

ALPHA UNIT

Scientific Network for Risk Assessment in Animal Health and Welfare

Minutes of the 6th meeting

Held on 11-12 06 2014, Parma

(Agreed on 14 07 2014)

Participants

• **Network Representatives of Member States:**

Country	Name	Country	Name
Austria	Friedrich Schmoll (11-12/06/14)	Hungary	Anna Zsófia Oszoli (11/06/14) Anna Luca Vecsei (12/06/14)
Belgium	Kristine Ceulemans (11-12/06/14)	Iceland	Audur Arnthorsdottir (11-12/06/14) Thora Jóhanna Jónasdóttir (11-12/06/14)
Bulgaria	Teodora Sarakostova (11-12/06/14)	Ireland	Niall O'Nuallain (11-12/06/14)
Croatia	Dražen Knežević (11-12/06/14)	Italy	Leonardo James Vinco (11/06/14) Paolo Calistri (12/06/14)
Cyprus	Maria Liapi (11-12/06/14) Christodoulos Pipis (11-12/06/14)	Lithuania	Vidmantas Paulauskas (11-12/06/14)
Denmark	Mariann Chriel (11-12/06/14)	Norway	Ingfrid Slaatto Næss (11-12/06/14)
Estonia	Margus Proses (11/06/14) Arvo Viltrop (12/06/14)	Netherlands	Trix Rietveld (11/06/14) Wim Ooms (12/06/14)
Finland	Tainia Mikkonen (11/06/14) Taina Aaltonen (12/06/14)	Slovakia	Anna Ondrejškova (11-12/06/14)

France	Charlotte Dunoyer (11-12/06/14)	Spain	Oscar Dignoes (11/06/14) Luis J. Romero Gonzalez (12/06/14)
Germany	Michael Marahrens (11/06/14) Franz Conraths (12/06/14)	Sweden	Ulla Carlsson 12/06/14
Greece	Katerina Plevraki (11-12/06/14)	United Kingdom	Helen Roberts (12/06/14)

- **Panel Members**

None

- **Hearing Experts**

None

- **European Commission or Member States representatives:**

None

- **EFSA:**

ALPHA Unit: Frank Berthe, Alessandro Broglia, Denise Candiani, Matthia Calzolari, Sofie DHollander, Maria Ferrara, Andrea Gervelmeyer, Andrey Gogin, Per Have, Renata Leuschner, Silvia Nicolau Solano, Frank Verdonck

- **Others**

None

1. Welcome and apologies for absence

The Chair welcomed the participants.

Apologies were received from Czech Republic, Latvia, Luxembourg, Malta, Poland, Portugal, Romania, Switzerland and Slovenia.

2. Adoption of agenda

The agenda was adopted without changes.

3. Declarations of interest

No interests were identified.

4. Agreement of the minutes of the 4th meeting of the Scientific Network for Risk Assessment in Animal Health and Welfare held on 17-18 10 2013, Parma.

The minutes were agreed by written procedure on 21 02 2014 and published on the EFSA website.

5. Topics for discussion

Animal Welfare

5.1 Keeping and killing of fish – lack of data for assessment of welfare

EFSA gave an overview of previous EFSA work on fish welfare and on risk ranking of fish farming systems. This includes scientific opinions on the welfare aspects of husbandry systems of five different fish species, the assessment of the welfare at stunning and killing of seven species of farmed fish and an overarching opinion on fish welfare.

In the following discussion MSs reported what research is being or has been carried out in on risk factors and welfare consequences in fish and what data on risk factors and welfare consequences in fish has been collected in MSs. It was stated by Spain that Mediterranean fish differs from Nordic fish and that different methods for stunning and killing need to be applied. The outcome of a recent research project indicates that slaughtering on ice cannot be improved further with view to welfare. A study on gaseous stunning of sea bream and sea bass has been carried out. In The Netherlands electrical stunning approaches have been implemented under practical conditions in a small and large smokehouse for eel and cat fish. Norway informed about risk assessments done on transport of fish and on fish stunning methods. Germany highlighted difficulties with stunning of catfish. These are linked to the special anatomy of the central nervous system, the ability of catfish to breathe and to survive in air. A small study carried out in the Netherlands on electrical stunning of catfish indicates that the use of ice water improves the duration of unconsciousness after electrical stunning. The parameters for electrical stunning of eels have been included in the German national law. It was underlined that the ability of fish to experience pain is still subject of a scientific debate with view to fish brain lacking a cortical structure, but there are indications of different arousal and pain processing signal pathways. In Belgium a study is being carried out in carp regarding the usefulness of cortisol as a biomarker for chronic stress. The report is expected by the end of 2014. Research in Finland showed that salmon which had been reared in an enriched environment had a higher survival rate when released into nature. It was stressed by Denmark, that the methods used for killing wild fish should be included in welfare assessments, too.

Meeting participants were encouraged to upload relevant research results and reports on ScienceNet. EFSA will try to have reports translated where necessary. Apart from the TRAW study, welfare during transport of fish has not been assessed so far and hence data collection is encouraged for the different types of transport in use for different species.

5.2 Slaughtering of cows in late stages of pregnancy

Germany presented an overview of the topic. While Council Regulation (EC) No 1099/2009 on the protection of animals at the time of killing does not have any specific provisions for

the stunning of gravid animals and their fetuses, Directive 2010/63/EU of the European Parliament and of the Council on the protection of animals used for scientific purposes covers also foetal forms of mammals, as there is scientific evidence showing that such forms in the last third of the period of their development are at an increased risk of experiencing pain, suffering and distress. In the EFSA Scientific Report of the Scientific Panel for Animal Health and Welfare related to welfare aspects of animal stunning and killing methods of 2004, it is stated that onset of breathing and increase in blood oxygen levels are essential to induce arousal and awareness in the animal foetus. Therefore, it is recommended to leave a foetus of a slaughtered pregnant dam in the uterus until it is dead. Lung inflation should be prevented if a foetus is exposed to air and fetuses exposed to air should be killed. This is in line with Article 7.5.5. regarding the management of fetuses during slaughter of pregnant animals of the OIE Terrestrial animal health code chapter 7. 5. on the slaughter of animals. While there are new scientific views on foetal awareness and pain perception, most of the underpinning research has been carried out on human fetuses. For example, it has been shown that the human foetus can respond to painful stimuli as early as 18 to 20 weeks gestation. However, there is controversy regarding the cortical interpretation of pain in the human foetus. Results from a number of (cross-sectional) surveys carried out in slaughterhouses in Germany, Italy, Luxemburg and Belgium, that found that around 10-15% of cows slaughtered were pregnant, often slaughtered during the late gestational period, were shown.

The ensuing discussion focused on identifying which studies are being or have been carried out in MSs on the ability of fetuses to experience pain and/or on the factors related to handling fetuses at slaughter that negatively affect foetus welfare. It was acknowledged that little scientific evidence exists to date on animal fetuses' capacity to experience pain. So far, slaughtering of pregnant animals in late stages of gestation is considered to happen occasionally. The reasons for slaughtering dairy cows are thought to be mainly low performance, due to various causes. An incentive for slaughtering pregnant dairy cows might be their higher live body weight achieving a better price. An additional factor leading to pregnant cows being slaughtered may be the low economic value of calves (especially male calves) from dairy cattle. It was stated that the collection of foetal calf serum for laboratory purposes (cell culture) is a minor activity for a small market and takes place in specialised slaughterhouses. In addition to welfare concerns, a further reason to avoid slaughtering of cows in late stages of gestation is the fact that the amount of steroid hormones in the blood and meat are high in this phase, which negatively affects meat quality. It was pointed out that the potential of fetuses experiencing pain at slaughter of the cow should also be considered for other animal species such as pigs and also in the context of disease control interventions where the number of pregnant animals culled might be even higher and carried out in later stages of gestation. It was suggested that, in order to avoid welfare issues, it could be recommended that dairy cattle be culled within 6 months after the last parturition. If culled later than 6 months after the last parturition, it could be required to provide evidence that the cow is not pregnant, or not pregnant in stages later than 6 months, or ensure that the foetus will be killed.

It was concluded that currently the prevalence of pregnant cows slaughtered during a late gestation period is not known in MS nor at EU level. Therefore, the magnitude of the problem is not known. In addition to this, the assessment of the outcome "pain" is not straightforward as no direct measure exists and a clear association between the development of the anatomic structures and nociception in bovine and other animal fetuses has not been established.

5.3 Small scale farming of dairy cows

EFSA presented the mandate on the welfare of small scale farming of dairy cows. Several opinions on the welfare of dairy cows in intensive production systems have been produced

by EFSA in the past. This new mandate should provide a description and categorisation of small scale farming systems and assess if the risk factors for and animal based measures of dairy cow welfare in intensive systems are also applicable in small scale settings.

MSs were asked if any categorisation of dairy cow farming by scale has been carried out and, particularly, if an upper limit of 75 cows per farm would be an applicable classification tool across MS. In Denmark the average dairy cow herd size is 161 animals (2014) and less than 25% dairy farms have fewer than 75 cows. In other countries, such as Austria, more than 80% of dairy cow farms have up to 75 cows and would therefore be considered small scale farming. The imminent abolition of the milk quota is expected to have an impact on the dairy herd size. It was suggested that other criteria need to be used to categorise farming as small scale systems in addition. Other useful indicators for small scale farming could be the importance given to economic benefits achieved by the farming activity, the breeds of cows used, the animal turnover rates, the average age of cows or number of lactations before culled or the distances travelled to the slaughterhouse. The example of organic farming was pointed out, as some organic farming associations require their members to have small herd sizes and to adhere to husbandry rules regarding animal welfare. It was pointed out that a large number of definitions is currently in use by different institutions, such as family farming, small scale farming, organic farming, which might provide insights for potential categorisation of dairy cow farming systems. In this context a recent Norwegian study comparing organic and conventional farming systems was mentioned, that might provide some assistance to the EFSA mandate.

EFSA proposed to involve the AHAW Network in reviewing the working definitions drafted for terms such as 'small scale dairy farming' as well as the draft description and categorisation of small scale dairy cow farming systems later in 2014.

5.4 Welfare of sheep

A short presentation regarding the ongoing opinion on sheep welfare (EFSA-Q-2013-0197), specifically of the questionnaire survey that was carried out in this context, was given by EFSA. EFSA expressed its gratitude to the Network for having assisted in disseminating the questionnaire to relevant experts in MSs. The mandate, which has already been briefly introduced at the last year's annual meeting, aims at identifying how animal based measures (ABM) can be used to assess sheep welfare. The main factors and welfare consequences depending on production and management systems are to be identified. The working group applied the approach of starting from biology of sheep, defining risk factors and then the welfare consequences. One major challenge is the lack of quantitative data, particularly on the various mixed systems. This opinion is to be adopted by end of 2014 and a public consultation is planned for September.

Spain requested clarifications on the questionnaire that EFSA had sent to the Network for collection of expert knowledge on sheep production and welfare. EFSA explained that the questionnaire is building on several scientific opinions of EFSA and that the expert knowledge elicitation process applied in the questionnaire process has previously been used in several opinions in EFSA. In this context it was pointed out that a guidance on expert knowledge elicitation is to be published shortly on the EFSA website.

5.5 Implementation of Regulation (EC) 1099/2009

A brief overview of the EFSA scientific opinions on monitoring procedures at slaughter, that focus on bovines, pigs, chickens and turkeys, sheep and goats and were published last year on the EFSA website, was provided. The sample size calculation method outlined in these opinions was explained in detail. It was emphasized that the reliability of indicators to indicate consciousness was one of the key issues in the monitoring process. A discussion on

how such monitoring protocols are organised in MSs, the main difficulties in checking the indicators and whether scientific support according to Art 20, Regulation (EC) 1099/2009 has been established in MS and what support is provided followed the presentation.

It was pointed out, that the sensitivity of the indicators for detecting consciousness must be known and that the indicators must be measurable under slaughterhouse conditions. The time period over which the sampling is carried out can be adjusted to the throughput of the slaughterhouse. In several countries, e.g. the Netherlands, France, Latvia, codes for good practice have been prepared. These specify which indicators to use, but mostly do not propose a sampling size and plan. The preferred indicators are eye-lid reflex and corneal reflex. First feedback from professionals in the field indicates that the sampling size proposed in the EFSA opinions for bovine slaughter can be difficult to achieve in practice.

In Germany, a working group at the national level develops a handbook for the implementation of Regulation (EC) 1099/2009. The handbook defines monitoring processes for different species. At each monitoring point at least two indicators need to be checked. The number of animals to be checked is to be defined by slaughterhouses in standard operation procedures on monitoring. The monitoring, which should be carried out by veterinarians or animal welfare officers, is supervised by the competent authorities. Comprehensive and detailed guides of good practice have been developed by the sector for the slaughter of bovine and porcine species. The Netherlands informed the meeting that the Ministry of Economic Affairs has identified a contact point responsible for sharing information on best practices and that a report is being prepared for the Ministry of Economic Affairs. Finally, it was stressed that the person carrying out stunning and sticking need to be properly trained in the procedures to assess consciousness.

5.6 Use of carbon dioxide for stunning rabbits

A short overview of the ongoing mandate on the use of carbon dioxide for stunning rabbits (EFSA-Q-2014-00186) was provided. This scientific opinion will provide a scientific assessment of new stunning methods following a recently published EFSA guidance on the assessment criteria for studies evaluating the effectiveness of stunning methods regarding animal protection at the time of killing (EFSA Journal 2013;11(12):3486, 41 pp. doi:10.2903/j.efsa.2013.3486). It was suggested to approach AHAW Network representatives for information regarding experiences made in commercial slaughterhouses with this stunning method. The information request would be in support of the ToR regarding the extent to which the findings of the study can be valid in the context of other rabbit slaughterhouses in the EU. Italy, Spain and the Netherlands have experience with regard to stunning of rabbits in commercial slaughterhouses.

5.7 Welfare of pigs

A short presentation was given by EFSA on the recently adopted opinion on welfare of pigs (EFSA-Q-2013-0236), that presents a multifactorial approach to the use of animal and non-animal based measures for the assessment of pig welfare. The ToRs and main outcomes were presented and discussed.

Animal Health

5.8 Vectorborne Diseases

A short presentation of the current EFSA mandate on ranking of vectorborne disease (VBD) and of the Vectornet project ("VectorNet: A European network for sharing data on the geographic distribution of arthropod vectors, transmitting human and animal disease

agents”) was given. VectorNet is a joint ECDC-EFSA project that will support the collection of data on vectors and pathogens in vectors, related to both animal and human health, in line with the EU “One Health” initiative (OC/EFSA/AHAW/2013/02). The project will contribute to a timely and appropriate response to vector-borne diseases in the EU. ECDC and EFSA will create a common database on the presence and distribution of vectors and pathogens in vectors in Europe and the Mediterranean through developing a network of experts and organisations from the medical and veterinary domains. The project will aim to extend the network of medical entomologists and public health professionals, already established during the VBORNET project, and include veterinary entomologists and veterinarians. To support the VectorNet project, an extended consortium of top experts in medical and animal entomology and public and animal health has been established (<http://www.ecdc.europa.eu/en/press/events/layouts/forms/EventDispForm.aspx?List=a8926334-8425-4aae-be6a-70f89f9d563c&ID=266>). Minimum standards for vector population monitoring will be developed next year in addition to protocols already developed by ECDC. As several EU projects on recently introduced VBD are currently ongoing, representatives from these will be involved in VectorNet to avoid changing existing protocols and data models. A big challenge will be the different focuses/aims of the various projects and how to combine the resulting information. The UK is assessing trade patterns and loading procedures for live animals. It was pointed out that TRACES and Eurostat may not contain all relevant data, therefore EFSA is looking into all available reports, including information from FVO and FAO.

5.9 Risk ranking of animal diseases

France provided a presentation of work on risk ranking at ANSES, which has been carried out in the context of several mandates over the past years. The applied methodology is based on the OIE framework. Some aspects have been changed to adapt to the national situation in France and some additional elements, especially on zoonoses from DEFRA, have been taken on board. All regulated diseases were considered. Both the impact of the disease and the impact of the control measures were considered in the ranking. The ranking framework and tool is Excel based and diseases have been grouped into three categories. In the Netherlands animal welfare and zoonotic potential are included among the criteria of the risk ranking framework. A major challenge in risk ranking is the comparison of very diverse impacts and the overarching integration of different hazards. The outcome of the EFSA critical review of methodology and application of risk ranking for prioritisation of food and feed related issues, on the basis of the size of the anticipated health impact (OC/EFSA/SCOM/2013/01) could be useful in this context. An overview on the UK’s Biosecurity programme was provided. The programme aims at drawing together risks for terrestrial and aquatic animals, plants and bees and invasive non-native species and characterising their impact considering environmental, economic, social, reputational and animal welfare aspects. A major difficulty is the identification of a scoring system covering these disparate aspects. The programme measures the overall impact over a period of ten years.

5.10 Porcine Epidemic Diarrhoea virus (PEDV)

A presentation of the epidemic in North America and the involved viruses was given by France. ANSES is currently working on a mandate regarding the risk of PED emergence in France. The French mandate is concerned with the Alfacoronavirus only and has a deadline of early July. EFSA provided a presentation of its mandate (EFSA-Q-2014-0141) on PEDV Alfacoronavirus and the new Deltacoronavirus (PDCoV) with a deadline of end of October 2014. The Network has been contacted for data and information on PEDV and the results were presented. To complement the information available from MSs, EFSA is carrying out an extensive literature search. No information on PDCoV in Europe is available. It was noted

that it is currently unclear if cross-protection between the European and the Alfacoronavirus circulating in North America exists and, therefore, if European pigs are protected against the new virus based on past virus encounters. This should be the subject of studies. Austria gave a presentation on porcine coronaviruses (PCV). The currently available diagnostic methods were discussed. It was suggested to develop and validate diagnostic tests for PEDV antigen and antibody detection, to develop standardized reference samples that can be utilized by veterinary diagnostic labs for diagnostic test validation, to develop and validate antibody-based diagnostic tests for serologic monitoring and surveillance. The need for sharing information between diagnostic labs was emphasized. The UK gave a short presentation on a study of pigs at slaughter. The serological prevalence study was carried out between Jan and May 2013 at 12 high output abattoirs representing approximately 80% of slaughter finishing pigs in the UK. Samples were tested by blocking ELISA and PCR. The seroprevalence was about 9% in pigs below six months and between 6-12 months and of about 3% for pigs older than 12 months. No Ab-positive samples tested positive for PCR.

Spray-dried blood plasma is added to pig weaner feed. *Salmonella* has been detected in finished blood products on an occasional, but regular basis at the main blood processing plant in GB. This may indicate that PEDV survives the process as well. It was stated that blood products are fed to a relatively large proportion of EU pigs and that the use of blood products as fertilisers for plants/agriculture is allowed.

5.11 African Swine Fever (ASF) - harmonisation of monitoring and surveillance

A short presentation on the potential of harmonisation of monitoring and surveillance of ASF was given by Germany. New cases of ASF have recently been detected in Eastern European MSs. Wild boar is seen as a possible route of entry, the role of illegal trade in spreading the disease is difficult to assess. Workers hired from Eastern countries, truck drivers or hunters may also pose a risk to transmit or be involved in the spread of disease. The risk of spread of ASFV is considered high. An agreement among countries on minimum standards for monitoring and surveillance of ASFV was proposed. This could provide reassurance to non-infected countries and potential trade partners. Data collected thorough such monitoring activities could be stored in the European CSF database.

5.12 AHAW Network meeting on wildlife surveillance

EFSA provided feedback from the AHAW Network workshop on wildlife surveillance in March 2014 (http://www.efsa.europa.eu/en/_events/event/140311a.htm). The workshop participants recommended that surveys providing valid information on size, distribution and structure of the various wildlife populations should be carried out, following harmonised methods. MS's authorities must know which groups are accessing wildlife populations in their country should try to understand how these groups collect the samples, to be able to adjust for potential biases when analysing the results of this sampling. The minimum information provided per wildlife sample should be the location of sampling, the date of sampling, the age and the gender of the sampled animal. EFSA presented the "harmonised Approaches in monitoring wildlife Population Health, And Ecology and Abundance" (APHAEA) project. The project of the EMIDA ERA-NET (coordination of European Research on Emerging and Major Infectious Diseases of production Animals, <http://www.emida-era.net>) aims at establishing a European wildlife disease surveillance network that is capable of providing reliable estimates of abundance of wildlife species and of pathogen distribution in key wildlife species (<http://www.aphaea.org/>). For wildlife only few systematic approaches for monitoring exist. APHAEA might help to develop such systematic approaches. It was stressed that it is important for Europe to discuss the relevance of wildlife for the health of livestock, including both microbial and chemical hazards. It was suggested that EFSA and APHAEA could explore if and how the harmonisation of approaches to monitoring wildlife

can be supported by EFSA. If such support is possible, a joint meeting between APHAEA project members and the EFSA Network for Risk Assessment in Animal Health and Welfare in 2015 could be envisaged.

5.13 West Nile Fever workshop

EFSA provided feedback on a joint meeting of the EFSA AHAW Network, the EFSA Taskforce on Zoonoses Data Collection and the ECDC Emerging and Vectorborne Disease Network that took place in Stockholm in December 2013. The minutes of the meeting are available on EFSA's website. One of the recommendations was to initiate joint EFSA-ECDC activities across the animal-human interface on WNF. The workshop will take place in Vienna on 30-31 October 2014 and brings together experts on animal and human health from different MS as well as entomologists. The workshop will seek to define common objectives regarding West Nile fever surveillance considering surveillance of humans, domestic animals, wildlife and vectors. Data collection models shall be analysed and compared in order to identify possibilities to harmonise surveillance of West Nile fever in the EU. The existing reporting of West Nile should be reviewed to improve joint analysis and reporting. Following the workshop, EFSA and ECDC will lead a dedicated 2-hours session at the International meeting on emerging diseases (IMED) on 2 November 2014 in Vienna. The MSs that will be involved in the workshop will be contacted soon to start preparations.

6. Any Other Business

EFSA thanked MSs for the support provided to the EFSA statement on bovine tuberculosis.

7. Next meeting

The next AHAW Network meeting is scheduled for 12 and 13 November 2014.