Lumpy skin disease (LSD) Epidemiological situation and vaccination in Europe
(update since LSD6)

Standing Group of Experts on Lumpy Skin Disease in the South East Europe region under the GF-TADs umbrella
Seventh meeting (SGE LSD7)
18-19 October 2018, Ohrid, the Former Yugoslav Republic of Macedonia
➢ LSD occurrence and vaccination in SE Europe

➢ LSD measures at EU level

➢ European Commission support against Lumpy Skin Disease

➢ Recent Activities - Future priorities

➢ Concluding remarks
2015 LSD vaccination – occurrence in South East Europe (situation as at Dec 2015)

Vaccination in:
- Greece (Northern part), not full vaccine coverage everywhere

Vaccination area (not full coverage)

LSD outbreaks as at 1 Jan - 31 Dec 2015 (ADNS)
Vaccination completed in:
- Bulgaria
- Greece (Northern part)
- Serbia
- FYROM
- Montenegro
- Kosovo
- Croatia
- Albania

Vaccination in progress in
- Southern part of continental Greece

**LSD vaccination – occurrence in SE Europe**

2016 LSD vaccination-occurrence in South East Europe *(situation as at early 2017)*
LSD vaccination – occurrence in South East Europe (situation as at mid-October 2017)

Vaccination completed since 2016 (annual revaccination in progress) or completion of primary vaccination:
- Bulgaria
- Greece (Northern part)
- Serbia
- FYROM
- Montenegro
- Kosovo
- Albania

Vaccination in progress in:
- Southern part of continental Greece & islands
- Bosnia & Herzegovina

Annual revaccination in progress or completion of primary vaccination

Primary vaccination in progress

LSD outbreaks as at 1 Jan-15 Oct 2017 (ADNS)
LSD vaccination – occurrence in South East Europe – Situation as at mid-October 2018

Vaccination (annual revaccination in progress) or completion of primary vaccination:
- Bulgaria
- Greece
- Serbia
- FYROM
- Montenegro
- Kosovo
- Albania

Vaccination in progress in:
- Parts of continental Greece & islands
- Bosnia & Herzegovina (southern part)

- Annual revaccination in progress or completion of primary vaccination
- Vaccination in progress
- Cease of vaccination

LSD outbreaks as at 1 Jan-15 Oct 2018 (ADNS)
**LSD vaccination in SE Europe**

**2015**
- LSD vaccination in the *North – Eastern Provinces of Greece*

**2016**
- All LSD affected countries (*Greece, Bulgaria, the former Yugoslav Republic of Macedonia, Serbia, Kosovo*, *Albania, Montenegro*) implemented mass vaccination of all their cattle against LSD in their entire territory.
- *Croatia*, not affected by LSD, became the 1st country to implement preventive vaccination of its entire country population against LSD (July 2016)

**2017**
- All countries in SE Europe that vaccinated against LSD in 2016 repeat vaccination in 2017 (annual revaccination + vaccination of new-born animals, campaigns completed or in progress).
- *Bosnia and Herzegovina*, not affected by LSD, began implementing preventive vaccination against LSD since 2017 (2nd country to implement preventive vaccination after Croatia).

**2018**
- All countries in SE Europe that vaccinated against LSD in 2017 repeat vaccination in 2018 except Croatia (cease of vaccination in view of the favourable epidemiological situation).

**NOTE:**
In all cases the vaccines used in the above countries were *live, homologous vaccines against LSD* imported from outside the EU (except Turkey)
**Methodology**

**LSD vaccination 2018**

- Data on vaccination
- per province or country
- End-Start dates
- Numbers of holdings – animals
- Vaccination coverage achieved
- Proportions of primary /booster vaccinations
- Vaccine supply
Methodology

LSD vaccination 2019

Data on vaccination planning

End-Start dates

Numbers of holdings – animals

Intended vaccination coverage

Vaccine supply

(logistics – stocks)
### LSD Vaccination Data Collection

#### Country replies received

<table>
<thead>
<tr>
<th>Country</th>
<th>LSD vaccination 2018</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>-</td>
<td>No LSD vaccination – National vaccine bank empty</td>
</tr>
<tr>
<td>Austria</td>
<td>✓</td>
<td>Vaccination in high risk areas (South)</td>
</tr>
<tr>
<td>Bosnia &amp; Herzegovina</td>
<td>✓</td>
<td>Mass Vaccination – Whole country</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>✓</td>
<td>Mass Vaccination – Whole country</td>
</tr>
<tr>
<td>Croatia</td>
<td>✓</td>
<td>Stopped Vaccination – 33,000 doses in stock</td>
</tr>
<tr>
<td>Cyprus</td>
<td>-</td>
<td>No vaccination</td>
</tr>
<tr>
<td>Georgia</td>
<td>✓</td>
<td>Heterologous + homologous (EU vaccinebank)</td>
</tr>
<tr>
<td>Greece</td>
<td>✓</td>
<td>Mass Vaccination – Whole country</td>
</tr>
<tr>
<td>Hungary</td>
<td>-</td>
<td>National vaccine bank</td>
</tr>
<tr>
<td>Kosovo*</td>
<td>✓</td>
<td>Mass Vaccination – Whole country</td>
</tr>
<tr>
<td>Montenegro</td>
<td>✓</td>
<td>Mass Vaccination – Whole country</td>
</tr>
<tr>
<td>Romania</td>
<td>✓</td>
<td>No LSD vaccination</td>
</tr>
<tr>
<td>Russia (affected areas)</td>
<td>✓</td>
<td>Heterologous vaccine</td>
</tr>
<tr>
<td>Serbia</td>
<td>✓</td>
<td>Mass Vaccination – Whole country</td>
</tr>
<tr>
<td>Slovenia</td>
<td>✓</td>
<td>No vaccination. Signed agreement with Austria on emergency supply of 150,000 vaccine doses, if needed</td>
</tr>
<tr>
<td>The former Yugoslav Republic of Macedonia</td>
<td>✓</td>
<td>Mass Vaccination – Whole country</td>
</tr>
<tr>
<td>Turkey</td>
<td>✓</td>
<td>Mass Vaccination Heterologous vaccine</td>
</tr>
<tr>
<td>Ukraine</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>Start Date</td>
<td>End Date</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Bosnia &amp; Herzegovina</td>
<td>01/4/2018</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>01/4/2018</td>
<td>31/7/2018</td>
</tr>
<tr>
<td>Georgia</td>
<td>01/08/2018</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Greece</td>
<td>01/08/2018</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Kosovo*</td>
<td>30/4/2018</td>
<td>30/05/2018</td>
</tr>
<tr>
<td>Montenegro</td>
<td>15/05/2018</td>
<td>16/08/2018</td>
</tr>
<tr>
<td>Russia (affected areas)</td>
<td>01/02/2018</td>
<td>ongoing</td>
</tr>
<tr>
<td>Serbia</td>
<td>01/01/2018</td>
<td>ongoing</td>
</tr>
<tr>
<td>The former Yugoslav Republic of Macedonia</td>
<td>15/3/2018</td>
<td>10/10/2018</td>
</tr>
<tr>
<td>Turkey</td>
<td>01/01/2018</td>
<td>29/6/2018</td>
</tr>
</tbody>
</table>
## LSD Vaccination 2017 - Numbers of animals

<table>
<thead>
<tr>
<th>Country</th>
<th>Total animals present</th>
<th>Animals vaccinated</th>
<th>Vaccination coverage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosnia &amp; Herzegovina</td>
<td>100.000</td>
<td>21.035</td>
<td>21 %</td>
<td>Homologous</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>685.846</td>
<td>667.026</td>
<td>97.26 %</td>
<td>Homologous</td>
</tr>
<tr>
<td>Georgia</td>
<td>868.100</td>
<td>544.544</td>
<td>62.72 %</td>
<td>Heterol/ Homologous</td>
</tr>
<tr>
<td>Greece</td>
<td>723.709</td>
<td>352.962</td>
<td>48.77 %</td>
<td>Homologous</td>
</tr>
<tr>
<td>Kosovo*</td>
<td>346.668</td>
<td>197.424</td>
<td>56.94 %</td>
<td>Homologous</td>
</tr>
<tr>
<td>Montenegro</td>
<td>69835</td>
<td>69.261</td>
<td>99.18 %</td>
<td>Homologous</td>
</tr>
<tr>
<td>Russia (affected areas)</td>
<td>6.008.129</td>
<td>4.256.935</td>
<td>70.9%</td>
<td>Heterologous vaccine</td>
</tr>
<tr>
<td>Serbia</td>
<td>890.277</td>
<td>674.315</td>
<td>76 %</td>
<td>Homologous</td>
</tr>
<tr>
<td>The former Yugoslav Republic of Macedonia</td>
<td>176.648</td>
<td>167.944</td>
<td>95 %</td>
<td>Homologous</td>
</tr>
<tr>
<td>Turkey</td>
<td>15.460.938</td>
<td>14.426.209</td>
<td>93.3 %</td>
<td>Heterologous vaccine</td>
</tr>
</tbody>
</table>
## LSD Vaccination Data Collection

### LSD vaccination 2018 – Animals vaccinated for 1st time

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Animals present</th>
<th>Total Animals vaccinated</th>
<th>Animals Vaccinated for 1st time</th>
<th>% Vaccinated for 1st time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosnia &amp; Herzegovina</td>
<td>100.000</td>
<td>21.035</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>685.846</td>
<td>667.026</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgia</td>
<td>868.100</td>
<td>544.544</td>
<td>301.296</td>
<td>55.3%</td>
</tr>
<tr>
<td>Greece</td>
<td>723.709</td>
<td>352.962</td>
<td>108.783</td>
<td>30.8%</td>
</tr>
<tr>
<td>Kosovo*</td>
<td>346.668</td>
<td>197.424</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montenegro</td>
<td>69.835</td>
<td>69.261</td>
<td>27.003</td>
<td>38.98%</td>
</tr>
<tr>
<td>Russia (affected areas)</td>
<td>6.008.129</td>
<td>4.256.935</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serbia</td>
<td>890.277</td>
<td>674315</td>
<td>132.101</td>
<td>19.6%</td>
</tr>
<tr>
<td>The former Yugoslav Republic of Macedonia</td>
<td>176.648</td>
<td>167.944</td>
<td>47.676</td>
<td>28.3%</td>
</tr>
<tr>
<td>Turkey</td>
<td>15.460.938</td>
<td>14.426.209</td>
<td>1.867.555</td>
<td>12.94%</td>
</tr>
</tbody>
</table>
## LSD Vaccination Data Collection

### LSD vaccination 2018 - Supply of vaccines (doses)

<table>
<thead>
<tr>
<th>Country</th>
<th>National procurement</th>
<th>EU LSD vaccine bank</th>
<th>Other</th>
<th>Total doses supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosnia &amp; Herzegovina</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>1.096.475</td>
<td>-</td>
<td>498.800 Donation (Austria)</td>
<td>1.595.275 (835.000 doses in stock)</td>
</tr>
<tr>
<td>Georgia</td>
<td>738.000 (Sheep Pox)</td>
<td>100.000 (LSD)</td>
<td>838000</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>205.000</td>
<td>100.000</td>
<td></td>
<td>600.000+200.000 contract</td>
</tr>
<tr>
<td>Kosovo*</td>
<td></td>
<td>170.000</td>
<td>Additional vaccines in stock since 2017</td>
<td></td>
</tr>
<tr>
<td>Montenegro</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia (affected areas)</td>
<td>6.100.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serbia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The former Yugoslav Republic of Macedonia</td>
<td>17050</td>
<td>230.000</td>
<td>Vaccines purchased in 2017</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>15.466.000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
LSD vaccination 2018 - General Remarks
(Based on replies received)

- A considerable proportion of the 2018 LSD vaccine supply needs were covered through the EU LSD vaccine bank (776,000 doses to date in 2018).
- Level of cooperation between countries on LSD supply remains high (e.g. transfer of LSD vaccines from Austria to Bulgaria).
- About **13-39% (in most cases 20-30%)** of the vaccinated animals in 2018 received LSD vaccination for the first time in their life (newborns, imported from free areas e.t.c.).
- Live homologous vaccines were used in most countries (except Turkey – Russia – Georgia, info from present and previous GF TADs meetings).
LSD in SE Europe: Situation as at mid October 2018

LSD outbreaks in South East Europe in 2018:

No outbreaks reported in any country of South East Europe since the beginning of 2018 (except Turkey see below)

Outbreaks in the vicinity of South East Europe in 2018:

- **Turkey:** 32 outbreaks reported in ADNS (1 in East Thrace Region -European Turkey, April 2018)
- **Georgia:** 5 outbreaks reported in Aug-Sep 2018 (OIE, WAHIS)
- **Russia:** 58 outbreaks reported in June-Oct 2018 (OIE, WAHIS)
LSD measures at EU level

Commission Implementing Decisions on LSD in force


Amendments related to zoning, refinement of measures for germinal products, holdings subject to revaccination and domestic movements of bovines after cessation of vaccination in free zones with vaccination.

➢ COMMISSION IMPLEMENTING DECISION (EU) 2016/2009 of 15 November 2016 approving the vaccination programmes against lumpy skin disease submitted by the Member States
**LSD measures at EU level**

**LSD zoning - Commission Implementing Dec. (EU) 2016/2008 (as amended)**

**Free zones with Vaccination (Part I):**
- Croatia
- Bulgaria (certain areas in the North and East part)
- Greece (islands except Kerkyra and Limnos)

**Infected zones (Part II):**
- Continental Greece (including the islands of Limnos and Kerkyra)
- Bulgaria (excluding the "free with vaccination" zones)
European Commission support against Lumpy Skin Disease

- **EU LSD vaccine bank** *(vaccine donations to various countries in 2016-2018)*

- **EU financial support**
  - *For EU Member countries*: cost of LSD homologous vaccines purchased and used through national procedures up to 1,1 EURO per dose
  - *For non EU Member countries*: reimbursement for the cost of LSD homologous vaccines purchased and used through national procedures up to 1,1 EURO per dose

- **Technical support: EUVET** *(EU Veterinary Emergency Team, 7 LSD missions so far available upon request), EURL (2 proficiency tests, 2 NRL workshops, lab training e.t.c.)*

- **LSD training activities**
  **LSD Sustained Technical Missions (STMs) in Ukraine and Belarus in 2018, mission in Georgia planned for early 2019**

- **Scientific support: EFSA Opinions on LSD** *(2 opinions & 3 reports published so far, latest on 16/10/2018) [https://www.efsa.europa.eu/en/topics/topic/lumpy-skin-disease, 2 more LSD reports expected in early 2019 and early 2020]*.

- **Awareness – Regional Cooperation: GF TADs SGE, LSD Ministerial Conference in Sofia (Sep 2016) e.t.c.*
## EU support against LSD

### European Union Lumpy Skin Disease Vaccine Bank

**2016 - 2017 – October 2018 grants**

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>Number of doses granted</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>Bulgaria, Greece, the former Yugoslav Republic of Macedonia, Serbia, Kosovo*, Albania, Montenegro, Croatia</td>
<td>625,000</td>
</tr>
<tr>
<td>2017</td>
<td>Bosnia &amp; Herzegovina, Montenegro, Greece, Albania, Kosovo*</td>
<td>325,000</td>
</tr>
<tr>
<td>2018</td>
<td>The Former Yugoslav Republic of Macedonia</td>
<td>230,000</td>
</tr>
<tr>
<td></td>
<td>Kosovo*</td>
<td>170,000</td>
</tr>
<tr>
<td></td>
<td>Montenegro</td>
<td>95,000</td>
</tr>
<tr>
<td></td>
<td>Greece</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>Albania</td>
<td>81,000</td>
</tr>
<tr>
<td></td>
<td>Georgia</td>
<td>100,000 (+100,000 planned)</td>
</tr>
</tbody>
</table>

**1,726,000 doses of LSD vaccine (live-homologous) granted in 2016-2018 (until October) to various countries (EU + non EU MS)**

*This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.*
**Regional Coordination on LSD**

GF TADs Standing Group of Experts on Lumpy Skin Disease in the South East Europe region under the GF-TADs umbrella

**MEETINGS**

- 1\textsuperscript{st} Meeting, Brussels on 4-5 July 2016
- 2\textsuperscript{nd} meeting, Lisbon (Portugal) on 21 September 2016
- 3\textsuperscript{rd} meeting, Istanbul, (Turkey) on 12-13 December 2016
- Teleconference on LSD vaccine procurement, 23 February 2017
- 4\textsuperscript{th} meeting, Paris, 24 May 2017
- 5\textsuperscript{th} meeting, Budva (Montenegro), 19-20 October 2017
- Teleconference on LSD vaccination and vaccine supply, 26 February 2018
- 6\textsuperscript{th} meeting, Paris, 23 May 2018
- 7\textsuperscript{th} meeting, Ohrid (the Former Yugoslav Republic of Macedonia), 18-19 October 2018

**EXPERT MISSIONS**

First GF TADs expert mission on LSD in **Kazakhstan** (19-23 February 2018) at the request of the competent authorities of this country, to provide technical support, based on the experience gained in SE Europe.
Regional Coordination on LSD

Current state of play in the region South East Europe

For 3 years on a row (2016-2017-2018):

➢ Coordinated vaccination control policy against LSD
  Mass vaccination, with live homologous vaccines, uniformly adopted across South East Europe (EU + non EU countries, excl. Turkey) with support from the EU (vaccines from the EU vaccine bank + financial assistance for vaccine purchase)

➢ Meetings - Exchange of info
  Regular meetings of GF TADs LSD SGE (at least 3 per year), report of all LSD outbreaks in SE Europe in ADNS

➢ Coordination in supply of LSD vaccines
  EU financial support for purchase of LSD vaccines, vaccine grants from the EU LSD vaccine bank, transfer of national stocks of LSD vaccines (Austria & Hungary) for immediate use before expiry (Bulgaria).
Future activities

EC Priorities for LSD in SE Europe

The European Commission will continue to:

Provide:

- technical assistance for LSD (EUVET missions, STM missions, EU Ref. Laboratory)
- training opportunities (e.g. BTSF workshops) for EU and non EU Member Countries.
- Support for the regional policy against LSD including vaccination and surveillance
- Support for the regional coordination and cooperation for LSD (GF TADs meetings)

Follow closely:

- the LSD epidemiological situation (particularly in South East Europe + West Eurasia) to take prompt action, as and when needed (LSD entry / recurrence)
- the scientific knowledge on LSD (EURL-EFSA) to optimise the LSD control measures
- the current discussions on an LSD exit strategy with a view to:
  - Capitalise on the achievements of coordinated LSD vaccination policy in South East Europe in the past 3 years
  - Minimise the risk of LSD recurrence
Concluding remarks

➢ There is a **constant reduction of LSD outbreaks** in the region of South East Europe from **2016 (7,483 outbr.)** to **2017 (385 outbr.)** and further into **2018 (32 outbreaks reported in Turkey)**.

➢ The constant improvement of the LSD epidemiological situation in South East Europe reaffirms:

   - **The importance of regional approach** for LSD control
   - **The effectiveness of mass vaccination with homologous vaccines**

➢ In the light of the current epidemiological situation the time seems ripe for a discussion on **a possible regional LSD exit strategy** to ensure **smooth transition** to the situation before the invasion of LSD in SE Europe and **protection against possible LSD reappearance** in the future.
THANK YOU !!!!