
ALPHA UNIT

Scientific Panel on Animal Health and Welfare
Notes of the Working Group meeting on data collection for lumpy skin disease

13th December 2016, teleconference
(adopted on 13th December)

Participants:

WG experts: Arjan STEGEMAN, Simon GUBBINS, Eyal KLEMENT

EFSA: Alessandro BROGLIA (ALPHA)

1. Welcome and apologies for absence

The Chair welcomed the participants.

2. Adoption of agenda

The agenda was adopted as agreed.

3. Declarations of Interest of Working Groups members

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes and the Decision of the Executive Director on Declarations of Interest¹, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

DISCUSSION

The main purpose of this meeting was to discuss the data models to be used for data collection.

Furthermore the preparation of the meeting with all contact points was discussed, tasks assigned, the topics for the presentations assigned to each expert.

TIMELINE AND NEXT MEETINGS

- 20th Dec 2016 with focal points of affected and at-risk countries

¹ <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

ALPHA UNIT

Scientific Panel on Animal Health and Welfare
Notes of the Working Group meeting on data collection for lumpy skin disease

20th December 2016, Parma
(adopted on 10 January 2017)

Participants:

External experts: Arjan STEGEMAN, Simon GUBBINS, Eyal KLEMENT; Nick LYONS

Country representatives: Ledi PITE, Džemil HAJRIĆ, Aleksandra MITEVA, Brigita HENGL, Sotiria-Eleni ANTONIOU, Bafti MURATI, Tatjana LABUS, Drago MAROEJVIC, Ioana NEGHIRLA, Srgjan MESHTEROVIKJ, Esra SATIR

EFSA: Alessandro BROGLIA, Lisa KOHNLE (ALPHA), Hans VERHAGEN (RASA), Josè CORTIÑAS (AMU), Jane RICHARDSON (DATA), Jelena VRACAR (AFSCO)

Minutes


- Round table presentation of the participants was done.
- No further interests were declared. In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes and the Decision of the Executive Director on Declarations of Interest¹, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.
- The agenda was adopted without changes.
- Hans Verhagen, Head of Risk Assessment Department of EFSA, welcomed the participants and reminded about the importance of collaboration with MSs and neighbouring countries in collecting data for better risk assessment and support risk managers.
- Alessandro Broglia introduced the current mandate on data collection on LSD. The background of this mandate derives from recommendations from 1. GF TADs meeting held in Brussels July 2016 and was reminded at the 3rd meeting of GF TADs

¹ <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

held in Istanbul in December 2016. The terms of references, the type of data needed, the timeline and workplan of the project were presented (see presentation for


Broglia_LSD meeting
20 Dec 2016.pdf details).


- The possible analysis that could be conducted with the data in the context of the project were presented by the external experts:
 - Simon Gubbins presented the possible epidemiological analysis of LSDV data, spatial –temporal analysis and how the spread models developed in the framework of past EFSA outputs could be updated with more data, in particular about i) the importance of denominator data (farm size and location if possible with XY coordinates), ii) the possibility of estimating the within farm transmission (for that purpose data on number of infected animals recorded over time, or at least the record of number of cases at suspicion date and at culling date would be needed), iii) data on animal movement onto infected farms in the weeks before outbreak onset (see


S.Gubbins_EFSA-LSD
Workshop_201216 presentation for details).


- Nick Lyons presented the different methodology for evaluation of vaccine effectiveness and risk of bias in the analysis (see presentation for details


N.Lyons_Vaccine
effectiveness.pdf).

- Eyal Klement presented examples of vaccine efficacy studies in Israel and Greece and explained how a relatively small amount of data is needed for those analysis, thus becoming feasible in terms of workload required for data


E.Klement_Efficacy
and effectiveness stu collection for almost all situation (see presentation for details).

- The representatives from LSD-affected countries presented the situation in the respective country and what data are and could be available. Some major points of the discussion are reported below:
 - Croatia: the vaccination campaign was described, 418,000 dosis were administered. Out of those 374 adverse effects in 57 farms (only one case vaccinated with OBP vaccine) were observed later than 7 days after vaccination and generally resolved in 30 days, although some deaths due to unknown reasons were observed 2 weeks after vaccination. This information was passively reported by farmers and confirmed by vets. A database of pooled data about adverse effects was presented. It was remarked about the usefulness to check at least few sample from animals showing adverse effects, in order to exclude the presence of field virus strain. It was also suggested, if feasible, to gather quantitative records about milk drops as adverse reaction after vaccination and to select few farms to be well followed for a precise study of vaccine safety.

- Albania: the well detailed database about cattle population and affected farms and animals was presented. Vaccination coverage is at the time of the meeting around 60%, no total culling of affected farms is carried out, making Albania a suitable case for studying within and between farm spread. Around 160 cases of adverse reactions were registered 1-2 weeks after vaccination. 500 samples were tested at laboratory level, 274 were positive (see presentation for details  [L.Pite_LSD_Albania_presentation_en.pdf](#)).
- Montenegro: the representative of Montenegro presented data about cattle population (distribution, density and mean number of animal per farm), about LSD outbreaks (space-temporal patterns), about vaccination campaign conducted in the country (90, 000 animals vaccinated in two weeks, 99% coverage). Detailed data can be provided for the affected farms. A question was posed about the safety to perform vaccination against LSD and bluetongue at the same time, it was suggested to perform a small pilot test in a couple of farms and register any adverse effects in the following month.
- Serbia: an update on the situation concerning outbreak and vaccination was presented. The affected farms were mainly backyard farms with few animals. It was remarked that not all LSD cases were confirmed by laboratory test. Mild reactions after vaccination were observed after around 10 days. Samples were collected from animals in order to differentiate field from vaccine virus strain.
- Kosovo: the situation regarding LSD outbreaks and control was presented. Vaccination was carried out on around 95% of the bovine population, with around 250,000 administered doses. Online database on cattle population and vaccination were shown. The vaccination records in Kosovo are collected at animal level.
- Greece: data on cattle population, outbreak and vaccination are available. Coordinates and attributes of farms about type of production (e.g. dairy/beef) are not available. It was remarked that the date for data extraction from national database should be specified. Laboratory data are available only to confirm suspected case and declare the outbreak, total culling of infected farms is applied.
- FYROM: in FYROM 88% vaccination coverage has been achieved by two types of homologous live vaccines available on the market. Outbreaks and vaccination records are available.
- Bulgaria: data on cattle population, outbreak and vaccination are available. It was proposed to add an optional field in the data model for cattle population about postal codes of cattle farms, as well as two separated fields for adverse effects (suspected/confirmed adverse effect of vaccination according to laboratory testing).
- EFSA data models about cattle population, vaccination, laboratory data were presented and discussed, these will be circulated asap. Compulsory and optional fields were discussed and agreed. For outbreak data the ADNS format will be used, it

will be indicated where outbreaks refer to multiple farms, in that case the data of affected animals will be split in relation to each farm. It was agreed that data on cattle population up to date on 1st January 2016, data on LSD outbreaks up to 31 December 2016 and data on vaccination up to 31 December 2016 will be submitted to EFSA by the 31st January 2017.

- A practical example of data submission to EFSA Data Collection Framework was presented by Jane Richardson from the DATA Unit. It was explained that a letter on agreement for data sharing among the parties involved in this projects will be circulated and requested to be signed.
- It was requested by the participants to prepare a letter to be sent from the EC to each CVOs of the countries involved in this project, in order to support the work to be done by the staff for collecting and submitting data to EFSA.
- The meeting ended at 18.00h.

ALPHA UNIT

Scientific Panel on Animal Health and Welfare
Notes of the Working Group meeting on data collection for lumpy skin disease

21st December 2016, Parma
(adopted on 21st December)

Participants:

WG experts: Simon GUBBINS

EFSA: Alessandro BROGLIA (ALPHA), Josè CORTINHAS (AMU)

1. Welcome and apologies for absence

The participants were welcome. No absence

2. Adoption of agenda

The agenda was adopted as agreed.

3. Declarations of Interest of Working Groups members

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes and the Decision of the Executive Director on Declarations of Interest¹, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

DISCUSSION

The main purpose of this meeting was to discuss the quality of the data presented at the meeting on 20th December.

The possible analysis to be done with these data were discussed, and how the spread model could be updated by including epi data from all countries.

TIMELINE AND NEXT MEETINGS

- 6th February 2017

¹ <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

ALPHA UNIT

Scientific Panel on Animal Health and Welfare
Notes of the Working Group meeting on data collection for lumpy skin disease
6th February 2017, Parma

Participants:

WG experts: Arjan STEGEMAN, Simon GUBBINS, Eyal KLEMENT; Nick LYONS

EFSA: Alessandro BROGLIA, Lisa KOHNLE, Andrey GOGIN (ALPHA), José CORTIÑAS (AMU)

Minutes

1. Welcome and apologies for absence

Apologies from Nick Lyons.

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Samantha.MOMMENS@efsa.europa.eu

2. Adoption of agenda

The agenda was adopted without changes.

3. Declarations of interest

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes¹ and the Decision of the Executive Director implementing this Policy regarding Declarations of Interests², EFSA screened the Annual Declaration of interest and the Specific Declaration of interest filled in by the experts invited for the present meeting. No conflicts of interests related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of interest at the beginning of this meeting.

4. Scientific topics discussed:

- The different data received from the affected countries were considered, and the possible analysis discussed. In many cases the ID of farms is missing in the outbreak database (ADNS extraction), so a reminder will be sent.
- Croatia: possible analysis of adverse effects after vaccination, but data on symptoms are pooled per farm and no indication of ID farm is provided. Also some cases 100% of adverse effects are reported, which is unlikely to be attributed to post vaccinal effects. To be asked Croatia to provide ID farm, inform about how long the farm are monitored for adverse effect, and to split symptoms at animal level if possible

¹ <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

² <http://www.efsa.europa.eu/en/keydocs/docs/independencerules.pdf>

- Turkey data: possible analysis of LSDV propagation in absence of effective vaccination, especially in 2014. Vaccination data are provided as pooled figures for whole 2016 at province level. The vaccination coverage in 2016 can be displayed.
- Descriptive analysis of spatial temporal spread will be displayed, through maps and temporal curves will be included in the first report. A short section on protocols to perform vector trapping for LSD studies will be included. Also opportunity maps for vector activity can be prepared according to the indications as in the paper by KAHANA-SUTIN, et al. (2016). A first draft can be circulated to the deep readers of the Panel by 17th February, comments collected by 21 February, then final version to WG by 24th February and approval by EFSA HoD on 27th.
- The proposal of publishing a special issue to be published on Prev Vet Med was discussed, it was proposed to have topic-wise papers rather than country-wise, so not one paper from each country, but to address certain aspects of the disease across the regions, the feasibility of this depends on what data we will get. It was suggested to explore who is really interested in contributing to provision of manuscript by given deadline, and what type support is needed. A possible plan can be done after discussion with the other Panel members involved in the editorial Board.
- It was agreed to have webconferences with the representatives from affected countries, in order to keep update, plan their contributions to the special issue, and plan another full workshop in September, it will be connected to the GF TADs meeting in Montenegro, dates to be confirmed.

ALPHA UNIT

Scientific Panel on Animal Health and Welfare
Notes of the WG meeting of the Working Group on lumpy skin disease
26th April 2017, teleconference

Invited participants:

WG experts: Aryan STEGEMAN, Simon GUBBINS, Eyal KLEMENT
Hearing experts Ledi PITE
EFSA: Alessandro BROGLIA, Lisa KOHNLE, Josè CORTIÑAS (AMU)

1. Welcome and apologies for absence

Apologies from Arjan Stegeman.

2. Adoption of agenda

The agenda was adopted without changes.

3. Declarations of interest

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes¹ and the Decision of the Executive Director implementing this Policy regarding Declarations of Interests², EFSA screened the Annual Declaration of interest and the Specific Declaration of interest) filled in by the experts invited for the present meeting. No conflicts of interests related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of interest at the beginning of this meeting.

4. Scientific topics discussed

The data presented about epidemiological situation of LSD in Albania were discussed, in particular some issues were identified and clarified about:

- the consistency between dates of suspicion and notification
- the number of sick animals per each date of follow up are really new cases;
- That the number of dead animals are included in the no. of sick animals at farm level (i.e. X of sick animals out of which Y dead)

It was agreed to try to fix these issues in the database.

ALPHA UNIT

Scientific Panel on Animal Health and Welfare
WG meeting of the Working Group on lumpy skin disease
3rd-4th May 2017, Parma

Invited participants:

WG experts: Eyal KLEMENT
Hearing experts Sotiria ANTONIOU, Paschalis Fortomaris (via TC), Evaggelos, TSIAMADIS via (TC)
EFSA: Alessandro BROGLIA, Lisa KOHNLE, Josè CORTIÑAS (AMU)

1. Welcome and apologies for absence

All invited attended the meeting.

2. Adoption of agenda

The agenda was adopted without changes.

3. Declarations of interest

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes¹ and the Decision of the Executive Director implementing this Policy regarding Declarations of Interests², EFSA screened the Annual Declaration of interest and the Specific Declaration of interest) filled in by the experts invited for the present meeting. No conflicts of interests related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of interest at the beginning of this meeting.

4. Scientific topics discussed:

- The modalities of vaccination as conducted in Greece were discussed: the vaccination start was closest to the outbreak and then proceed along the farms more far away from that. But in case farmers could purchase the vaccine themselves, then the vaccination could be done also simultaneously in different places.
- The assumptions underlying the model for analysis of vaccination effectiveness was discussed and the model improved. The model could be adapted to the situation in all countries, given that at least the data as indicated in the table below are provided in a reliable way:
- The simplest data model to be used is shown below, which incorporate data on population, vaccination, outbreak:

ID farm	Regional Unit	No. animals in the farm	Grazing Y/N	Outbreak Suspicion date	No. susceptible	No. affected	Date of Vaccination	No. vaccinated animals
For all farms in Greece where info is complete	For all farms in Greece	For all farms in Greece on 1 st March 2016		If affected	If affected	If affected	If vaccinated	If vaccinated

Legend:

- FarmID : Unique and univocal entry of each single farm
 - Region : NUTS3
 - No. Animals in the farm, as on 1 January 2016
 - GrazingY/N : indicated whether the animals have access to grazing for a certain amount of time along the year (Y), or if they never have access (No)
 - Same data to be prepared by other countries for the next meeting.
 - Suspicion date : date of the LSD outbreak suspicion (dd/mm/yyyy)
 - No. susceptible: no. of animals in the farm at the time of outbreak suspicion
 - No. affected: no. of detected sick animals
 - Date of vaccination: date of the first vaccination (dd/mm/yyyy). Please consider that, if more than one day was used to vaccinate the whole farm, the date of the first day should be indicated.
 - No. vaccinated: no. of vaccinated animals in the farm at the first campaign. Please consider that if more than one day was used to vaccinate the whole farm, and the no. of vaccinated animals is entered for each day, then the total number of vaccinated animals should be indicated (day 1: 34 animals; day 2: 6 animals >>> no. vaccinated: 40)
- Consideration about Greek data and tasks :
 - The regional unit of Imathia could be included in the database
 - Number of susceptible and affected animals to be added
 - the reliability of data of the excluded regional units should be checked
 - **Discussion on joint publication on LSD** : an alternative proposal was advanced about publishing one single paper in a high-level journal with the contributions by all participants as authors. Such a publication could start from the analysis of the regional strategy of LSD control and tackle the control of livestock infectious disease beyond the single example of LSD. To be discussed further.
 - **Discussion on a possible survey on LSD vectors** in some sentinel farms, chosen among the affected ones, e.g 5 farms with access to grazing, 5 with no grazing. Survey model could be as the one published by Israeli colleagues (Kanana et al., 2017). Israeli colleagues are ready to support for advice about setting of the field survey and for data analysis. Greek colleagues could contact entomologist group and checking possibility for funding.

ALPHA UNIT

Scientific Panel on Animal Health and Welfare
Notes of the Working Group meeting on data collection for lumpy skin disease

17 May 2017, Galway

Participants:

WG experts: Simon GUBBINS

EFSA: Josè CORTINHAS (AMU)

1. Welcome and apologies for absence

The participants were welcome. No absence.

2. Adoption of agenda

The agenda was adopted as agreed.

3. Declarations of Interest of Working Groups members

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes and the Decision of the Executive Director on Declarations of Interest¹, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

DISCUSSION

The main purpose of this meeting was to discuss the model.

TIMELINE AND NEXT MEETINGS

- 31 May-1 June 2017

¹ <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

ALPHA UNIT

Scientific Panel on Animal Health and Welfare
Minutes of WG meeting of the Working Group on lumpy skin disease
31st May – 1st June 2017

Invited participants:

External experts: Aryan STEGEMAN, Simon GUBBINS, Eyal KLEMENT; Nick LYONS, Paolo CALISTRI

Hearing experts: Ledi PITE, Aleksandra MITEVA, Drago MAROJEVIC, Srgjan MESHTEROVSKI

EFSA: Alessandro BROGLIA, Lisa KOHNLE (ALPHA) Josè CORTIÑAS (AMU)

1. Welcome and apologies for absence

All invited attended the meeting. Calistri and Miteva attended via phone.

2. Adoption of agenda

The agenda was adopted without changes.

3. Declarations of interest

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes¹ and the Decision of the Executive Director implementing this Policy regarding Declarations of Interests², EFSA screened the Annual Declaration of interest and the Specific Declaration of interest) filled in by the experts invited for the present meeting. No conflicts of interests related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of interest at the beginning of this meeting.

4. Scientific topics discussed:

An update on the data collected so far, a recap of the content of the first report published in April 2017 and the preliminary further analysis carried out after the publication of first report was presented.

Drago MAROJEVIC, the representative from Montenegro presented an update on the epidemiological situation in the country. No further outbreaks were reported in 2017, the second round of vaccination against LSD will start soon, before the grazing season.

Ledi PITE, the representative from Albania, presented an update on the epidemiological situation in the country. New outbreaks of LSD have been reported in Albania, with a peak in January 2017, and some more in April 2017. The reason for the cases detected in winter deserve deeper investigation,

in particular if these are linked to field or vaccine strain and whether in vaccinated or unvaccinated animals. **Action point:** The data related to outbreaks reported in 2017 until 15th October 2017 will be provided to EFSA by Ledi.

Srgjan MESHTEROVSKJ , the representative from FYROM, presented an update on the epidemiological situation in the country. Few new outbreaks are reported in FYROM, the last one on 30 May. Further details will be provided.

Aleksandra MITEVA , the representative from Bulgaria, presented an update on the epidemiological situation in the country. No further outbreaks were reported in 2017, the second round of vaccination against LSD has started. The database including merged data on all farms about outbreaks and vaccination from 2016 will be provided.

An update about the spread model developed and presented in previous EFSA outputs was given by Simon Gubbins, in particular the same model has run with the data from Albania. The model can be used to evaluate the impact of vaccination and the role of some environmental factors (e.g. temperatures, altitude).

A presentation about an analysis of vaccine effectiveness was given by Nick Lyons (see presentation circulated).

The **proposal of preparing a joint publication** among representatives from the LSD-affected countries and EFSA experts to be submitted as special issue to Prev Vet Med was discussed. Other alternative possibilities were discussed , including the submission of a single publication including different aspects to a higher level journal. The list of topics on the original proposal was discussed (to be circulated), and it was agreed to move forward firstly with the papers on topics where data are already available and/or some analysis has already been performed. One or more expert from EFSA is assigned to each topic/paper as reference author and coordinator for the development of each paper, the representatives from the LSD-affected countries will be included as co-author where relevant, i.e. where the data from the respective country has been used for the analysis in each paper.

Check of the data provided from MNE: The database including merged data on all farms about outbreaks and vaccination from 2016 was presented and discussed. A preliminary analysis for vaccination effectiveness was carried out during the meeting. On the basis of the preliminary output, it was agreed that the indication of the geo location of the municipality for each farm is needed, in order to perform the analysis by taking into account a smaller geographical unit. **Action point:** Drago to provide the additional information of outbreak location in the last database submitted to EFSA.

Check of the data provided from Albania: The database including merged data on all farms about outbreaks and vaccination from 2016 was presented and discussed. Of particular utility for the analysis of within farm transmission is the database reporting information about follow up visit of the outbreak farms. The number of sick and dead animal is indicated both on the date of first detection of LSD and on the follow up visit (the number of additional sick and dead animal is indicated for the last date).

Check of the data provided from FYROM: the electronic system for data recording at animal level was presented. This is particular utility because the data collected at animal level would allow within

farm analysis of LSD transmission. **Action point:** Srgjan to contact the IT system in order to retrieve the complete database for all farms (farm ID) and all animals (animal ID) in the country, keeping the date of first LSD detection (18 April 2016) as starting date, as in the data model below:

Municipality	Villages	Farm ID	Animal ID	breed	birth date	sex	Date of vaccination	Date of first suspicion LSD
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Adverse effects of vaccination : Since vaccination against LSD has started also in one region of Bosnia Herzegovina, which is still unaffected, a proposal has been discussed about the analysis of the adverse effects of the vaccination. The importance of follow up of the farms has been discussed. A possible data model for this has been discussed as below:

Municipality	Village	Farm ID	Animal ID	breed	birth date	sex	Date of vaccination	signs at week 1 post vacc	signs at week 2 pv	signs at week 3	signs at week 4
								lumps			
								fever			
								milk reduction			
								death			

Give that the expected prevalence of adverse effect is 0.5%, as observed in Croatia, the minimum sample size was calculated for a precision of : 3000 animals, as independent samples. However there may be a correlation effect of samples if originate from the same farms and this should be taken into account, and the sample size corrected accordingly. For example if the 3000 samples originate from farms with more 20 animals, hen at least 444 farms should be sampled. A concept note will be prepared and shared with the Bosnian colleagues (Action point: Nick to prepare the first draft).

The **next meeting** will be in Montenegro connected to the GF TADs meeting. Dates and details to be confirmed by Drago.

ALPHA UNIT

Scientific Panel on Animal Health and Welfare
Notes of WG meeting of the Working Group on lumpy skin disease
6 July 2017

Invited participants:

Hearing experts in private capacity

Tatjana LABUS

EFSA:

Alessandro BROGLIA, Lisa KOHNLE, Josè CORTIÑAS

1. Welcome and apologies for absence

All invited attended the meeting.

2. Adoption of agenda

The agenda was adopted without changes.

3. Declarations of interest

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes¹ and the Decision of the Executive Director implementing this Policy regarding Declarations of Interests², EFSA screened the Annual Declaration of interest and the Specific Declaration of interest) filled in by the experts invited for the present meeting. No conflicts of interests related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of interest at the beginning of this meeting.

4. Scientific topics discussed:

- A recap about the topics addressed in the first report was presented
- The timeline for 2017 and the elements that could be included in the next report (to be published by January 2018) were discussed
- The model structure to be applied to different affected countries for assessing vaccination effectiveness was explained
- The data provided about LSD and cattle population in Serbia were checked and discussed; the objective to provide with a similar data set as we received for other countries with the exact column names that can be directly used with the R model prepared.
- Pcinjski is the only Serbian region that could have been used for the analysis (there were 169 outbreaks and in other regions much less or even only 1), but there are 38 farm IDs that do not match in the extraction from population database, probably removed after stamping out. It should be clarified for which point in time the data on population has been extracted.
- Discrepancies between her different data bases should be explored and fixed

- About vaccination carried out in Serbia in 2017 it was informed that:
 - zone 1: LSD first (around 60% of the whole population have been vaccinated so far), bluetongue after
 - zone 2: bluetongue first, booster after 28 days, LSD 21 days after
- The publication of the special issues on Prev Vet Med was discussed
- The next meeting is foreseen on 18th October in Montenegro, where the final data related to 2017 and preliminary analysis should be presented.

ALPHA UNIT

Notes of the 10th meeting of the EFSA Working Group on data collection for lumpy skin disease

18th October 2017, Budva (Montenegro)

Invited participants:

WG experts: Arjan STEGEMAN, Simon GUBBINS, Eyal KLEMENT

Country representatives: Ledi PITE (phone), Aleksandra MITEVA, Sotiria-Eleni ANTONIOU, Bafti MURATI, Budimir PLAVŠIĆ, Drago Maroejvic, Marijan Glavina, Esra SATIR, Srgjan MESHTEROVSKJ , Zorana MEHMEDBASIC

EFSA: Alessandro BROGLIA, Josè CORTIÑAS

1. Welcome and apologies for absence

The participants were welcome. Apologies from Srgjan Meshterovskj and Zorana Mehmedbasic.

2. Adoption of agenda

The agenda was adopted as agreed.

3. Declarations of Interest of Working Groups members

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes and the Decision of the Executive Director on Declarations of Interest¹, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

4. Discussion points

The purpose of the meeting was explained, mainly focus on content of the next EFSA report under the mandate art. 31, data still needed and a proposal about the content of next report was presented.

The situation about LSD in each country was presented. The presentations are circulated among participants.

¹ <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

The structure and content of the final report (to be published by Jan 2018) was discussed and the preliminary results presented:

- Results from mathematical model based on Albanian data were presented.
- The analysis for estimation of vaccine effectiveness based on analysis of survival curves was presented for the case study of Albania (farm and village level), Greece (Serres), Bulgaria (Blagoevgrad), Montenegro, Serbia (Pcinskj).

The publication of the special issue on LSD on Prev Vet Med was discussed.

The project promoted by Bulgarian Risk Assessment Centre “Strengthening regional cooperation in the Balkans for prevention and control of some exotic transboundary vector born animal diseases with veterinary and public health importance” was presented.

ALPHA UNIT

Notes of the
Meeting of the EFSA Working Group on data collection for lumpy skin disease
21-22 Nov 2017, Parma
(adopted on 24th November)

Invited participants:

WG experts: Arjan STEGEMAN, Simon GUBBINS, Eyal KLEMENT

EFSA: Alessandro BROGLIA, Josè CORTIÑAS

1. Welcome and apologies for absence

The participants were welcome. Apologies from Nick Lyons and Paolo Calistri.

2. Adoption of agenda

The agenda was adopted as agreed.

3. Declarations of Interest of Working Groups members

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes and the Decision of the Executive Director on Declarations of Interest¹, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

4. Discussion points

- The topic of possible exit strategies was discussed: scenarios, elements to be considered for different risk levels in countries/areas according to different exposure and control measures in place. Some indications for planning exit strategies have been discussed and which data are needed in order to formulate such strategies. It was agreed to include a section in the report, with a description of the above issues, a draft has been prepared, to be revised and completed.
- The structure of the report has been revised and agreed, missing parts will be completed by next meeting.
- An update about the mathematical model has been presented, it has been agreed to use the model for these possible outputs to be presented in the report, i) the kernel estimated on the data from Albania, ii) the incorporation of seasonality and vector abundance by using

¹ <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

Lysyk model (Lysyk 1998)², iii) the estimation of vaccination effectiveness in the four main affected districts in Albania (Mat, Kukes, Diber, Bulqize).

- Estimation of vaccination effectiveness: it has been agreed to consider the time lag of 21 days between vaccination and infection. The results obtained by using the 2 different analysis methods (i.e. model or survival analysis) were discussed, the discrepancy about the values obtained for district of Diber with the 2 methods is explained by how the onset of vaccine protection has been considered, namely as a progressive linear increase between 10 and 21 days (in the model) , or as a step function (in the Cox model).
- The analysis for vaccination effectiveness in Greece (Serres region) has been done again.
- Tasks and next steps are shown in the table below:

What	When
<ul style="list-style-type: none"> • Section on methodology about model to be revised • seasonality and vectors to be included in the model • Vaccination effectiveness in the 4 districts in Albania 	Next meeting
Maps about vaccination coverage in the whole region	Next meeting
Section on diagnostics updates	Next meeting
Vaccination effectiveness in FYROM and MNE considering municipalities	Next meeting
Section on methodology about vaccination effectiveness to be revised and completed	Next meeting
Section on exit strategy to be revised and completed	Next meeting

² Lysyk T, 1998. Relationships between temperature and life-history parameters of *Stomoxys calcitrans* (Diptera: Muscidae). *Journal of Medical Entomology*, 35, 107–119

ALPHA UNIT

Notes of the 12th meeting of the EFSA Working Group on data collection for lumpy skin disease

12-13th December 2017, Parma

(adopted on 13th December 2017)

Invited participants:

WG experts: Arjan STEGEMAN, Simon GUBBINS, Eyal KLEMENT, Paolo Calistri

EFSA: Alessandro BROGLIA, Josè CORTIÑAS

1. Welcome and apologies for absence

The participants were welcome. Apologies from Nick Lyons.

2. Adoption of agenda

The agenda was adopted as agreed.

3. Declarations of Interest of Working Groups members

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes and the Decision of the Executive Director on Declarations of Interest¹, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

4. Discussion points

- The updated results of the mathematical model were presented and discussed. The main conclusions points were drafted. The effect of seasonality and vector abundance will be estimated.
- The updated results of the analysis for estimating the vaccine effectiveness were presented and discussed. It was discussed and decided that for countries where data were such that the confidence intervals were too broad, thus not being informative, the exact value of vaccine effectiveness will not be reported, but the survival analysis is discussed.
- The risk factors for LSD infection related to type of housing (outdoor access), vaccine type, and farm type (beef, dairy) were analysed for the Greek region of Serres.

¹ <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

- It was proposed to estimate the speed of propagation of the outbreaks in the whole region occurred closest in time, to be compared with the results from the kernel model.
- The next meeting is foreseen on 9th January 2018 via teleconference.