Lumpy Skin disease in Greece (Evros)
(Update - Situation as at 7 Sep 2015)

Dimitrios Dilaveris, Animal Health Directorate / Dept. of Infectious Diseases
Lumpy Skin Disease (LSD) in Greece

- Background information
- Recent epidemiological situation
- Measures in place
- Preliminary observations
- Acknowledgements
Lumpy Skin Disease in Greece (Evros) – Background Information

LSD epidemiological situation in recent years (Global)

Source: EFSA Journal 2015;13(1):3986, EFSA opinion on LSD, Jan 2015, info from OIE
Lumpy Skin Disease in Greece (Evros) – Background Information

LSD epidemiological situation in recent years (neighborhood 2013-2014-2015)

May 2015 (Reported in June)

Nov –Dec 2014
Lumpy Skin Disease in Greece (Evros) – Background Information

Preparatory activities of the Greek Authorities

- Training of personnel of the competent National Reference Laboratory (seminar, Istanbul, 25-27 August 2014, activity supported by EuFMD, through the T.H.R.A.C.E. project)

- Issue of circular letter 456/13780/04.02.2015 (general disease information, photos, sources of further info)

- Seminar-training and Field visit/exercise in LSD affected holdings (Adana –Turkey, 24-26 Feb 2015, activity supported by EuFMD, through the T.H.R.A.C.E. project)

- Seminar “Preparation and Coordination of Veterinary Services as regards Lumpy Skin Disease in cattle” (Alexandroupolis-Greece, 6 March 2015, seminar organised by the Greek Veterinary Authorities at central and local level). The seminar included presentations delivered by international experts (i.e. the former head of the Pirbright Capripox Reference Center & the CVO of Israel).
Lumpy Skin Disease in Greece (Evros) – Background Information

LSD epidemiological situation in recent years (neighborhood May 2015)

Lumpy Skin Disease outbreaks

Limits of 3 km – Protection zone
Limits of 10 km – Surveillance zone
Lumpy Skin Disease in Greece (Evros) – Background Information

Activities of the Greek Authorities in response to the LSD outbreaks in European Turkey

- Establishment of a surveillance zone in the area of the Evros Prefecture at the location where the 10 km zone around one of the two LSD outbreaks in European Turkey expanded in Greek soil (see Maps) in the sense of the provisions of Dir. 92/119/EEC (even though these outbreaks were confirmed in mid-May).

- Establishment of an Enhanced Safeguard Zone (a 10 km stripe along the Greco-Turkish border of the Evros Prefecture) with strict pre-movement clinical control of all cattle exiting the zone & briefing and on the spot clinical visits of all cattle holdings within the zone.

- Strict pre-movement clinical control of all cattle that moved from the Evros prefecture to the rest of the country.

- Increased safeguard measures at the entry points to Greece from Turkey (Peplos BIP and Kastanies check-point) with an emphasis on vehicle disinfection.

- Increased awareness–safeguard measures throughout Greece for the timely report/investigation of any LSD suspicion anywhere in the country.
Lumpy Skin Disease in Greece (Evros) – Background Information

Activities of the Greek Authorities in response to the LSD outbreaks in European Turkey

Lumpy Skin Disease in Greece – Update (PAFF Committee, Brussels 9-10 Sep 2015)
Lumpy Skin Disease in Greece (Evros) – Recent epidemiological events

- Suspicion of LSD reported, in two holdings (beef cattle) of the Evros Prefecture within the Evros Delta National Park on **18 August 2015**.

- Clinical examination of affected cattle (nodules in the neck and elsewhere in the body + respiratory symptoms). Collection of samples and dispatch to the competent state laboratory on **18 August 2015**.

- Results of real-time PCR detecting capripoxviruses (among which LSD virus) came positive and further testing using a specific conventional PCR to exclude Sheep Pox confirmed the disease (final results available on **20 Aug 2015**).

- Preliminary, communication of LSD confirmation by e-mail on **20 August 2015** and relevant online notifications in the ANDS and WAHIS (OIE) systems followed the next day (**21 Aug 2015**).
Lumpy Skin Disease in Greece (Evros) – Recent epidemiological events

- Both outbreaks with a small number of affected cattle, non ulcerated lesions. No history of recent animal movements e.t.c. Both within ≈ 15 km from the closest confirmed LSD outbreak in Turkey (ADNS).

- Both outbreaks stamped out (75 + 72 animals).

- EVROS DELTA – a protected area and an important wetland at national and international level, hosting a wide variety of aquatic organisms and breeding populations of rare birds. It holds appr. 5,500 bovines (mostly free ranging beef cattle kept from late spring to early autumn).

- Most holdings of Evros Delta keep “double” facilities within and outside the Delta (pre-emptive stamping out in one of the two outbreaks).
Protection zone
- a minimum 3 km radius around the affected holdings
- inclusion of the entire Evros Delta
- use of the national road connecting Alexandroupoli – Kpoi as a natural border (from the point opposite the Apalo village to the point opposite the town of Ferres).
- inclusion of the area between the Evros Delta and the Alexandroupoli-Kopi national road

Surveillance zone
- 20 km radius instead of the 10 km minimum requirements of Dir. 92/119/EC
- zone expanded locally to include selected villages/settlements with a distinct cattle population at risk for LSD
Lumpy Skin Disease in Greece (Evros) – Measures in place

Measures adopted within the surveillance and protection zones

Surveillance & Protection zones
The measures of Dir. 92/119/EC.

Entire Evros Prefecture
Original plan to have prohibitions on the exit of live cattle and products thereof most likely to carry the LSD, however ...
Prohibitions expanded automatically in line with Commission Implementing Decision (EU) 2015/1423 of 21 August 2015 concerning certain interim protective measures against lumpy skin disease in Greece (notified under document C(2015) 6010)
Ban on exit from the entire Evros Prefecture of:

✓ live bovine animals and wild ruminants  
✓ bovine semen  
✓ fresh meat produced from bovine animals, and meat preparations and meat products produced from such fresh meat  
✓ milk and dairy products from bovine animals  
✓ unprocessed animal by-products of bovine animals, unless destined under official supervision of the competent authority for disposal in an approved plant within the territory of Greece.

HOWEVER.....

Lumpy Skin Disease in Greece – Update (PAFF Committee, Brussels 9-10 Sep 2015)
**Lumpy Skin Disease in Greece (Evros) – Measures in place**

*Commission Implementing Decision (EU) 2015/1500 of 7 September 2015 concerning certain protective measures against lumpy skin disease in Greece and repealing Implementing Decision (EU) 2015/1423 (notified under document C(2015) 6221)* introduced a number of derogations for:

- Live bovine animals and wild ruminants that may exit the Evros prefecture only for immediate slaughter under specific conditions
- Fresh meat and meat preparations produced from bovine animals originating outside the Evros prefecture
- Fresh meat and meat preparations produced from bovine animals originating in the Evros prefecture outside the LSD surveillance & protection zones, destined exclusively for the market of Greece
- Meat products produced from bovine animals that are subject to heat treatment
- Milk and dairy products from bovine animals that are subject to heat treatment
Lumpy Skin Disease in Greece (Evros) – Further epidemiological developments

Data: SIO, NOAA U.S. Navy NGA, GEBCO
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Image: Landsat
© 2015 Blue Marble
Lumpy Skin Disease in Greece (Evros) – Further epidemiological developments
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Initial LSD outbreaks (Greece 21/8/2015)
New LSD outbreaks (Greece 28/8/2015)
New LSD outbreaks (Greece 4/9/2015)
New LSD outbreaks (Turkey 20/8/2015)

Limits of Protection zone
Limits of Surveillance zone

So far (7/9/2015):
24 confirmed outbreaks
17 additional suspicions awaiting confirmation
1.819 cattle destroyed
Morbidity = 8.9 %  Mortality = 0.3 %
Lumpy Skin Disease in Greece (Evros) – Measures in place

Measures in progress or scheduled for the near future

Surveillance & Protection zones
Boundaries to be adapted according to the epidemiological situation in the area.

NOTE: disposal of carcasses of cattle (after stamping out) by sanitary burial on the spot is becoming already problematic within the Evros Delta due to the nature of the soil (extended wetlands in the area).

Entire Evros Prefecture

- Emergency vaccination of cattle of the Evros prefecture as a supplement to control measures (together with stamping out & the other measures of Dir. 92/119/EEC).
Emergency Vaccination against Lumpy Skin Disease

Rationale:

- Unfavorable epidemiological situation in the area over recent years (e.g. Sheep Pox in 2013-2014) with devastating effects for the local farming industry in the area (financial + social issues)

- high costs of stamping out

- unclear if the stamping out policy alone is sufficient to stop disease spread
**Lumpy Skin Disease in Greece (Evros) – Measures in place**

**Emergency Vaccination against Lumpy Skin Disease**

Compulsory vaccination of all cattle within the Evros prefecture with homologous LSD vaccine (Lumpy Skin Disease vaccine for Cattle – Onderstepoort Biological Products) followed by a 28 day standstill of vaccinated animals.

<table>
<thead>
<tr>
<th>Area</th>
<th>Priority</th>
<th>Estimated vaccination time</th>
<th>Number of holdings</th>
<th>Number of animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection zone</td>
<td>1</td>
<td>1st half of September 2015</td>
<td>88</td>
<td>5,426</td>
</tr>
<tr>
<td>Surveillance zone</td>
<td>2</td>
<td>2nd half of September 2015</td>
<td>84</td>
<td>2,754</td>
</tr>
<tr>
<td>Remainder of Evros prefecture (areas outside the protection and surveillance zone)</td>
<td>3</td>
<td>October 2015</td>
<td>548</td>
<td>10,932</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
<td><strong>720</strong></td>
<td><strong>19,112</strong></td>
</tr>
</tbody>
</table>

Establishment of special restrictions/conditions regarding movements of vaccinated cattle and products thereof (work in progress in close cooperation with the E. Commission – to be described in a dedicated Commission Decision)
Emergency Vaccination against Lumpy Skin Disease

Current state of play:

- A first batch of ≈ 8,000 doses of LSD vaccines reached Evros on 5 September 2015 and vaccination of cattle began the same day.
- Since then ≈ 4,800 cattle have been vaccinated until 7/9/2015 (= 100% of the cattle within the original surveillance and protection zones + cattle in Soufli & North Evros)
- Provisional safeguard measures for vaccinated animals (standstill, derogation provided only for milk destined for pasteurization in dairy facilities within the Evros prefecture) pending the relevant Commission decision.
- Work continues........

Immediate objective is to carry out a complete round of vaccination of all cattle in the Evros prefecture as soon as possible.
Lumpy Skin Disease in Greece (Evros) – Measures in place

Other measures

- Awareness campaign
- Insect control measures at regional and farm level (effectiveness ??)

(poster designed by the Directorate of Veterinary Medicine of the East Thrace and Macedonia Region)
Lumpy Skin Disease in Greece (Evros) – Preliminary observations

✓ LSD is supposed to be a “lazy or slow transmitter”, however:
   - there seems to be a rapid LSD spread
     - within the animals of the same holding
     - within the holdings of the same area

✓ No “old” LSD lesions have been observed yet ?????

✓ Signs of increased pathogenicity are being observed too (animals with poor general condition within affected holdings)

✓ Occurrence of the outbreaks seems to coincide with high mosquito populations in the Evros Delta region (observations from the mosquito control programmes running in the region since before the actual epidemic) ?????
  Attempts to detect LSD virus in insect collections from the Delta area (work in progress)

✓ Vital pieces of LSD scientific information absent or unclear (e.g. presence/survival of the LSD virus in products of animal origin)
Acknowledgements

Many thanks to all colleagues of the Dept of Veterinary Medicine of Evros

Special thanks to:

Dr Evangelia Plevraki (Head, Dept of Veterinary Medicine of Evros)

Dr Achilleas Sachpatzidis (Director, Directorate of Veterinary Medicine of the East Macedonia and Thrace Region)

Dr Konstantia Tasioudi & Dr Peristera Iliadou (Directorate of Athens Veterinary Center, Dept of Molecular Diagnostics, FMD, virological, Rickettsial and Exotic Diseases).

Dr Chyssoula Dile (Director, Animal Health Directorate, central service)

Dr Sotiria – Eleni Antoniou (Animal Health Directorate, Dept of Infectious Diseases)

The colleagues at DG SANTE for their help and close cooperation.
Thanks for your attention !!!