Public consultation on the draft scientific opinion on Methodological guidance for the development of animal welfare mandates in the context of the Farm To Fork Strategy

European Food Safety Authority (EFSA)

Abstract
The European Food Safety Authority (EFSA) has launched a public consultation to receive input from the scientific community and all interested parties on the draft methodological guidance for the development of welfare mandates in the context of farm-to-fork strategy. The guidance document was discussed and endorsed for public consultation at the EFSA Scientific Panel on Animal Health and Welfare (AHAW) Plenary meeting on 15 December 2021. The written public consultation for this document was open from 14 February 2022 to 31 March 2022. EFSA received comments from 24 interested parties. This report, which summarises the outcome of the public consultation, includes a brief summary of the comments received and how they were addressed in the final document/guidance. In total 76 original comments were submitted in the tool by 24 interested parties, including anonymous contributors, from 12 different countries. All the comments are published in the EFSA web page as received (https://open.efsa.europa.eu/consultation/a0c7U000000JnsvQAC). Thirteen comments (from 8 identified interested parties) had no comment or “nonsense comment (e.g. test)” or indicated “no comment”, “no specific comment” or were “Blanco”. In addition, there were 6 identical comments (duplicates) submitted by 4 different interested parties. In that case, the comment was only taken over once and indicated which interested parties made this comment. Therefore, the 67 unique comments were taken up in this Annex. EFSA and its AHAW Panel wish to thank all stakeholders for their contributions.

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1. Data and Methodologies

Appendix A of this annex contains an explanatory text for the public consultation on the draft Scientific Opinion on public consultation on guidance methodology farm to fork.

Appendix B of this annex contains the full list of the 67 unique comments submitted by the interested parties by means of the of the electronic form on the EFSA website and its assessment (answers).

Appendix C of this appendix contains the answers to the attached files uploaded by the interested parties contains by means of the of the electronic form on the EFSA website during the public consultation.

Table 1 depicts the 25 interested parties that have participated in the public consultation, the country of origin, the number of comments and files (attached) provided. These include professional and sector (animal species) associations, public agencies, consumer organisations, university affiliates, NGOs, contract research organisations, individuals in their personal capacity and one anonymous contributor.

Table 1: Number of comments (Appendix B) and number of uploaded documents (Appendix C) provided by the stakeholders contributing to the public consultation

| Organisation                                                                 | Country             | Number of comments (see Appendix B) | Number of attached files (see Appendix C) |
|------------------------------------------------------------------------------|---------------------|-------------------------------------|------------------------------------------|
| 1. Universities Federation for Animal Welfare [https://www.ufaw.org.uk/](https://www.ufaw.org.uk/) | UK                  | 7                                   | -                                        |
| 2. Anonymous                                                                 | NL, ES              | 7 (6 NL, 1 ES)                      | -                                        |
| 3. Nederlandse voedsel en warenautoriteit (NVWA) – Ministerie van Landbouw, Natur en Voedselkwaliteit [https://www.nvwa.nl/](https://www.nvwa.nl/) | NL                  | 6                                   | -                                        |
| 4. COPA-COGECA [https://copa-cogeca.eu/](https://copa-cogeca.eu/)             | BE                  | 5                                   | -                                        |
| 5. Dutch Dairy Association - Nederlandse Zuivel organisatie [https://www.nzo.nl/](https://www.nzo.nl/) | NL                  | 5                                   | 4 files                                  |
| 6. LTO Nederland Nederlandse land- en tuinbouw [https://www.lto.nl/](https://www.lto.nl/) | NL                  | 6 (2 comments were repeated from stakeholder nr 5) | -                                        |
| 7. EC- Auditor - Health & Food Audits & Analysis                               | IE                  | 4                                   | -                                        |
| 8. EFFAB European Forum of Farm Animal Breeders [https://www.effab.info/](https://www.effab.info/) | BE                  | 4                                   | -                                        |
| 9. HIS EU- Humane Society International/Europe [https://www.hsi.org/](https://www.hsi.org/) | BE                  | 4                                   | -                                        |
| 10. IFIP Institut du porc [https://ifip.asso.fr/](https://ifip.asso.fr/)       | FR                  | 2 (2 comments were repeated by IFIP) | -                                        |
| 11. ARTIA [https://www.atria.fi/en/group/](https://www.atria.fi/en/group/)     | FI                  | 3                                   | -                                        |
| 12. The Danish Veterinary and Food Administration Danish Ministry of Agriculture and Fisheries of Denmark [https://foedevarestyrelsen.dk/english/Pages/default.aspx](https://foedevarestyrelsen.dk/english/Pages/default.aspx) | DK                  | 2                                   | -                                        |
| 13. Vereniging van de Nederlandse Puiimveeverwerkende Industrie (NEPLUVI) [https://www.nepluvii.nl/](https://www.nepluvii.nl/) | NL                  | 2                                   | 1 file                                   |
| 14. Association de la Transformation Laitière (ATLA) [https://www.filiere-laitiere.fr/fr/les-organisations/fnil](https://www.filiere-laitiere.fr/fr/les-organisations/fnil) | FR                  | 1                                   | -                                        |
| 15. Institut De L'Elevage (French Livestock Institute) IDELE [https://www.inno4grass.eu/en/partners/idele-france-2](https://www.inno4grass.eu/en/partners/idele-france-2) | FR                  | 0 (1 comment was repeated from stakeholder nr 10) | -                                        |
| 16. ITAVI expert des filières avicole, cunicole et piscicole [https://www.itavi.asso.fr/](https://www.itavi.asso.fr/) | FR                  | 0 (1 comment was repeated from stakeholder nr 10) | -                                        |
Table 2: Number of comments provided under private capacity contributing to the public consultation

| Name                        | Country | Number of comments | Number of attached files |
|-----------------------------|---------|--------------------|--------------------------|
| Eva Killeen                 | NL      | 1                  |                          |
| Mauricio Varvela Vicente    | ES      | 1                  |                          |

All comments are summarised and addressed in Appendix B and could be classified according the following classes/clusters: out of scope (e.g. risk management aspects, economic aspects, legislation, etc.), comments related to selection of experts and/or experts, comments on the methodology (EKE approach/model (Figure 1)) and its assumptions, specific comments related to specific wording/phraseology, comments not linked to methodology but rather specific mandates, general comments, empty/no comments, etc. All 67 unique comments were answered in appendix B by a narrative text for each comment (Answer). In case similar answers could be provided for different comments there is a reference made to the number of the comment where the answer has been provided for the first time. Each answered comment is followed by a statement in case this comment led to changes in the document. In the majority of the cases no changes to the document ‘Methodological guidance for the development of animal welfare mandates in the context of the Farm To Fork Strategy’ was needed. In case there has been changes made due to the comment this has been indicated in the statement: “Changes to the guidelines based on this comment: minor”. An overview of the clusters with the number referring to the comment in Appendix B is shown in Table 3. Names of individuals and personal information such as personal email addresses and phone numbers have been blackened for data protection reasons.

Table 3: Number of comments according to the identified cluster

| Cluster                                                      | Number of comments | Comments reference in Appendix B |
|--------------------------------------------------------------|--------------------|---------------------------------|
| Comments related to selection of experts and/or experts     | 15                 | 2;9;10;13;17;19;20;25;29;31;52;54;62 |
| General comments                                            | 13                 | 4;8;18;26;32;34;36;38;39;46;50;60;62 |
| Category                                                                 | Count | Examples |
|-------------------------------------------------------------------------|-------|----------|
| Empty/no comments                                                        | 12    | 1;5;6;14;16;40;41;57;58;64;65;66 |
| Specific comments related to specific wording/phraseology               | 9     | 22;23;24;35;37;43;45;49;53 |
| Comments not linked to this document (guidance methodology)             | 8     | 3;12;44;48;51;55;56;67 |
| Comments on the EKE approach/model and its assumptions                  | 7     | 7;11;21;37;28;30;47;61 |
| Repetition/repeated comments with same phraseology as other organisation| 6     | Original numbers of comments were respectively : 27;28;29;30;33;34 |
| Out of scope (e.g. risk management aspects, economic aspects, legislation, etc) | 3     | 33;42;59 |

2. **Assessment**

See Appendices B and C.
Appendix A — Explanatory text for the public consultation on the draft Scientific Opinion on public consultation on guidance methodology farm to fork

Scope of Consultation
EFSA’s Panel on Animal Health and Welfare (AHAW) has launched an open consultation on the draft scientific opinion on the Methodological guidance for the development of welfare mandates in the context of farm-to-fork strategy. This document presents the guidance methodology for developing a series of mandates received by EFSA from the European Commission on the welfare of i. animals during transport, ii. calves, iii. laying hens, iv. broilers, v. pigs, vi. ducks, geese and quails and vii. dairy cows. The methodological guidance will define harmonised methods and strategies to be applied consistently across the opinions. Among other things, it lists and describes welfare consequences that are known to affect animal welfare. The document also includes a new methodology for assessing welfare by comparing the conditions that animals experience on farms to “natural” conditions (e.g. if they were offered unlimited space). Interested parties are invited to submit written comments by 31 March 2022.

Comments will not be considered if they:

- are submitted in other languages than English;
- are submitted after the closing date of the consultation;
- are still in ‘draft’ status on the closing date of the consultation;
- are presented in any form other than what is provided for in the instructions and the relevant function in the tool (e.g. comments made by email will not be considered);
- are made outside the corresponding fields of the form, for instance as part of supporting files uploaded in the tool;
- are not related to the contents of the document or scope of the consultation;
- contain complaints against institutions, personal accusations, irrelevant or offensive statements or material;
- are related to policy or risk management aspects, which are out of the scope of EFSA’s activity.

Comments will be assessed in line with the criteria above and taken into consideration if found to be relevant.

Copyright-cleared contributions
Persons or organizations participating in a public consultation of EFSA are responsible for ensuring that they hold all the rights necessary for their submissions and subsequent publication by EFSA. Comments should inter alia be copyright-cleared considering EFSA’s transparency policy and practice to publish all submissions. In case the submission reproduces third-party content in the form of charts, graphs or images, the required prior permissions of the right holder(s) should have been obtained by the public consultation respondent.

Publication of contributions
Third-party comments will be made public in their original form without delay after the closing date of the consultation and may be reused by EFSA in a different context. The outcome of the consultation will be made public in conjunction with the publication of the relevant scientific output. Contributions submitted by individuals in a personal capacity will be published indicating the author’s first and family name, unless the respondent has requested anonymity. Contributions submitted on behalf of an organisation will be attributed to the organization in question.
Appendix B – Full list of comments submitted by means of the electronic form on the EFSA website

| Organisation Name | Country     | Comment                                                                 |
|-------------------|-------------|-------------------------------------------------------------------------|
| 1 A.N.G.E.V. OdV  | Italy       | Empty                                                                  |
| Associazione Guardie Ecologiche | | Not applicable/no need/no comment                                       |
| 2 Association de la Transformation Laitière (ATLA) | France | It is important that the methodological guidance on animal health and welfare should be adapted to commercial dairy farms and should take into account professional constraints of dairy farms. As it is mentioned in the Abstract (lines 30-33), it should be essential that the methodological guidance on animal health and welfare integrates the animal in its global and interconnected environment and should not be restricted to only some parameters. We would like some details on the process of designation of experts (page 30). We understand that the methodological guidance on animal health and welfare is divided in two parts: « What » and « How ». In concrete terms, will there be a public consultation at the end of the part « What »? Will the dairy sector be associated during the evaluation? Answer: The selection of members of the scientific working groups (experts) is done according standard operating procedures in place where EFSA ensure a high level of collective scientific competence and expertise (e.g. animal welfare and in particular on-farm welfare, species (e.g. dairy cattle)) to fulfil the mandate and, consistent with this, a geographical distribution that reflects the diversity of scientific problems and approaches in the European Union. However, negotiating with farmers, NGO's and industry is a task of risk managers while EFSA provides the scientific input and background for the scientific opinions. Specific reply: A public consultation was run on the mandates received in 2020 on the protection of animals during transport, and on the protection of pigs, laying hens and broilers on farm, but not for the mandates received in 2021 (dairy cattle and ducks geese, quail) due to time constraints. Changes to the guidelines based on this comment: none |
| 3 Atria          | Finland     | It would be better to gather a wide set of animal based indicators for different animal species and study on husbandry system or population level, which indicators are most suitable under the given circumstances. We have done preliminary studies using such approach for cattle farms growing bulls for slaughter in Finland. We also have a long experience in collecting and applying animal based measures (for example Welfare Quality, NASEVA and SIKAVA) to evaluate animal welfare. It should be recognized and taken into consideration as well as other scientific and grey literature mentioned in the context of Table 5. Isolation an separation stress in the Table 2 should be merged to one line, because they are very related to each other. In the Terms an References, it should be pointed out that regular follow-up of animal behaviour during everyday work, good health, absence of injuries and stable production are the most relevant and only available stress indicators of various listed stress causing welfare consequences and negative affective states. Answer: this is a methodological guidance, meant to provide common methodologies to develop the species-specific or transport scientific opinions. Therefore, the ABMs, hazards and WCs specific to the different species will be detailed in the separate scientific opinions. The ABMs described in the other Opinions come from the literature and from the welfare assessment tool applied in each species (e.g.
AWIN). Isolation and separation stress were considered different welfare consequences (isolation is when animal is kept isolated and suffers from lack of social contact while separation is when two animals (e.g. calf and mother cow) are separated and suffer from separation). Therefore the list of Welfare consequences was kept as in Table 2.

**Changes to the guidelines based on this comment: none**

| Organisation Name | Country | Comment |
|-------------------|---------|---------|
| 4 Atria           | Finland | Husbandry systems and transport practices are varying a lot between member states, farms and transport operators. That is why, it is very important to make the welfare estimation and corrective measures also on farm and operator level not on the EU or system level, only. A summary of the most important indicators should be followed and controlled on the EU level. Housing system based approach is a wrong starting point for the legal regulation of animal welfare. Regulation system should be based on the animal point of view, not the husbandry system. Therefore, the approach should be based on the likelihood of various animal welfare consequences in various systems. The suggested Terms of Reference have a risk to lead to guidelines, which are very difficult to apply by farmers and operators. They should be reshaped to emphasize applicability much stronger. |
| 5 Atria           | Finland | We thank EFSA for a thorough work, |
| 6 AVEC ELPHA EPB  | Belgium | EMPTY: none |
| 7 Copa and Cogeca | Belgium | It is not yet demonstrated scientifically that unlimited space and full cow-calf contact is optimum in terms of animal welfare for both of them. We do not consider it a valid indicator of animal welfare comparing domestic on-farm animals with animals provided with unlimited space (e.g., non-farmed, if they would exist for certain species), because there is no evidence that a domestic animal adapted during thousands of years, kept for production would have had better welfare with unlimited space. It is not clear yet if they are fair and comparable enough towards the evaluation of animal welfare. We keep farmed animals in Europe for many years and we have improved through the centuries to minimize welfare and health risks, but zero risk does not exist. We must ensure that we keep animals with the highest standards possible, putting in place innovation as much as we can and not comparing our circumstances with foreign or non-existent, ideal ones that cannot be applied in a practical and science-based manner. It’s questionable if comparing the nowadays way of keeping animals with the ‘natural’ situation is the right way to approach the issue. For example, it is questionable if giving a domestic animal unlimited space is better for animal welfare. The assumption ignores the fact that domestic animals are very capable of adaptation to different environments. Capability of adaptation should not be ignored when different housing systems are assessed on animal welfare, so the assumption made is very undesirable. If the underlying assumptions for a model can be disputed, this has serious consequences for the outcome of the model and as a result, this can lead to questionable conclusions and answers to the questions of the Commission. It is not clear yet if the four parameters proposed are fair and comparable enough towards the
Organisation Name | Country | Comment
---|---|---
| | | evaluation of animal welfare. We keep farmed animals in Europe for many years and we have improved through the centuries to maximise welfare.

Answer: EFSA’s methodology foresees an integral assessment of the risks husbandry systems pose to welfare by identifying and ranking the most relevant welfare consequences (based on to severity, prevalence and duration) in each system (please see Section 3.2.2). The specific scenarios of the mandate asked for recommendations on certain aspects (e.g., space allowance) from a welfare perspective and therefore these were looked in more detail following the methodology outlined for the “specific scenarios”. The EKE model to express relationship between exposure (hazards) and ABMs starts with under the assumption of ‘absence of exposure’. However, the variation that may exist within the non-exposed population been taking into account the 10\textsuperscript{th} percentile (Figure 1) of this distribution. This is capturing the variation. In addition, in the uncertainty assessment other factors like those listed above in the comment (e.g. adaptation to housing systems, resilience by breeds, etc) are considered. The model allows the assessment of a change in behaviour when (domesticated) animals are provided with a larger extent of resources with the assumption that this change can be reflective of higher welfare. Therefore, the model has the strength to provide conclusions and answers to the terms of reference and foresee recommendations and conclusions that may allow estimates (e.g. the level of restriction of animal behaviour) given the current farming practices and/or legislated values.

Changes to the guidelines based on this comment: none

8 Copa and Cogeca | Belgium | It’s very clear that the complex and broad questions of the European Commission need to be narrowed down and simplified, otherwise they’re very hard to answer for EFSA. By focussing on only one aspect of the original question, in this case, the amount of space, other important aspects of housing systems are overlooked, eventually leading to incomplete and/or incorrect ABMs. Another consequence of this method is that the way different aspects of a housing system influence each other is neglected, which makes an integral approach impossible. For instance, the actual question is to assess the welfare of sows and piglets in different housing systems offering different degrees of behavioural freedom. Under (b) and (e) this question is narrowed to only the effect of the amount of space. This is not a complete rendering of the question. Different housing systems for farrowing and lactating sows differ in so many ways, not only in space allowance. The simplification of the question doesn’t do justice to all different kinds of housing systems and to the different effects on welfare they represent. Possible solutions for this problem: define different sub-questions (point b) for each question, leading to different exposure variables (point e), welfare consequences (point f) and ABM’s (point g). This will lead to a more balanced approach to the questions. Or, even better, use an integrated approach to answer the questions of the Commission, e.g. an integral approach of free farrowing pens, in which all different welfare aspects and the way they influence each other are described. The ABM considered as a valid indicator of the welfare of the animals related to the exposure variable can be disputed.

Answer (see comment 4): Thank you for your comment. Indeed, an interpretation of the terms of reference and the outline of the different sub-question to be considered is carried out in each mandate received by EFSA on animal welfare and is part of the methodological approach here described. While the methodological guidance foresees an integral assessment of the husbandry systems by identifying most relevant welfare consequences in each (please see comment 7), a methodology for the integration of different exposure effects on a single welfare outcome is not yet available. The aspects investigated
in more detail were the ones prioritised by the risk assessor and included in the mandates received by EFSA (e.g. space, enrichment, etc). In the EFSA outputs it is also discussed what other effects on welfare are observed at a given level of the exposure variable. In section 3.2.2. it is described how evidence of literature is combined with results from EKE and this can lead to production of tables presenting all findings from the EKE and extracted from literature in order to provide the risk managers with the complete picture around an exposure variable (hazard) and provide an overview of the relation between the exposure and ABMs.

Changes to the guidelines based on this comment: none

9 Copa and Cogeca Belgium

We would wonder if there are experts with actual practical experience in stables and how many are available for this work. In table 4 only researchers are mentioned, but it would be wise if EFSA uses a broad range of experts in order to get a well-founded answer to the questions in the mandate. Science is very important - new requirements or legislation should always be based on scientific evidence – but on-farm experience and proving that certain procedures or actions do or don't work under practical, on-farm conditions are equally important. We wonder how would EFSA deal with the potential limitations of scientific evidence in a given situation or case. For example, many articles currently available may lack an integrated approach to animal welfare (single issue management) and the fact that for some topics only literature from a certain point of view is available. There are topics for which not enough literature is available or only literature from a certain point of view. A possible consequence is that a balanced answer to a question is not possible with the existing literature, which may lead to conclusions that don’t reflect the actual situation. We would like to know more about EFSA’s opinion on this and how EFSA will discuss the issue in the future, for the different posed questions. We wonder if EFSA will write some kind of disclaimer if they notice the existing literature is biased and does not cover fully the scope of the proposed question. Many scientific articles investigate animal welfare through one specific topic, for example, enrichment material, space allowance or climate. This approach gives valuable information about the individual topics, but they lack an integral view. EFSA needs to make sure that also practical on-farm and veterinary input is taken into account. Science and literature are important and should be the base, but also common, practical knowledge, which might not be covered by scientific articles, can give valuable information.

Answer: See comment 2 (selection of experts). The thorough selection of the experts allows an integral view of the animal welfare issues tackled in each working group.

Following a literature review, EFSA selects the soundest studies from a scientific point of view for its assessment. The publications referenced in the opinion were chosen based on their relevance for the topic. Therefore, the opinions should not be regarded as an exhaustive overview of all systematic reviews and meta-analyses published in the area.

In addition, in all Opinions it is reported that, when research is not present, knowledge gaps have been highlighted. As information found in literature is never complete (missing data or studies for a certain aspect) expert knowledge is used to fill in this gap via a structured and transparent exercise (EKE) as described in the document.

Changes to the guidelines based on this comment: none
| Organisation Name | Country   | Comment                                                                                                                                                                                                 |
|-------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 Copa and Cogeca| Belgium   | We would like to know who will be participating in the expert group meetings if representatives from stakeholders will also be included as it happened in the past in other expert groups. We think it would be interesting for EFSA to allocate seats in these groups to several on-field experts that may know what happens in the farms on a daily basis and what are the practical current conditions for animal welfare in the EU. Again, we insist on EFSA’s need to collaborate with the EU Animal Welfare Centers for the assessment and development of “animal welfare indicators”. From the farmers’ side, we have been asking for animal welfare indicators for several years and we were glad that the Commission set up years ago the first EU Reference Center for Animal Welfare, plus recently the second one. Nevertheless, we must consider that most of the measures done to rate animal welfare in the farms, for instance, are environmental factors.  
**Answer:** see comment 2 (selection of experts). The thorough selection of the experts in the working group allow an integral view of the animal welfare issues tackled in each Scientific Opinion. In each working group experts of the AHAW panel [with expertise in Risk assessment, quantitative risk assessment, modelling, microbiology and pathology (applied to infectious diseases of food-producing animals, including aquatic animals), epidemiology, animal welfare and animal production (husbandry, housing and management, animal transport and stunning and killing of animals)] are appointed as working group Chairs. In addition, EFSA is responsible for risk assessment. Negotiating with farmers, NGO’s and industry is a task of risk managers while EFSA provides the scientific input and background.  
**Changes to the guidelines based on this comment: none** |
| 11 Copa and Cogeca| Belgium   | The comparison that is going to be made here between how we keep production animals and ‘free animals’ (unlimited space, etc.) is not comparable and should not be looked for. The basis is that we produce healthy and safe food with high standards of animal health and welfare and we must all look together at where we can improve that, but the feeling now is that we are going to adapt the current systems to the ‘free nature’ of animal keeping. In the guidance, they mention measuring animal-based measures (ABM) but we still insist that the EU Animal Welfare Reference Centres were already mandated to develop some animal-based welfare indicators to complement or replace the current measuring on environmental factors. Furthermore, the way of keeping animals has evolved since the beginning of domestication thousands of years ago. Besides, years of evaluation and adaptions by domestic animals made them very different compared to their originally wild siblings. It is questionable if giving a domestic animal unlimited space if it is better for their animal welfare or not, as there are other threats (e.g., large carnivores, climatic events…) that can compromise the welfare of our animals.  
**Answer:** see comment 2 (selection of experts) and comment 7 (EKE model)  
**Changes to the guidelines based on this comment: none** |
| 12 Dutch Dairy Association| Netherlands | The new EU legislation can only be fit for the future when the legislation is based on target requirements. Therefore is it necessary for the more modern animal welfare approach to be based on Five Domains: a) good nutrition, b) good environment, c) good health, d) appropriate behaviour, and e) positive mental experiences. And in addition it must be formulated uniformly/ unambiguously and scientifically substantiated to prevent widely deferent interpretation of individual member states In case of target requirements the size of a farm is irrelevant. Every farm should comply with the target requirements.  
**Answer:** In the specific scientific opinions, the approach is followed by answering the common terms of reference of the mandate as agreed with the EC (identifying the housing systems, identify the highly
relevant welfare consequences and animal based measures). This approach allowed a distinction to be made between the physical and functional factors that affect an animal’s welfare and the overall mental state of the animal arising from these factors. The comment related to ‘every farm should comply with the target requirements’ is out of scope of the document and of this public consultation (rather risk management then risk assessment).

**Changes to the guidelines based on this comment: none**

13 Dutch Dairy Association

| Country | Comment |
|---------|---------|
| Netherlands | When using a qualitative approach (in case of insufficient quantitative data) it is necessary to use a research design which optimizes the reliability interval; correct selection of experts/scientists (number, background, variation in results, knowledge of current situation and developments etc.) and the correct scoring of the opinions and the effect of the expert opinions. The extensive and valuable Welfare Quality® project has previously developed scientific protocols for animal welfare assessments in the EU. The achievements of the Welfare Quality® project includes the definition of principles and criteria of good welfare; development of standardized, primarily animal-based measures for each welfare criterion etc. The essential principles, insights and learnings of the protocol must be taken into account and build upon. The EU Welfare Quality® view on animal based measure should be endorsed in order to be consistent in the development of animal based measures. In ensure objectivity and completeness, the screening and extracting data from scientific literature and previous EFSA scientific outputs should be performed by a group of reviewers, not by only one reviewer. |
| Answer: While the initial review of the literature on a given topic is led by a single reviewer (working group expert), the outcome of the review is thoroughly screened and discussed by whole working group. The selection of experts the composition of the working group and the adoption by the AHAW panel of the scientific opinion allows a deep review mechanism by many experts and reviewers. |
| Changes to the guidelines based on this comment: none |

14 Dutch Dairy Association

| Country | Comment |
|---------|---------|
| Netherlands | upload a file |
| Answer: see appendix C for answers to uploaded files |

15 Dutch Dairy Association

| Country | Comment |
|---------|---------|
| Netherlands | The extensive and valuable Welfare Quality® project has previously developed scientific protocols for animal welfare assessments in the EU. The achievements of the Welfare Quality® project includes the definition of principles and criteria of good welfare; development of standardized, primarily animal-based measures for each welfare criterion etc. The essential principles, insights and learnings of the protocol must be taken into account and build upon. The EU Welfare Quality® view on animal based measure should be endorsed in order to be consistent in the development of animal based measures. The comparison of the welfare of domesticated animals with animals living under unexposed conditions should not be made. There must be a balance between societal aspirations for high welfare levels and the realistic achievements of levels which can be reached in practice. It is important to use uniform (unambiguous) assumptions, definitions, monitoring, calculations which are science based. The experts involved must have practical knowledge of livestock farming and are working in the practical field who can understand the impact and feasibility. It is strongly recommended to involve different types of experts i.e. animal scientists, veterinarians, practical advisors and stakeholders. When using this qualitative approach it is necessary to use a research design which optimizes the reliability interval: correct selection of experts/scientists (number, background, variation in results, knowledge of current situation and developments etc.) and the correct scoring of the opinions and the effect of the expert opinions. |
| Answer: see appendix C for answers to uploaded files |
| Organisation Name | Country | Comment |
|-------------------|---------|---------|
| Answer: The approach taken by the scientific working groups consider the outcomes and protocols developed by the European Welfare Quality® project. In essence, the EFSA protocol follows the principles of the Welfare Quality because it focuses its welfare assessment on the animal via animal-based measures (e.g. directly related to animal body condition, health aspects, injuries, behaviour, etc.) rather than on resource-based measures only. All are considered in the scientific opinions. **See comment 2 (selection of experts) and comment 8 (effects of expert opinions)** |
| Changes to the guidelines based on this comment: none |
| 16 European and Mediterranean Horseracing Federation | Belgium | EMPTY: none / see attached file (appendix C) **Answer: see appendix C for answers to uploaded files** |
| 17 European Forum of Farm Animal Breeders | Belgium | We also hope that EFSA gathers pool of experts from all stakeholders involved in the food chain related to the transport of live animals and gathers their expertise for the discussions. Knowledge from the field, it being breeding companies, transporters, and others is extremely relevant to understand not only what is being done but also what more can be achieved. As well as researchers from the relevant institutes in Animal Genetics, Animal Science and others. We would like to see the preparation of the evidence dossier for all sub-questions as it would provide a common ground for discussion, understanding and formulation. **See comment 2 (selection of experts)** |
| Changes to the guidelines based on this comment: none |
| 18 European Forum of Farm Animal Breeders | Belgium | We consider extremely relevant to go beyond literature reviews, in the breeding sector there is a lot of knowledge that is not translated into literature due to a number of reasons (lack of resources, time and others) and this knowledge of those working in the field and the practicability of certain routines should not be lost. Practices in other countries are also relevant to be considered. **Answer: See comment 9 (knowledge obtained from literature)** |
| Changes to the guidelines based on this comment: none |
| 19 European Forum of Farm Animal Breeders | Belgium | For the methodology, we consider essential to include as well a state of play of the practices in the field operated by experts (e.g. Veterinarians of breeding companies ensuring AW). As well as, a thorough assessment of the trade-offs, including socio-economic aspects. We should not address animal welfare in a silo, therefore it is important to assess connections and intersections, particularly also with animal health. We also consider relevant to highlight the progress that has been made throughout the years in terms of animal welfare. Per example, through breeding practices. **Answer: See comment 2 (selection of experts). The comment in relation to trade-offs and including socio-economic aspects is considered out of the scope of the scientific opinion (i.e., not covered by the terms of reference) or outside EFSA’s remit (i.e., refer to risk management rather than to risk assessment in animal welfare), and thus are outside the scope of this consultation. Breeding categories (laying hens, broilers, ducks, geese, quail) are captured in the scientific opinions.** |
| Organisation Name                          | Country         | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20 European Forum of Farm Animal Breeders | Belgium         | Changes to the guidelines based on this comment: none  
EFFAB considers that practical data from the field is key to produce scientific opinions. And collaboration between the private and the research sector could give responses and best scenarios to explore and implement better practices, without compromising other aspects, like animal health.

*Answer: see comment 2 (selection of experts).*  
Where possible, experts from industry and private sector were invited as hearing expert and/or observer in the working groups. The literature used often comes from data collected in field and epidemiological studies using field data.  

Changes to the guidelines based on this comment: none |
| 21 Humane Society International/Europe    | Belgium         | Changes to the guidelines based on this comment: none  
- How will the model be validated?  

*Answer: The model proposed is agreed by group consensus and uncertainty estimates provided by the experts. Ideally, the estimates resulting from the EKE exercise would be tested under field conditions to validate the model. Currently this external validation is not possible.*  

Changes to the guidelines based on this comment: none |
| 22 Humane Society International/Europe    | Belgium         | Changes to the guidelines based on this comment: none  
Page 21, Table 4. - Table caption: Suggest adding "Methodology for addressing sub-questions..." - Identification of experts: suggest adding 1. experts in veterinary sciences; experts in NGOs whose profiles show strong experiences in field works and possess physical evidence in current situation.  

*Answer: see comment 2 (selection of experts). Where possible, experts from industry and private sector were invited as hearing expert and/or observer in the working groups*  

Changes to the guidelines based on this comment: none |
| 23 Humane Society International/Europe    | Belgium         | Changes to the guidelines based on this comment: none  
Line 433, Table 1. - i.2. suggest adding group discussion into APRROACH only literature reviews is not enough to cover the issues, in transport particularly. - i.3. suggest adding (or explaining) why there is no "resources/management-based measurables" to be identified while in the ToRs (both general and specific) the EC requests to provide "recommendations for resources/management-based measurables. - i.4. suggest moving this "assessment question" up to the beginning of the list. Identification hazards should be carried out before any other assessment could be conducted. Like comments in i.3, resource/management-based hazards should be identified, as well. - ii.4. please define "EKE" - iii.5. AIM should include identification of both: Qualitative AMBs / Quantitative AMBS as requested in Assessment Question. - iv.7. suggest adding experts in NGOs who may have a wealth of field experience and evidence, e.g., in farm and in transport. - iv.8. APPROACH should include group discussion - suggest adding "assessment question VI": Define qualitative or quantitative resource/management-based measures to assess these welfare consequences. This Question is asked by the Questor, and without this question, there will be impossible to "Provide recommendations to prevent, mitigate or correct the hazards", Lines 437. - 3.1.1.3. Focus on sub-question 3 (identification of welfare consequences _ common starting point for all animal species) Table 2. - "restriction of movement": suggesting adding "aggressive behaviour" (Ewbank R. and Bryant, 1972; Petherick and Blackshaw, 1987) as welfare consequences. - "resting problem": suggesting adding "aggressive behaviour". Often resting refers to as animals being transported, but in husbandry system resting (time and quality) are often overlooked, if the animals...
### Outcome of the public consultation on methodological guidance animal welfare farm-to-fork

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#### Outcome of Public Consultation 2022

| Organisation Name | Country     | Comment                                                                                                                                                                                                 |
|-------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Humane Society International/Europe | Belgium   | lack rest e.g. due to overcrowding, social hierarchy is distorted, rest in preferred sub-group is impossible, ... their blood profile will be altered and could cause aggression.

**Answer:** the list of WCs was kept as it is (Table 2). Aggressive behaviour is often used as an ABM (frequency of aggressive behaviour, or proportion of animals showing aggressive behaviour) and therefore can be used as an indicator of restriction of movements, group stress, resting problems, handling problems.

Recommendations for resource/management based measures are accounted for when recommending preventive or corrective measures (which are in most cases resource or management related).

The view from NGO experts and other experts from practical field is captured via public consultation of the draft opinions (and it is to be noted that these type of experts cannot be directly involved in the drafting of the opinion). For transport, a public consultation at an early stage of development was launched and called for data. Some, but very few data, were collected.

Changes to the guidelines based on this comment: minor

| 24 | Humane Society International/Europe | Belgium |
|----|-----------------------------------|---------|
|    | Lines 407 – 410: suggest moving the description of "low extent" up to line 378, at the end of the first sentence, where this description is needed. Line 410, please define WCs |
|    | **Answer:** We agree with these changes. |

Changes to the guidelines based on this comment: minor

| 25 | IFIP | France |
|----|------|--------|
|    | Point of vigilance: The practical and economic feasibility is not taken into account in the assessment model and will have to be evaluated in the next steps of work with technical experts (not only scientific experts) who need to be included in the assessments. Point of vigilance: for many exposure variables, scientific data are missing to quantify the level of welfare through ABM (Animal Bases Measure) according to different degrees of variation of these exposure variables. Some studies and trials are still needed to be able to benchmark ABM in different housing systems, transport conditions, access to feed and water, etc. Point of vigilance: the choice of the optimal conditions used to build the model for welfare risk assessment has to be technically irreproachable. For example, the affirmation "with no space restriction = situation of reference" is not so exact. Indeed, a theoretically large surface area available for outdoor animals can be very small in reality when the animals must protect their selves from climatic difficult weather (protection from the sun in the shade of trees; protection from the rain in huts) or health problems (confinement of free-range birds in the event of avian flu) Point of vigilance: the deadlines given to EFSA seem much shorter to review or to do all these assessments thoroughly |
|    | **Answer:** Please see comment 2 (selection of experts); comment 9 (use of expert knowledge); comment 19 (economic impact); comment 11 (unrestricted (with no space restriction) as reference). In the scientific opinions the sources of uncertainties will be listed and the conclusions will integrate uncertainty assessments. In case there is need for further research this will be highlighted in the recommendations. |
|    | **Changes to the guidelines based on this comment: none** |
### Outcome of the public consultation on methodological guidance animal welfare farm-to-fork

| Organisation Name | Country   | Comment                                                                                                                                                                                                 |
|-------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 26 IFIP            | France    | One point of vigilance is about the translation of the mandate into assessment questions: for example, the European Commission initially spoke about "behavioural freedom in different housing systems for sows and piglets"; then this was translated into "Space allowance". The way in which the questions of the commission will be reformulated will strongly guide the expertise. Answer: The interpretation of the TORs is in agreement with the requestor and discussed in each working group. The behavioural freedom has been interpreted according to the specific scenarios in the mandate. Changes to the guidelines based on this comment: none |
| 27 La Coopération Agricole | France | First, we would like to thank EFSA’s panel on AHAW for this tremendous work to better understand animal welfare. We are thankful to have the opportunity to share our views on this project. When it comes to the objective of developing a new method to assess animal welfare, we understand that this should be ready-to-use on commercial, real-life environment. The method presented in this document is built around the identification of an optimal state, based on the estimation of each single behaviour's expressions in unlimited settings (e.g. assess the expression of optimal locomotor behaviours when projected in an unlimited space). It is rather the combination of factors, which is detailed later in the document, than the factor itself that affects animal welfare - bearing our above-mentioned "real life" objective in mind. We believe that this premise may not reflect what actually happens on farms as this method does not take into account practical and economic feasibility. As everything is interconnected (economic possibilities connected to available space, food and water accesses, temperature, air quality...) the use of this combination to assess animal welfare is not shown. Furthermore, the process to identify and select relevant experts presented on page 30 may benefit further explanations. Finally, many indicators listed may be difficult to assess given the current lack of information available. Altogether, we would appreciate if EFSA panel on AHW would be kind enough to specify the way they consider to work with farmers organisations on this matter, and to learn more about the perspectives of this project (how will this methodology be used, will there be public consultations once the experts are selected, or once the "what" is defined?). Thank you in advance. Answer: please see comment 2 (selection of experts) and comment 7 (EKE model). The economic feasibility is not the remit of the mandate nor of EFSA and therefore not the remit of this public consultation. Public consultations on the specific mandates (laying hens and broilers) will be organised later in 2022. Changes to the guidelines based on this comment: none |
| 28 LTO Nederland  | Netherlands | For the underlying assumptions of the model the expression of the ABM under unexposed conditions reflects the natural situation [...] which is considered the optimum in terms of animal welfare. The question is whether this really represents optimum of animal welfare for these domesticated animals. The evaluation and adaptions from domestic animals during thousands of years have made them very different compared to the wild species. It is questionable if giving a domestic animal unlimited space if it is better for their animal welfare. It is important to use uniform (unambiguous) assumptions, definitions, monitoring, calculations which are science based. The extensive and valuable Welfare Quality® project has previously developed scientific protocols for animal welfare assessments in the EU. The |
### Outcome of the public consultation on methodological guidance animal welfare farm-to-fork

| Organisation Name | Country | Comment |
|-------------------|---------|---------|
| LTO Nederland | Netherlands | The development of animal welfare mandates in the context of the Farm To Fork Strategy is by nature bound to ethical decisions, e.g. on whether we should consider the average state of animals vs. the worst ones, whether we should consider each welfare criterion separately vs. together in a more holistic approach, or whether a balance between societal aspirations for high welfare levels and the realistic achievements of such levels in practice should be achieved. Therefore, it is important that the experts involved have practical knowledge of livestock farming and are working in the practical field who can understand the impact and feasibility. It is recommended to involve different types of experts i.e. animal scientists, veterinarians, practical advisors and stakeholders. For the impact on welfare it seems to be that this will be only on expert opinion and not on relevant research. It is not realistic for the experts involved to be aware of all the relevant research and practical experiences on the relevant themes. It is therefore necessary not only to use expert opinion via group discussion, but also to apply other research methods, such as literature research, consultation with practical experiences via interviews/surveys, etc. The emphasis is on negative affective states, but there can also be an impact on positive affective states. To improve animal welfare, positive affective states must also be taken into account. Since there is no gold standard of animal welfare how about EU Welfare Quality®? The extensive and valuable Welfare Quality® project has previously developed scientific protocols for animal welfare assessments in the EU. The achievements of the Welfare Quality® project includes the definition of principles and criteria of good welfare; development of standardized, primarily animal-based measures for each welfare criterion etc. The essential principles, insights and learnings of the protocol must be taken into account and build upon. **Answer: see comment 2 (selection of experts); see comment 7 (EKE model).**

**Changes to the guidelines based on this comment: none** |

| Organisation Name | Country | Comment |
|-------------------|---------|---------|
| LTO Nederland | Netherlands | - The comparison that is going to be made here between how we keep production animals and 'free animals' (unlimited space etc.) is not comparable and should not be desired - The basis is that we produce healthy and safe food with high standards of animal health and welfare and we must all look together at where we can improve that, but the feeling now is that we are going to adapt the current systems to the 'free nature' of animal keeping. - In the guidance they mention measuring ABM (animal-based measures) but we also know that that is very difficult and we measure welfare mainly on environmental factors. Our main concerns lie in what is the next step, legislation is based on enforceability and accountability, how does that match with measuring on the animal from the intrinsic value of the animal. Legislation is built upon environmental factors as stable sizes etc. that does not match with this methodological research. **Answer: see comment 7 (model EKE and assumption from unlimited space). Beside animal-based measures the scientific opinions also allow the identification of resource-based measures in case animal-based measures are difficult to define/identify or not feasible.** |

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**Outcome of Public Consultation 2022**
| Organisation Name | Country | Comment |
|------------------|---------|---------|
| AVEC – The Voice of the European Poultry Meat, welcomes the chance to comment on the Methodological guidance for the development of animal welfare mandates in the context of the Farm to Fork Strategy and would like to thank EFSA for this initiative. We are very pleased by the outcome of the guidance and the scientific foundations EFSA will base its opinions on. Indeed, when deciding on policies on creating a fair, healthy and environmentally friendly food system in the EU AVEC, ELPHA and EPB encourages the EU Commission to base policies on science and not emotions and to consider the efforts already put in place by the sectors. Hence, the importance of the future EFSA reports and their scientific justifications. The revised animal welfare legislation must be based on objective measures and not subjective or emotional ones. These objective measures must be based on scientific and agronomic evidence, measurable and easily applicable for the whole agri-food chain. As a main comment, AVEC, ELPHA and EPB would like to remind EFSA of the request on collaboration from the European Poultry Meat sector letter, sent on the 28th of July 2020. The 19 AVEC members are national associations representing poultry processors and the poultry trade in 17 EU countries and all in all AVEC represents 95% of EU poultry meat production. Within the European Poultry Meat Sector, we have skilled experts on animal welfare who will be able to assist with a nuanced input on how to assess the animal welfare of poultry in the different EU countries, and our three associations will be very interested in providing data, scientific documentation, interviews etc. AVEC, ELPHA, and EPB are very committed to be a part of the solution when it comes to the creation of a Sustainable Farm to Fork strategy, and we would like to highlight that we are willing to cooperate and provide available data to support EFSA in the entire process. | Changes to the guidelines based on this comment: none |
| NEPLUVI, the Dutch association for the poultry processing industries, would like to share that we are very pleased by the outcome of the guidance and the scientific foundations EFSA will base its opinions on. We share the opinion of AVEC, our European counterpart, that policies should be based on science and not on emotions. Furthermore we would like to put emphasis on the efforts the sectors already put in place, which is why we think that EFSA reports and their scientific justifications are of utmost importance. The revision of animal welfare legislation therefore must be based on objective measures and not subjective or emotional ones. These objective measures must be based on scientific and agronomic evidence, measurable and easily applicable for the whole agri-food chain. | Changes to the guidelines based on this comment: none |
| A clear division of responsibility at the different stages of road transport: The legislative framework on animal transport ought to rest on a common European legal and factual basis where the responsibility for animal welfare is clearly and logically placed. Currently, in the interpretation of the national authorities the transporter bears the major responsibility to make sure that the animals are fit for transport, even though the transporter does not have any previous information of the animals and only a limited opportunity to check on them during the short loading phase. It is thus crucial to | Changes to the guidelines based on this comment: none |
### Organisation Name | Country | Comment
--- | --- | ---
 |  | have a clear demarcation of responsibility where the party with the real capability to check on the animals before the transport is also charged with doing so. In order to avoid that animals with bruises or wounds are loaded on a truck, we need to have a more logical division of responsibility between the farmer and the transporter of the animals. The responsibility for detecting existing or old injuries should be placed with the farmer since he/she knows the history of the animals and has a real opportunity to observe them. The transporter should in turn bear full responsibility for the loading and the unloading of the animals, in addition to the condition and legality of the vehicle, the correct training and instruction of the driver and the quality of driving. Stop gender separation: The transporter today bears the responsibility to ensure gender sorting of livestock for the transport operation, unlike the sender of the animals. This creates several challenges for the transporter and the well-being of the animals. E.g. the transport of a group of animals consisting of a breeding bull that already walks on the farm with a group of females. Separation of such animals can entail both serious safety risks for the driver involved and create dangerous tension for the animals. When animals are already used to each other exceptions for separating the gender should be allowed.
 |  | **Answer:** The comment in relation to the responsibility for animal welfare during transport is considered in the scientific opinion in the sense that fitness for transport and the conditions should be checked. However, who should be responsible for this is out of the scope of the scientific opinion (i.e., not covered by the terms of reference) and outside EFSA’s remit (i.e., refer to risk management rather than to risk assessment in animal welfare), and thus are outside the scope of this consultation.
 |  | Changes to the guidelines based on this comment: none
 | 34 NVWA | Netherlands | Page 31 L209-210: "with ... (hazard). **COMMENT:** How do you consider welfare consequences that act as a hazard for other welfare consequences? Do you then consider the hazards for the first welfare consequence also a the hazard for the second welfare consequence? General comments: **COMMENT:** The examples used throughout the document concern farm/transport. Is it possible to also incorporate some examples with respect to the killing of animals?
 |  | **Answer:** in relation to the general comment; the scientific opinions in the framework of farm to fork do not consider killing of animals on-farm. Therefore, this comment is considered outside the scope of the topic and therefore outside the scope of this consultation. Preventive and corrective measures are always provided for each welfare consequence. So, if one welfare consequence is the hazard of other, we still consider both. In section 3.2.2.2. of the document it is explained how the evaluation of the relationship between exposure (hazard) and welfare consequences is carried out (e.g. one exposure variable may lead to more than one welfare consequence).
 |  | Changes to the guidelines based on this comment: minor
 | 35 NVWA | Netherlands | L83 Pagina 27-30: het risk model met 4 parameters: **COMMENT:** The model seems to incorporate many assumptions, therefore the model seems to remain very subjective and the question arises if this is indeed an improvement in methodology? Can you elaborate on that?? Page 28, L126: "The median ABM...” **COMMENT:** Please explain more clearly the choice for 'median ABM' and not the lowest measure of the ABM. ABM maybe affected by other hazards as well, so median maybe too high.

Organisation Name | Country | Comment
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Answer: see comment 7 for the rationale of the EKE model and the assumptions. All model assumptions were clearly stated for transparency and completeness. The choice for the median animal was to take the 'average animal' as a reference, however it is assumed that variation that may exist and therefore values for the 10th and 90th percentile of the “unexposed” population are also provided (see green distribution in Figure 1 of the document).

Changes to the guidelines based on this comment: none

36 NVWA Netherlands | | Table 4: Specific requirements for expert lack. Why only using consensus and not literature to support final choice? Or if necessary describing the non-consensus and assessing for instance two different scenario’s. Consensus is not always possible...see also EFSA's opinion about pregnant cows. Experts provide evidence: seems a rather weak approach, if possible evidence should be sought in data as well... No uncertainty assessment : Providing the level of certainty seems most valuable here, if you strive for consensus... EKE will be much used, due to lack of data or time. It would be worthy to elaborate more on that. E.g. an uncertainty expert was included, but this is not clearly presented in the methods. Is it possible to provide a bit more guidance in the document? ABM's that are feasible on-farm are preferred. It might be possible to measure an ABM elsewhere...? Table 5: Please identify in which languages is sought? Grey literature in other languages than English might be highly valuable. If using one reviewer a bias may occur. Please explain why not using literature/data for risks and only EKE when data is really not available? Focus on most prevalent system seem to exclude important upcoming intermediate segments that may replace conventional systems. Please elaborate on that?

Answer: In all scientific opinions the assessment of uncertainty will be expressed by i) providing the sources of uncertainty ii) if no EKE’s were used the uncertainty about the major conclusions will be expressed and is provided based on group discussion in the WG iii) from the EKE model the uncertainty is expressed by using the range obtained from the estimated values obtained via a structured EKE exercise. All executed EKEs are based on data extracted from the scientific literature. If no data was available or very scarce the use of EKE was (re)evaluated in consensus.

In relation to the choice of systems, the selection of the “most prevalent” ones was requested in the mandate, and hence these were the ones EFSA focused on. The WGs also discussed other systems that, although less prevalent, may become more relevant in the future, and integrated them in the assessment whenever time allowed.

Specific reply to table 5: Mainly literature in English was considered. Scientific peer reviewed papers as well as grey literature – in different languages – were used in the specific scientific opinions. The publications referenced in the opinions were chosen based on their relevance for the topic and expert judgement and therefore, the opinions should not be regarded as an exhaustive overview of all systematic reviews and meta-analyses published in the area.

Changes to the guidelines based on this comment: minor
| Organisation Name | Country    | Comment |
|-------------------|------------|---------|
| NVWA              | Netherlands| 37      |
|                   |            | 420 iii) and iv) The general TORs are insufficient as they lack to assess positive welfare consequences of housing and transport systems. Advise to adjust as follows: "...define animal-based measures (ABMs) to assess positive or negative these welfare consequences, iv) identify hazards and positive aspects in housing or transport leading to positive or negative these welfare consequences and"... Table 1: 2. What if other relevant systems and practices are described by literature but not identified and selected by experts? Table 1: 3: do not only use expert opinions but collect welfare consequences from the literature as well at start. The literature review that is part of the study but listed later in the process should start already at the beginning, also for identification of welfare consequences and positive aspects of fulfilling natural needs. Table 1. 4 Welfare consequences are identified in sub question 3, not 1 as stated in the text? Table 1. 6. Same here, what if literature does not confirm expert view? Table 1. 8; First experts, then literature. Identification of WC, ABM, hazards etc. highly rely on expert view first. This implies that up to date knowledge and experience of experts is of major importance, which is a risk with respect to animal welfare. Can you elaborate on that? L439: Expand objective to housing and transport systems to be able to assess what are good practices. "The objective.....descriptions, and relate these to housing and transport systems where possible". L455: Welfare consequences should be scored not in general but attributable to different housing and transport systems identified in Table 1. as significant differences can be expected. L466: same list for species may not fit reality. L468: criteria lack about severity and duration classification and also differentiating between a one-time exposure versus frequent, recurring short lasting exposure etc.: EKE groups are going to differ. "Product" of 3 parameters lacks (multiplication?) Answer: EFSA changed 420 iii) and iv); Table 1:2 included group discussion (see comment 23). In relation to expert selection and knowledge see comment 9 & 10 (selection of experts). The absence of some of the WCs (e.g. inability to perform play behaviour) implies that animals can experience the positive effect of performing play behaviour. This is taken into account in the methodology and Scientific opinions. The inclusion of direct measures of positive welfare is foreseen for future EFSA guidelines on welfare assessment. Changes to the guidelines based on this comment: minor |
| NVWA              | Netherlands| 38      |
|                   |            | In the general ToR's recommendations lack to collect and register the most relevant ABM's to ensure improved data for future risk assessments In order to make better use of available farm and transport data, as well as of modern sensor, camera and artificial intelligence technologies, the Opinion should not only list animal-based measures, but also indicate if, and if yes, farm management systems, modern sensor, camera and artificial intelligence technologies or other tools would allow the measurement of the identified animal-based measures, for the ultimate purpose of monitoring of animal welfare. Answer: The primary aim in the scientific opinions is to identify meaningful ABMs that can be applied easy. When new technologies are available this will be mentioned and where there are gaps identified in the knowledge and useability of these this will be highlighted (recommendations). Changes to the guidelines based on this comment: none |
| Organisation Name                          | Country    | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 39 NVWA                                   | Netherlands| L409: to the different topics to be assessed (different husbandry systems, different transport scenarios, WCs, ABMs, ...). COMMENT: Assessments are on several levels and not only risk level, please explain how assessments will differ/are done.                                                                                                                                                                                                                                              |
|                                           |            | Answer: The SOs will mainly assess the common/general TORs (described in section 3.1) and some specific scenarios identified for each of the species (described in section 3.2). These will be assessed in the specific opinions and not in detail in the guidance document.                                                                                                                                                                                                 |
|                                           |            | Changes to the guidelines based on this comment: none                                                                                                                                                                                                                                                                                                                                                     |
| 40 Onehealth Consulting SRL               | Spain      | EMPTY: none                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 41 Promert                                 | Portugal   | Answer: Not applicable/no need/no comment                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 42 Proteon Pharmaceuticals S.A.           | Poland     | In response to sub-question 3, Identification of welfare consequences, it is important to understand that animal welfare includes the analysis of the natural microbiome of the bird/animal. It should also be understood that certain drugs (e.g. antibiotics) and additives (e.g. acidifiers) damage the microbiome. There should be a measurement to assess the normal microbiome of poultry and the damage done to the microbiome from use of certain products such as antibiotics, acidifiers, etc, and this assessment should be included as part of the welfare assessment. Animals have a right to normal microflora and if you ignore this, you are fundamentally ignoring the way that industrial farming impairs the natural life of the animal. Answer: The comment in relation to change of microbiome and use of certain drugs and additives in bird/animal is considered out of the scope of the scientific opinion (i.e., not covered by the terms of reference) and thus are outside the scope of this consultation. The welfare consequence 'metabolic disorders' and 'gastro-enteric disorders' are taken up in Table 2 of the guidelines document. Changes to the guidelines based on this comment: none |
| 43 Swedish University of Agricultural Sciences, Swedish Centre for Animal Welfare | Sweden     | Table 2.List and description of 33 welfare consequences used for all animal species... The difference between the descriptions of isolation stress and separation stress is unclear. Separation could be a part of isolation and these two descriptions are therefore not mutually exclusive. If the process of separating an animal from conspecifics (eg. cow-calf separation) is what is intended to be described as separation stress, then that needs to be clarified. It would then also be a process limited in time. The description of boredom is difficult to understand. It could preferably be rewritten in a more understandable way. Answer: see comment 3. Isolation and separation stress are considered different (isolation is when an animal is kept isolated and suffers from lack of social contact while separation is when two animals (e.g. calf and mother cow) are separated and suffer from this separation and the associated loss of bond. Changes to the guidelines based on this comment: none |
| Organisation Name                          | Country                  | Comment                                                                                                                                                                                                 |
|------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Danish Veterinary and Food Administration | Denmark                  | In addition to the scenarios the Commission has identified, we believe that: 1. "Export by livestock vessels" could also be an issue relevant for pigs, 2. "export by road" would also be an issue relevant for pigs (in Denmark small pigs of 25-35 kg) and 3. "Roll-on-roll-off" would also be an issue relevant for pigs. Answer: The scenarios taken up in the transport mandates on pigs have been agreed with the EC (Roll-on-roll-off was not considered). Regarding vessels we have seen no evidence that pigs are transported in vessels. Pigs are exported and the fundamental aspects are covered in the common TORs as it involves repeated use of trucks, control posts etc. In addition, the specific scenario on ‘special health’ is also touching the major concerns here, as it deals with long journeys for pigs. Changes to the guidelines based on this comment: none |
| The Danish Veterinary and Food Administration | Denmark                  | Table 1. Mapping of the translation of the mandate assessment questions into sub-questions: i. 1. Animal transport practices are missing in the text. Answer: animal transport practices are taken up in table 1. Changes to the guidelines based on this comment: minor |
| Universities Federation for Animal Welfare (Northern Ireland) | United Kingdom            | In 3.2.2.2 is stated that "one welfare consequence may be assessed by more than one ABM and, similarly, one exposure variable may lead to more than one welfare consequence". This is all very well. However, given the elaborate description of the methodology until this point, the integration of different ABMs/exposure variables is presented in one paragraph (lines 203-210). This integration is quite important but has many pitfalls. The end result is dependent more on this integration than on any one particular WC/ABM. Therefore, the methods used for the integration needs to be more clearly explained. Answer: see section 3.2.2.2. where a consideration how to deal with the different WCs, ABMs and hazards is considered. In the scientific opinions we identified and listed meaningful ABMs per welfare consequence. In the approach taken equal weight to each welfare consequence is considered. For the EKE approach/model a ‘reference’ ABM has been selected. The current protocol does not include an integration of cumulative effect originating from several WCs as well as different effects on a single ABM. This may be one of the aspects to be developed in future EFSA guidance on welfare. Changes to the guidelines based on this comment: none |
| Universities Federation for Animal Welfare (Northern Ireland) | United Kingdom            | In the example given in 3.2.1.1 on assessment of the welfare of weaners and rearing pigs, it is not clear how the interactions between the different risk factors, such as space allowance, types of flooring, and enrichment material, are dealt with, when these are assessed individually and separately? In 3.2.1.2, is it to be understood that ‘degree of behavioural freedom’ is reduced to be assessed by the variable ‘access to space’, as in meter squared (line 74), ignoring other aspects of behavioural freedom, such as access to rooting material, choice of places to be with different flooring, walls to avoid aggressive pen-mates, etc.? In 3.2.1.3, "If possible, the variation of the ABM within the non-exposed population is estimated", to be used to “interpret the strength of the exposure effect on the average animal”. But as each ABM is assessed independently of others, and will be affected by the environment in which the animal is
| Organisation Name | Country | Comment |
|-------------------|---------|---------|
|                   |         | placed, the variation observed/estimated for one ABM may be a consequence of the concurrent state of other ABMs. This would, in turn, affect the allowable range of exposure (Figure 2), without necessarily reflecting good welfare. **Answer:** see comment 7. The EKE approach/model tries to express the relationship between exposure (hazards) and ABMs, starting under the assumption of ‘absence of exposure’. However, the variation that may exist within the non-exposed population has been taking into account during the EKE and it may implicitly take into consideration the complex situation of different hazards at the same time. The ABM selected considered for the exercise is considered to be the overall/reference ABM representing the overall welfare of the animal. The variation observed/estimated is taken into account in the EKE exercises. For example, floor type, season, breed, etc. are taken into consideration as source of uncertainty. **Changes to the guidelines based on this comment: none** |
| 48 Universities Federation for Animal Welfare | United Kingdom (Northern Ireland) | What does ‘feasible’ mean in the identification and description of ABMs? E.g. in Table 4 is stated that “Only those ABMs that are feasible on-farm and at the slaughterhouse will be taken up”. If it refers to the difficulty of measurement, is there not a high risk that the ABMs chosen will not reflect the welfare of the animals? For the screening of literature, there need to be assurance that the same techniques/criteria are used across mandates/scenarios. Having more than one reviewer for all, or at least a subsection of publications across mandates would be of benefit. This is also the technique used for systematic reviews. Publications that are not considered relevant nor providing any additional value to address the question will be removed (Table 5). When overlaps exist, will the most recent or most comprehensive article be kept? Also, how can the inclusion of a study be properly assessed prior to appraising the evidence within the study (two steps further down)? **Answer:** In section 3.1.1.1 the selection of ABMs has been explained in function of feasibility. The definition of feasibility has been expanded for clarity. **For approach in reviewing literature: see comment 9** **Changes to the guidelines based on this comment: minor** |
| 49 Universities Federation for Animal Welfare | United Kingdom (Northern Ireland) | Table 1: It is not clear why a literature review has been chosen to describe the current husbandry systems and transport practices. Or rather, what type of literature is referred to? Scientific literature is unlikely to contain this type of information. In the selection of the most relevant welfare consequences (WCs) for each scenario dealt with, is there an upper limit to the number of WCs in this category? When dividing the 33 WCs in Table 2 into categories, to what extent will feasibility of assessment be taken into account in this ranking? You state in 3.1.1.4 that the magnitude of a WC is defined as the product of three parameters (severity, duration, and frequency of occurrence), but that owing to the lack of published data on these three parameters, the experts express their qualitative expert opinion on the magnitude of WCs. In other words, the magnitude is NOT a product of the three parameters? Table 2: Under predation stress, do you need to specify that the stress is not arising from members of the same species, as this would be included under Group stress? We assume this WC also includes stress induced by drones or hot-air balloons passing over an outdoor range? Table 2: In the description of Prolonged Hunger and Thirst, would it not be more accurate to say “... and will eventually lead to a weakened condition/dehydration if metabolic requirements are not met”? Table 2: It is not clear why, in the WC ‘Bone lesions (incl. fractures and dislocations)’, the ones affecting locomotor activity

| Organisation Name | Country | Comment |
|-------------------|---------|---------|
| Universities Federation for Animal Welfare | United Kingdom (Northern Ireland) | are not included. Should, say, a broken wing be listed here, and if so, does that mean it is assumed not to affect locomotor activity? Table 2: Air hunger is only mentioned under Respiratory Disorders, but may be a consequence of deficits in the animal's environment, e.g. poor ventilation, overcrowding, malfunctioning heating etc. Where does this feature in Table 2?  
Answer: Table 1: besides literature (scientific articles and books) also expert opinion is used (see comment 2: selection of experts). For the list of highly relevant WCs there is no upper limit of the number of WCs selected. The magnitude was indeed provided by the experts without requesting the exact values for each: prevalence, duration and severity. The experts were requested to provide their direct estimate of the product of the three parameters based on "expert opinion" (and not based on real data as in a sort of 'mental exercise'). Feasibility for ABMs is described in section 3.1.1.1.  
Table 2: while EFSA recognizes that welfare consequences are sometimes correlated e.g. predation stress and group stress or bone/wing fractures and locomotory problems, it was considered necessary to create a distinction for simplifying the assessment.  
Changes to the guidelines based on this comment: minor |
| Universities Federation for Animal Welfare | United Kingdom (Northern Ireland) | The mandates request the identification of the most relevant welfare consequences for each of the defined husbandry systems or animal transport scenarios per animal category (29 scenarios are listed in total). The starting point is the list of 33 specific WCs identified. For each scenario, the WCs are divided into four categories of relevance: i) non-applicable, ii) less relevant, iii) moderately relevant and iv) most relevant. The magnitude of a WC is defined as the product of three parameters (severity, duration, and frequency of occurrence). The stepwise questions and the methods appear logical, when taking into account the assumptions mentioned above. However, some questions arise from the detailed description of how to answer or seek information for these questions. We have listed these questions below under the relevant sections.  
Answer: see comment 55.  
Changes to the guidelines based on this comment: none |
| Universities Federation for Animal Welfare | United Kingdom (Northern Ireland) | Given the magnitude of the task, i.e. 29 scenarios to process, is it at all feasible to achieve within the 12 months’ deadline (March 2023)? And how can the responses to this consultation be taken into account if the process has already started?  
Answer: EFSA takes note of this comment. Comments provided in this public consultation are only meant for the guidance document and will be taken in to account during the development of the scientific Opinions.  
Changes to the guidelines based on this comment: none |
The method is based on a model with two assumptions that 1) the expression of a given Animal-Based Measure (ABM) will be optimal under unconstrained conditions, and 2) this variable can thus be used as a proxy measure for welfare in situations where the ABM is expressed quantitatively more or less (implying a direct – and known – relationship between this variable and the welfare of the animal). We acknowledge that the EFSA guidance on protocol development has been implemented to the low extent due to the broad and heterogeneous scope of the opinions in relation both species and topics. However, this makes the selection of the panels involved in the group discussions and expert opinions described in Table 1 both difficult and important for the outcome of each scenario. We have not been able to find a description of how this selection of participant is taking place.

**Answer:** see comment 2 (selection of the experts).

**Changes to the guidelines based on this comment:** none

It is important that at least some of experts for assessing transport risks also have a good knowledge of farming systems (e.g. what happens in the weeks before preparation phase for transport and also in the weeks after arrival at destination). And in the case of animals for slaughter the slaughter industry (availability of mobile slaughter or possibilities for emergency slaughter on farm) and what can be monitored post mortem in the slaughterhouse (e.g. a lot of PM data for poultry flocks is not effectively used).

**Answer:** see comment 2 (selection of the experts).

**Changes to the guidelines based on this comment:** none

3.1.1.1 focuses on animal-based measures, and while TOR emphasises these it also indicated (164) mitigate or correct the welfare consequences (resource and management based measures). Important that opinion deals with measures such as measuring, recording and transmitting data on temperature (and humidity if possible) for purposes of monitoring. A focus on animal based measures would miss this. Perhaps a relevant question to answer is what are the practical advantages/disadvantages of selected ABMs over resource/management measures? This would allow...
| Organisation Name | Country    | Comment                                                                                                                                                                                                 | Changes to the guidelines based on this comment: |
|-------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| 56                | NA/blanco  | Ireland                                                                                                                                                                                                | minor                                                                                       |
|                   |            | The tilted “bucket” model (Bracke et al) where stresses that lead to tail biting in pigs build up and eventually lead to the bucket falling over/tail biting outbreak occurs is a good visual for how an "unexposed" (hazard) circumstances becomes a "highly exposed" circumstances (237). Stressor can build up on any farm and it doesn't need a comparison of widely different farming systems, i.e. identify cumulative stressors and how each farming system (and management) can contribute to these. Answer: EFSA takes note of this comment. The different stressors described are taken care of in the SO on protection of pigs. However, cumulative stressors have not been taking into account. |                                                                                             |
| 57                | NA/blanco  | Italy                                                                                                                                     | none                                                                                         |
|                   |            | Test                                                                                                                                                                                                   |                                                                                             |
| 58                | NA/blanco  | Italy                                                                                                                                     |                                                                                             |
|                   |            | Test                                                                                                                                                                                                   |                                                                                             |
| 59                | Eva Killeen| Netherlands                                                                                                                                |                                                                                             |
|                   |            | I think the live transport of animals causes stress, fear, fatigue and likely pain. And it should be banned. As a general rule all animals need more space then they currently have and much higher welfare standards are needed. Factory farming must be banned in the EU. Answer: EFSA takes note of this comment but the subject is out of scope of the mandate and public consultation (banning is rather risk management then risk assessment) |                                                                                             |
| 60                | NA/blanco  | Netherlands                                                                                                                                |                                                                                             |
|                   |            | Possible solutions for the problem described under 3.2.1.2 (see 3.2): Define different sub-questions (point b) for each question, leading to different exposure variables (point e), welfare consequences (point f) and ABM’s (point g). This will lead to a more balanced approach of the questions. Or, even better, use an integral approach to answer the |                                                                                             |
questions of the Commission, e.g. an integral approach of free farrowing pens, in which all different welfare aspects and the way they influence each other are described.

Answer: The risk assessment questions (TORs) were agreed with the EC and take into account the principles that for each specific scenario the hazards (exposure), welfare consequence and ABMs are identified as described in the comment. A thorough selection of ABMs from which a clear relationship with the exposure variable was expected was performed and in addition other aspects derived from the literature were when coming up with the conclusions (e.g. space allowance in calves, space allowance in sows). See section 3.2.2.2.

Changes to the guidelines based on this comment: minor

61 NA/blanco Netherlands

Our comments on 3.2.1.2: see section 3.2!!! 3.2.1.3 The underlying assumptions of the model can be disputed. 1. The ABM considered is a valid indicator of the welfare of the animals related to the exposure variable. Concerns about this assumption are already explained under 3.2.1.2. 2. Since there is no gold standard for animal welfare, the expression of the ABM under unexposed conditions reflects the natural situation an animal population may experience, which is considered the optimum in terms of animal welfare. This assumption is doubtful. It’s questionable if comparing the nowadays way of keeping animals with the ‘natural’ situation is the right way to approach the issue. For example: it is questionable if giving a domestic animal unlimited space is better for animal welfare. The assumption ignores the fact that domestic animals are very capable of adaptation to different environments. Capability of adaptation should not be ignored when different housing systems are assessed on animal welfare, so the assumption made is very undesirable. If the underlying assumptions for a model can be disputed, this has serious consequences for the outcome of the model and as a result this can lead to questionable conclusions and answers to the questions of the Commission. Overall opinion of the model described in 3.2.1.3: it’s at least risky and maybe even impossible to assess welfare with a mathematic model. I’m starting to repeat myself, but animal welfare (e.g. housing systems) should be assessed in an integral way in which all different welfare aspects and the way they influence each other are described. Besides, the effect on animal health, public health (zoonoses!), farmer health and welfare, economics, emissions, climate etc. should be taken into account as well. It will be a huge improvement if such an integral approach is used with the upcoming revision of the European animal welfare legislation.

Answer: see comment 7 (model EKE)

Changes to the guidelines based on this comment: none

62 NA/blanco Netherlands

3.2.1.2 It’s clear the complex and broad questions of the Eur. Com. need to be narrowed down and simplified, otherwise they’re very hard to answer for EFSA. The method of using sub-questions as described in 3.2.1.2 seems logical on paper, but in practice (according to the example written down on page 26-27) has some serious disadvantages. The example shows that the steps described in b/e/f/g narrow down the original question far too much. By focussing on only one aspect of the original question, in this case the amount of space, other important aspects of housing systems are overlooked, eventually leading to incomplete and/or incorrect ABM’s. Another consequence of this method is that the way different aspects of a housing system influence each other is neglected, which makes the so important integral approach impossible. Explanation: The actual question is to assess THE WHOLE welfare of sows and piglets in different housing systems offering different degrees of behavioural freedom. Under ‘b’ and ‘e’ this question is narrowed to only the effect of the amount of space. This is not a complete rendering of the
question. Different housing systems for farrowing and lactating sows differ in so many ways, not only in space allowance. The simplification of the question doesn't do justice to all different kinds of housing systems and to the different effects on welfare they represent. Points f/g are of similar concern, because they lead to the conclusion that the locomotor activity of sows and pre-weaning mortality of piglets are good parameters for assessing animal welfare in different housing systems. This is not untrue, but: 1. other parameters should be taken into account as well; 2. these parameters are affected by many more factors, e.g. genetics, feed, management during farrowing, temperature, colostrum intake etc. Therefore it's not correct to conclude that possible differences in sow activity/piglet mortality can be directly related to the housing system.

**Answer:** see comment 4 and see comment 8

Changes to the guidelines based on this comment: none

| Organisation Name | Country | Comment |
|-------------------|---------|---------|
| NA/blanco         | Netherlands | 3.1.2.1 Table 4 About the identification of experts. Are there also experts involved with actual practical experience in stables? In table 4 only researchers are mentioned, but it would be wise if EFSA uses a broad range of experts in order to get a well-founded answer to the questions in the mandate. Science is very important - new requirements or legislation should always be based on scientific evidence - but on-farm experience and prove that certain procedures or actions do or don't work under practical (farm) conditions are equally important. Table 5 - How does EFSA makes sure that also practical input is taken into account? Science and literature are important and should be the base, but also common, practical knowledge, which might not be covered by scientific articles, can give valuable information. - There are topics for which not enough literature is available, or only literature from a certain point of view. A possible consequence is that a balanced answer to a question is not possible with the existing literature, which may lead to conclusions that don't reflect the actual situation. What is EFSA's opinion on this? Will EFSA discuss this issue for the relevant questions? For example, will EFSA write some kind of disclaimer if they notice the existing literature is biased (doesn't cover the whole question/answer)? - Many scientific articles investigate animal welfare through 1 specific topic, for example enrichment material, space allowance or climate. This approach gives valuable information about the individual topics, but they lack an integral view on animal welfare: different topics influence each other, which is not taken into account. Animal welfare needs an integral approach, so how does EFSA intend to overcome this problem? **Answer:** see comment 2 (selection of experts) |
| NA/blanco         | Netherlands | Who are the WG experts? Are also experts with practical, on-farm experience involved? **Answer:** see comment 2 (selection of experts) |
| NA/blanco         | Portugal | EMPTY: none **Answer:** Not applicable/no need/no comment |
| NA/blanco         | Spain | EMPTY: none **Answer:** Not applicable/no need/no comment |
| Maurice Vervella Vicente | Spain | Very thorough document however I would suggest to consider adopting new dimensions of a holistic welfare. E.g. if one of the goals of F2F is to offer at least 25% of organic /bio production, then this needs to be taken in consideration for welfare measures. Do we have the adequate genetics for hens that will have access to open field? Will the hyper |
| Organisation Name | Country | Comment |
|-------------------|---------|---------|
|                   |         | Prolific sows be consistent with the new expectations of welfare? There are many other examples of “What” that should probably be taken onboard (Slaughtering without stunning; long-haul transportation; conditions of welfare for imported goods should be consistent with the ones adopted in the EU; using animal protein to rear carnivorous animals may not be sustainable), also need to relook the environmental impact of macro-farms. I believe the “What” need to be further challenged. |

**Answer:** In the specific scientific opinions for each species (e.g. pigs, poultry) breeding categories are included. Slaughtering without stunning, imported goods and animal protein to rear carnivorous animals is out of scope of the mandates farm to fork and therefore out of scope of this public consultation.

**Changes to the guidelines based on this comment: none**
Appendix C – Attachments to comments submitted

FILE 1 NZO:
NZO input EU animal welfare F2F consultation methodological guidance Concept V2

Comments for 3. Assessment

Comments for 3.1. Methodology for Part I - General Terms of Reference

Comments for 3.1.1. Step 1: Formulate the problem (the 'What')

The development of animal welfare mandates in the context of the Farm To Fork Strategy is by nature bound to ethical decisions, e.g. on whether we should consider the average state of animals vs. the worst ones, whether we should consider each welfare criterion separately vs. together in a more holistic approach, or whether a balance between societal aspirations for high welfare levels and the realistic achievements of such levels in practice should be achieved. Therefore it is important is important that the experts involved have practical knowledge of livestock farming and are working in the practical field who can understand the impact and feasibility. It is recommended to involve different types of experts i.e. animal scientists, veterinarians, practical advisors and stakeholders. For the impact on welfare it seems to be that this will be only on expert opinion and not on relevant research. It is not realistic for the experts involved to be aware of all the relevant research and practical experiences on the relevant themes. It is therefore necessary not only to use expert opinion via group discussion, but also to apply other research methods, such as literature research, consultation with practical experiences via interviews/surveys, etc. The emphasis is on negative affective states, but there can also be an impact on positive affective states. To improve animal welfare, positive affective states must also be taken into account. “Since there is no gold standard of animal welfare” what about EU Welfare Quality®? The extensive and valuable Welfare Quality® project has previously developed scientific protocols for animal welfare assessments in the EU. The achievements of the Welfare Quality® project includes the definition of principles and criteria of good welfare; development of standardized, primarily animal-based measures for each welfare criterion etc. The essential principles, insights and learnings of the protocol must be taken into account and build upon. The EU Welfare Quality® view on animal based measure should be endorsed in order to be consistent in the development of animal based measures.

Answer: see comment 7 (model EKE)

Changes to the guidelines based on this comment: none

FILE 2 NZO:

Comments for 3.2.2. Step 2. Plan the methods for conducting the assessment (the 'How')

For the underlying assumptions of the model the expression of the ABM under unexposed conditions reflects the natural situation [...] which is considered the optimum in terms of animal welfare. The question is whether this really represents optimum of animal welfare for these domesticated animals. The evaluation and adaptions from domestic animals during thousands of years have made them very different compared to the wild species. It is questionable if giving a domestic animal unlimited space if it is better for their animal welfare. It is important to use uniform (unambiguous) assumptions, definitions, monitoring, calculations which are science based.

Answer: see comment 2 (selection of experts); see comment 7 (EKE model).

Changes to the guidelines based on this comment: none
The extensive and valuable Welfare Quality® project has previously developed scientific protocols for animal welfare assessments in the EU. The achievements of the Welfare Quality® project includes the definition of principles and criteria of good welfare; development of standardized, primarily animal-based measures for each welfare criterion etc. The essential principles, insights and learnings of the protocol must be taken into account and build upon. The EU Welfare Quality® view on animal based measure should be endorsed in order to be consistent in the development of animal based measures.

**Answer: see comment 15 See comment 2 (selection of experts) and comment 8 (effects of expert opinions)**

**Changes to the guidelines based on this comment: none**

Practical experiences/implementation of animal based measures must be included in the research in order to estimate the impact and feasibility of the measures. For example: In the Netherlands, the dairy sector has translated and implemented the Welfare Quality® protocol for dairy cows into a practical system. Currently approximately 15,000 dairy farmers are participating. Parallel this system gives an overview of the risks on animal welfare and the food safety principles. The farmer receives information from the system with targeted advice to improve the animal welfare. It is a targeted way to turn knowledge into action instead of securing a level of knowledge without taking action. Therefore farmers are supported in the continuous improvement of animal welfare on their farm. The system also provides the enforcement to focus on high-risk farms.

**FILE 3 NZO:**

Paper: A new practical animal welfare assessment for dairy farmers
https://doi.org/10.3390/ani11030881

**FILE 4 NZO: for information**

Paper: **Cow Compass: a Dutch monitoring system of risk factors for the production process of milk** Department of Farm Animal Health, Ruminant Health Institute, Faculty of Veterinary Medicine, Utrecht University, Yalelaan 7, 3584 CL, Utrecht, corresponding author, g.a.hooijer@uu.nl,
Outcome of the public consultation on methodological guidance animal welfare farm-to-fork

Subject: Methodological guidance for the development of animal welfare mandates in the context of the Farm to Fork Strategy
From: AVEC, ELPHA & EPB Secretariat
To: EFSA
Deadline: 28th of March 2022
Link: https://connect.efsa.europa.eu/RSs/publicconsultation2/a017U0000011Nwv/pc0132

AVEC – The Voice of the European Poultry Meat, ELPHA – European Live Poultry and Hatching Egg Association, as well as EPB, European Poultry Breeders Association welcome the chance to comment on the Methodological guidance for the development of animal welfare mandates in the context of the Farm to Fork Strategy and would like to thank EFSA for this initiative.

We are very pleased by the outcome of the guidance and the scientific foundations EFSA will base its opinions on. Indeed, when deciding on policies on creating a fair, healthy and environmentally friendly food system in the EU AVEC, ELPHA and EPB encourages the EU Commission to base policies on science and not emotions and to consider the efforts already put in place by the sectors. Hence, the importance of the future EFSA reports and their scientific justifications.

The revised animal welfare legislation must be based on objective measures and not subjective or emotional ones. These objective measures must be based on scientific and agronomic evidence, measurable and easily applicable for the whole agri-food chain.

As a main comment, AVEC, ELPHA and EPB would like to remind EFSA of the request on collaboration from the European Poultry Meat sector letter, sent on the 28th of July 2020.

The 19 AVEC members are national associations representing poultry processors and the poultry trade in 17 EU countries and all in all AVEC represents 95% of EU poultry meat production.

The 18 members of ELPHA are national associations and hatcheries from 14 EU Countries and the work of ELPHA is covering the range from the selection of the breeds to the placing of the birds in the farm to produce poultry meat and/or eggs.

The 8 members of EPB are primary poultry breeding companies who are all taking care of genetic selection for breeding pedigree stock.

Within the European Poultry Meat Sector, we have skilled experts on animal welfare who will be able to assist with a nuanced input on how to assess the animal welfare of poultry in the different EU countries, and our three associations will be very interested in providing data, scientific documentation, interviews etc.

AVEC, ELPHA, and EPB are very committed to be a part of the solution when it comes to the creation of a Sustainable Farm to Fork strategy, and we would like to highlight that we are willing to cooperate and provide available data to support EFSA in the entire process.

Answer: Please see comment 15, comment 37 and comments 2 and 8 (selection of experts)

Letter of Europen & Mediterranean Horseracing Federation:
EMHF
European & Mediterranean Horseracing Federation

European Food Safety Authority,
Via Carlo Magno, 1A,
43126, Parma,
ITALY

27th March, 2022

Dear Sirs,

We would like to provide comments on the EFSA consultation on Methodological Guidance for the Development of Welfare Mandates.

We are encouraged that EFSA's equine specialist, Barbara Padalino, also has extensive experience in non-slaughter horse transport research, and stand ready to provide any further information we can on specific conditions for transporting thoroughbred racehorses and breeding stock, and the self-regulation already existing within Racing to monitor welfare of our horses.

EFSA's specific terms of reference (1.1.1.2, Part II, 6) focuses on 'transport of horses on long journeys to slaughterhouses', and we remain convinced that it is right to focus primarily on specific recommendations for these equines, who are most at risk from significant welfare abuse.

Unlike other farm species and horses for slaughter, race and sports horses usually undertake return journeys with an economic imperative that these horses arrive in good condition to race, compete, or for stud, and then return home. Therefore, we believe it is essential that any methodologies and recommendations for equines take into account the significant difference between horses transported for slaughter and these equines.

In relation to specific issues, we would like to make the following points:

- **Travel time** – research is clear that, for fit horses accustomed to handling, travel time is only one variable in transport welfare, and that ‘driver experience, training and behaviours are critical to the welfare of transported animals’ (Riley et al, 2016). The SCAHAW 2002 report notes that, “after the animal has adapted to the situation, time is a minor problem compared to loading densities, vehicle design, road conditions, driving behaviour of the driver etc.”

- **Enforced rest times** after a journey time limit may also have unintended consequences for race and competition horses in particular. For example, a blanket 24 or 28 hour rest for all equines after a journey would often not be in the best welfare interests of racehorses, who would benefit more from returning to their habitual residence.

- **Temperature limits** - Horses have a wide thermal tolerance, particularly tolerating cold well (Marlin et al, 1996). Racing often takes place in northern countries in temperatures well below freezing. During transport in winter, fabric coverings are often used to mitigate lower temperatures and to allow horses to travel comfortably.

- **Any blanket EU requirement for forced ventilation systems** on all horse transport would put a significant and unnecessary economic burden on horse transporters in Northern EU member states without providing any significant welfare benefit at all – in fact,
observations from professional horse transporters are that horses not used to air-conditioned vehicles can react adversely to these conditions.

- Any requirements for constant free access to forage on arrival and for the duration of stay are not always compatible with the health requirements of horses who are racing or competing.

As a sector, we are far from complacent. We are currently working on a new international Code of Practice and Guidance on Welfare in Transport under the auspices of our global body, the International Federation of Horseracing Authorities (IFHA) and we are conducting a review of current research to identify gaps in knowledge so we can look at commissioning future research to further improve thoroughbred welfare in transport.

We ask that EFSA methodologies and the review of existing scientific research take into specific account the differences between slaughter horse transport, and that of other equines such as thoroughbred race horses and their breeding stock.

Yours faithfully

Dr Paull Khan Secretary-General

Answer: See comment 2 (selection of experts). Expert mentioned in the letter is a panel member of the AHAW panel and member of the Working group. The scientific opinion on transport of horses takes into account the transport of horses (for slaughter and other purposes (racing, hobby, etc)) into account. Also the listed specific issues such as travel time, resting time, temperature limits, etc. are assessed in the scientific opinion. Specific recommendations are provided. Any requirement to be taken up in the legislation is out of the scope of the Scientific opinion of EFSA. Therefore the comments related to requirements (free access to forage after arrival, free blanket) is considered outside the scope of the topic and therefore outside of this public consultation.