



# EFSA assessment on Lumpy Skin Disease

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# MILESTONES

Jan 2015 - first scientific opinion: focusing the problem

May 2016 - EFSA-EC workshop: fostering cooperation

Aug 2016 - Urgent advice : vaccination vs. stamping out

2016-2020 - data collection: data & analysis >> learning from epidemics



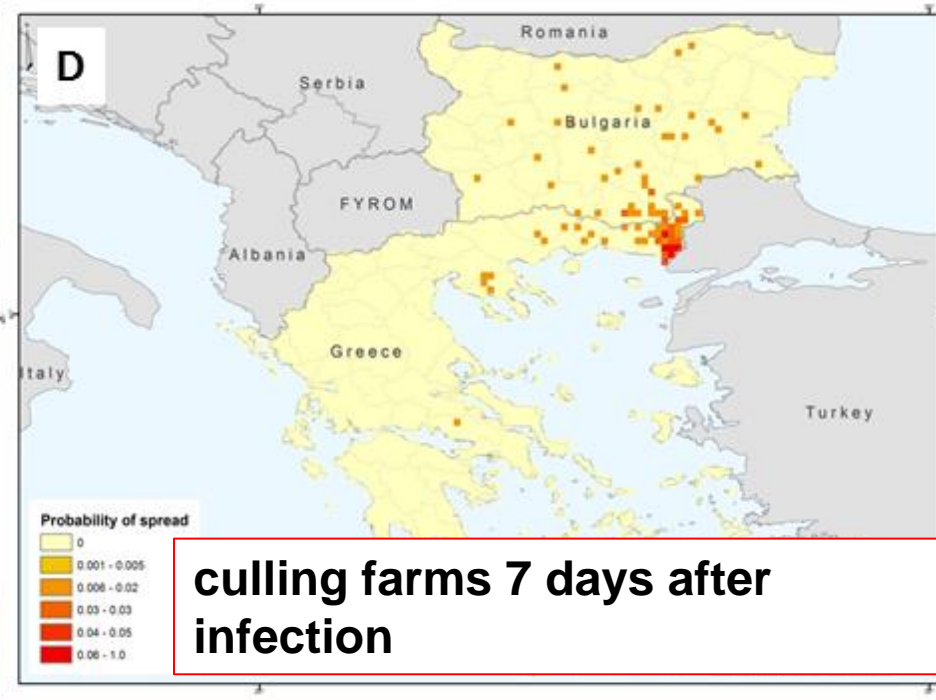
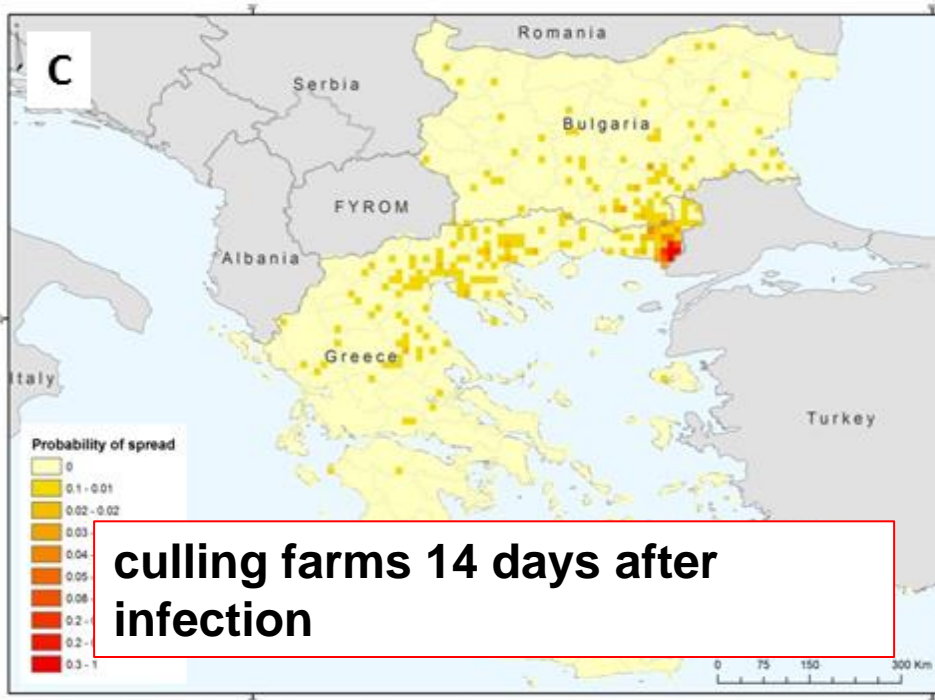
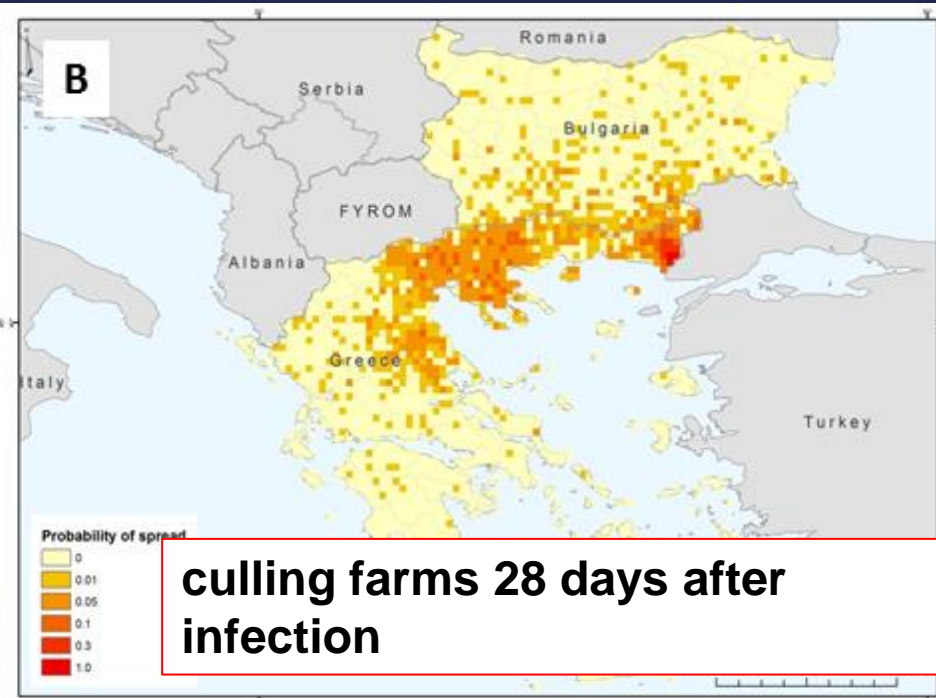
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# JANUARY 2015

LSD is still out of Europe

- Update on available knowledge on LSD
- First version of spread model >> test culling options





**MAY 2016**

## **EC-EFSA workshop – Brussels, May 2016**

*“Strengthening regional cooperation in South East Europe and Middle East for prevention and control of Lumpy Skin Disease (LSD)”*

- Increase awareness
- Establish synergies in the region



**AUGUST 2016**

## **EFSA Urgent advice on LSD**

- Assessment of **culling** and **vaccination** options and their combination
- Preventive vaccination works at best



# VACCINATION

None

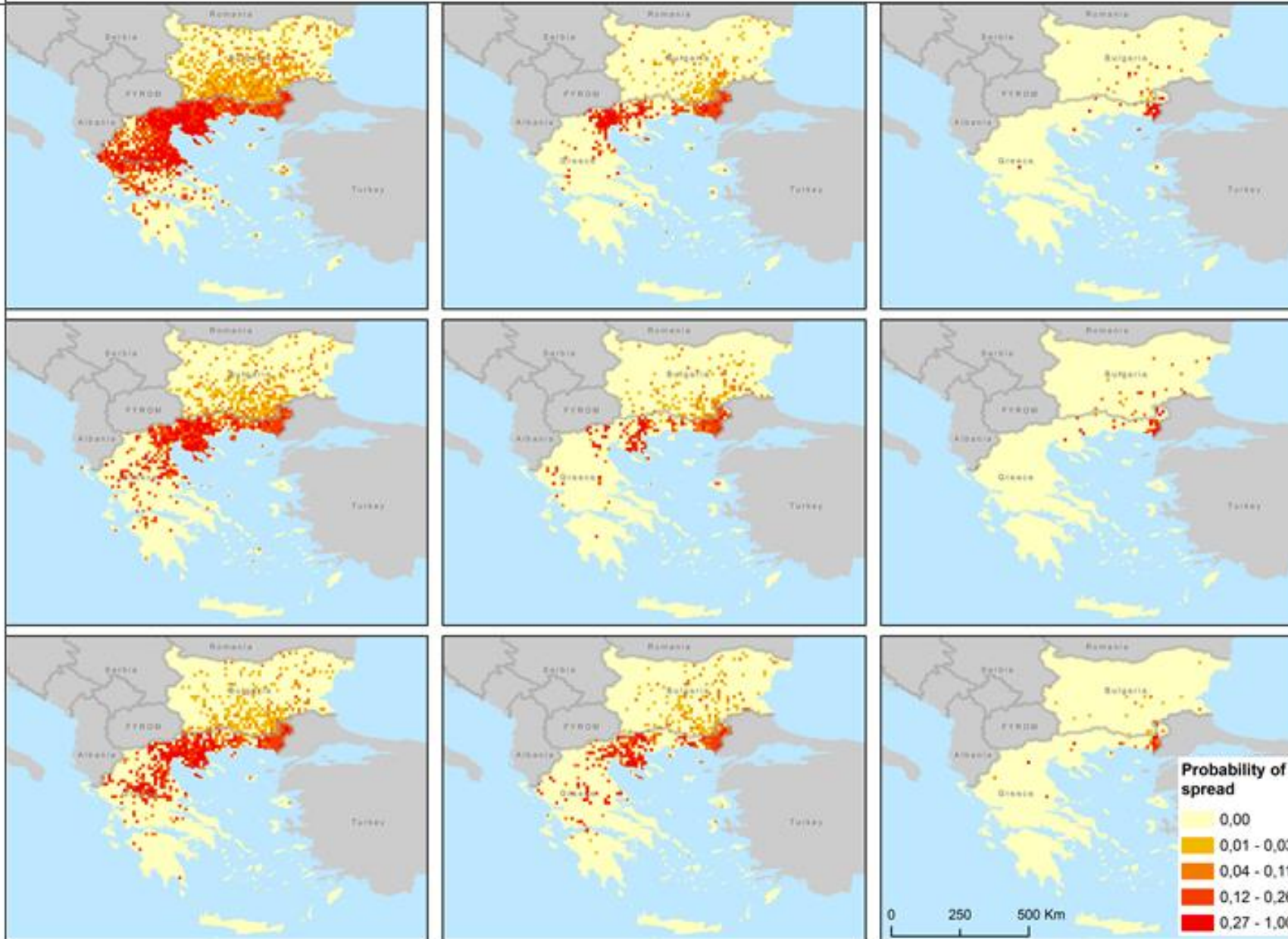
after virus entry

before virus entry

NONE

PARTIAL

TOTAL



STAMPING OUT



**FEBRUARY 2018**

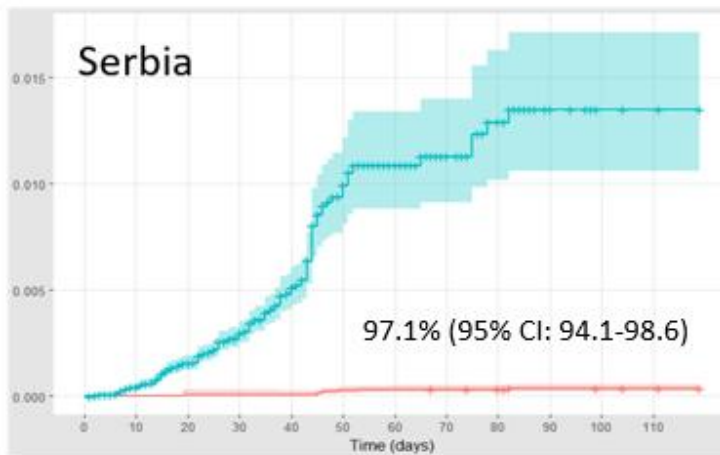
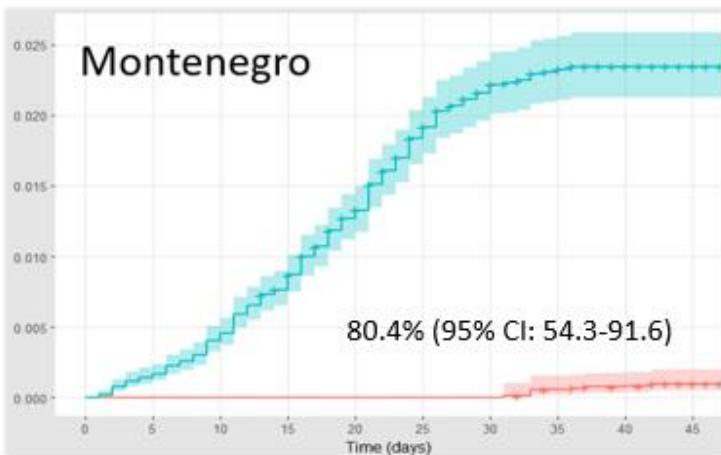
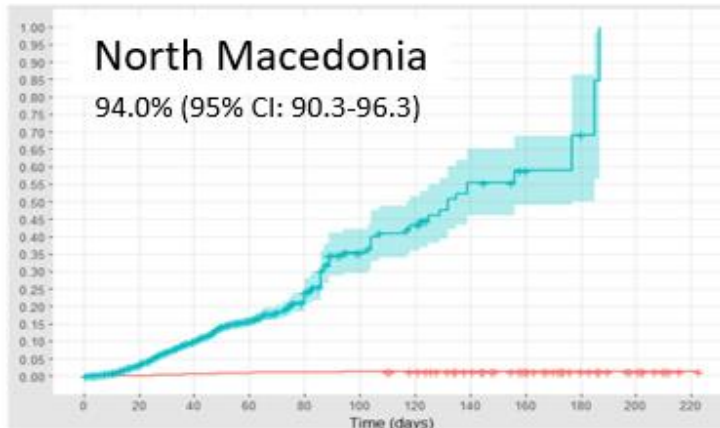
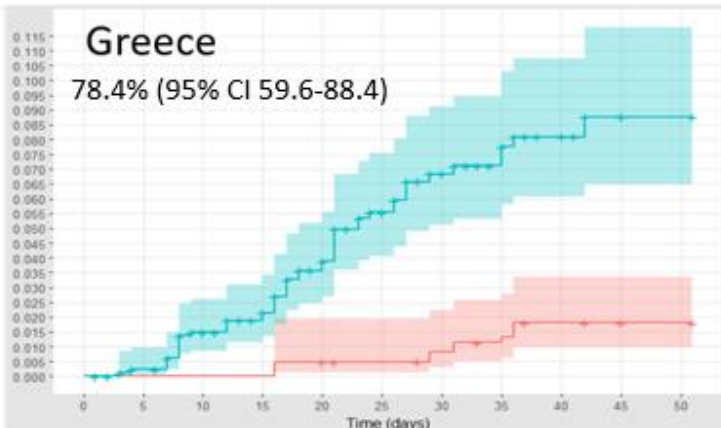
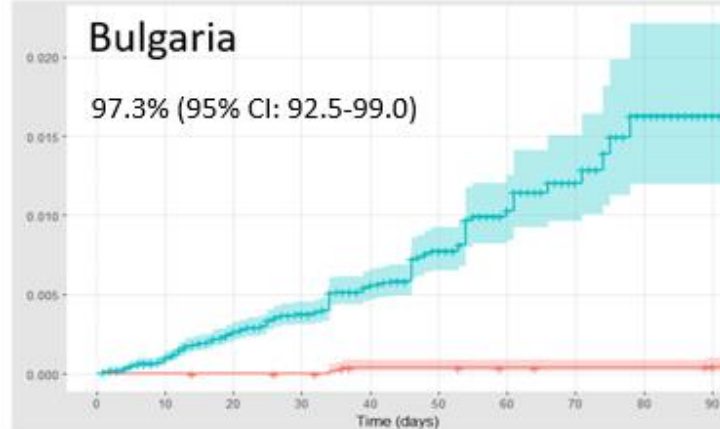
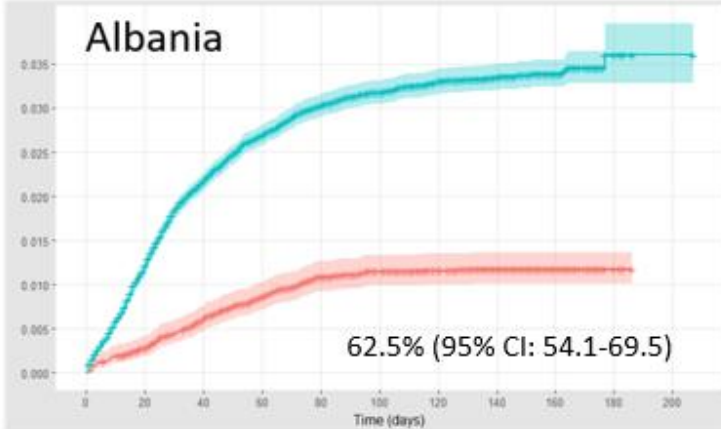
## **Scientific report**

- Epidemiological progress
- Speed of spread
- Risk factors: **proximity to affected farms, warm temperatures and vector abundance**
- Assessment of field effectiveness of vaccination: **80% (62-97%)**





Cumulative proportion of affected farms



Strata

- Vaccinated
- NonVaccinated



# DATA TO ESTIMATE VACCINATION EFFECTIVENESS

- Define your unit
- Record the event: VACCINATION / INFECTION + DATE

| Farm | cow # | Group/age/ other risk factors | Vaccinated? (Y/N) | vaccination date | infected (Y/N) | Infection date | severe (Y/N) |
|------|-------|-------------------------------|-------------------|------------------|----------------|----------------|--------------|
|      |       |                               |                   |                  |                |                |              |
|      |       |                               |                   |                  |                |                |              |
|      |       |                               |                   |                  |                |                |              |



OCTOBER 2018

## Scientific report

*“Lumpy skin disease: scientific and technical assistance on control and surveillance activities”*

- **Exit strategy:** how to lift vaccination and surveillance scenarios



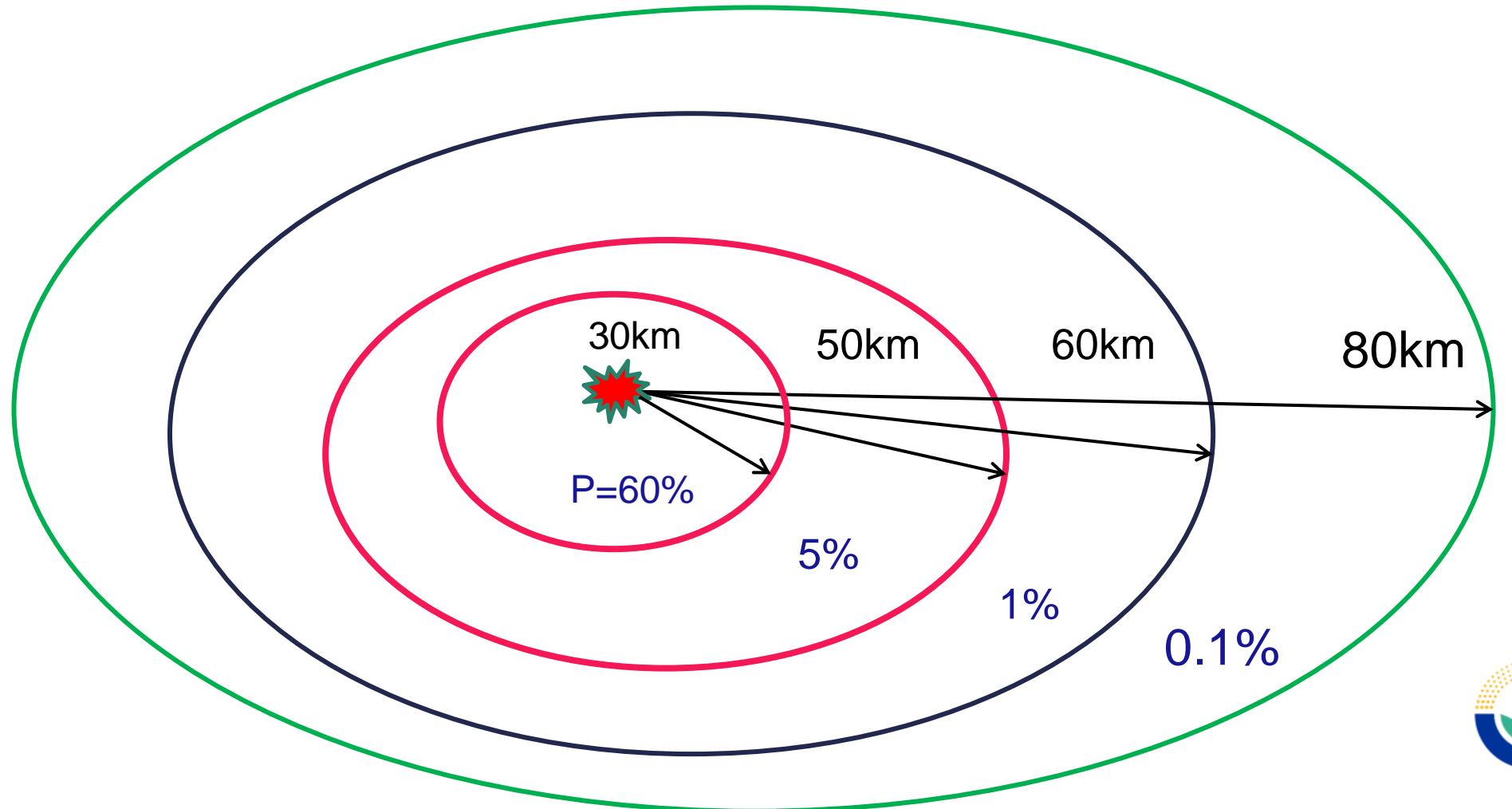
# HOW LONG TO VACCINATE?

| Vaccination Coverage | Vaccination effectiveness | 2 years        | 3 years      | 4 years | 5 years |
|----------------------|---------------------------|----------------|--------------|---------|---------|
| 70%                  | 80%                       | PERSIST P: 20% | PERSIST P<5% | gone    | gone    |
|                      | 95%                       | PERSIST P<20%  | PERSIST P<5% | gone    | gone    |
| 90%                  | 80%                       | PERSIST P<20%  | gone         | gone    | gone    |
|                      | 95%                       | gone           | gone         | gone    | gone    |



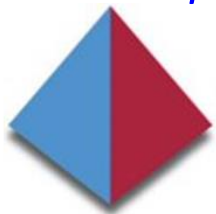
# BUFFER ZONE : PROBABILITY OF LSD «ESCAPE»

Planning risk based surveillance



# TEMPLATE - WHAT REQUESTED TO COUNTRIES

- **LSD occurrence** : *[ list the years when LSD outbreaks were recorded e.g. 2021, 2022 etc. and numbers of outbreaks for each year] – if no outbreaks in the past put “Never”*
- **LSD Vaccination**: *[ list the years when LSD vaccination was implemented e.g. 2021, 2022 etc., **vaccination effectiveness**] – if no vaccination was ever implemented put “Never”*
- **LSD surveillance (active or passive or both)**: *[ list the years when LSD active surveillance (post vaccination) was implemented, **objective, type, diagnostic test, target prevalence, sampling frequency** e.g. 2021, 2022 etc.] – if no such surveillance was ever implemented put “Never”*



# CORE RECOMMENDATIONS

- Monitor vaccination campaign >> get information about vaccination effectiveness
- Passive surveillance: key for early warning for LSD, all the time in place
- areas bordering endemic regions previously infected >> active surveillance (clinical and serological)
- Feasibility of surveillance for early detection: to be adapted to different contexts





# THANK YOU

<https://www.efsa.europa.eu/en/topics/topic/lumpy-skin-disease>