	-	-	-	-
<b>Syria</b>	-	-	-	-	-	-	-	-	-	-	-	4%	-	-
<b>Rwanda</b>	-	-	-	-	-	1%	-	-	-	-	-	-	-	-
<b>Saudi Arabia</b>	-	15%	-	10%	-	1%	-	8%	-	8%	-	8%	-	24%

Source: Eurostat Database.

**Table 3. Exports of sheep by road and sea from the EU to Third countries (2017-2018)**

SHEEP/ GOATS	Croatia		France		Ireland		Portugal		Romania		Slovenia		Spain	
	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
<b>Lebanon</b>	25%	21%	96%	98%	-	-	-	-	3%	14%	100%	68%	2%	1%
<b>Jordan</b>	10%	-	-	-	-	-	-	-	60%	50%	-	-	-	-
<b>Israel</b>	22%	54%	-	-	-	-	97%	86%	-	-	-	32%	-	-
<b>Libya</b>	42%	25%	-	-	-	-	-	-	36%	36%	-	-	98%	99%
<b>Senegal</b>	-	-	-	2%	-	-	-	-	-	-	-	-	-	-
<b>Iran</b>	-	-	4%	-	-	-	-	-	-	-	-	-	-	-
<b>Occupied Palestine</b>	-	-	-	-	-	-	3%	14%	-	-	-	-	-	-
<b>Saudi Arabia</b>	-	-	-	-	-	-	-	-	-	1%	-	-	-	-

Source: Eurostat Database.

**Table 4. Exports of cattle and sheep by sea and road from the EU (2017-2018)**

	2017				2018			
Animals	sheep/goats		cattle		sheep/goats		cattle	
Country	DG SANTE (by sea)	Eurostat (by sea and road)	DG SANTE (by sea)	Eurostat (by sea and road)	DG SANTE (by sea)	Eurostat (by sea and road)	DG SANTE (by sea)	Eurostat (by sea and road)
<b>Croatia</b>	67 205	67 143	107 843	108 419	65 269	61 339	129 403	124 076
<b>France</b>	5 548	5 772	61 998	71 789	2 323	74 112	69 625	79 581
<b>Ireland</b>	0	0	32 337	20 303	0	0	16 546	11 510
<b>Portugal</b>	155 534	172 993	58 374	57 208	276 390	275 851	69 710	70 069
<b>Romania</b>	1 162 737	1 141 727	127 285	137 739	1 254 530	1 197 743	83 982	69 631
<b>Slovenia</b>	21 924	19 660	84 795	70 496	17 978	17 531	77 013	69 715
<b>Spain</b>	826 916	825 553	181 571	138 535	626 390	628 992	179 411	195 307
<b>sum</b>	<b>2 239 864</b>	<b>2 232 848</b>	<b>654 203</b>	<b>604 489</b>	<b>2 242 880</b>	<b>2 255 568</b>	<b>625 690</b>	<b>619 889</b>

Source: DG(SANTE)2019-6835 and Eurostat Database.

**Table 5. Age and conversion year of livestock vessels approved by the European Union**

IMO number	Vessel name	Year of build	Age	Previous category	Conversion year	Age at time of conversion
7819876	<i>Abdullah</i>	1980	41	general cargo vessel	2016	36
8017970	<i>Adel I</i>	1981	40	car carrier	2017	36
8813037	<i>Al Farouk</i>	1990	31	Ro-Ro	1999	9
6817003	<i>Al Mabrouka 10</i>	1968	53	general cargo vessel	1994	26
9152806	<i>Alkhairat 9</i>	1998	23	general cargo vessel	2016	18
9113719	<i>Alondra</i>	1995	26	general cargo vessel	2017	22
7422544	<i>Anakin</i>	1976	45	general cargo vessel	2011	35
7510858	<i>Apus</i>	1976	45	general cargo vessel	1994	18
8200577	<i>Atlantic M</i>	1983	38	car carrier	2010	27
9360788	<i>Bahijah</i>	2010	11	livestock	n/a	n/a
7614848	<i>Barhom</i>	1978	43	general cargo vessel	2011	33
7607429	<i>Barhom II</i>	1977	44	general cargo vessel	2012	35
7405091	<i>Barhom III</i>	1976	45	general cargo vessel	2017	41
8506361	<i>Bashar One Transport</i>	1986	35	container vessel	1999	13
7396630	<i>Blue Moon I</i>	1975	46	general cargo vessel	2012	37
9238416	<i>Brahman Express</i>	2002	19	livestock	n/a	n/a
7368815	<i>Britta K</i>	1974	47	general cargo vessel	2006	32
7601073	<i>Bruna</i>	1977	44	general cargo vessel	2015	38
7303231	<i>Dragon</i>	1973	48	general cargo vessel	1982	9
6718427	<i>Elbeik</i>	1967	54	general cargo vessel	1994	27
7407324	<i>Elevation</i>	1976	45	car carrier	2010	34
6703343	<i>Equality</i>	1966	55	Ro-Ro	1981	15
6609779	<i>Etab</i>	1966	55	general cargo vessel	1980	14
7300992	<i>F.M.Spiridon</i>	1973	48	general cargo vessel	2009	36
7310507	<i>Fidelity</i>	1973	48	container vessel	1985	12



IMO number	Vessel name	Year of build	Age	Previous category	Conversion year	Age at time of conversion
7104972	<i>Freedom</i>	1971	50	general cargo vessel	1998	27
7703259	<i>Gamma Star</i>	1978	43	general cargo vessel	2017	39
9621211	<i>Gelbray Express</i>	2014	7	livestock	n/a	n/a
8009076	<i>Gulf Livestock 2</i>	1985	36	Ro-Ro	2014	29
7349871	<i>Harmony Livestock</i>	1973	48	general cargo vessel	2012	39
9004413	<i>Holstein Express</i>	1991	30	Ro-Ro	2009	18
7015509	<i>Janay</i>	1970	51	general cargo vessel	2011	41
9262895	<i>Jawan</i>	2003	18	container vessel	2015	12
7639616	<i>Jersey</i>	1977	44	general cargo vessel	2012	35
7901693	<i>Julia L.S.</i>	1980	41	general cargo vessel	2016	36
8215807	<i>Karazi</i>	1983	38	general cargo vessel	2000	17
6519144	<i>Karim Allah</i>	1965	56	Ro-Ro	2001	36
7022356	<i>Kenoz</i>	1970	51	general cargo vessel	1982	12
6518425	<i>Lady Maria</i>	1965	56	general cargo vessel	2010	45
7223041	<i>Lady Rasha</i>	1972	49	general cargo vessel	2012	40
6927092	<i>Lss Success</i>	1970	51	Ro-Ro	1998	28
7113624	<i>Mariona</i>	1971	50	general cargo vessel	2016	45
7222982	<i>Mariona Star</i>	1972	49	general cargo vessel	2013	41
6829082	<i>Maysa</i>	1968	53	general cargo vessel	1991	23
8300157	<i>Mira</i>	1983	38	Ro-Ro	2014	31
7128760	<i>Nabolsi I</i>	1972	49	general cargo vessel	1996	24
7611547	<i>Nader-A</i>	1977	44	general cargo vessel	2013	36
7903029	<i>Neameh</i>	1979	42	Ro-Ro	2012	33
7615309	<i>Nelore</i>	1979	42	Ro-Ro	2010	31
7913153	<i>Noa</i>	1979	38	reefer	2011	32
7529940	<i>Norland</i>	1976	45	palletized cargo vessel	2010	34

IMO number	Vessel name	Year of build	Age	Previous category	Conversion year	Age at time of conversion
8200565	<i>North Star I</i>	1983	38	car carrier	2010	27
9232852	<i>Ocean Drover</i>	2002	19	<i>livestock</i>	n/a	n/a
9360776	<i>Ocean Swagman</i>	2009	12	<i>livestock</i>	n/a	n/a
6401218	<i>Omega Livestock</i>	1964	53	general cargo vessel	1980	16
8917742	<i>Omega Star</i>	1991	30	general cargo vessel	2017	26
7041053	<i>Pacific M</i>	1970	51	general cargo vessel	1984	14
7026871	<i>Phoenix I</i>	1971	48	container vessel	2000	29
7711866	<i>Phoenix III</i>	1978	43	reefer	2011	33
7405089	<i>Princess Hiyam</i>	1975	46	general cargo vessel	2012	37
7920675	<i>Queen Hind</i>	1980	39	car carrier	2017	37
9186390	<i>Queensland</i>	1998	23	container vessel	2017	19
7026663	<i>Rami M</i>	1970	48	reefer	1994	24
7808463	<i>Sarah M</i>	1979	42	reefer	2014	35
6422303	<i>Sea Star Livestock</i>	1964	57	general cargo vessel	2010	46
7311329	<i>Spiridon II</i>	1973	48	general cargo vessel	2011	38
7406772	<i>Suha Queen II</i>	1975	46	general cargo vessel	2011	36
7708807	<i>Taiba</i>	1978	43	reefer	2010	32
7910888	<i>Talia</i>	1980	41	general cargo vessel	2016	36
8701387	<i>Transporter</i>	1987	34	car carrier	2010	23
7504158	<i>Trust I</i>	1975	46	general cargo vessel	2015	40
8614273	<i>Tulip</i>	1987	34	car carrier	2019	32
7021821	<i>Unimar Livestock</i>	1970	51	container vessel	1983	13
9057214	<i>Uranus II</i>	1992	29	general cargo vessel	2019	27
8129254	<i>Uranus L</i>	1982	39	general cargo vessel	2016	34
7931985	<i>Victory</i>	1981	40	Ro-Ro	2012	31
7819113	<i>Yosor</i>	1981	40	container vessel	2011	30
9109079	<i>Zad Elkhir</i>	1995	25	container vessel	2015	20

Source: Robin des Bois, Animal Welfare Foundation, Tierschutzbund Zurich Report 78 EU-approved livestock carriers

**Table 6. List of livestock vessels approved by the European Union vs flag and owner**

IMO number	Vessel name	EU-approved	Flag	Flag performance	Owner
7819876	<i>Abdullah</i>	Romania	Tanzania	Black - medium to high risk	undisclosed
8017970	<i>Adel I</i>	Croatia	Jamaica	not ranked	Livestock Express Corp
8813037	<i>Al Farouk</i>	Spain	Sierra Leone	Black - medium risk	Altair Shipping & Trading Corp
6817003	<i>Al Mabrouka 10</i>	Romania	Sierra Leone	Black - medium risk	Rabunion Maritime Agency Sarl
9152806	<i>Alkhairat 9</i>	Croatia	Jordan	not ranked	Coral Technical Services
9113719	<i>Alondra</i>	Ireland-Portugal	Panama	White	Corral Line ApS
7422544	<i>Anakin</i>	Spain	Palau	Black - medium to high risk	undisclosed
7510858	<i>Apus</i>	Romania	Togo	Black - high risk	Unifleet Management Co SA
8200577	<i>Atlantic M</i>	Romania-Ireland	Panama	White	Naseem Al Bahar General Trading LLC Co
9360788	<i>Bahijah</i>	Portugal	Marshall Islands	White	Korkyra Shipping Ltd
7614848	<i>Barhom</i>	France	Tanzania	Black - medium to high risk	Altair Shipping & Trading Corp
7607429	<i>Barhom II</i>	Romania	Tanzania	Black - medium to high risk	Altair Shipping & Trading Corp
7405091	<i>Barhom III</i>	Romania	Palau	Black - medium to high risk	Le Havre Maritime Co Ltd
8506361	<i>Bashar One Transport</i>	Romania	Panama	White	Coral Technical Services
7396630	<i>Blue Moon I</i>	France	Togo	Black - high risk	Arwad Trading FZE
9238416	<i>Brahman Express</i>	Portugal	Luxemburg	White	Livestock Express BV
7368815	<i>Britta K</i>	Romania	Sierra Leone	Black - medium risk	Rabunion Maritime Agency Sarl
7601073	<i>Bruna</i>	Spain	Comoros	Black - high risk	IMS Istanbul Ltd
7303231	<i>Dragon</i>	Romania	Togo	Black - high risk	Rana Maritime Services SA

IMO number	Vessel name	EU-approved	Flag	Flag performance	Owner
6718427	<i>Elbeik</i>	Romania	Togo	Black - high risk	Rana Maritime Services SA
7407324	<i>Elevation</i>	Romania	Lebanon	Grey	Ania Marine Ltd
6703343	<i>Equality</i>	France	Lebanon	Grey	Mary Marine Ltd
6609779	<i>Etab</i>	Romania	Comoros	Black - high risk	ADCO SAL
7300992	<i>F.M.Spiridon</i>	France	Togo	Black - high risk	Murr Shipping SA
7310507	<i>Fidelity</i>	France	Lebanon	Grey	Mary Marine Ltd
7104972	<i>Freedom</i>	France	Lebanon	Grey	Ania Marine Ltd
7703259	<i>Gamma Star</i>	Romania	Sierra Leone	Black - medium risk	Karazi Shipping Co Ltd
9621211	<i>Gelbray Express</i>	Portugal	Singapore	White	Livestock Express BV
8009076	<i>Gulf Livestock 2</i>	Romania	Panama	White	Gulf Navigation
7349871	<i>Harmony Livestock</i>	Romania	Tanzania	Black - medium to high risk	Black Sea Shipmanagement
9004413	<i>Holstein Express</i>	Ireland-Portugal	Luxemburg	White	Livestock Express BV
7015509	<i>Janay</i>	Romania	Togo	Black - high risk	AMJ Marine Services
9262895	<i>Jawan</i>	Romania	Panama	White	MarConsult Schiffahrt GmbH & Co KG
7639616	<i>Jersey</i>	Romania	Togo	Black - high risk	Diabco Management Ltd
7901693	<i>Julia L.S.</i>	Romania	Tanzania	Black - medium to high risk	MGM Marine Shipping Srl
8215807	<i>Karazi</i>	Romania	Sierra Leone	Black - medium risk	Uni-Marine Management
6519144	<i>Karim Allah</i>	Croatia	Lebanon	Grey	Talia Shipping Line Co SARL
7022356	<i>Kenoz</i>	Romania	Panama	White	Hijazi & Ghosheh Co
6518425	<i>Lady Maria</i>	Romania	Tanzania	Black - medium to high risk	Mina Group Shipping Ltd
7223041	<i>Lady Rasha</i>	Romania	Tanzania	Black - medium to high risk	Mina Group Shipping Ltd
6927092	<i>Lss Success</i>	Romania	Panama	White	RTSS Maritime Services LLC
7113624	<i>Mariona</i>	Romania	Tanzania	Black - medium to high risk	Mariona Maritime Co SA
7222982	<i>Mariona Star</i>	Romania	Tanzania	Black - medium to high risk	Mina Group Shipping Ltd
6829082	<i>Maysa</i>	Romania	Panama	White	Black Sea Shipmanagement

IMO number	Vessel name	EU-approved	Flag	Flag performance	Owner
8300157	<i>Mira</i>	Portugal	Comoros	Black - high risk	Livestock Ship Management SA
7128760	<i>Nabolsi I</i>	Spain	Panama	White	RJA Group SA
7611547	<i>Nader -A</i>	Romania	Togo	Black - high risk	AMJ Marine Services
7903029	<i>Neameh</i>	Romania	Panama	White	Arab Ship Management Ltd
7615309	<i>Nelore</i>	France	Togo	Black - high risk	Nelore Shipping SA
7913153	<i>Noa</i>	Romania	Comoros	Black - high risk	Florencio Shipping Co
7529940	<i>Norland</i>	Slovenia	Togo	Black - high risk	Elbeco SAL
8200565	<i>North Star I</i>	Romania - Ireland	Panama	White	Naseem Al Bahar General Trading LLC Co
9232852	<i>Ocean Drover</i>	Portugal	Singapore	White	Wellard
9360776	<i>Ocean Swagman</i>	Portugal	Singapore	White	Wellard
6401218	<i>Omega Livestock</i>	Romania	Togo	Black - high risk	Rexincorp Bay Inc
8917742	<i>Omega Star</i>	Romania	Sierra Leone	Black - medium risk	Karazi Shipping Co Ltd
7041053	<i>Pacific M</i>	Romania	Togo	Black - high risk	Unifleet Management Co SA
7026871	<i>Phoenix I</i>	Romania	Panama	White	Bovicom Holding BV
7711866	<i>Phoenix III</i>	Romania	Panama	White	Bovicom Holding BV
7405089	<i>Princess Hiyam</i>	France	Togo	Black - high risk	Awad Aeed Al-Oadini Est
7920675	<i>Queen Hind</i>	Romania	Palau	Black - medium to high risk	MGM Marine Shipping Srl
9186390	<i>Queensland</i>	Spain	Liberia	White	Elbeco SAL
7026663	<i>Rami M</i>	France	Lebanon	Grey	Rami Shipping Management Sarl
7808463	<i>Sarah M</i>	Romania - Ireland	Panama	White	DMS Line SA
6422303	<i>Sea Star Livestock</i>	Romania	Togo	Black - high risk	Black Sea Shipmanagement
7311329	<i>Spiridon II</i>	Spain	Togo	Black - high risk	Murr Shipping SA
7406772	<i>Suha Queen II</i>	France	Togo	Black - high risk	Arwad Trading FZE
7708807	<i>Taiba</i>	Romania	Tanzania	Black - medium to high risk	Faros Shipping Co

IMO number	Vessel name	EU-approved	Flag	Flag performance	Owner
7910888	<i>Talia</i>	Romania	Lebanon	Grey	Talia Shipping Line Co SARL
8701387	<i>Transporter</i>	Romania	Panama	White	Naseem Al Bahar General Trading LLC Co
7504158	<i>Trust I</i>	Romania	Togo	Black - high risk	Faros Shipping Co
8614273	<i>Tulip</i>	Romania	Lebanon	Grey	ADCO SAL
7021821	<i>Unimar Livestock</i>	Romania	Togo	Black - high risk	Union Commercial Co Sarl
9057214	<i>Uranus II</i>	Portugal	Sierra Leone	Black - medium risk	Uranus Denizcilik Sanayi ve Ticaret Ltd
8129254	<i>Uranus L</i>	Portugal	Sierra Leone	Black - medium risk	Uranus Denizcilik Sanayi ve Ticaret Ltd
7931985	<i>Victory</i>	France	Lebanon	Grey	Ania Marine Ltd
7819113	<i>Yosor</i>	Romania	Panama	White	Faros Shipping Co
9109079	<i>Zad Elkhir</i>	Romania	Panama	White	Al-Wareed Co

Source: Robin des Bois, Animal Welfare Foundation, Tierschutzbund Zurich Report 78 EU-approved livestock carriers

**Table 7. List of deficiencies of livestock vessels approved by the European Union**

Deficiencies category	Number of deficiencies	% of deficiencies	Number of vessels	% of vessels
Certificates and documentation	469	19%	71	91%
Safety of Navigation	352	14%	70	90%
MLC, 2006	274	11%	61	78%
Fire Safety	224	9%	66	85%
Lifesaving appliances	179	7%	61	78%
Working-Labour-Living Conditions	164	7%	53	68%
Propulsion and auxiliary machinery	127	5%	46	59%
Structural Conditions	112	4%	43	55%
Emergency Systems	109	4%	46	59%
Water/Weathertight conditions	109	4%	48	62%
Pollution prevention - MARPOL	104	4%	50	64%
Radio Communications	80	3%	44	56%
ISM	74	3%	43	55%
Other Type of Deficiencies	28	1%	24	31%
Alarms	25	1%	22	28%
Load lines	20	1%	10	13%

Deficiencies category	Number of deficiencies	% of deficiencies	Number of vessels	% of vessels
ISPS	19	1%	11	14%
Structural Safety	16	1%	11	14%
Ballast Water Management Plan	6	0%	2	3%
Operational deficiencies	6	0%	6	8%
Food and catering	4	0%	4	5%
Cargo operations incl. equipment	2	0%	2	3%
Dangerous goods	1	0%	1	1%

Source: Robin des Bois, Animal Welfare Foundation, Tierschutzbund Zurich Report 78 EU-approved livestock carriers

**Table 8. List of detentions of livestock vessels approved by the European Union**

IMO number	Vessel name	Number of detentions	Year of detention
7819876	<i>Abdullah</i>	13	1999, 2003, 2004, 2005 (2), 2006, 2007, 2008, 2009, 2012, 2015 (2), 2017
8017970	<i>Adel I</i>	3	2010, 2011, 2015
8813037	<i>Al Farouk</i>	2	2003, 2013
6817003	<i>Al Mabrouka 10</i>	9	2001, 2006, 2008 (2), 2009, 2010, 2014, 2015, 2017
9152806	<i>Alkhairat 9</i>	2	2018 (2)
9113719	<i>Alondra</i>	1	2009
7422544	<i>Anakin</i>	12	2006 (3), 2007 (4), 2008 (3), 2009, 2011
7510858	<i>Apus</i>	4	2001, 2004 (2), 2007
8200577	<i>Atlantic M</i>	3	2009, 2018, 2020
9360788	<i>Bahijah</i>	0	n/a
7614848	<i>Barhom</i>	7	1998, 1999, 2006 (2), 2007, 2009, 2014
7607429	<i>Barhom II</i>	6	2003, 2004, 2005, 2007 (2), 2009
7405091	<i>Barhom III</i>	11	1998, 1999 (3), 2004, 2005 (3), 2006 (3), 2016
8506361	<i>Bashar One Transport</i>	2	2001, 2013
7396630	<i>Blue Moon I</i>	9	2003, 2004, 2008, 2009, 2010, 2011, 2017, 2018 (2)
9238416	<i>Brahman Express</i>	0	n/a
7368815	<i>Britta K</i>	2	1998, 2001
7601073	<i>Bruna</i>	5	2002, 2011 (2), 2018, 2020
7303231	<i>Dragon</i>	4	2007, 2009, 2014, 2017
6718427	<i>Elbeik</i>	9	2003, 2006 (2), 2013 (2), 2015 (2), 2017, 2020
7407324	<i>Elevation</i>	0	n/a
6703343	<i>Equality</i>	1	1999



IMO number	Vessel name	Number of detentions	Year of detention
6609779	<i>Etab</i>	16	1999 (2), 2003 (2), 2004 (2), 2005, 2006, 2007, 2010, 2012, 2013, 2014, 2019, 2020 (2)
7300992	<i>F.M.Spiridon</i>	6	2000, 2005, 2006, 2008, 2009, 2014
7310507	<i>Fidelity</i>	5	2004, 2011, 2015, 2016, 2018
7104972	<i>Freedom</i>	3	1999, 2003, 2011
7703259	<i>Gamma Star</i>	2	2003, 2015
9621211	<i>Gelbray Express</i>	2	2017, 2018
8009076	<i>Gulf Livestock 2</i>	1	2019
7349871	<i>Harmony Livestock</i>	3	2008 (2), 2010
9004413	<i>Holstein Express</i>	1	2020
7015509	<i>Janay</i>	17	1998, 2004, 2005, 2007 (3), 2008 (5), 2009 (2), 2010, 2013, 2014, 2019
9262895	<i>Jawan</i>	1	2016
7639616	<i>Jersey</i>	13	1998, 2005, 2007, 2008 (2), 2009, 2011 2012, 2014 (2), 2015, 2016 (2)
7901693	<i>Julia L.S.</i>	8	1999, 2009, 2010 (2), 2011, 2017 (2), 2018
8215807	<i>Karazi</i>	2	2010, 2019
6519144	<i>Karim Allah</i>	5	2000 (2), 2001, 2002 (2)
7022356	<i>Kenoz</i>	3	2004 (2), 2016
6518425	<i>Lady Maria</i>	4	2003 (2), 2005, 2015
7223041	<i>Lady Rasha</i>	7	2001, 2005, 2007, 2008 (2), 2015 (2)
6927092	<i>Lss Success</i>	4	2001, 2014, 2015, 2017
7113624	<i>Mariona</i>	5	2006, 2007, 2008, 2014, 2015
7222982	<i>Mariona Star</i>	15	1999, 2000, 2001 (2), 2004, 2005, 2006, 2007, 2008 (2), 2009 (3), 2012, 2017
6829082	<i>Maysa</i>	8	2003, 2010, 2011, 2012, 2013, 2015 (2), 2019
8300157	<i>Mira</i>	7	2004, 2005 (2), 2012, 2015, 2018, 2020
7128760	<i>Nabolsi I</i>	2	2007, 2012
7611547	<i>Nader A</i>	3	2015, 2016, 2017
7903029	<i>Neameh</i>	2	2006, 2016
7615309	<i>Nelore</i>	8	2004, 2005 (4), 2006 (2), 2011
7913153	<i>Noa</i>	7	1998, 2005, 2006, 2008, 2011, 2012, 2016
7529940	<i>Norland</i>	1	2004

IMO number	Vessel name	Number of detentions	Year of detention
8200565	<i>North Star 1</i>	2	2014 (2)
9232852	<i>Ocean Drover</i>	3	2011, 2014, 2016
9360776	<i>Ocean Swagman</i>	0	n/a
6401218	<i>Omega Livestock</i>	5	2000, 2002, 2003, 2006, 2010
8917742	<i>Omega Star</i>	4	2004, 2008, 2013, 2016
7041053	<i>Pacific M</i>	4	2007, 2011, 2016, 2017
7026871	<i>Phoenix I</i>	8	2001, 2005, 2006, 2010, 2011, 2015, 2017, 2018
7711866	<i>Phoenix III</i>	8	1999 (2), 2001 (3), 2007, 2008, 2015
7405089	<i>Princess Hiyam</i>	8	1999, 2004, 2007 (2), 2008, 2009, 2012, 2017
7920675	<i>Queen Hind</i>	3	2008, 2011, 2018
9186390	<i>Queensland</i>	0	n/a
7026663	<i>Rami M</i>	8	2000, 2002, 2003, 2004 (3), 2012
7808463	<i>Sarah M</i>	2	2003, 2019
6422303	<i>Sea Star Livestock</i>	10	1998, 1999, 2000 (2), 2001 (3), 2007, 2015, 2016
7311329	<i>Spiridon II</i>	8	2009 (2), 2010 (2), 2012, 2015, 2018, 2020
7406772	<i>Suha Queen II</i>	9	2002, 2007, 2013, 2015 (2), 2016 (2), 2019, 2020
7708807	<i>Taiba</i>	8	2001, 2003, 2005, 2006 (2), 2010 (2), 2016
7910888	<i>Talia</i>	5	2009, 2010, 2012 (2), 2013
8701387	<i>Transporter</i>	2	2007, 2013
7504158	<i>Trust I</i>	6	2001, 2002, 2008, 2010, 2011, 2018
8614273	<i>Tulip</i>	1	2014
7021821	<i>Unimar Livestock</i>	4	2006, 2007, 2010, 2013
9057214	<i>Uranus II</i>	14	1999, 2005, 2006, 2008 (2), 2010, 2012, 2013, 2014, 2018 (2), 2019, 2020
8129254	<i>Uranus L</i>	9	1998, 2002, 2005 (2), 2012, 2013, 2017, 2018, 2019
7931985	<i>Victory</i>	7	2003, 2004, 2007 (2), 2009, 2010 (2)
7819113	<i>Yosor</i>	6	2010, 2011, 2012 (2), 2013, 2014
9109079	<i>Zad Elkhir</i>	2	2011, 2017

Source: Robin des Bois, Animal Welfare Foundation, Tierschutzbund Zurich Report 78 EU-approved livestock carriers

**Table 9. List of livestock vessels approved by the European Union banned from Paris MoU**

IMO number	Vessel name	Ban	Year of the ban	Ban duration	Number of detentions
7396630	<i>Blue Moon I</i>	1	2018	3 months	9
6718427	<i>Elbeik</i>	1	2015	3 months	9
6609779	<i>Etab</i>	2	1) 2014 2) 2020	1) 3 months 2) 12 months	16
7639616	<i>Jersey</i>	2	1) 2014 2) 2016	3 months	13
7901693	<i>Julia L.S.</i>	1	2011	3 months	8
7611547	<i>Nader A</i>	1	2017	3 months	3
7406772	<i>Suha Queen II</i>	1	2015	3 months	9
7910888	<i>Talia</i>	1	2013	3 months	5
9057214	<i>Uranus II</i>	1	2020	3 months	14

Source: Robin des Bois, Animal Welfare Foundation, Tierschutzbund Zurich Report 78 EU-approved livestock carriers

**Table 10. List of online publications on carcasses of EU animals washed up on shores**

Date	Animal /s	Country where animal was found	Media	Link
13.01.2014	1 cow	United Kingdom	BBC News UK	<a href="https://www.bbc.com/news/uk-england-dorset-25709550">https://www.bbc.com/news/uk-england-dorset-25709550</a>
10.01.2014	2 cows	Denmark	Sveriges Radio	<a href="https://sverigesradio.se/artikel/5751152">https://sverigesradio.se/artikel/5751152</a>
22.01.2014	10 cows	Denmark, Sweden	1. Daily Mail UK 2. CIWF UK	1) <a href="https://www.dailymail.co.uk/news/article-2536700/Moodunnit-Police-baffled-11-dead-cows-wash-Danish-Swedish-beaches.html">https://www.dailymail.co.uk/news/article-2536700/Moodunnit-Police-baffled-11-dead-cows-wash-Danish-Swedish-beaches.html</a> 2) <a href="https://www.ciwf.org.uk/news/2014/01/dead-cattle-wash-up-on-beach">https://www.ciwf.org.uk/news/2014/01/dead-cattle-wash-up-on-beach</a>
25.06.2014	cow	Germany	Ostsee Zeitung	<a href="https://www.ostsee-zeitung.de/Nachrichten/MV-aktuell/Grausiger-Fund-Kuh-lebendig-ueber-Bord-geworfen">https://www.ostsee-zeitung.de/Nachrichten/MV-aktuell/Grausiger-Fund-Kuh-lebendig-ueber-Bord-geworfen</a>
20.12.2014	cow	United Kingdom	BBC News UK	<a href="https://www.bbc.com/news/uk-england-cornwall-30557673">https://www.bbc.com/news/uk-england-cornwall-30557673</a>
14.04.2015	cow	Spain (Menorca)	Menorcaal dia Spain	<a href="https://www.mallorcamagazin.com/nachrichten/lokales/2015/04/14/42187/tote-kuh-aus-dem-meer-gefishcht.html">https://www.mallorcamagazin.com/nachrichten/lokales/2015/04/14/42187/tote-kuh-aus-dem-meer-gefishcht.html</a>

Date	Animal /s	Country where animal was found	Media	Link
16.04.2015	cow	Mallorca (Spain)	Mallorca Magazine	<a href="https://www.mallorcamagazin.com/nachricht/en/lokales/2015/04/16/42204/erneut-tote-kuh-angespult.html">https://www.mallorcamagazin.com/nachricht/en/lokales/2015/04/16/42204/erneut-tote-kuh-angespult.html</a>
09.09.2015	1 calf and 1 cow	Germany	Focus.de	<a href="https://www.focus.de/regional/mecklenburg-vorpommern/tiere-zwei-tote-kuehe-am-strand-von-prerow-angeschwemmt_id_3995453.html">https://www.focus.de/regional/mecklenburg-vorpommern/tiere-zwei-tote-kuehe-am-strand-von-prerow-angeschwemmt_id_3995453.html</a>
10.05.2016	cow	Portugal	Expresso Portugal	<a href="https://expresso.pt/sociedade/2016-05-10-Frigorificos-esqueletos-de-vacas-e-agulhas-sujam-as-nossas-praias.-E-incrivel">https://expresso.pt/sociedade/2016-05-10-Frigorificos-esqueletos-de-vacas-e-agulhas-sujam-as-nossas-praias.-E-incrivel</a>
30.01.2017	7 cattle	Turkey	Sozcu TR	<a href="https://www.sozcu.com.tr/2017/gundem/duzcede-telef-olmus-7-inek-sahile-vurdu-1651589/">https://www.sozcu.com.tr/2017/gundem/duzcede-telef-olmus-7-inek-sahile-vurdu-1651589/</a>
10.11.2017	cow	Mallorca (Spain)	Tourist News ES	<a href="https://www.tourinews.es/resumen-de-prensa/notas-de-prensa-espana-turismo/aparecen-flotando-cadaveres-de-vacas-en-playas-de-mallorca_4444244_102.html">https://www.tourinews.es/resumen-de-prensa/notas-de-prensa-espana-turismo/aparecen-flotando-cadaveres-de-vacas-en-playas-de-mallorca_4444244_102.html</a>
22.01.2018	sheep	United Kingdom	Chronicle Live UK	<a href="https://www.chroniclelive.co.uk/news/north-east-news/north-shields-beach-dead-sheep-14185802">https://www.chroniclelive.co.uk/news/north-east-news/north-shields-beach-dead-sheep-14185802</a>
15.03.2018	cow	Canary Island (Spain)	Kanarenmarkt DE	<a href="https://www.kanarenmarkt.de/63093/gran-canaria-tote-kuh-an-die-suedostkueste-der-ferieninsel-nahe-vecindario-gespult.html">https://www.kanarenmarkt.de/63093/gran-canaria-tote-kuh-an-die-suedostkueste-der-ferieninsel-nahe-vecindario-gespult.html</a>
14.05.2018	25 sheep	Egypt	Splash 24	<a href="https://splash247.com/turkish-livestock-carrier-owner-fined-dumping-dead-ship-overboard/">https://splash247.com/turkish-livestock-carrier-owner-fined-dumping-dead-ship-overboard/</a>
21.01.2019	cow	United Kingdom	DEV Online	<a href="https://www.devonlive.com/news/devon-news/dead-cow-floating-ilfracombe-harbour-2450689">https://www.devonlive.com/news/devon-news/dead-cow-floating-ilfracombe-harbour-2450689</a>
18.02.2019	sheep	United Kingdom	Devon Live UK	<a href="https://www.devonlive.com/news/devon-news/shock-dead-sheep-washing-up-2555313">https://www.devonlive.com/news/devon-news/shock-dead-sheep-washing-up-2555313</a>
21.02.2019	sheep	Gibraltar (United Kingdom)	The Olive Press	<a href="https://www.theolivepress.es/spain-news/2019/02/21/watch-dead-sheep-mysteriously-washes-up-on-gibraltar-beach-warning-distressing-images/">https://www.theolivepress.es/spain-news/2019/02/21/watch-dead-sheep-mysteriously-washes-up-on-gibraltar-beach-warning-distressing-images/</a>
25.03.2019	cow	Canary Island (Spain)	Canarias 7	<a href="https://www.canarias7.es/sucesos/por-que-han-aparecido-toros-muertos-en-las-playas-canarias-AE7006828">https://www.canarias7.es/sucesos/por-que-han-aparecido-toros-muertos-en-las-playas-canarias-AE7006828</a>
27.03.2019	cow	Canary Island (Spain)	Canarias 7	<a href="https://www.canarias7.es/sucesos/por-que-han-aparecido-toros-muertos-en-las-playas-canarias-AE7006828">https://www.canarias7.es/sucesos/por-que-han-aparecido-toros-muertos-en-las-playas-canarias-AE7006828</a>
29.03.2019	cow	Canary Island (Spain)	Canarias 7	<a href="https://www.canarias7.es/sucesos/por-que-han-aparecido-toros-muertos-en-las-playas-canarias-AE7006828">https://www.canarias7.es/sucesos/por-que-han-aparecido-toros-muertos-en-las-playas-canarias-AE7006828</a>

Date	Animal /s	Country where animal was found	Media	Link
25.04.2019	two cows and one calf	Menorca (Spain)	Express UK	<a href="https://www.express.co.uk/news/world/1119679/Menorca-holiday-news-rotting-cows-spain-travel-new">https://www.express.co.uk/news/world/1119679/Menorca-holiday-news-rotting-cows-spain-travel-new</a>
02.10.2019	cow	Mallorca (Spain)	Mallorca Magazine	<a href="https://www.mallorcamagazin.com/nachrichten/lokales/2019/10/02/73789/tote-kuh-playa-palma-angespult.html">1. https://www.mallorcamagazin.com/nachrichten/lokales/2019/10/02/73789/tote-kuh-playa-palma-angespult.html</a> <a href="https://www.mallorcazeitung.es/lokales/2019/10/02/stadt-entfernt-stinkenden-kuh-kadaver/71504.html">2. https://www.mallorcazeitung.es/lokales/2019/10/02/stadt-entfernt-stinkenden-kuh-kadaver/71504.html</a>
21.03.2020	cow	Mallorca (Spain)	Mallorca Magazine	<a href="https://www.mallorcamagazin.com/nachrichten/lokales/2020/03/21/78545/tote-kuh-bei-cala-angespult.html">https://www.mallorcamagazin.com/nachrichten/lokales/2020/03/21/78545/tote-kuh-bei-cala-angespult.html</a>
23.03.2020	cow	Mallorca (Spain)	Cap Vermell	<a href="http://www.capvermell.org/index.php/actualitat/placa-del-sitjar/25971-apareixen-3-vaques-a-la-costa-gabellina">http://www.capvermell.org/index.php/actualitat/placa-del-sitjar/25971-apareixen-3-vaques-a-la-costa-gabellina</a>
21.05.2020	cow	United Kingdom	Somerset Live	<a href="https://www.somersetlive.co.uk/news/somerset-news/mystery-over-dead-cow-washed-4151461">https://www.somersetlive.co.uk/news/somerset-news/mystery-over-dead-cow-washed-4151461</a> <a href="https://www.haaretz.co.il/nature/.premium-1.8862999">https://www.haaretz.co.il/nature/.premium-1.8862999</a>
10.06.2020	several skeletons of cows	Lanzarote Spain	Cadenaser	<a href="https://cadenaser.com/emisora/2020/06/10/ser_lanzarote/1591811586_892999.html">https://cadenaser.com/emisora/2020/06/10/ser_lanzarote/1591811586_892999.html</a>
18.12.2020	several sheep	Greece	IN Greece	<a href="https://www.in.gr/2020/12/18/greece/ileia-nekra-provata-ksevrastikan-se-paralia-apo-pou-proerxontai/">https://www.in.gr/2020/12/18/greece/ileia-nekra-provata-ksevrastikan-se-paralia-apo-pou-proerxontai/</a>
28.01.2021	four cows	Mallorca (Spain)	Mallorca Daily Bulletin	<a href="https://www.majorcadailybulletin.com/news/local/2021/01/28/78213/mallorca-animal-welfare-cattle.html">https://www.majorcadailybulletin.com/news/local/2021/01/28/78213/mallorca-animal-welfare-cattle.html</a>

**Table 11. List of animal carcasses washed up on Israeli shore revealed by IALS.**

Date	Animal/s	Media	Link
09.05.2015	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
21.06.2015	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
29.06.2015	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
01.07.2015	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>

Date	Animal/s	Media	Link
07.07.2015	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
09.07.2015	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
15.09.2015	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
07.03.2016	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
11.06.2016	cow	1. Facebook page of IALS 2. Ynet	1. IALS FB: <a href="https://www.facebook.com/IsraelAgainstLiveShipments/photos/a.488284707942082/700207166749834">https://www.facebook.com/IsraelAgainstLiveShipments/photos/a.488284707942082/700207166749834</a> 2. <a href="https://www.ynet.co.il/articles/0,7340,L-4814607,00.html">https://www.ynet.co.il/articles/0,7340,L-4814607,00.html</a>
25.06.2016	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
06.08.2016	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
02.09.2016	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
02.02.2017	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
18.03.2017	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
13.05.2017	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
02.06.2018	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
25.06.2018	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
27.06.2018	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
31.08.2018	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
31.08.2018	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
02.09.2018	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
05.09.2018	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
28.12.2018	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
09.01.2019	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
02.02.2019	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
23.03.2019	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>

Date	Animal/s	Media	Link
27.03.2019	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
29.03.2019	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
25.05.2019	cow	Haifa News	<a href="https://haipo.co.il/item/129685">https://haipo.co.il/item/129685</a>
01.06.2019	cow	1. Facebook page of IALS  2. The Jerusalem Post	1. IALS FB: <a href="https://www.facebook.com/watch/?v=331859737491532">https://www.facebook.com/watch/?v=331859737491532</a>  2. Jerusalem Post: <a href="https://www.jpost.com/israel-news/beachgoers-shocked-when-dead-calf-washes-up-on-shore-591331">https://www.jpost.com/israel-news/beachgoers-shocked-when-dead-calf-washes-up-on-shore-591331</a>
09.06.2019	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
20.09.2019	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
11.04.2020	lamb	Hashikma Batyam	<a href="https://www.hashikma-batyam.co.il/news/22528/">https://www.hashikma-batyam.co.il/news/22528/</a>
17.04.2020	three lambs	Haifa News	<a href="https://www.haaretz.co.il/nature/premium-1.8862999">https://www.haaretz.co.il/nature/premium-1.8862999</a>
24.04.2020	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
03.05.2020	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
03.07.2020	lamb	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
09.08.2020	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
22.09.2020	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
01.10.2020	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>
18.02.2021	cow	Facebook page of IALS	<a href="#">FB Israel Against Live Shipment</a>

Source: [Israel Against Live Shipments](#)



## **ANNEX II. CASE STUDIES**

### Case study 1. Etab

*Etab* was inspected four times in 2020: in Spain with seven deficiencies found; in France with seven deficiencies (resulting in detention); in Spain again with 13 deficiencies, and in Croatia with 8 deficiencies, resulting in another detention. The last detention resulted in a ban from the Paris MoU region for 12 months (second ban in *Etab*'s lifetime) [66]. Before the ban, complaints were filed by an NGO against *Etab* being allowed to load animals in most EU ports despite so many deficiencies and detentions. *Etab*'s operation despite violations is not an isolated case.

Deficiencies, including ones resulting in detentions, are sometimes found just before or after the departure of the vessel from EU ports. For example, in July 2020 *Elbeik* was inspected by PSC in Cartagena with 8 deficiencies found [66]. Some deficiencies (problems with the engine, steering gear and water/weathertightness) could have a direct impact on the welfare of animals. Only one day after the inspection, the vessel was allowed to load animals.

This means that veterinary authorities did not verify or ignored deficiencies in the THETIS database and therefore failed to perform a proper pre-inspection of the vessel before loading, as required by Art. 20(1) of Reg. 1/2005.

### Case study 2. Express 1; Girolando Express; Nabolsi 1; Ocean Drover; F.M.Spiridon; Mariona; Bahijah; Britta K; Queen Hind

In May 2013, an EU approved vessel *The Express 1* (now *North Star 1*), carrying 800 dairy cows from the USA to Russia, suffered regular propulsion failures and was stranded off Germany after her engine broke down. After 10 days on board of the broken-down vessel the cows were finally transhipped onto another vessel.

Less than one year later, the vessel had to be towed again after suffering an engine failure with Irish cattle on board destined for Libya. She was detained for 45 days. The cattle had to be transferred onto her sister vessel. Younger vessels can have engine problems as well.

In December 2015, the 1-year-old *Girolando Express* suffered an engine failure shortly after leaving Geelong (Australia) bound for China and was stranded with 4,245 cattle on board for a few days off the Australian coast. In May 2018, *ex-Alferdawi-1* (now EU-approved *Sea Star Livestock*) encountered ventilation problems, killing an undisclosed number of sheep.

*Ocean Drover*, in 2002 (then *Becrux*) had a ventilation failure causing the death of 880 cattle out of 1,995. In 2014 the vessel suffered main engine failure again and had to stop in the Indian Ocean for repairs. 165 cattle and 1,654 sheep died as a result. A few months later the same vessel suffered a major fire. *Ocean Drover* remains approved for livestock transport by Portugal.

*Nabolsi 1* in 2015 caught fire going from Croatia to Egypt with pregnant heifers from Germany. The vessel continued to its destination; no information about fire-related deaths or injuries among crew nor animals was obtained (see Figure 17).

*Uranus II* in 2019 suffered an engine failure shortly after leaving Portugal with 1,400 cattle and 2,000 sheep on board.

Other examples of EU-approved livestock vessels with engine failure in recent years include *F.M.Spiridon* in December 2018; *Gamma Star* in November 2019; *Janay* in February 2018 and November 2019; *Lady Maria* in August 2020; *Mariona* in November 2018 and in March 2019, *Bahijah* in May 2014 and *Britta K* in September 2018 [3]. And there was the total loss of an EU-approved livestock carrier *Queen Hind* in November 2019, which sank with at least 14,600 sheep while leaving Midia (Romania)<sup>185</sup> (see Case study *Queen Hind* 6; 7; 12) (see Figure 16).

<sup>185</sup> <https://www.theguardian.com/world/2019/nov/25/rescuers-race-to-save-14600-sheep-after-cargo-ship-capsizes>

### Case study 3. Al Shuwaikh; Bashar One Transport

Romania approved *Al Shuwaikh* livestock vessel (now *Bashar One Transport*) on 11 July 2019.<sup>186</sup> On 12 July 2019 the vessel started loading 66,000 Romanian sheep. This is one of the biggest livestock vessels currently operating in the EU (length 180 m) and therefore her inspection should take more time than usual. Romania approved the vessel in less than 15 hours (9 working hours) (see Figure 18).

This vessel has a history of high animal mortalities during transport (609 sheep died during one of the voyages in 2018)<sup>187</sup>. Due to serious welfare implications, she was banned from Australia at the end of 2019<sup>188</sup> (see Figure 20). In 2020 she was sold and renamed *Bashar One Transport*, suffered a fire in her cargo compartments [1], and may now be trying to get a new certificate in the EU<sup>189</sup>.

### Case study 4. Etab

*Etab* had her certificate withheld by Slovenian CAs after an inspection during a DG SANTE audit in 2018 [67]. This livestock vessel had many long-unresolved deficiencies, she was in a generally poor state of repair with many corroded and hazardous fittings and lacked several essential systems. At that time *Etab* was approved by France.

Upon notification received from the Slovenian competent authorities, France withdrew the vessel's authorisation in April 2018. Only 8 months later, *Etab* was approved again by Romania.<sup>190</sup> Due to lack of publicly available data the authors could not investigate or analyse similar cases in other MSs.

### Case study 5. Alpha Livestock 19; Rabunion XX; Abou Karim I; Abou Karim II; Karim Allah; Phoenix I; Phoenix III; Talia; Sarah M

According to an NGO, seven of eight vessels inspected between 2014 and 2017 (*Alpha Livestock 19*; *Rabunion XX*; *Abou Karim I*; *Abou Karim II*; *Karim Allah*; *Phoenix I*; *Phoenix III*) should not have been approved (only *Talia* met all requirements). Animal behaviour and animal needs were not sufficiently incorporated into the ship design. The vessels were poorly designed and maintained, with constructions posing many risks for the safety of the animals: steep loading ramps exceeding the inclination of 26°, pens and passageways with sharp edges, steel protrusions. Some pens were very rusty and not maintained (see Figure 21). Some pens had no automatic water system. The lighting was not sufficient for proper inspection of animals, ventilation was reduced; gaps from bulkhead frames were not in line with the requirements of Reg. 1/2005 [18].

Another example of non-compliance is *Sarah M*, approved by Ireland only for cattle, but Romania approved this vessel also for other species such as sheep. According to NGOs, pens on *Sarah M* are not appropriate for small animals like sheep and the animals easily escape from them.

As a result, sheep were also found in corridors when *Sarah M* was loading in July and August 2020 in Cartagena port, i.e. transported in areas not approved for animals, which is in breach of Reg. 1/2005, is dangerous and compromises animal welfare. With animals loaded in corridors it is possible that the vessel was overloaded [17].

<sup>186</sup> Romanian A.N.S.V.S.A.: <https://domino.igq.ro/ansv/ansvsa.nsf/MTNAnulate>

<sup>187</sup> Information gathered by the sources of NGO Animals International.

<sup>188</sup> <https://thewest.com.au/business/agriculture/ship-shape-sheep-laws-hurt-wa-exporters-ng-b881151942z>

<sup>189</sup> Information gathered by the sources of NGO Animals International.

<sup>190</sup> Romanian A.N.S.V.S.A.: <https://domino.igq.ro/ansv/ansvsa.nsf/MTNAnulate>

### Case study 6. Queen Hind

In November 2019, *Queen Hind* sank with at least 14,600 sheep while leaving Midia (Romania)<sup>191</sup>, additional decks being one of the reasons. *Queen Hind*, 39 years old at time of the accident, was a car carrier converted in 2017 at the age of 37 years in Romania (adding intermediate decks described as "clandestine" by the Marine Incident Safety Investigation Report). The construction raised the centre of gravity of *Queen Hind* and caused instability after loading of live animals which by nature are moving<sup>192</sup>. From the start of the departure manoeuvre, the vessel experienced instability that finally got out of control.

During the whole departure/capsizing sequence which lasted 1h20', some animals probably suffered from injuries, suffocation and fractures before almost all of them drowned. Even though this vessel was classed by an IACS society, the inspectors did not take note of the additional decks which, according to the post-accident report, had been doubled in order to load more livestock, in violation of the ISM code and her SMS (Safety Management System). The conversion was carried out in Romania and the certificate was issued in the same country. No written document confirming the actual number of sheep loaded was transmitted to the reporting investigator [3] (see Case study *Queen Hind* 2; 7; 12) (see Figure 16).

### Case study 7. Queen Hind; Trust I

The *Queen Hind* accident resulting in the drowning of 14,600 sheep may be attributed to lack of crew competence (only 1.23 % of the animals (180) survived). First, the overloading of the vessel with sheep was not questioned. Second, the Syrian master had just joined the ship and it was his first time on board a livestock carrier. Just prior the departure he ordered that big bags of feedstuff (100 - 120 tonnes) be loaded on the upper decks. This raised the vessel's centre of gravity and increased its instability. The post-accident report mentions hierarchical and commercial pressures on the inexperienced master to take risks and leave at all costs. The report points out another mistake (leaving the watertight door to the engine room open) that "allowed water ingress (...) accelerating the loss of floatability". The overall competence of the *Queen Hind* crew at the time of the accident is questioned by the report [3] (see Case study *Queen Hind* 2; 6; 12) (see Figure 16).

*Queen Hind* is not an isolated case of recurring problems on livestock vessels potentially related to lack of crew competence. In 2015, *Trust I*, transporting 13,000 sheep from Midia (Romania) was denied entry to Aqaba (Jordan). The routine veterinary inspection found that 5,200 (40%) sheep had died during transport from thirst and starvation because they were not fed or watered for 8 days [3].

### Case study 8. Summer 2020 journeys authorized over 40°C

In summer 2020 (03.06 – 29.09.2020) Romania authorised 40 journeys to destinations in the Middle East<sup>193</sup>. In 95% (38 journeys), the temperature was over 30°C; in 87.5% (35) – over 35°C and in 55% (22) - over 40°C on the day of arrival at the destination port<sup>194</sup>. This indicates that the competent authorities approved these transports without considering weather at the destination. NGOs have been reporting temperatures of over 30°C even at night, when European animals were unloaded in Israel [44].

<sup>191</sup> <https://www.theguardian.com/world/2019/nov/25/rescuers-race-to-save-14600-sheep-after-cargo-ship-capsizes>

<sup>192</sup> Unlike other cargo such cars and other vehicles each of which is lashed and stowed.

<sup>193</sup> Data collected and analysed by Animals International.

<sup>194</sup> Data collected and analysed by Animals International on basis of Vessel tracker: <https://www.vesseltracker.com>

**Case study 9. Al Shuwaikh**

In July 2019 the *Al Shuwaikh* livestock vessel (now *Bashar One Transport*), arrived for the first time in Europe to export 66,000 Romanian sheep to Arabian Gulf destinations. Even though the EU Commissioner urged Romanian authorities to stop this shipment where animal welfare could not be guaranteed<sup>195</sup>, Romanian authorities still approved the journey. The vessel unloaded Romanian sheep in Saudi Arabia (21 July, 40°C); Dubai (29 July, 44°C); Kuwait (1 Aug, 43 °C); Qatar (3 August; 42°C); Oman (6 August, 36°C).

Heat stress and mortalities of these sheep during the journey and after arrival were reported by an NGO. The approval of such journeys did not lead to any consequences for the CAs who approved such journeys or the transporters involved [16]. The author only analysed data of sea exports from Romania in summer 2020; it is possible that other MSs have similar situations in recent years.

**Case study 10. Elbeik; Karim Allah**

The recent case of vessels *Elbeik* and *Karim Allah* show that doubts regarding the existence, feasibility, verification, and application of contingency plans are justified. Both vessels left Spanish ports on 18 December with nearly 3000 Spanish bulls on board. Both vessels were refused permission to unload in Turkey on health grounds (suspicion of blue tongue disease in farms of origin<sup>196</sup>). On 21 December, when the vessels were still sailing, Spanish authorities were informed by Turkish authorities that the animals would not be accepted but did not immediately communicate this to the captains, the organizer, the EU Commission or OIE.

As soon as the vessels left EU territory, they entered a legal limbo with no authorities willing to accept the consignment with a health hazard. For 2 months in the case of *Karim Allah* and 3 months in the case of *Elbeik*, the organizers tried to unload the animals in other countries (Libya, Egypt, Cyprus, Italy, Tunisia, Greece), but were refused. On 22 February the *Karim Allah* returned near Cartagena, Spain, but did not enter. The shipper's plan was to have the cattle's blood tested and, if the animals were cleared of any disease risk, to re-export them.

According to Spanish authorities, due to the lengthy journey the animals were in poor condition, and therefore not fit for transport outside the EU, nor allowed into the EU for disease-control reasons. As the animals showed signs of prolonged suffering with development of cachexia and dermatological, ophthalmological and mobility problems, the Spanish Government issued an order to euthanize them. By 9 March, all young bulls from *Karim Allah* were killed. *Elbeik* finally returned to port in Cartagena three months after she left Spain and faced the same procedure. On 28 March killing of 1,610 surviving young bulls from the *Elbeik* was completed. In summary, 189 bulls on *Elbeik* and 22 bulls on *Karim Allah* died during the journey and 2,474 bulls were killed by the mobile unit in port of Cartagena, Spain.

There are other similar examples<sup>197</sup> such as the *Ocean Drover* that arrived at Bahrain with 22,000 sheep on 29 August 2012 and for more than 10 days was not allowed to unload because some sheep suffered from scabby mouth disease [3].

<sup>195</sup> Ares(2019)4427188-10/07/2019: [https://twitter.com/v\\_andriukaitis/status/1148952313677144064?lang=en](https://twitter.com/v_andriukaitis/status/1148952313677144064?lang=en)

<sup>196</sup> According to the organizers this was a consequence of a mistake on health certificates issued by Spain's agriculture ministry. The Ministry denies that.

<sup>197</sup> Another example: in 2016, Italian buffaloes coming from Croatia were not allowed to enter Egypt as non-indigenous species, were refused back in Croatia, and spent almost 1 month on board before unloading in Turkey and Lebanon [18].

### Case study 11. Suez Canal blockage

The recent case of blockage of the Suez Canal, when on 23 March 2021 the canal was blocked by an ultra large container ship causing disruptions in maritime supply chain is another example of problems caused by inadequate contingency plans. The delay affected animals on board 16 EU livestock vessels (11 from Romania, 5 from Spain). Mortalities declared by Romanian authorities were not higher than 0.22% among 105.727 sheep and 1,613 cattle aboard 7 of 11 ships [20]. Mortality rates have not been provided by the Spanish authorities as of the date of this study. According to NGOs, mortality rates were between 180 and 1,100 animals on each vessel [20] (see Figure 19).

The Suez crisis was a scenario never foreseen by any party involved and there were no contingency plans for this situation, either for journeys or for competent authorities. EU authorities had no legal means or procedures to order the vessels to return to the port of origin. Moreover, Romanian CAs authorised 5 journeys and Spanish CAs authorised 2 journeys after the Suez Canal was blocked<sup>198</sup>, which also raises questions regarding the quality of checks before journey.

### Case study 12. Queen Hind

*The Queen Hind* incident is again a good example of the consequences of improper preloading inspections. There is no document or record that the *Queen Hind* was inspected by an appointed expert before loading and after loading [1].

The official post-incident report says that "*Local authorities should have been more proactive in ensuring that such particular type of vessels with their intrinsic hazards, and such particular crews are able to operate and maintain such vessels and moreover, conduct comprehensive assessment of safety management and safe operation of the vessel and environment protection, before they are accepted for operations in Romanian ports and of course prior departure*" [1].

An FVO fact-finding mission in Romania after the incident confirmed these findings: regulations and controls for animal welfare were not geared to detect issues that could cause vessels to tilt and overturn. Moreover, official veterinarians would not have the necessary skills to detect these issues. This incident, however, highlights that these controls are not only important for maritime safety at sea but also for animal welfare. The different authorities carrying out controls on livestock vessels should work together to prevent such events from happening [1] (see Case study *Queen Hind* 2; 6; 7) (see Figure 16).

### Case study 13. Karim Allah

*Karim Allah* had a pre-loading inspection at Cartagena Port (Spain) on 18 December 2020 with a positive result (otherwise the journey would not have been authorised), but after the vessel's return to the port of origin on 25 February 2021 inspectors (from the same competent authority) detected that metallic structures separating the pens and ventilation tubes were in a state of deterioration, with rust, lack of paint and loss of material, problems not found before departure.

Inspection of *Karim Allah* after her return to Cartagena found that hospital pens were used to load animals or for feed storage [68].

<sup>198</sup> Marine Traffic: <https://www.marinetraffic.com/en/ais/home/centerx:8.8/centery:40.5/zoom:5>



**Case study 14. Julia LS**

On 01.11.2019 loading of live animals onto *Julia LS* was denied by Portuguese authorities due to non-compliance with provisions of Reg. 1/2005, “especially the ones related with the training and competence of the crew and the proper development/implementation of the internal procedures. In that respect, the vessel company was notified and informed of the measures that had to be taken in order to allow the loading of the animals. The company that operates the vessel decided to depart from Portugal, without animals and it was not possible to verify the compliance with our determinations.”<sup>199</sup> The vessel left Portugal on 13 November 2019 without animals, arrived in Romania on 23 November 2019 and only two days later was allowed to load animals for export.

According to Romanian authorities no major problems were found during vessel inspections (performed 1 day after the *Queen Hind* accident).<sup>200</sup> It does not seem possible that shortcomings identified by the Portuguese competent authorities were repaired before the inspection performed by the Romanian authorities, who at the same time were busy with massive rescue operation for *Queen Hind*. Moreover, in August 2018 *Julia LS* was also not allowed to load animals in Portugal due to serious non-compliances, especially in the ventilation system and management of the animals.<sup>201</sup>

**Case study 15. Lithuanian road consignments going to Slovenian port**

In 2019 an NGO reported the case of two Lithuanian road consignments going to a Slovenian port, where – besides other welfare problems – 3 calves were dead and the remaining 358 were declared by Polish competent authorities unfit to continue the journey. The journey was allowed after a 24-hour rest and with reduced loading density.

Despite communication between Member States involved (Poland, Lithuania, and Slovenia), animals from other vehicles of the same transporter with similar densities on board were loaded onto the vessel to Israel without any veterinary inspection [25].

**Case study 16. Neameh; F.M.Spiridon; LSS Success; Uranus II**

Vessels *Neameh*<sup>202</sup> and *F.M.Spiridon*<sup>203</sup>, inspected in 2020 for suspected drug trafficking by Spanish Police, raise concern that extremely impaired animal welfare is beneficial for smuggling. Despite very bad conditions, overcrowding and animals in agony, Spanish authorities did not allow offloading of any animals from *Neameh* so they had to continue to Egypt.

The Commission answered a complaint by an NGO<sup>204</sup> that despite clear welfare problems, animals could not be assisted, as they were not coming from or destined to the EU. EU-approved *LSS Success*, had a load of cannabis found when transporting cattle [3]. *Uranus II*, also EU-approved, had crew members arrested for fuel trafficking [3].

<sup>199</sup> Source: communication letter between Animal Welfare Foundation and Portuguese Competent Authorities.

<sup>200</sup> Source: communication letter between Animal Welfare Foundation and Romanian Competent Authorities.

<sup>201</sup> Information provided by Portuguese NGO PATAV in 2018.

<sup>202</sup> [https://www.europasur.es/algeciras/cocaina-vacas-muertas-alijo-Neameh-barco\\_0\\_1467153543.html](https://www.europasur.es/algeciras/cocaina-vacas-muertas-alijo-Neameh-barco_0_1467153543.html)

<sup>203</sup> [https://www.eldiario.es/canariasahora/sociedad/Vacas-condiciones-dantescas-puerto-Palmas\\_0\\_1033447145.html](https://www.eldiario.es/canariasahora/sociedad/Vacas-condiciones-dantescas-puerto-Palmas_0_1033447145.html)

<sup>204</sup> <https://www.civf.org.uk/>



### Case study 17. Carcasses of EU cattle and sheep washed up on shores

In 2019, an NGO learned that 36 animals died on board during nine journeys from EU ports to Israel [69]. After unloading live animals in Israeli ports, these livestock vessels went directly to an EU port<sup>205</sup> that has no reception facilities for animal carcasses. A new consignment of live animals was loaded there. Israel does not accept animal carcasses; each vessel before entering any EU Port needs to be cleaned and disinfected; thus, it can be presumed that the animal carcasses were disposed of into the Mediterranean. Data collected by another NGO indicate the same practice on a journey from Croatia to Egypt in 2016 during which nine cattle died and their carcasses were cut up and thrown into the Mediterranean Sea [18].

Since 2014 the media have published reports of over 50 animal carcasses (cattle and sheep) washed up on the shores of EU countries (Sweden, Denmark, United Kingdom (incl. Gibraltar), Spain (incl. Canary Islands), Portugal and Greece) and in Turkey without being split or treated prior to their discharge into the sea (see Table 10)<sup>206</sup>. In 2019 an NGO reported 43 carcasses of cattle and sheep washed up on Israeli shores (see Table 11). The majority of ear tags<sup>207</sup> were removed and only some animals could be identified as originating from Spain, Portugal, Romania, Greece, the United Kingdom and France, and some from South America<sup>208</sup> [69]. One of the carcasses was later identified by Portuguese authorities as coming from the vessel *Mira*. Following a notification by an NGO [70], the case was investigated resulting in withdrawal of the certificate of vessel approval. In another case, French authorities failed to identify animals found on the Greek coast in 2021 despite being provided with ear tag numbers [71].

In 2021 two livestock vessels *Karim Allah* and *Elbeik* were sailing in the Mediterranean without being accepted in any port [72] (see Case study 10 and Case study 13). According to the captains' statements, 179 animals on *Elbeik* and 20 animals on *Karim Allah* were cut up on board and disposed of into the Mediterranean [68]. Additionally, on *Elbeik* 10 dead animals were revealed during inspection in Spanish port. Their carcasses were destroyed at the Spanish port.

<sup>205</sup> [www.marinetraffic.com](http://www.marinetraffic.com)

<sup>206</sup> Carcasses of cattle and sheep washed up on EU (Sweden, Denmark, United Kingdom (incl. Gibraltar), Spain (incl. Canarias Island), Portugal, Greece & Turkey ashore.

<sup>207</sup> An ear tag is a plastic or metal object used for identification of domestic livestock animals to allow traceability and movement control of the animals.

<sup>208</sup> Animals from South and North America are transported to the Middle East or North Africa via the Mediterranean Sea.

## ANNEX III. FIGURES

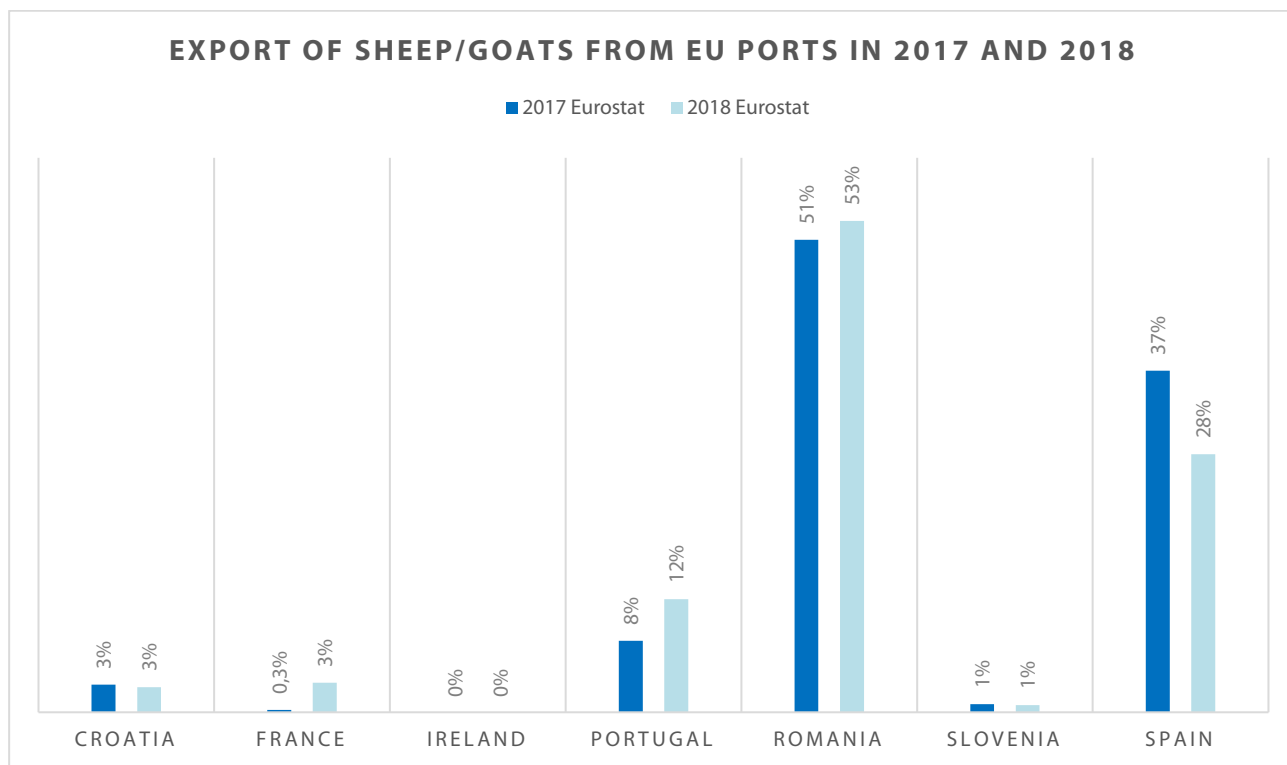


Figure 1. Export of sheep/goats from EU ports in 2017 and 2018

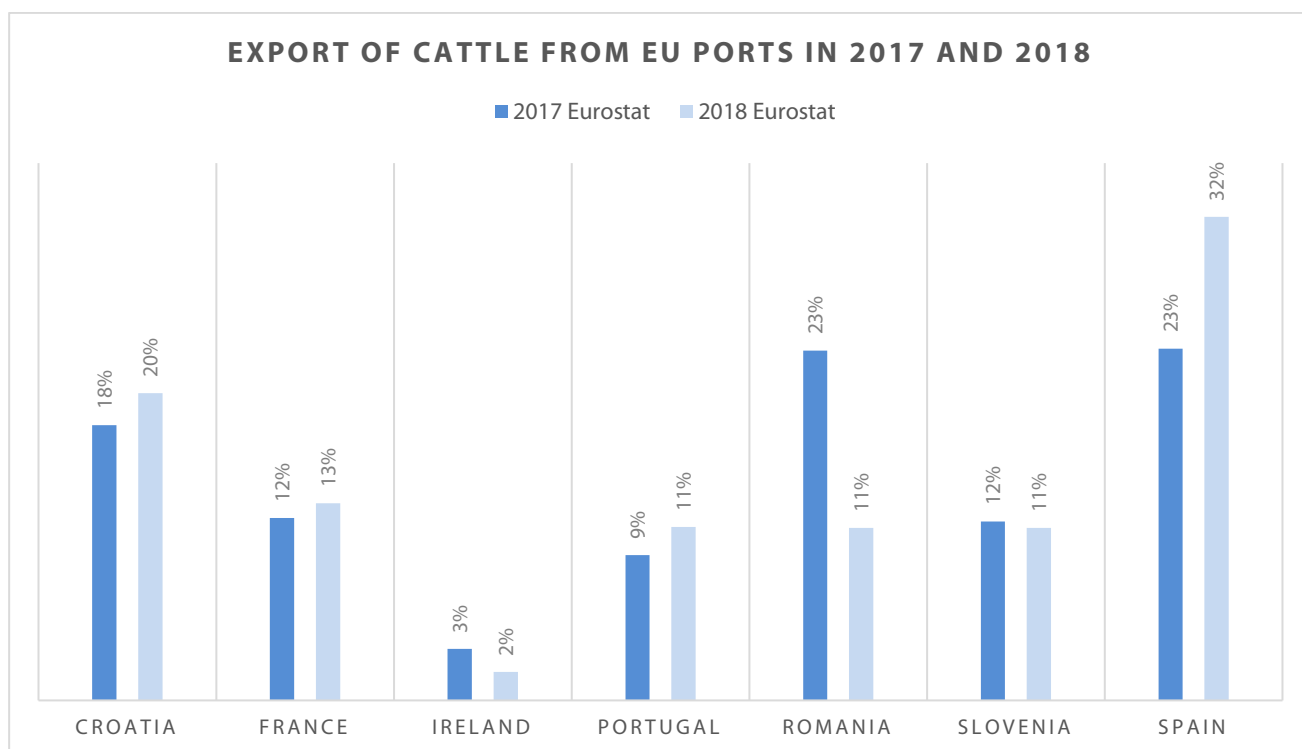


Figure 2. Export of sheep/goats from EU ports in 2017 and 2018



Figure 3. Vessel Abdullah before and after conversion to a livestock vessel <sup>209</sup>



Figure 4. Vessel Viking before and after conversion to a livestock vessel Mira <sup>210</sup>

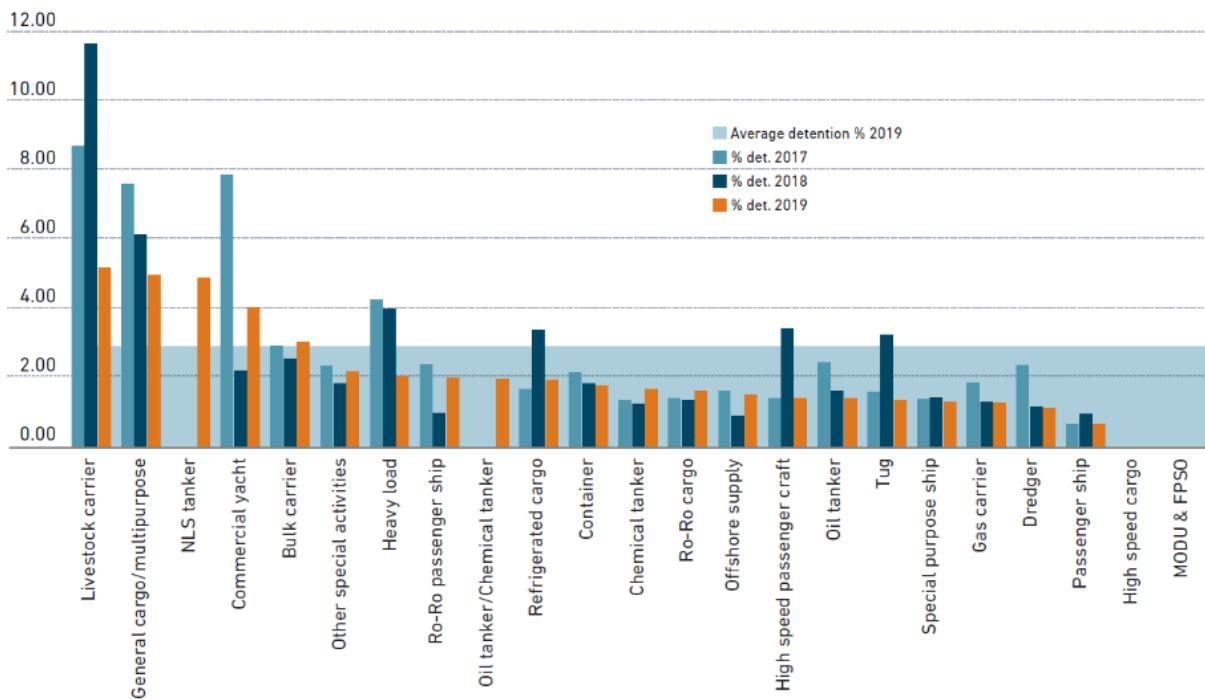


Figure 5. Inspections and detentions in 2017-2019 per ship type (%) <sup>211</sup>

<sup>209</sup> Left, 2010; Right, 2018. Source: Marine Traffic.com

<sup>210</sup> Left, 2009; Right, 2019. Source: Marine Traffic.com

<sup>211</sup> Source: Paris MoU, Port State Progression Detention rate down 2019 [7].

Ship type	Nr of inspections	Inspections with deficiencies	% of inspections with deficiencies	Nr of individual ships inspected	Inspections with detentions	% of detentions to inspections 2019	% of detentions to inspections 2018	% of detentions to inspections 2017	+/- average detention % 2019
Bulk carrier	3,641	1,879	51.6	3,341	112	3.1	2.6	3.0	0.1
Chemical tanker	1,646	676	41.1	1,458	28	1.7	1.3	1.4	-1.2
Commercial yacht	267	114	42.7	262	11	4.1	2.2	8.1	1.2
Container	1,822	808	44.3	1,620	33	1.8	1.9	2.2	-1.1
Dredger	88	46	52.3	83	1	1.1	1.2	2.4	-1.8
Gas carrier	541	162	29.9	512	7	1.3	1.3	1.9	-1.6
General cargo/multipurpose	4,832	3,177	65.7	3,741	246	5.1	6.3	7.8	2.2
Heavy load	48	20	41.7	47	1	2.1	4.1	4.3	-0.9
High speed cargo	16	8	50.0	15	-	0.0	0.0	0.0	-2.9
High speed passenger craft	70	44	62.9	45	1	1.4	3.5	1.4	-1.5
Livestock carrier	113	100	88.5	72	6	5.3	11.9	8.9	2.4
MODU & FPSO	26	11	42.3	26	-	0.0	0.0	0.0	-2.9
NLS tanker	20	6	30.0	17	1	5.0	0.0	0.0	2.1
Offshore supply	452	247	54.6	426	7	1.5	0.9	1.6	-1.4
Oil tanker	1,400	516	36.9	1,311	20	1.4	1.6	2.5	-1.5
Oil tanker/Chemical tanker	151	72	47.7	149	3	2.0	0.0	0.0	-1.0
Other	11	7	63.6	11	2	18.2	0.0	12.5	15.2
Other special activities	540	290	53.7	517	12	2.2	1.9	2.4	-0.7
Passenger ship	302	154	51.0	262	2	0.7	1.0	0.7	-2.3
Refrigerated cargo	203	123	60.6	185	4	2.0	3.4	1.7	-1.0
Ro-Ro cargo	730	314	43.0	657	12	1.6	1.4	1.4	-1.3
Ro-Ro passenger ship	545	325	59.6	293	11	2.0	1.0	2.4	-0.9
Special purpose ship	151	70	46.4	148	2	1.3	1.4	1.4	-1.6
Tug	293	151	51.5	287	4	1.4	3.3	1.6	-1.6

Figure 6. Inspections and detentions in 2017-2019 per ship type (% and number)<sup>212</sup>Figure 7. Additional decks with transported sheep<sup>213</sup>

<sup>212</sup> Source: Paris MoU, Port State Progression Detention rate down 2019 [7].

<sup>213</sup> Such decks are made of aluminium or wood and increase the loading surface area. The weight of additional cargo on these decks is not considered during safety approvals or in the risk profile calculation, despite the potential consequences. Alpha Livestock (now: Unimar Livestock). November 2011. Source: Animal Welfare Foundation.





Figure 8. Inadequate livestock vessel, incorrectly approved for animal species or categories<sup>214</sup>



Figure 9. Animals escaping during loading or falling into water have been reported<sup>215</sup>



Figure 10. Ocular damage and blindness of a Portuguese animal arriving in Israel<sup>216</sup>



Figure 11. Dirty and wet bedding in pens with cattle on 7th day of a journey<sup>217</sup>

<sup>214</sup> With smaller animals escaping from pens. Journey from Croatia to Egypt. October 2016. Source: Animal Welfare Foundation.

<sup>215</sup> Spain, August 2020. Source: Animal Welfare Foundation.

<sup>216</sup> July 2020. Source: Israel Against Live Shipments.

<sup>217</sup> Journey from EU to Egypt. October 2016. Source: Animal Welfare Foundation.



Figure 12. Substandard road transport conditions of Irish animals in Turkey after sea journey<sup>218</sup>



Figure 13. Substandard road transport conditions after sea journey<sup>219</sup>



Figure 14. EU animals discharged into the Mediterranean Sea<sup>220</sup>



Figure 15. Animal excrements discharged into the water<sup>221</sup>

<sup>218</sup> October 2016. Source: Animals International.

<sup>219</sup> Romanian animals in Israel July 2020. Source: Israel Against Live Shipments.

<sup>220</sup> October 2016. Source: Animal Welfare Foundation. Animal washed up in Israel. June 2019. Source: Jerusalem Post.

<sup>221</sup> Source: Dr Lynn Simpson.





Figure 16. Queen Hind:14,600 sheep drowned while leaving Midia (Romania)<sup>222</sup>



Figure 17. Major fire on Ocean Drover<sup>223</sup>



Figure 18. Al Shuwaikh. 16453 t DWT of carrying capacity<sup>224</sup>

<sup>222</sup> November 2019. Source: Animals International.

<sup>223</sup> It ravaged the accommodation block and spread across to cargo decks October 2014. Source: The Maritime Executive 2016.

<sup>224</sup> Current draught reported to be 9 meters. Her length overall (LOA) is 179.81 meters, and her width is 26.55 meters. Source: Marine Traffic.com.





Figure 19. Fourteen livestock vessels affected by the Suez Canal blockage<sup>225</sup>

<sup>225</sup> Vessels bound for Saudi Arabia and Jordan. Situation on 23 March 2021. Source: Robin des Bois.



Figure 20. Animals with severe heat stress symptoms in journeys in 2016 and 2018<sup>226</sup>

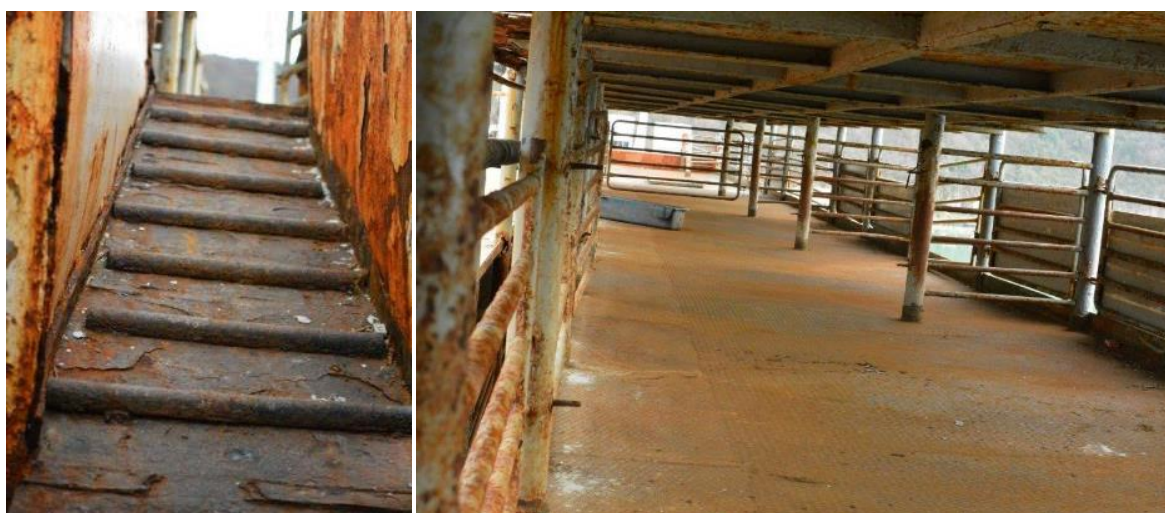


Figure 21. Pens very rusty and not maintained. Livestock vessel Rabunion<sup>227</sup>

<sup>226</sup> Left, 2018; Journey from Australia to Kuwait, Qatar and United Arab Emirates. 609 sheep died during the journey. Source: Animals International. Right, 2016; Journey from Croatia to Egypt. 9 cattle died during the journey. Source: Animal Welfare Foundation.

<sup>227</sup> (now named: Unimar Livestock) December 2014. Source: Animal Welfare Foundation.

## ANNEX IV. DEFINITIONS

### Admiralty and Maritime Cases

Admiralty and maritime jurisdictions comprise two types of cases: (1) those involving acts committed on the high seas or other navigable waters, and (2) those involving contracts and transactions connected with shipping employed on the seas or navigable waters. In the first category, which includes prize cases and torts, injuries, and crimes committed on the high seas, jurisdiction is determined by the locality of the act, while in the second category subject matter is the primary determinative factor. An admiralty court is a tribunal with jurisdiction over maritime law, including cases regarding shipping, ocean, and sea laws. Historically, admiralty courts were a separate part of the court system. In modern times, these cases may be assigned within the regular court system, usually at the federal or Superior Court level. An admiralty court hears shipping, ocean, and sea legal cases. The definition of such cases is broad, encompassing contracts, torts, injuries, and offenses relating to maritime law and events that occur on the high seas.

### Australian Maritime Safety Authority (AMSA)

Provides in its Maritime Order 43 minimum provisions for the construction of vessels and transport of animals.

### Banning of a vessel

As detailed in the Paris MoU text, under the provisions of section 4 of the Paris MoU, Art 16 of EU Council Directive 2009/16/EC, the ship will be refused further access to any port and anchorage in the Paris MOU region, except the port and anchorage of the ship's flag State: 1. In accordance with section 4.1 of the Paris MoU, vessels are banned after multiple detentions: these vessels will be refused access to any port in the region of the Memorandum for a minimum period. The refusal of access following multiple detentions will become applicable as soon as the vessels leaves the port or anchorage. 2. In accordance with section 4.2 of the Paris MoU, vessels which jump detention or fail to call at an indicated repair yard are banned: these vessels will be refused access to any port in the region of the Memorandum. 3. Access to a specific port may be permitted by the relevant authority of a port State in the event of force majeure or overriding safety considerations, or to reduce or minimize the risk of pollution, provided that adequate measures to the satisfaction of the authority of such State have been implemented by the owner, the operator or the master of the vessels to ensure safe entry.

### Better practice

In this research study 'better practice' is used as it goes beyond the minimum standard required by EU law.

### Black Sea MoU

The Black Sea MOU on Port State control is a system of harmonized inspection procedures designed to target sub-standard ships with the main objective being their eventual elimination.

### Border Inspection Post

According to Reg. 1/2005, this means any inspection post designated and approved in accordance with Art 6 of Directive 91/496/EEC (2), for carrying out veterinary checks on animals arriving from third countries at the border of the territory of the Community.

### Classification societies

Are organisations which develop and apply technical standards for the design, construction and survey of vessels and which carry out surveys and inspections on board vessels. Flag states can authorise classification societies to act on their behalf to carry out statutory survey and certification work for their vessels. Worldwide there are more than 50 classification societies but only 11 classification societies are presently recognised by the European Union. This recognition allows them to act as recognised

organisations on behalf of EU member States. EU Member States can only authorise a classification society recognised by the European Union. The European Union legislation that deals with classification societies is Regulation (EC) No 391/2009 and Directive 2009/15/EC. The European Commission assesses each of the EU recognised organisations once every two years. EMSA has been entrusted by the Commission with the task of carrying out the necessary inspections and therefore EMSA carries out a number of inspections of recognised organisations per year. These inspections include head offices and selected regional, field and site offices and also include visits to vessels for the purpose of verifying the performance of the recognised organisations. EMSA also carries out the necessary inspections of organisations for which recognition has been requested a Member State.

### **Company Performance**

One of the parameters to determine the SRP (Ship Risk Profile) is the Company Performance. The method used for evaluation of Company Performance is explained in annex 7 of the Paris MoU text and it takes into account the detention and deficiency history of all vessels in a company's fleet while that company was the ISM cCompany for the vessels. Companies are ranked as having a very low, low, medium or high performance. The calculation is made daily on the basis of a running 36-month period. There is no lower limit for the number of inspections needed to qualify, except that a company with no inspections in the last 36 months will be given a "medium performance". The formula consists of two elements: The Deficiency Index and the Detention Index. The Detention index is the ratio of the number of detentions of all vessels in a company's fleet to the number of inspections of all the vessels in the company's fleet within the last 36 months.

### **Competent authority**

Is defined by Reg.1/2205 as *"the central authority of a Member State competent to carry out checks on animal welfare or any authority to which it has delegated that competence."*

The competent authority at departure plays a very important role in verifying the journey plan for the entire journey up until the place of destination in the third country under Art 5 (3) (4), 14 (1) and Annex II of Regulation 1/2005.

The competent authority at the exit port has the tasks of:

- documentary check prior to loading of the vessel under Art 3,5(3) (4) and Art 20, Annex I, Chapters I (Point 4), II and IV
- Pre-loading and loading inspections of vessel and animals according to Art 5, Art 20, Art 21 and Annex I Chapters I, III and IV.
- Approving a livestock vessel and granting a certificate including documentary check and vessel inspection under Articles 3, 5, 19 and Annex I Chapters II, III and IV
- Authorizing the transporter for the sea part of the journey under Articles 6(1) (4),10 and 11(1)(B)(IV) and 17(1) in connection with Annex III, Chapter II

### **European Maritime Safety Agency (EMSA)**

Is a European Union agency charged with reducing the risk of maritime accidents, marine pollution from vessels and loss of human lives at sea by helping to enforce the relevant EU legislation. It is headquartered in Lisbon. EMSA works on maritime safety, security, climate, environment and single market issues and tasks, first as a service provider to Member States and the Commission, but also as an innovative and reliable partner and knowledge hub for the European maritime cluster and potentially beyond as a reference internationally.

### **Exit Point**

Means a border inspection post or any other place designated by a Member State where animals leave the customs territory of the Community (according to Reg.1/2005).



**Flag of convenience (FOC):**

Is a business practice whereby a vessel is registered in a country other than that of the vessel's owners. Owners of a vessels may register the vessel under a flag of convenience to reduce operating costs or avoid the regulations of the owner's country. Flag-of-convenience registries are criticised, mostly by trade union organisations based in developed countries, especially those of Europe. A basis for many criticisms is that the flag-of-convenience system allows vessel owners to be legally anonymous and difficult to prosecute in civil and criminal actions. Some vessels with flags of convenience have been involved in crime, offer substandard working conditions, and negatively impact the environment.

**Flag state**

The flag state of a commercial vessel is the state under whose laws the vessel is registered or licensed. The flag state has the authority and responsibility to enforce regulations over vessels registered under its flag, including those relating to inspection, certification, and issuance of safety and pollution prevention documents. As a vessel operates under the laws of its flag state, these laws are applicable if the vessel is involved in an admiralty case.

**Good practice**

In this research study 'good practice' is used when the practice is done to enforce current EU law.

**International Association of Classification Societies (IACS)**

Is a technically based organisation consisting of twelve marine classification societies, committed to a unique contribution to maritime safety and regulation through technical support and compliance verification. The members of IACS are: American Bureau of Shipping (ABS), Bureau Veritas (BV), China Classification Society (CCS), Croatian Register of Shipping (CRS), Det Norske Veritas Germanischer Lloyd (DNV GL), Indian Register of Shipping (IRS), Korean Register of Shipping (KR), Lloyd's Register (LR), Nippon Kaiji Kyokai (NK/ClassNK), Polish Register of Shipping (PRS), Registro Italiano Navale (RINA), Russian Maritime Register of Shipping (RS).

**International Maritime Organisation is the United Nations (IMO)**

Specialized agency with responsibility for the safety and security of shipping and the prevention of marine pollution by vessels. IMO is the global standard-setting authority for the safety, security and environmental performance of international shipping. Its main role is to create a regulatory framework for the shipping industry that is fair and effective, universally adopted and universally implemented. In 1987 the IMO adopted resolution A.600 to create the IMO number scheme aimed at the "*enhancement of maritime safety and pollution prevention and the prevention of maritime fraud*" by assigning to each ship a unique permanent identification number.

**IMO number**

A unique reference to the vessels, it remains linked to the hull for its lifetime, regardless of a change in name, flag, or owner.

**International Safety Management Certification (ISM Code)**

Entered into force on 1st July 1988 as SOLAS Chap. IX, the ISM provides an international standard for the safe management and operation of vessels and for pollution prevention. Its objectives are ensuring safety at sea, preventing human injury and fatalities and avoiding damage to the environment. It is applicable to all oceangoing vessels over 500 GT and to the owner or management company that has assumed responsibility for the vessels' operation. The ISM Code requires owners and operators to set in place a Safety Management System (SMS) embracing its objectives and involving the totality of the company's operations and managed vessels. The SMS allows a company to measure its performance against a documented system, and it enables a company to identify areas of improvement in safety practices and pollution prevention measures.

**Journey**

Reg. 1/2005 defines journey under Art 2 (j) as *"the entire transport operation from the place of departure to the place of destination, including any unloading, accommodation and loading occurring at intermediate points in the journey"*.

**Livestock vessel**

According to Reg. 1/2005 it is *"a vessel which is used or intended to be used for the carriage of domestic equidae or domestic animals of bovine, ovine, caprine or porcine species other than a roll-on-roll-off vessel, and other than a vessel carrying animals in moveable containers."*

**Long journey**

Means a journey that exceeds 8 hours, starting from when the first animal of the consignment is moved (according to Reg. 1/2005).

**Means of transport**

Means road or rail vehicles, vessels and aircraft used for the transport of animals (according to Reg. 1/2005).

**Official veterinarian**

According to Reg. 1/2005 it is a veterinarian appointed by the competent authority of the Member State.

**Organizer of the journey**

According to Art 2 (q) a primary legal or natural person who is responsible under Art 5 for the animals' welfare throughout the journey.

**Paris MoU**

The organisation consists of 27 participating maritime Administrations and covers the waters of the European coastal States and the North Atlantic basin from North America to Europe, with the mission to eliminate the operation of sub-standard vessels through a harmonized system of port State control. The Paris MoU Committee approved a quality performance list of Flag States, where 11 flags of convenience are targeted for special enforcement by countries that they visit (black-grey-white list of flags). The Memorandum of Understanding consists of the main text and includes 12 annexes, in which the Maritime Authorities agree on: the relevant international conventions; their inspection commitments; the principles for selection of vessels for inspection; inspection procedures; exchange of information on inspections; the structure of the Paris MoU organisation, the Secretariat; and amendment procedures of the Memorandum itself.

**Place of departure**

Means the place at which the animal is first loaded on to a means of transport provided that it had been accommodated there for at least 48 hours prior to the time of departure (according to Reg.1/2005).

**Place of destination**

Means the place at which an animal is unloaded from a means of transport and (i) accommodated for at least 48 hours prior to the time of departure; or (ii) slaughtered.

**Port State Control**

In accordance with the international regulations stipulated by international conventions in the maritime field, primary responsibility for the safe condition of a ship is borne by the flag State – the State under whose flag the ship is registered. Port State Control (PSC) becomes involved when shipowners, classification societies and flag State administrations have failed to comply with the

requirements of the international maritime conventions. Although it is well understood that the ultimate responsibility for implementing conventions is left to the flag States, port States are entitled to control foreign ships visiting their own ports to ensure that any deficiencies found are rectified before they are allowed to sail. Port State control is regarded as measures complementary to the flag State control. The rights for such control are provided by the conventions themselves. In recent years the importance of port State control has been widely recognized and there has been important movement in various regions toward establishing a harmonized approach to the effective implementation of the control provisions. Currently the following PSC regimes are established in the world: Paris MoU (Europe and North Atlantic region); Acuerdo de Viña del Mar (Latin American region); Tokyo MoU (Asia-Pacific region); Caribbean MoU (Caribbean region); Mediterranean MoU (Mediterranean region); Indian Ocean MoU (Indian Ocean region); Abuja MoU (West and Central African region); Black Sea MoU (Black Sea region); Riyadh MoU; United States.

#### **Port State Control Officer (PSCO)**

Carries out port State control. The PSCO is a properly qualified person authorised to carry out port State control inspections in accordance with the Paris MoU, by the Maritime Authority of the port State and acts under his/her responsibility. All PSCOs carry an identity card issued by their maritime authorities.

#### **Roll-on-roll-off vessel**

Means a sea-going vessel with facilities to enable road or rail vehicles to roll on and roll off the vessel (according to Reg. 1/2005).

#### **Ship risk profile (SRP)**

Each vessel (ship) in the information system will be attributed a ship risk profile, in accordance with Annex 7 of the Paris MoU Memorandum text. This SRP will determine the vessel's priority for inspection, being the interval between its inspections and the type of the inspection. Vessels can be "high risk", "standard risk" or "low risk". The profile is calculated using generic and historic parameters. Table 1 of annex 7 of the Memorandum shows the criteria for each parameter for the ship risk profile. The SRP is recalculated on a daily basis overnight, taking into account changes in the parameters, such as the 36-month inspection history and company performance. The latter means that inspection results of other vessels within the same ISM company may have an immediate effect on a vessel's SRP. Once determined, new performance tables for flags and ROs are also taken into account.

#### **THETIS system**

THETIS is an inspection data base developed, maintained and hosted by EMSA that supports the Port State Control inspection regime foreseen by Directive 2009/16/EC as amended and its four implementing regulations. EMSA has been tasked to develop, in cooperation with Member States and the European Commission, a new information system, which will support the New Inspection Regime for Port State Control. The design and creation of an effective inspection system will be crucial for the implementation of this New Inspection Regime and will assist Member States with harmonisation of PSC procedures and execution through centralised storage and distribution of reports. At the same time the requirements stemming from Directive 99/35/EC introducing an inspection system for Ro-Ro ferries and high-speed passenger craft will be catered for. THETIS implements all processes and interfaces in line with EMSA founding Regulation 1406/2002.

#### **Transport**

According to Reg. 1/2005, *"'transport' means the movement of animals effected by one or more means of transport and the related operations, including loading, unloading, transfer and rest, until the unloading of the animals at the place of destination is completed"*.



**Transporter**

Means any natural or legal person transporting animals on his own account, or for the account of a third party (according to Reg. 1/2005).

**TRACES**

Is the European Commission's multilingual online platform for sanitary and phytosanitary certification required for the importation of animals, animal products, food and feed of non-animal origin and plants into the European Union, and the intra-EU trade and EU exports of animals and certain animal products. It facilitates the exchange of data, information and documents between all involved trading parties and control authorities and therefore simplifies and speeds up the administrative procedures.

**Type of inspections**

The following types of inspection can be carried out: Initial inspection; More detailed inspection; Expanded inspection.

- Initial inspection: Check the certificates and documents listed in Annex 10 of the MoU text; Check that the overall condition and hygiene of the vessel – including navigation bridge, accommodation and galley, decks including forecastle, cargo holds/area and engine room – meet generally accepted international rules and standards; Verify, if it has not previously been done, whether any deficiencies found by an Authority at a previous inspection have been rectified in accordance with the time specified in the inspection report.
- More detailed inspection: A more detailed inspection will be carried out whenever there are clear grounds for believing, during an inspection, that the condition of the vessel or of its equipment or crew does not substantially meet the relevant requirements of a relevant instrument. Clear grounds exist when a Port State Control Officer finds evidence that in his/her professional judgement warrants a more detailed inspection of the vessel, its equipment or its crew. The absence of valid certificates or documents is considered a clear ground. Other examples of clear grounds can be found in Annex 9, paragraph 6 of the MoU text. A more detailed inspection will also be carried out on vessels flying a flag that has not yet ratified all of the Relevant Instruments of the Paris MoU.
- Expanded inspection: High Risk Ships (HRS) and vessels of a risk type (chemical tanker, gas carrier, oil tanker, NLS tanker, bulk carrier and passenger vessels) and more than 12 years old are eligible for an expanded inspection. An expanded inspection shall include a check of the overall condition, including the human element where relevant. And, subject to their practical feasibility or any constraints relating to the safety of persons, the vessel or the port, verification of the specific items in the risk areas for each vessel type must be part of an expanded inspection. The PSCO must use professional judgement to determine the appropriate depth of examination or testing of each specific item. The PSCO must be aware that the safe execution of certain on-board operations, e.g. cargo handling, could be jeopardised by tests carried out during such operation. The expanded inspection will take account of the human elements covered by ILO, ISM and STCW and include operational controls as appropriate.

**Vehicle**

According to Reg. 1/2005 a vehicle is a means of transport fitted with wheels which is propelled or towed.

**White, Grey and Black flag List (WGB)**

Each year a new White, Grey and Black list will be published in the Paris MoU Annual Report. The “White, Grey and Black (WGB) list” presents the full spectrum, from quality flags to flags with a poor performance that are considered high or very high risk. It is based on the total number of inspections and detentions over a 3-year rolling period for flags with at least 30 inspections in the period.



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This research project was commissioned by the European Parliament's Committee of Inquiry on the Protection of Animals during Transport. The paper provides an analysis of the legal framework for the transport of animals on livestock vessels and related operations. Shortcomings of the system currently in place are identified, examples of good practices worldwide are described, and case studies are presented. Policy recommendations and short-term goals for the EU Commission and Members States are outlined.

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