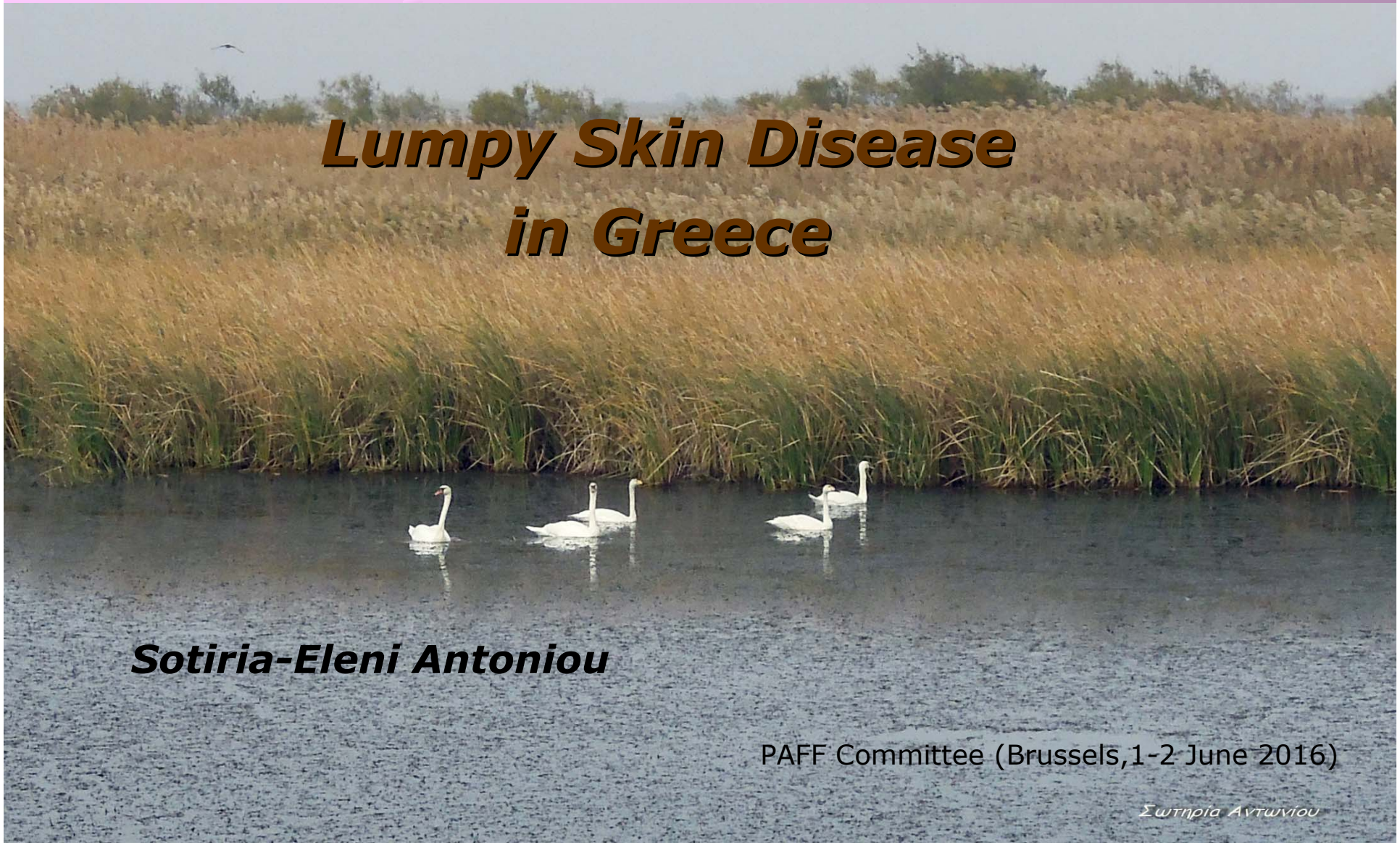
HELLENIC REPUBLIC
MINISTRY OF RURAL DEVELOPMENT AND FOOD
DIRECTORATE GENERAL OF SUSTAINABLE ANIMAL PRODUCTION & VETERINARY MEDICINE
ANIMAL HEALTH DIRECTORATE
DEPARTMENT OF INFECTIOUS AND PARASITIC DISEASES



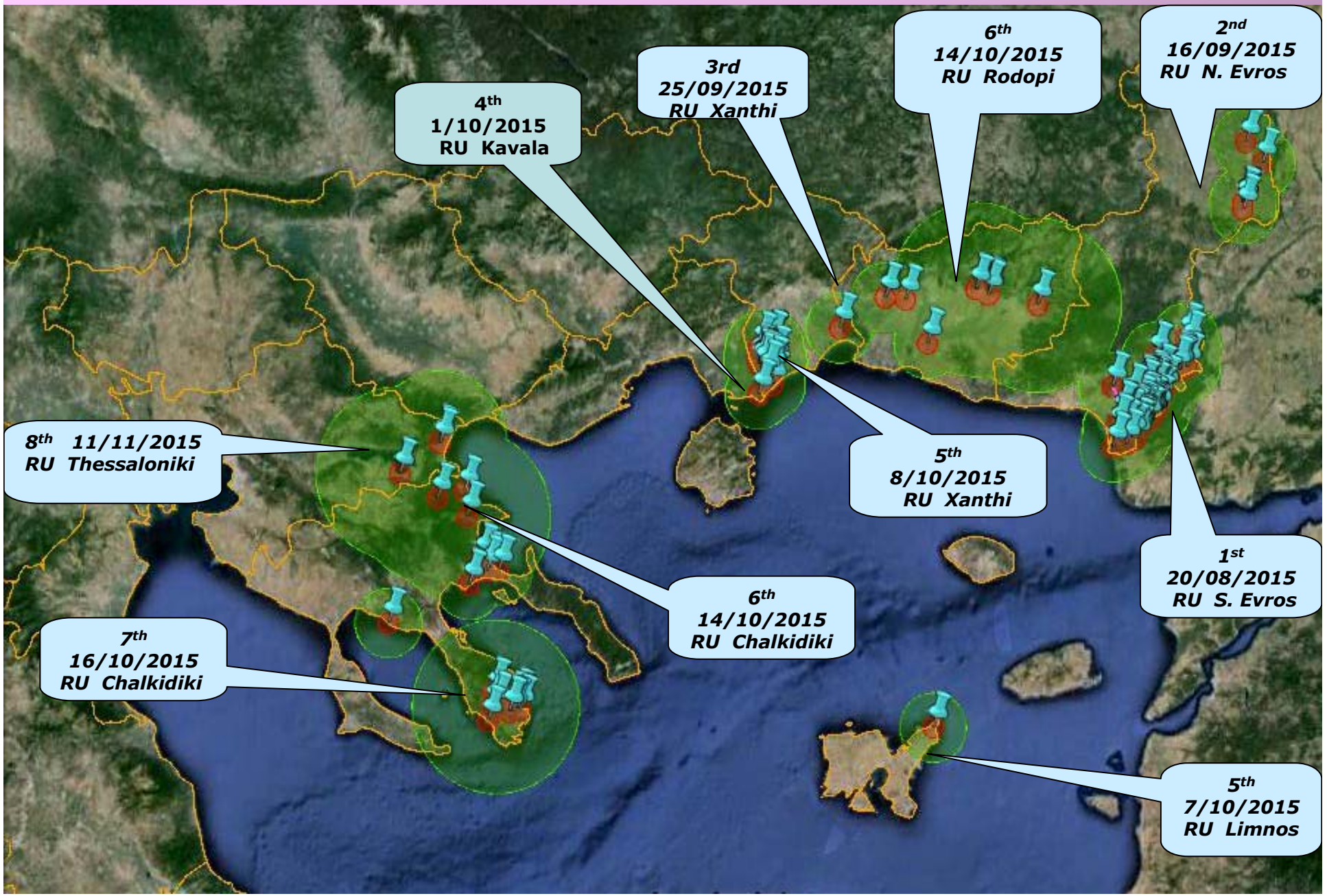
Lumpy Skin Disease in Greece

Sotiria-Eleni Antoniou

PAFF Committee (Brussels,1-2 June 2016)

Σωτηρία Αντωνίου

1st Wave of the Disease (20 Aug-15 Dec. 2015)



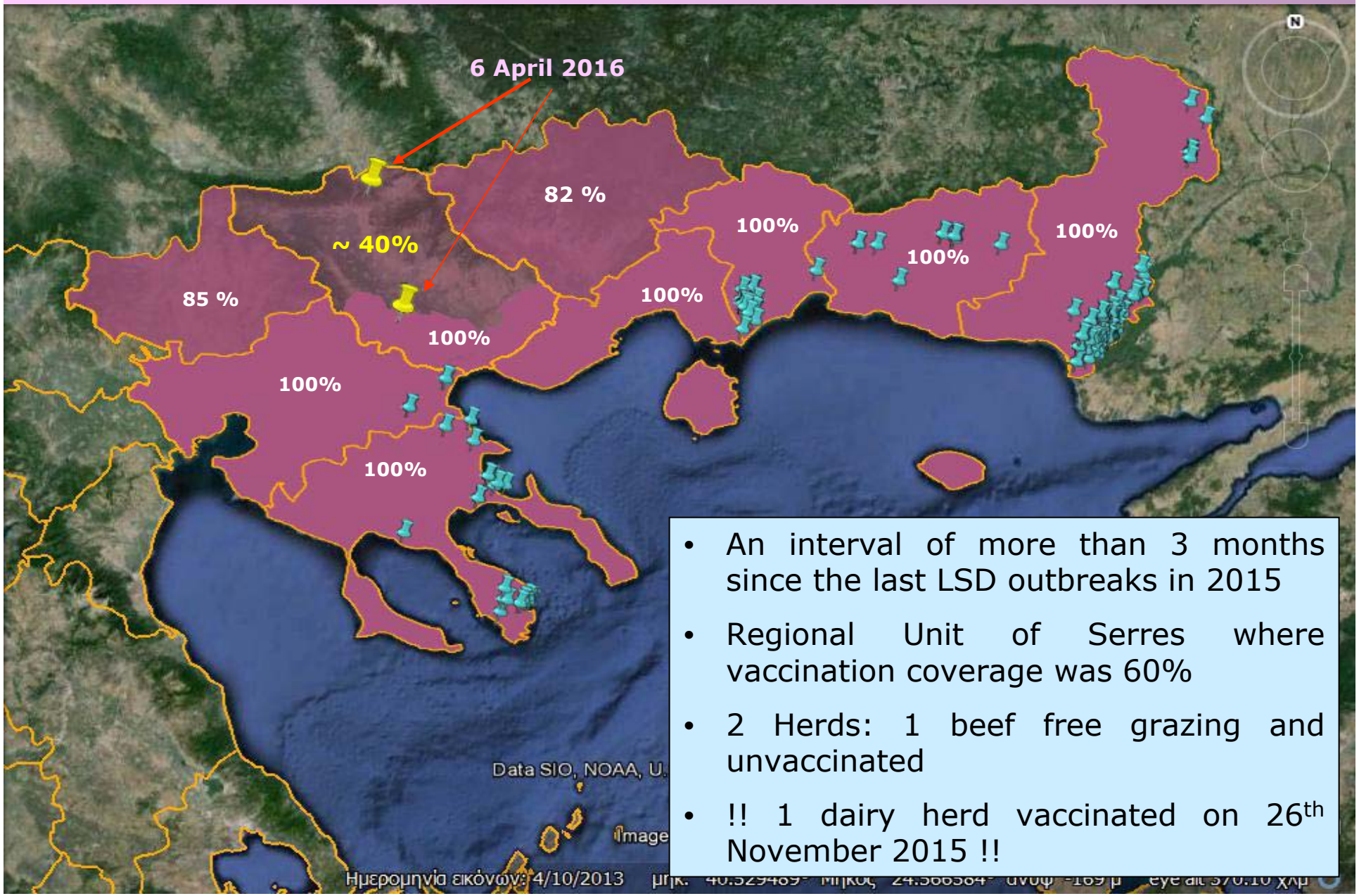
Restricted Zone of LSD during 2015

Overview of the 1st Wave

Regional Units (RU)	Confirmed Outbreaks	Date of first outbreak	Date of last outbreak	Periode of onset of outbreaks
RU Evros	64	20/08/2015	23/10/2015	65 days
RU Kavala	1	1/10/2015	1/10/2015	-
RU Limnos	1	7/10/2015	7/10/2015	-
RU Xanthi	18	25/9/2015	9/11/2015	46 days
RU Chalkidiki	21	14/10/2015	14/12/2015	62 days
RU Rodopi	9	14/10/2015	15/12/2015	63 days
RU Thessaloniki	3	11/11/2015	9/12/2015	29 days
Greek Territory	117	20/8/2015	15/12/2015	118 days

- *Mortality: 0,6%*
- *Morbidity: 9 %*
- *6.000 animals culled (during 2015)*
- *160.000 animals vaccinated (during 2015)*

Re–emergence of LSD on 6 April 2016



- An interval of more than 3 months since the last LSD outbreaks in 2015
- Regional Unit of Serres where vaccination coverage was 60%
- 2 Herds: 1 beef free grazing and unvaccinated
- !! 1 dairy herd vaccinated on 26th November 2015 !!

2nd Wave of the Disease April -31 May2016

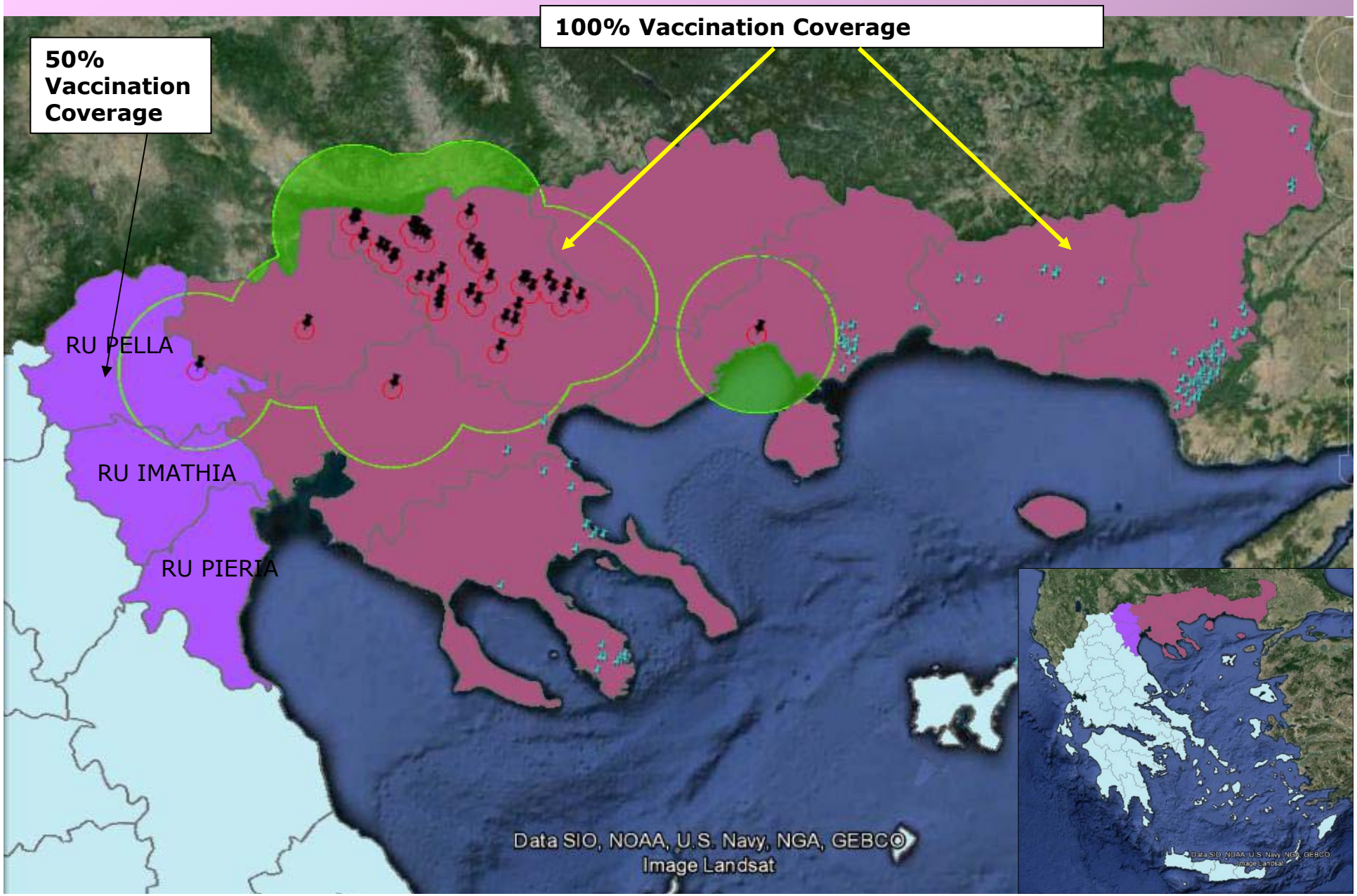
2nd wave: 6 of April – up today

Regional Units (RU)	*Confirmed Outbreaks*	*Date of first outbreak*	*Vacccination Status of Animals*
RU Serres	*44*	*06/04/2016*	*Unvaccinated**
RU Kavala	*1*	*18/05/2016*	*Unvaccinated*
RU Thessaloniki	*1*	*18/05/2016*	*Unvaccinated*
RU Pella	*1*	*23/05/2015*	*Unvaccinated*
RU Kilkis	*1*	*26/05/2015*	*Unvaccinated*
Greek Territory	*48*		

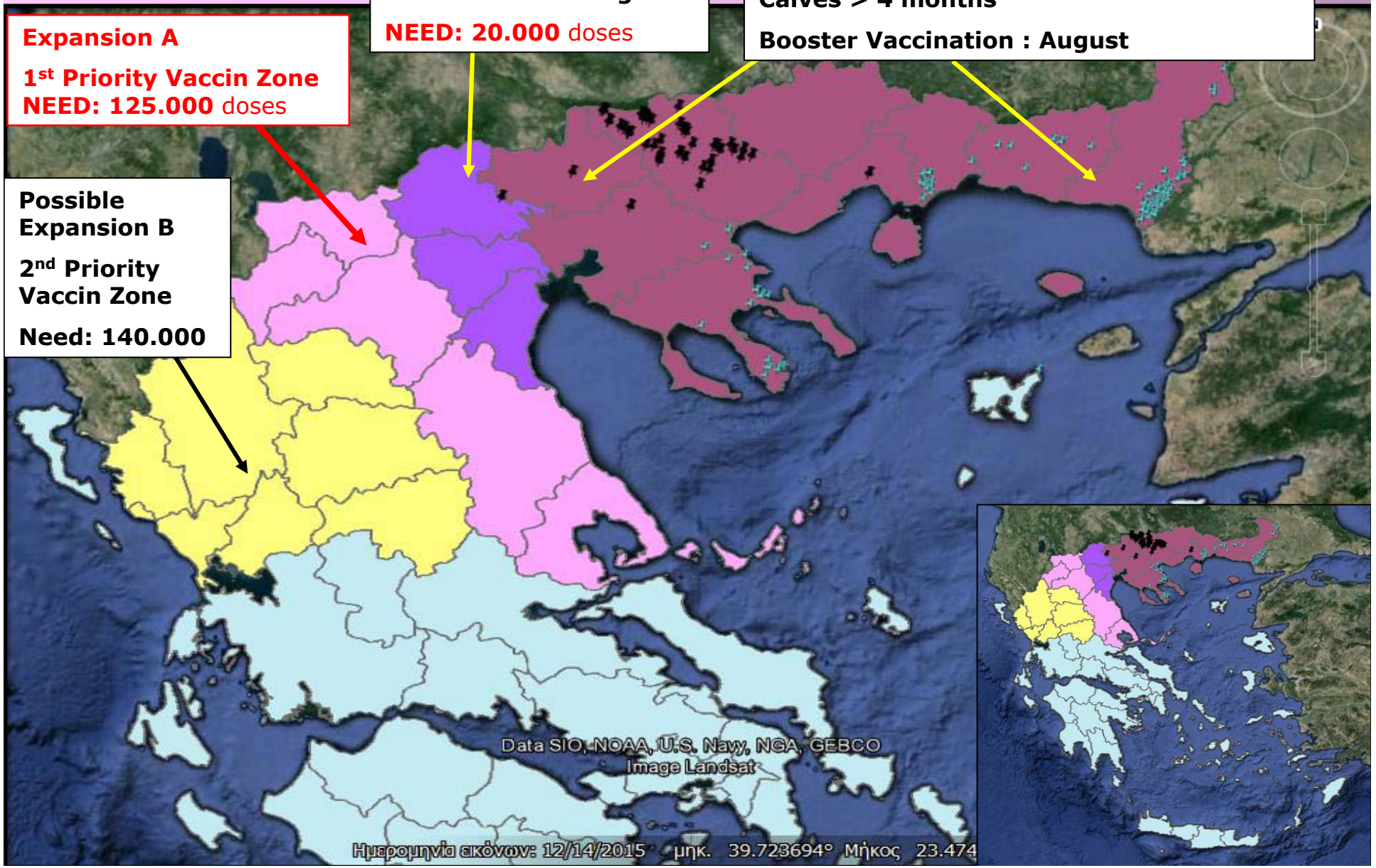
***or less than 28 /30 days post vaccination, except 1 case**

3.410 animals have been culled during 2016

Current Vaccination Coverage



Future Vaccination Campaign



Management

Vaccines Supply

Greece within a difficult economical and political situation (summer 2015)

5years economical crisis (memorandums)

under capital controls

Had to deal with an animal disease crisis

Greece managed to find enough vaccines to vaccinate

218.000 animals

- At the end of April (7 months since the beginning of the epizootic) received **50.000** doses out of **100.000 promised** from **EU bank** to cover primary vaccination in 3 RU and to vaccinate calves

There is a need for 150.000 doses

to complete vaccination in 3 RU and to start with RU close to the borders with FYROM and close to affected areas

Management

- **Early diagnosis**

Early Clinical Diagnosis: no ulcerated lesions (at least at the begging)

Rapid laboratory diagnosis

60,6% outbreaks (59% animals) within 2 days from the suspicion

74 % of outbreaks (70 % of animals) within 4 days from the suspicion

Average time from suspicion to confirmation: **3,4 days**

- **Zoning**

Surveillance zone with radius more than 10 km (20, 25 km)
Since November 2015 National Decision : **at least 25km**

Protection zone with radius more than 3 km in some cases

Analysis of data from the 1st wave of LSD during 2015

Management Issues

- ***Culling and Sanitary burial on the spot***

Minimize the spread of the disease

Culling before laboratory confirmation: 16 % outbreaks
(based on Clinical signs) 15% animals
Culling within 7 days after <u>suspicion</u>: 76 % outbreaks
64 % animals

Culling also animals from holdings in close contact with affected

Average time from suspicion to culling: 5,3 days

Analysis of data from the 1st wave of LSD during 2015

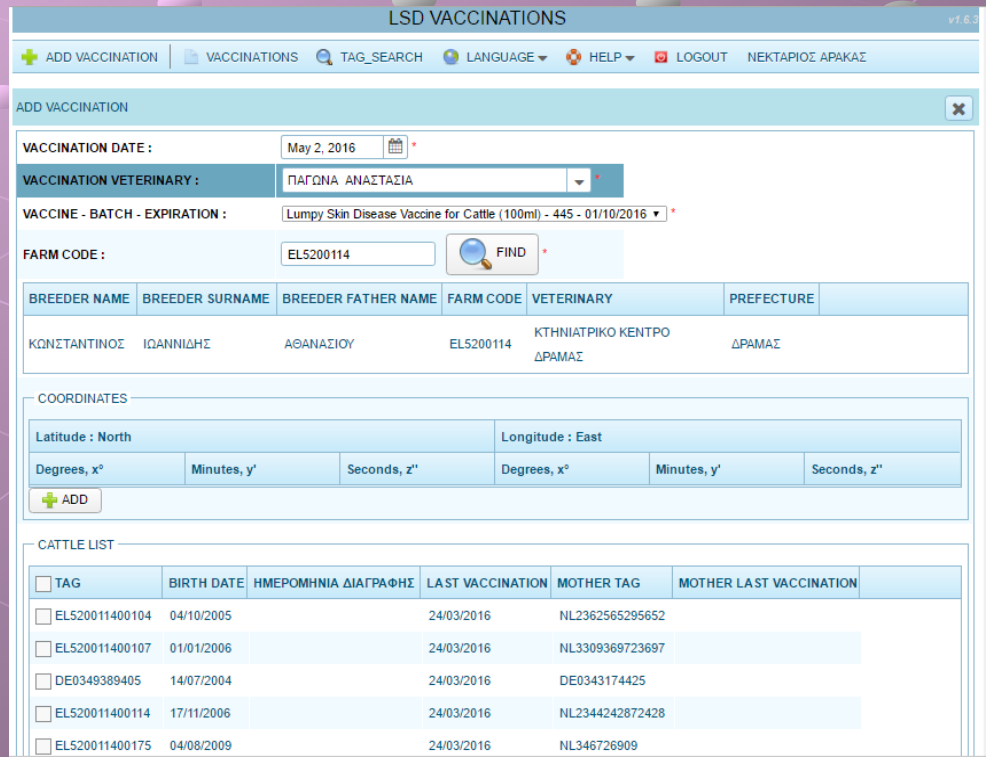
Management

➢ Traceability of Vaccinated Animals

Electronic application (online database) has been developed for registration of vaccinated animals and farms

- Available since November
- Connected with the central data base of Reg. 1760/2000
- Each vaccinated animal and farm is registered
- Information entered and available:

Date of vaccination
Veterinarian of Vaccination
Name of vaccine and batch number
Coordinates
Identification Number of the Herd
Eartags (data base of Reg. 1760/2000)
"Mothers" last date of vaccination
Statistic data



Management Issues

- **Outbreaks in Vaccinated Herds**

1st wave of LSD during 2015

24 out of 117 outbreaks : vaccinated herds

suspicion was notified less than 28 days post vacc.

1 case: suspicion notified 30 days ? post vacc.

Stamping out was implemented to all bovine herds

Later on, during the interval of peace ….

Greek **Capripox National Reference Laboratory** proceed to sequencing of all positive samples coming from vaccinated animals to differentiate the vaccine from field strain

In only 1 out of 24 outbreaks the vaccine strain was identified,

all the others were field strains

Management Issues

➢ Outbreaks in Vaccinated Herds

➢ **2nd Wave of LSD**

26 out of 48 outbreaks concerned unvaccinated animals

21 outbreaks concerned Vaccinated animals,

(suspicions were notified less than 28 days post vacc.)

!! 1 Suspicion was reaction to vaccination **!!**

!!! 1 outbreak vaccinated herd more than 3 months post vaccination (26 November 2015) !!!

Management Issues

➢ Outbreaks in Vaccinated Herds : Case study 1

1 out of 380 bovine animals infected

It was decided the animals not to be killed at that moment :

a) Priority the depopulation of the outbreaks concerning free grazing unvaccinated animals (higher risk to remain)

b) Further investigation

c) Mission of Commission Veterinary Emergency Team

1. Farm is under official supervision, vet visits, animal movements prohibition, vector control
2. 379 blood samples collected
3. 215 blood samples have been already examined with PCR and gave **negative results**

Confidence level 95%, prevalence 1%

Management Issues

- **Outbreaks in Vaccinated Herds : Case study 1**

Vaccinated and Immunized Animals

+

Animals without Viraemia

+

Animals without Clinical Signs

+

Animals restricted to their establishment

+

Area with high coverage of vaccination

↓

They can not be considered as a hazard to transmit LSD

↓

No scientific reason for stamping out

Management Issues

- **Outbreaks in Vaccinated Herds**

More than 200.000 vaccinated

Cases like that will appear

Normal and common for vaccinations irrespectively the disease

Why??
Their Immune system has not been reacted to vaccination
In big herds 1 or 2 animals easily skip vaccination and not be noticed
Vets may sub dose some animals because of the tiredness
Unvaccinated Animals Originated from free Areas or other MS

And Then what ???
We are going to stamping out vaccinated herds of 200, 500, 800, 1000 animals because one has been infected ???

Lessons for the Future

- **Scientific Research based on practical needs:**

There are grey areas and uncertainties

Subclinical cases
The role of vectors
Ways of transmission
Laboratory Tests : Easy, fast, practical of low cost to help to decision making
Vaccines supporting DIVA protocol

Presence of LSD virus and vaccine strain in secretions and animal products (meat, milk)

Immune response to virus and to vaccine strain (live attenuated). Duration of immunity, Presence of antibodies in blood, Assessment of the level of immunity, Viraemia

Lessons for the Future

- **Preparedness** in different levels
- National and European **banks of vaccines**
- **Cooperation** & **Exchange of Information** between Countries

  Close cooperation with Bulgarian Authorities

  Important to know the exact location of the outbreaks close to the borders to develop the zones

  Also in order to avoid problems in the intra community trade there is a need to add information of the outbreaks and Restricted Zones in **TRACES**

  Connection between TRACES and ADNS ???

Lessons for the Future

- **Animal Health** vs **Trade Activities**

Commercial pathways is a risk for transmission of the disease
Diseases do not recognize National Borders

Some measures should be taken for live animal trade :

Biosecurity Measures for the vehicles
Insecticides should be used
Protection against Vectors on the animals before departure
(Mentioned also on Health Certificate and in TRACES)

Itineraries should be adjusted to the risks and avoid transit via protection and surveillance zones

Greek Vet Auth insiste to traders not to pass through Infected Areas of Greece, Servia, Bulgaria and Fyrom

Lessons for the Future

- **Capripoxvirus European Reference Laboratory (EuRL)**

  In the areas where the Capripoxvirus diseases often appear
  Support Veterinary Authoritiess
  Opportunities for research

- **Flexibility** in order to adjust according to the characteristics, evolution of the disease and to the Knowledge
  Legislation could be an obstacle

Lessons for the Future

- **Update and Amend European Legislation Dir 92/119 :**

Written in 1992: Disregards 24 years scientific research and Knowledge

The role of vectors had not been taken under consideration

How exotics are these diseases ? Maybe we have to leave with them

Prophylactic Vaccination is not allowed

Modified Stamping out is not allowed

Stamping out policy is an obligation without any exception even if a vaccinated program is implemented

Even of an economic point of view
Killing and compensate is not a good **policy**

Compensation never reaches the real value of the devastating consequences of the diseases:

- Total Direct Cost of Animals
- Indirect costs
- Expenses of Veterinary Authorities
- Social Impact
- Impact to local micro economy
- Impact to National Economy
- Psychological Impact
- The impact to the Environment

The cost of prevention is always lower than the cost of Control and Eradication of the diseases

A **good practice** is to **Invest on Preventio**n and to Eliminate Killing

Regarding Lumpy Skin Disease

Prevention is closely related with Vaccination

Vaccination is an **effective measure** to prevent the spread of LSD and eliminate the devastating effects

LSD is mainly transmitted by vectors, **neither the virus nor the vectors recognize national borders**

Waiting until the disease enters the Country when it is outside the borders it is not a good veterinary practice.

Preventive Vaccination should be reconsidered for Countries close to the areas with outbreaks.

Modified Stamping out in vaccinated animals should be reexamined

In some cases it is not justified
Farmers will lose confidence to vaccination
Less suspicions will be notified
The economical impact is much bigger

Risk assessment of the consequences of the replacement of Stamping out of Modified Stamping out

EFSA maybe involved to give its Opinion

Bluetongue Experience

Listed in diseases mentioned in Annex I of Dir 92/119 and at first place stamping out policy was implemented.

In 2000 using of the article 15 of the same directive and after a proposal from European Commission some derogations regarding Bluetongue, have been adapted through Dir 2000/75 according to which

“stamping out” has been replaced by the “slaughter deemed necessary to prevent extension of the epidemic”.

LSD should be the next

Amendment of Decision 2015/2055

Amendment of a Directive is a long lasting procedure

Alternatively amendment of the Decision on Emergency Vaccination

Give the flexibility to MS to deal with some cases of vaccinated animals

A framework of rules, limitations and procedures to specific conditions in order to achieve better control and minimize the risk of the disease.

Acknowledgements

Many thanks to all colleagues
of the Depts of Veterinary Authorities
Orestias , Evros , Xanthi, Limnos, Rodopi, Kavala, Chalkidiki,
Thessaloniki, Serres, Drama, Kilkis

Special thanks to :

- ***Achilleas Sachpatzidis*** *(Director, Directorate of Veterinary Medicine of the East Thrace and Macedonia Region)*
- ***Evaggelia Plevraki and Maria Topkaridou*** *(Veterinary Service of S.Evros)*
- ***Evaggelos Tsiamadis*** *(Veterinry Service of Thessaloniki)*
- ***Chryssoula Dile*** *(Director, Animal Health Directorate, Central Veterinary Authority)*
- ***Konstantia Tasioudi, Eirini Agianniotaki*** *(NRL)*
- ***Thomas Alexandropoulos*** *(Chief Veterinary Officer)*

Last but not least

- ***The colleagues at DG SANTE of European Commission*** *for their help and close cooperation.*
- ***The colleagues of Community Veterinary Emergency Team*** *for their presence on the spot and contribution*

Thank you for your attention

Contact Details
Department of Infectious and Parasitic Diseases
Animal Health Directorate
Directorate General of Sustainable Animal Production & Veterinary Medicine
Ministry of Rural Development and Food

Address: Veranzerou 46 str, Athens, Greece
Email: seantoniou@minagric.gr
Website: www.minagric.gr