TECHNICAL ITEM I

Long-distance transport of live animals: WOAH’s standards and best practices including societal perception and communication aspects

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Summary: During the 88th General Session held virtually in May 2021, the World Organisation for Animal Health (WOAH: founded as OIE) Regional Commission for Europe agreed “Long-distance transport of live animals: WOAH’s standards and best practices including societal perception and communication aspects” as the Technical Item I to be presented during the 30th Conference of the Regional Commission in Catania (Italy), from 3 to 7 October 2022. An online questionnaire was designed and distributed to WOAH Members of the Regional Commission for Europe from 21 June to 8 July 2022 (with minor finalisations by 2 August 2022). The persons responsible for completing the questionnaire (of 47 Members in total) were mainly WOAH Delegates, National Focal Points for animal welfare or National Contact Points for long-distance transportation. The qualitative analysis of the information provided was carried out by grouping similar answers and, when proper, the United Nations geoscheme was applied to highlight any spatial clustering of the results. The wide majority of the Members (46 out of 47) declared to have in place specific legislation on animal welfare during transport, and most of them stated to be “generally aligned” with WOAH standards, there are still many countries in the Region where certain crucial requirements are not mandatory. Journey and contingency plans are commonly part of the specific legislation on animal welfare during transport, as well as monitoring and evaluation of the implementation of the legal requirements concerning animal transport by the Competent Authority or other certification bodies. The presence of major gaps in budget and/or available resources and trained personnel was declared by almost half of the responding Members (21 out of 47). Concerning the awareness of the civil society regarding animal welfare issues during transport, 11 Members reported a “low” level of awareness, and they were mostly included in the areas of Southern Europe, Western and Central Asia. The greatest part of Members responding “high awareness” clustered in the Northern and Western Europe geographical areas. Members were also asked to indicate possible WOAH initiatives that could improve the implementation of the standards, and most of them suggested to develop training activities and provide additional guidance through revised and/or new standards in the Terrestrial Animal Health Code and/or through other WOAH documents.

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INTRODUCTION

During the 88th General Session held virtually in May 2021, the World Organisation for Animal Health (WOAH, founded as OIE) Regional Commission for Europe recognised the crucial importance of implementing WOAH Standards on animal transport, in particular for long distances in all its Members. Therefore, it was decided to assign the topic “Long-distance transport of live animals: WOAH standards and best practices including societal perception and communication aspects” initially as one of the two Technical Items of the 29th Conference of the Regional Commission for Europe. Considering that, due to the COVID-19 pandemic restrictions, such an event was held as an online meeting with a limited agenda, this topic was assigned as Technical Item I of the 30th Conference of the Regional Commission for Europe (Catania, Italy, 3–7 October 2022).

BACKGROUND

One of the core objectives of WOAH is to develop international standards for the facilitation of safe international trade, the prevention and control of animal diseases, including zoonoses, and the promotion of animal health and animal welfare.

WOAH recognises the gap between animal welfare standards and the actual situation in many countries. It supports developing and implementing regional animal welfare strategies and platforms and WOAH global animal welfare strategy. WOAH encourages participation of all its Members in the standard-setting process and works with a wide range of stakeholders to raise awareness at all levels of WOAH’s international animal welfare standards and strengthen collaboration between private and public partners for effective implementation of these standards.

WOAH Terrestrial Animal Health Code (Terrestrial Code) provides a set of provisions for ensuring animal health in relation to international trade and movement of animals (Section 5. Trade measures, import/export procedures and veterinary certification) and recommendations for the welfare of animals during the transport of animals by land, by sea and by air [9, 10, 11].

Chapters 7.2 and 7.3 of the Terrestrial Code cover set provisions and considerations to minimise poor welfare during handling and transport, addressing: animal behaviour, distractions and their removal, personnel responsibilities and competencies, planning the journey, documentation, pre-journey period, loading, travel, unloading, post-journey handling and actions in the event of a refusal to allow the completion of the journey [10, 11].

WOAH global animal welfare strategy provides continuing direction and coordination of the organisation's actions in the animal welfare area through the development of animal welfare standards, capacity building and education, communication with governments, organisations and the public and support for the implementation of animal welfare standards and policies.

The Regional Platform on Animal Welfare for Europe, launched in 2014, facilitates the application of WOAH Animal Welfare Standards in Europe and empowers and supports the Veterinary Services in implementing those Standards. The welfare of animals during transport was identified as one of the priority topics in the first (2014–2016), in the second (2017–2019) and in the third (2020–2023) Action Plans of the WOAH Platform on Animal Welfare for Europe. The series of comprehensive and complementary activities was completed starting with developing training modules on the transport of animals by land and sea, through the organisation of a series of train-the-trainers workshops and regional seminars, monitoring cascading activities conducted in countries, arriving to the services of the new concept of whole Journey Scenario Workshops organised on the regional (Europe) and multiregional level (Europe and the Middle East).

WOAH organised a second Global Forum (April 2019, Paris) with the dedicated theme 'Animal transport: a shared responsibility' to provide a platform for the open and transparent exchange of ideas, experiences and specific knowledge on the welfare of animals during transport by land, sea or air and discuss proposals to improve the implementation of relevant WOAH international standards with participants representing WOAH Members, international organisations, industry, Non-Governmental Organisations (NGOs) and the civil society.

The key points highlighted during the forum include the need to establish a sense of collective responsibility amongst all participants in the transportation chain, as well as clearly identified individual responsibility at every point of the chain, and mechanisms to transfer that responsibility between transportation chain participants; the role of effective communication and coordination among those responsible for reducing the risk of animal welfare failures, the need to develop regulatory frameworks and practises to ensure a strong buy-in from all stakeholders and a commitment to practical implementation,
and the importance of having a multidisciplinary approach when developing animal welfare policies including scientific bases and socio-economical aspects.

Furthermore, recognising the importance of the subject, the Regional Commission for Europe adopted the “Terms of Reference of the National Contact Point on Long-Distance Transportation” in November 2020. The network of Contact Points and National Focal Points on animal welfare supports WOAH Delegates in addressing the related issues.

The main points highlighted through activities organised by the WOAH Platform on animal welfare for Europe include the need for strengthening communication and collaboration between Competent Authorities and all actors involved in the transport of live animals, benefits of appropriate planning and emergency procedures, including the processes for their verification. The participants of those called for further strengthening the collaboration between Competent Authorities, inter-regional cooperation and further activities supporting the implementation of WOAH standards on animal transport (WOAH regional network of National Contact Points on long-distance transportation and the organisation of follow-up workshops).

Transport is a stressful operation in the life of farm animals – whether transported to slaughterhouses, holding or reproduction sites – while animal welfare risks generally rise as the distance over which animals are transported increases. Animal welfare during and as a result of transport, can be assessed by using a range of behavioural, physiological, pathological and carcass-quality indicators and measures of the extent of any disease, injury or mortality resulting from, or exacerbated by, transport are important because health is an important part of welfare [1].

A long-distance transport in the context of WOAH Europe Region (i) can be carried out within the group of European Union (EU) countries within a shared regulatory framework; (ii) can involve in-country transport only given the geography of some large countries in Europe; or (iii) can occur between EU and non-EU countries including international trade issues and border controls that can seriously impact the duration of transport; (iv) in addition to those regional scenarios there is also long-distance transport of live animals occurring between Europe and the Middle-East and North Africa. In general, animal welfare during transport is a complex and multi-faceted subject including scientific, ethical, economic, social, and political dimensions. Pursuing animal welfare during transport – especially when long distances should be covered – creates a set of challenges for all parties involved, farmers, business operators, transporters, and – above all – Competent Authorities. The growing interest expressed by the civil society towards the main animal welfare issues during transport and the effects of the related awareness on the meat market trends should be explored and taken in due consideration.

Detailed data on the number of transported animals covering all Members in WOAH Europe Region are not available. However, the significance of the issues can be demonstrated by the fact that in 2019, about 1.4 billion bovines, swine, poultry, ovine and caprine and equines were traded across the EU Member States, and roughly 230 million animals of the same species were traded from EU to other countries.

In addition, it is important to highlight that the transport of animals in EU (27 out of 53 WOAH European Members), is covered by a common legal framework under EU Regulation 1/2005 on the protection of animals during transport, aiming to provide a level playing field for operators while ensuring sufficient protection for the animals being transported.

Animal welfare, including during transport, remains a concern of society and NGOs and has become part of political debate in the Region, especially within the EU, with the most recent inquiry of the EU Parliament (ANIT Committee) recalling for better protection of animals during transport as an example. Within the EU, political commitment to improving animal welfare during transport is supported by various actions, including coordinated implementation of regulation through a network of national contact points, development of guidance documents, and monitoring and evaluation of the implantation of the EU regulation.

As mentioned above, the Members of the Regional Commission for Europe confirmed the importance of ensuring animal welfare during transport by implementing WOAH standards. The WOAH Platform on Animal Welfare for Europe, with relevant capacity-building activities in previous years, focused its support to Members from Eastern Europe, Western and Central Asia, and still continues further strengthening collaboration and sharing of best practices among all Members in the Region as well as Members in the Middle East and North Africa.

This survey provides insight for the Regional Commission for Europe when planning future activities to address identified gaps in standards implementation whilst taking into consideration specific Members’ needs. In addition, as the WOAH Terrestrial Animal Health Standards Commission included in its working programme, the revision of specific chapters of the
Terrestrial Code on the transport of animals, therefore, the outcome of this Technical Item may provide relevant inputs from Europe Region for possible revision of standards in the Terrestrial Code.

MATERIALS AND METHODS

An online questionnaire was designed by a multi-disciplinary team composed by a team of experts appointed by WOAH Headquarters and Sub-Regional Representation in Brussels and WOAH Collaborating Centre Consortium. This tool – implemented on the Microsoft Forms web platform – was distributed by the WOAH Sub-Regional Representation office in Brussels to all 53 Members of the Regional Commission for Europe, in order to analyse the level of implementation of WOAH International Standards and current best practices in a long-distance transportation of animals by sea and by land [10, 11].

The questionnaire is divided into different thematic sections:

- Legislative framework that explores different key aspects such as the adoption of the mentioned WOAH Standards or other regulation and standards, the authorisation of facilities and means of transport, the formal attribution of responsibilities, the personnel competency certification, the journey and contingency plans, the evaluation and monitoring of the implementation of the legislative requirements, the Competent Authority capacity to implement standards and requirements on animal transport

- Major gaps/or shortages for the Competent Authorities to implement standards and requirements on animal transport

- Civil society and business operators’ awareness regarding animal welfare issues during long-distance transportation and the impact on the protection of the animals

- Expected actions or activities by WOAH to assist the Competent Authorities in the implementation of standards and requirements on animal transport.

The analysis of the data obtained was carried out by grouping similar answers and expressing the result obtained in the text as a percentage or as an absolute value. Furthermore, for the analysis of some information, the geographical distribution proposed by the United Nations geoscheme (created only for statistical analysis) was used to highlight, when proper, any spatial clustering of the results.

In particular, according to the list of Members of the WOAH Regional Commission for Europe, the United Nations geoscheme subdivides the continent as follow:

**Eastern Europe (10 countries):** Belarus, Bulgaria, Czech Republic, Hungary, Poland, Moldova, Romania, Russia, Slovakia, Ukraine

**Northern Europe (10 countries):** Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden, United Kingdom

**Southern Europe (14 countries):** Albania, Andorra, Bosnia and Herzegovina, Croatia, Greece, Italy, Malta, Montenegro, Portugal, San Marino, Serbia, Slovenia, Spain, Republic of North Macedonia

**Western Europe (8 countries):** Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, The Netherlands, Switzerland

**Central Asia (5 countries):** Kazakhstan, Kyrgyzstanz, Tajikistan, Turkmenistan, Uzbekistan

**Western Asia (6 countries):** Armenia, Azerbaijan, Cyprus, Georgia, Israel, Türkiye
The results of the questionnaire are provided in table form with both the numbers reported and the percentage of responses tabulated.
RESULTS AND DISCUSSION

The survey was carried out from 21 June to 8 July 2022 (with minor finalisations by 2 August 2022) and completed by 47 Members. The respondents were mainly WOAH National Focal Points on animal welfare or National Contact Points for long-distance transportation (31 out of 47).

Questions from 1 to 10 and question 13 were aimed to investigate the state of implementation of the Terrestrial Code standards on animal welfare during transport through the mandatory and/or voluntary norms currently in place in the countries of the Region, as well as the control systems.

Implementation of the science-based standards included in the Terrestrial Code is the responsibility of individual WOAH Members. Still WOAH supports its Members to establish the necessary underpinnings of good animal welfare policy, including contemporary legislation, improved veterinary education and training [6]. Animal welfare during long-distance transport has been considered a priority topic in the region by WOAH since the launch of the Regional Platform on Animal Welfare for Europe in 2014, with a series of activities in order to help countries in the implementations of best practices according to the Terrestrial Code Chapters 7.2 and 7.3 [10, 11].

These questions were designed to establish an overview of the current situation including the existence of legislation that includes the key requirements to ensure the animal welfare during transport as described in Chapters 7.2 and 7.3 of the Terrestrial Code.

Questions 1 and 2. At the opening question, Members were asked to indicate if they have in place a specific legislation on animal welfare during transport. Almost all responding Members (46 countries) gave a positive response. From the analysis of the provided positive feedback, it can be deduced that in a large number of Members (41 out of 46), the legislation generally reflects WOAH Standards. Moreover, 33 out 47 (70%) of Members also stated they have non-legislative documents such as working/operating procedures and/or best practice guidelines and/or foresee the application of voluntary schemes covering animal welfare issues during transport. On the contrary, almost 30% of the Members do not have non-legislative documents concerning animal welfare during transport by land and sea (mainly long-distance transportation). The results show that most Members declared to have relevant legislation in place; however, its implementation in many countries in the Region could be further supported by non-legislative documents.

Question 3. Once asked about the existence of specific regulations related to some key aspects for ensuring the welfare of the animals to be transported or during transport, 44 out of 47 responding Members (93%) indicated their existence. In particular, 98% of them pointed out that the legislation in their country concerns the inspection of animals before and during their travel, certification, and record keeping. The legislative obligations guarantee the verification of the minimum requirements related to the fitness of the animals for the journey. Equally important to prevent the establishment of unfavourable and stressful conditions for animals is the approval of facilities, vehicles, vessels, containers, and roll-on-roll-off vessels. Approval, in fact, is influenced by the compliance of structures and means of transport with the necessary and indispensable requirements to reduce the stress of the transported animals. Thirty-one (71%) of the Members declared to have specific regulations for inspection of animals plus approval of means of transportation, including the approval of facilities. In the overall, key elements listed in question 3 are included in the regulatory framework in the majority of Members; however, further detailed information on the application of those key elements is necessary for assessing their effect on ensuring the welfare of the animals during transport.

Questions 4 and 5. WOAH standards highlight the joint responsibility of all people involved for the welfare of the animals during their journey and provide their specific roles. Regarding the definition of responsibilities during transport operations, the majority of the responding Members replied positively. In particular, they identified – as key actors – animal owners or managers (39 out of 47), drivers (37 out of 47), animal handlers (37 out of 47), transport companies (36 out of 47), and exporters (30 out of 47). The level of attribution of responsibilities to managers of facilities and masters of vessels is lower. This trend is further confirmed by the feedback provided to question 5. In fact, specific competencies in accordance with responsibilities during transport operations documented through formal training or practical experience are required mainly for drivers (33 out of 47), animal handlers (28 out of 47), transport companies (23 out of 47), animal owners and or managers (13 out of 47). The number of positive responses related to the documented competencies required to the master of vessels was very low (3 out 11), not proportionate to the number of replies to the previous question concerning the responsibility attribution to such a professional profile, crucial for sea transportation (11 out 47). The precise definition and shared understanding of specific responsibility for all actors involved in transporting animals, especially for long distance and cross-border journeys, may significantly contribute to ensuring the welfare of the transported animals.
Questions 6 and 7. A journey plan before departure (which includes a loading plan, journey duration, itinerary, and location of resting places) is required in the majority of the responding Members (41 out of 47). Of the 41 positively responding Members, 46% (19 out of 41) belong to Eastern and Southern Europe, 37% (15 out of 41) to Northern and Western Europe, and 17% (7 out of 41) to Western and Central Asia (Figure 1). The journey plans are approved or verified by the Competent Authority in 85% of the Members (35 out of 41). In 6 Members, mainly in the Western and Central Asia areas, the legislation in force does not require a journey plan before departure.

Questions 8 and 9. The information obtained from the question related to contingency plans was very similar in terms of percentages and geographical distribution. In 35 out of responding 47 Members, contingency plans addressing emergencies during transport are required, and only in 30 of these Members are these plans approved or verified by the Competent Authority. 43% (15 out of 35) of the Members adopting the contingency plans, belong to Eastern and Southern Europe, 40% (14 out of 35) to Northern and Western Europe, while 17% (6 out of 35) to Western and Central Asia. In 12 Members, mainly in Western and Central Asia and Southern Europe, emergencies that can occur during the transport process are not addressed by contingency plans (Figure 1).

Figure 1. Geographical distribution of WOAH Members where legislation in force requires a journey plan before departure or contingency plans addressing emergencies during transport and geographical distribution of Members without both tools

Question 10. Almost all the respondents (45 out of 47) declared that monitoring and evaluation of the implementation of the legal requirements concerning animal transport are regularly carried out by the Competent Authority or other certification bodies. This is congruent with the fact that almost all the countries that replied to the questionnaire have in place legislation on animal transport. The results provided by Members’ monitoring and evaluation processes may provide further detailed feedback on the implementation of WOAH standards. In addition, sharing the methods and best practises for monitoring and evaluation may further contribute to strengthening collaboration between Competent Authorities and improving welfare of the animals.

WOAH is not responsible for the implementation and enforcement of Terrestrial Code standards in the Members’ territories, that depends on many parties at various stages in the different countries [7]. As the only presence of norms (mandatory or voluntary) is crucial but not sufficient to ensure their effective implementation and enforcement, and that improving the welfare of animals during transport is a challenge particularly where resources and tools are lacking, questions 11 and 12 were aimed to assess the presence of problems or gaps that should be filled in order to gain compliance with WOAH standards on the field.

Question 11. Concerning the question if the Competent Authority has the technical capacity, trained personnel, and additional capacity to implement standards and requirements on animal transport, 26 Members replied “yes”, 19 replied “partially” and 2 stated “no”. More than the 50% of the Members responded positively (26 out of 46). 46% of them (12 out of 26) belong to Northern and Western Europe, while 42% (11 out of 26) to Eastern and Southern Europe. 52% (10 out of 19) of Members that have only partially the above-mentioned resources for the implementation of animal welfare standards
related to transport, belong to Eastern and Southern Europe, 31% (6 out of 19) to Western and Central Asia, and 15% (3 out of 19) to Northern and Western Europe (Figure 2).

**Figure 2.** WOAH Members where Competent Authority has full, partial or no technical capacity, trained personnel, and additional capacity to implement standards and requirements on animal transport

<table>
<thead>
<tr>
<th>Region</th>
<th>Yes</th>
<th>Partially (to some extent)</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Asia</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Central Asia</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Western Europe</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Southern Europe</td>
<td>7</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Northern Europe</td>
<td>7</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**Question 12.** In the 21 WOAH Members that have recognised major gaps/shortages, budget or available resources and trained personnel, represented the major critical issues to be worked on (Figure 3).

**Figure 3.** Total number per type of major gaps/shortage

<table>
<thead>
<tr>
<th>Issue</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal authority</td>
<td>4</td>
</tr>
<tr>
<td>Trained personnel</td>
<td>16</td>
</tr>
<tr>
<td>Monitoring system</td>
<td>10</td>
</tr>
<tr>
<td>Equipment/supplies</td>
<td>6</td>
</tr>
<tr>
<td>Reporting authority/capability</td>
<td>6</td>
</tr>
<tr>
<td>Communication with</td>
<td>2</td>
</tr>
<tr>
<td>Budget, resources</td>
<td>16</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
</tr>
</tbody>
</table>
Regarding the shortage of trained personnel, almost all Members (14 out of 16), which made explicit the problem, are located in Eastern and Southern Europe and Western and Central Asia. For the same geographical areas, 9 Members out of 10 also showed a lack of a monitoring system for the correct implementation of the standards and requirements on animal transport.

An adequate budget and resources also seem necessary to address the other identified gaps, such as trained personnel and monitoring systems. Ensuring sufficient funding available for the Competent Authority is a complex and multi-factorial issue, including economic aspects as well as long-term political commitment and executive actions to address animal welfare issues during transport.

**Question 13.** In order to assure the enforcement of the legislation concerning the welfare of animals during transport, all the 47 responding Members organise or carry out official controls. In most EU countries (27 out of 47), the Central and the local Competent Authority organise or carry out official controls. In 13 out of 47 Members, official controls are conducted only by the local Competent Authority and in 7 of them, by the Central Competent Authority only. A low percentage of European Countries (38%) have a reporting system to analyse – at central level – the legal infringements. The presence of this type of system is geographically well distributed throughout the Europe Region, but as less than 50% of Members have this type of system, it could be interesting for the Members to share their experience in order to establish the system in the Members without.

In 47% (22 out of 47), 36% (17 out of 47) and 13% (6 out of 47) of Members, the Competent Authority staff cooperate with the road and sea police during official control, or with their counterparts in the country of destination before, during, after the journey, or with the NGOs, or other voluntary organisations (Figure 4) respectively. Cooperation between administration and stakeholders could be further developed to improve and strengthen the control system.

**Figure 4.** WOAH Members cooperating with other organisations during official control inspections or before, during and/or after the journey per type of organisation

**Questions from 14 to 18** were aimed to understand the respondents' perception of the level of awareness expressed by the civil society in the Members regarding animal welfare issues during transportation, and the possible effects that such an awareness could have on animal welfare in the Region. As consolidated knowledge in the social and economic domains, the consumers' purchase behaviour is a complex process that originates from the collection and analysis of all accessible information about the product to purchase (raw materials, production system, quality level, price, and placement). It forms – in individuals or groups – the so-called purchase intention that turns (or not) in the final purchase decision, and in related interpersonal communications, having the power to influence the purchase behaviour of other potential consumers. These multidimensional factors always address the marketing mix strategies implemented by the business operators to save or increase their market shares. What consumers want, how the product meets or fails to meet their wants, how the product features are perceived by potential or actual clients, how the product stands out from similar competitors’ items, and how the producers or sellers communicate with their customers about the product are essential levers to determine the success of a business within a specific market. Research conducted within the Welfare Quality® project [4] demonstrates...
that animal welfare is recognised as a component of product differentiation and provides broader notions of quality. It is also identified as ethical and quality commitment of food suppliers to their consumers.

In light of this preamble, the survey outcomes are interpreted (Figure 5). The majority of the respondents (28 out of 47) declared a “medium” level of awareness expressed by the civil society in their country (question 14), but there was also a consistent part of Members showing the presence of “high” or “low” level of awareness.

It is interesting to note that the greatest part of Members responding with a “high awareness” are clustered in the Northern and Western Europe geographical areas (7 out of 8), while the Members with a “low awareness” level were mostly included in the areas of Southern Europe, Western and Central Asia (9 out of 11).

Figure 5. Number of WOAH Members responding per level of awareness and per geographical area

This low level of awareness was over-represented in the same geographical areas where, according to the answers to question 12, major gaps or shortages are present for the Competent Authorities to implement Terrestrial Code standards on animal welfare during transport: 13 out of 21 Members showing major gaps/shortages were in Southern Europe, Western and Central Asia, while only 3 out of 21 were in Northern and Western Europe. This could be considered as further confirmation of the fact that the presence of support from the civil society is tightly connected to the effective capacity of implementing Terrestrial Code standards on animal welfare, considering that this should necessarily pass through awareness raising, communication, education and training [8].

This is also consistent with the answers to questions 15 and 16, aimed to investigate if the civil society’s awareness on animal welfare issues during transport could affect consumers and business operators' choices and, therefore, facilitate the application of WOAH standards. In fact, 23 out of 47 Members were in agreement with this assumption, particularly as concerns the possible influence on business operators (question 16), while a minor share of Members (16 out of 47) were in agreement on the fact that civil society awareness on animal welfare issues during transport could also impact on consumers choices (question 15). Many Members, however, were “neutral” in regard to these two questions (21 to question 15; 17 to question 16). In both cases, Southern Europe seems to be the most sceptical area about the possible positive effects of the civil society awareness on the implementation of measures to protect animal welfare during long-distance transportation (5 out of 10 “disagree” answers to these two questions were from this area). Northern and Western Europe are more in agreement with this approach (17 out of 30 answers from these areas).

Symmetric to the civil society awareness was the attention given to the level of awareness expressed by business operators towards their role and responsibilities to protect animals during long-distance transportation by land and sea. From the feedbacks provided to question 17, animal transport companies emerge as the most relevant category (45% of the respondents – 21 out of 47 – consider them highly aware of their role and responsibilities to protect the transported animals), while predominantly medium is considered the level of awareness expressed by farmers, exporters, business or buy/selling agents and animal truck manufacturers.
The outcomes were different concerning the professional profiles of those who work in the animal during transportation, such as drivers, animal handlers, and resting point managers and personnel. The respondents consider medium–high, the level of awareness they have, about their role and responsibilities to assure animal welfare at each stage of the land and sea transportation.

The questionnaire also collected information on the initiatives already in place in Members to increase the level of awareness of civil society and business operators concerning animal welfare (question 18). The majority of the Members provided a positive answer (only 16 out of 47 stated “no” to initiatives to increase the level of awareness of civil society and business operators being in place).

Members that organise awareness raising activities are quite evenly distributed among the different geographical areas, even if they are slightly more frequent in Northern and Western Europe (11 out of 15).

Awareness raising campaigns are mainly organised by the Competent Authorities (11 out of 31), Competent Authority(ies), NGOs and mass media and social networks (14 out of 31) and NGOs, mass media and social networks (6 out of 31).

Those initiatives aim most at increasing:

- controls by the Competent Authorities and applying more severe sanctions/criminal convictions
- the protection measures adopted by the business operators before departure and during long-distance transportation as the consequence of a cultural change within the entire production chain.

It is proper to highlight that 31% of the respondents that have indicated the scope of the initiative in place (9 out of 29) said that they are finalised to definitely stop long-distance animal transportation by law in the country or in the Region.

**Question 19.** The conclusive question posed to the Members of the Europe Region concerned the indication of any possible action or activity by WOAH to assist the Competent Authorities to implement or manage more effectively standards and requirements on animal transport (Figure 6).
In this regard, 39 Members suggested to develop training or regional workshop programmes or provide simulation / tabletop exercises and facilitate incorporation of the topic into veterinary education curricula. This result, even if predictable, should not be underestimated. It proves the need for urgent and targeted capacity building interventions aimed at boosting the effectiveness of the controls carried out by the Veterinary Services on animal welfare during transport.

Of the 39 Members mentioned above, 15 belonged to Eastern and Southern Europe, 13 to Northern and Western Europe, and 11 to Western and Central Asia.

The request formulated by 34 Members to WOAH for additional guidance through revised standards in the Terrestrial Code or the development of new additional standards or through other WOAH documents, can be considered coherent with and complementary to the need for specific training just illustrated.

In fact, together with further capacity building interventions, additional guidance from WOAH in this field could facilitate the role of its Members in the protection of the transported animals in the Region. The geographical distribution of the Members expressing the two macro-needs is quite similar as concerns the Eastern and Southern Europe (16 out of 34) and Western and Central Asia (10 out of 34). For the Northern and Western Europe, the need for additional guidance is less perceived compared to the need for training activities (only 8 Members out of 34 has recognised that need).

The issue of developing awareness campaigns is most felt in Eastern and Southern Europe (13 out of 26), and less so in Northern and Western Europe (9 out of 26), and Western and Central Asia (4 out of 26).

Twenty-two (22) Members have indicated as two of the activities in which WOAH can assist Members i) the targeted assistance for developing legislation and ii) the targeted assistance by experts/assonance teams. Most of the Members that express these needs (17 out of 22) are from the Western and Central Asia (5 out of 17), and Eastern and Southern Europe (8 out of 17).
As regards WOAH support to the process for setting bilateral and multilateral agreements between countries, 17 respondents expressed such a need, and in particular those belonging to Eastern and Southern Europe (9 out of 17) and Northern and Western Europe (6 out of 17).

To embed animal transport issues into WOAH Performance of Veterinary Services (PVS) Pathway, and to promote private–public partnership initiatives have been identified as possible WOAH activities by 9 Members.
CONCLUSIONS

Detailed data related to transported animals from and to the Europe Region are not available, but billions of bovines, swine, poultry, ovine and caprine and equines were traded and transported across the Europe Region. These animals are mainly transported for slaughter, for further fattening and breeding. Economic considerations (free trade and competition, specialisation of production systems), or cultural considerations (consumer preferences, religious considerations) drive livestock transport over long distances [3]. Transport is certainly a critical moment relating animal welfare; it involves two different types of actions, direct movements and restrain: neither of these are part of the normal experience of an animal, so they can be great stressors. Livestock are forced onto a vehicle they have never seen before, often by unfamiliar people, sometimes mixed with unknown animals, subjected by vibrations and other feelings they have never experienced. This is particularly evident for long-distance transport, when these “new” conditions last for a long time and could be associated with other unpleasant feelings like hunger, thirst, exhaustion, lack of space and rest during transit, thermal discomfort and, in general, fear. All these elements contribute to poor welfare in transported animals, and they also increase the susceptibility to infection and the shedding of infectious agents in already infected animals [2]. WOAH recognises the importance of this delicate moment, whenever it happens during the life of the animals transported for different reasons, and clearly identify as primary issue, that could threaten the correct management of a long-distance transport, the fact that a number of different actors could be involved in the process, often in different countries.

WOAH is the international organisation that produces commonly recognised standards that state the scientific fundamentals on which the welfare of the animals should be ensured, agreed by different countries, with different legislations, and different stakeholders, with different interests. Long-distance transport is perhaps the situation in which the role of WOAH as common reference organization is more evident and useful, particularly when it comes to animal welfare. WOAH should favour the arising of a sense of collective responsibility amongst all participants in the transportation chain, effective communication and coordination among those responsible for reducing the risk of animal welfare failures, on the basis of adequate regulatory frameworks. Moreover, available data and information could allow WOAH to direct the strategies, analyse and anticipate WOAH Members’ priorities, needs, gaps and limitations on the animal welfare during transport to provide more and more, also through WOAH Regional and Sub-Regional Representations, i) appropriate technical support to WOAH Members in the implementation of the animal welfare standards of the Terrestrial Code, including the provision of tools, relevant to the development, implementation, monitoring and evaluation of veterinary legislation on animal welfare; ii) focused and appropriate education programmes, based on effective modern methodologies, for boosting Competent Authorities and key players’ skills, involved in the transport of animals.

On the basis of the results obtained from the questionnaire, some critical aspects relating the effective implementation of WOAH standards on animal welfare during transport should be highlighted:

- despite the wide majority of WOAH Members declaring to have in place legislation “generally aligned” with Terrestrial Code standards, there are still many Members in the Region where certain crucial requirements are not included (e.g. defined specific responsibilities and mandatory documented training/practical experience for people in charge of the animals);
- access to guidelines and other non-legislative documents for all WOAH Members could be extremely useful to allow the enforcement of the existing legislation. Coherently to what is required by the respondents, additional guidance from WOAH in this field could facilitate the role of its Members in the protection of the transported animals;
- journey plans and contingency plans are commonly part of the specific legislation on animal welfare during transport. Monitoring and evaluation of the implementation of the legal requirements concerning animal transport are regularly carried out by the Competent Authority or other certification bodies; moreover, the majority of WOAH Members declare to have specific regulations for inspection of animals, approval of means of transportation and approval of facilities; further analysis in more detail could assess the level of application of the above mentioned control tools/actions and identify Members where these should be still put in place and define effective implementation methods (e.g. twinning, training, eLearning);
- almost half of the respondent WOAH Members declare the presence of major gaps in budget or available resources and trained personnel, necessary for the effective implementation of WOAH animal welfare standards, even if these are included in mandatory legislation. This result proves the need for urgent targeted capacity building interventions aimed at boosting the effectiveness of the controls carried out by the Veterinary Services on animal welfare during transport;
• particularly in certain geographical areas, efforts are needed to increase awareness among stakeholders involved in animal welfare issues during transport. Consumers' and transporters' awareness should be a powerful lever to strengthen the process of effective implementation of WOAH standards on animal welfare;

• additional training and guidance from WOAH in this field could facilitate the role of the Competent Authorities of Members in the protection of the transported animals in the Region.
REFERENCES


