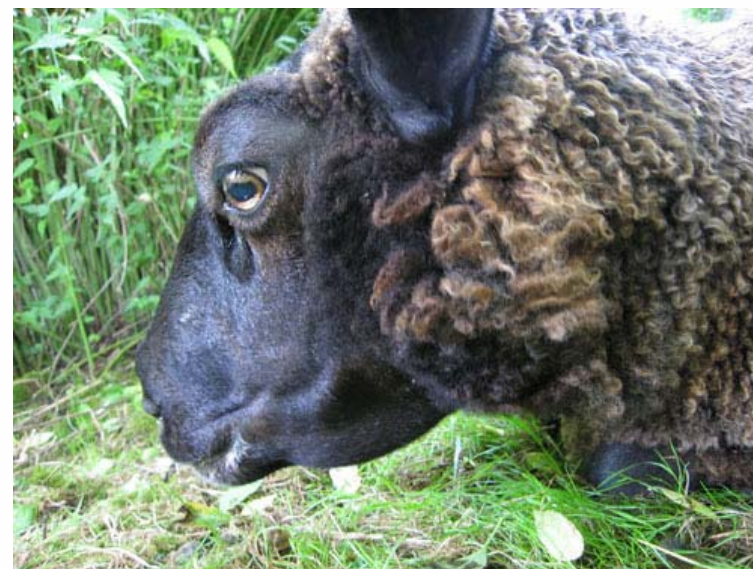




BLUETONGUE

The Netherlands 2006



SCFCAH 11 April 2007

Situation at 04-04-2007



landbouw, natuur en
voedselkwaliteit

Agenda

- **Infected holdings**
- **Cross sectional study**
- **Monitoring and surveillance**





Infected area

- **478 infected holdings in the southern part of the Netherlands**
- **271 infected sheep holdings**
- **207 infected bovine holdings**
- **13 December last case with clinical signs**



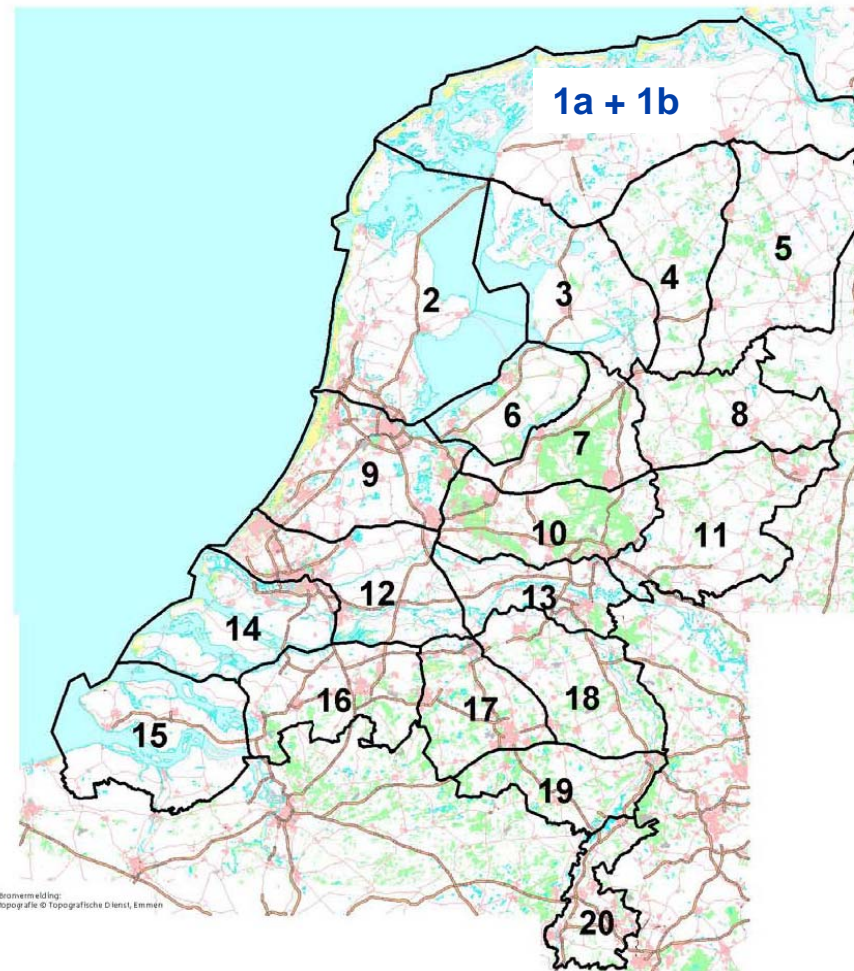
Geographical units

Compartments (ADNS)

Area of approx. 2.000 km²
(45 x 45 km)

With maximum of 3.000 km²

Compartment 1 is divided
into 1a and 1b





Cross-sectional serological study:

- A preliminary step to better define the extent of the infected zone or to estimate the prevalence of infection per compartment
- Started after *Culicoides* stopped flying and runs from January – April
- blood samples from cattle submitted to the laboratory of GD are serologically tested for bluetongue anonymously and results are reported per postal code area





Cross-sectional serological study:

The number of cattle to be tested per compartment depend on

- the number of cattle farms
 - the number of cattle
 - the prevalence of infection per compartment
- and is calculated to lie between 770 and 2040 cattle to be tested per compartment; the total number of animals to be tested is 40.000

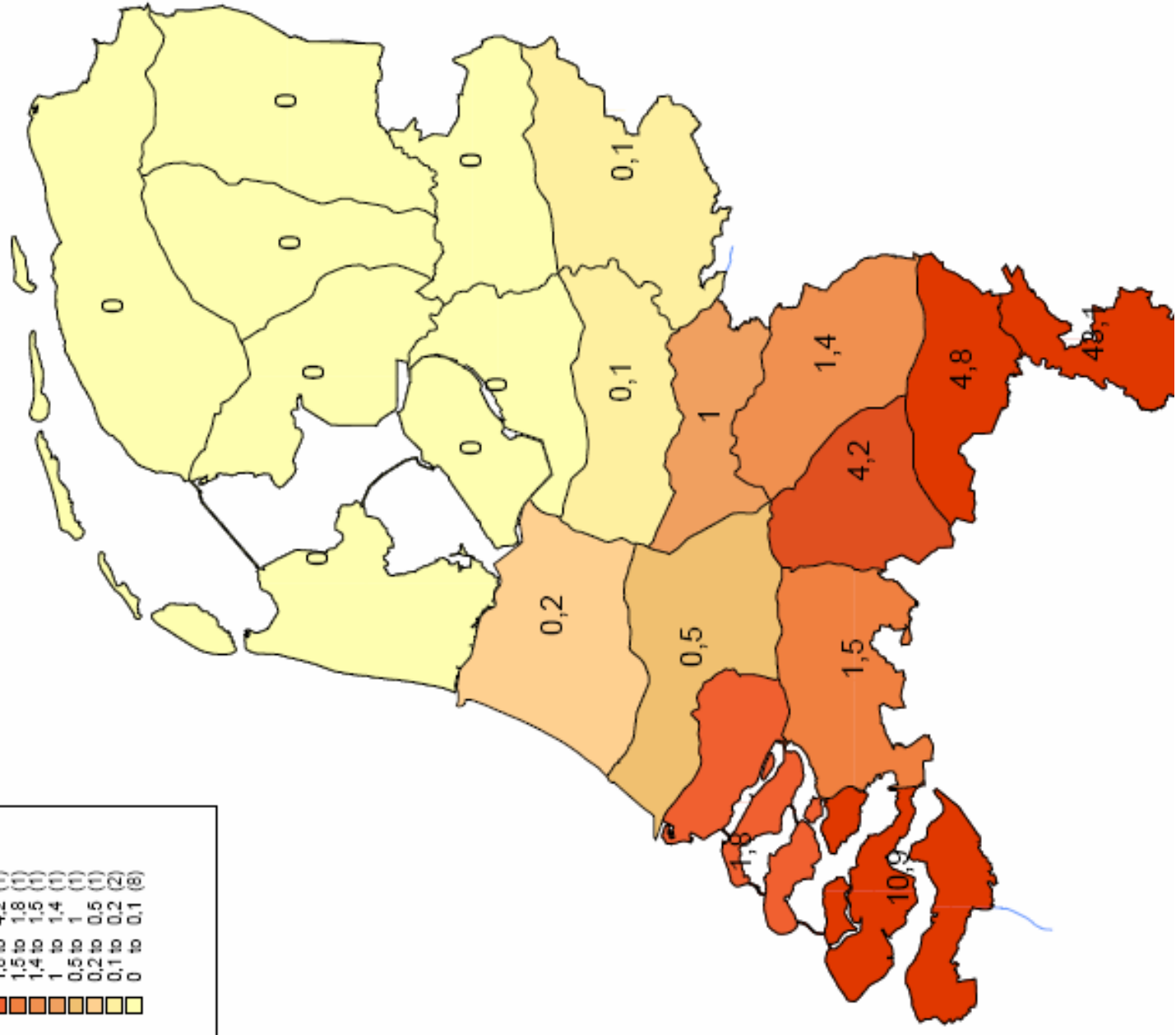


Cross-sectional serological study

28.02.2007

| Compartment | BT %pos | Compartment | BT % pos |
|-------------|---------|-------------|----------|
| 1 | 0 | 11 | 0,1 |
| 2 | 0 | 12 | 0,5 |
| 3 | 0 | 13 | 1 |
| 4 | 0 | 14 | 1,8 |
| 5 | 0 | 15 | 10,9 |
| 6 | 0 | 16 | 1,5 |
| 7 | 0 | 17 | 4,2 |
| 8 | 0 | 18 | 1,4 |
| 9 | 0,2 | 19 | 4,8 |
| 10 | 0,1 | 20 | 43,1 |







Monitoring Culicoides



Vector monitoring

- **Start 10 November 2006**
- **12 December 2006**
 - 4 inside traps
- **31 January 2007**
 - Compartment 19 31 culicoïdes
- **Week 13**
 - Compartment 19 40, 28 culicoïdes
 - Compartment 18 33 culicoïdes
 - Compartment 17 15 culicoïdes
 - Compartment 16 31 culicoïdes





End vector free period Protocol

- **Transport within the 20 km zone is allowed without conditions**
- **Transport of slaughter animals from the 20 km zone to restriction zone without test conditions**
- **Transport of slaughter animals from the restriction zone to free zones of Germany and France without test conditions**
- **Transport of breeding calves (10-day old calves) from the 20 km zone to restriction zone after a PCR-test (48h)**





End vector free period Protocol

- **Transport of other ruminants from 20 km zone to restriction zone after protection from Culicoides for 14 days and a negative PCR-test or 28 days and a negative serological test**
- **Transport of animals from the 20 km zone to the restriction zone (after a protection period and a test) and afterwards to free zones of Germany and France under the conditions of Annex II**





Monitoring

A sentinel network of bovine animals:

- **Will be set up all over the Netherlands to be able to differentiate newly infected animals from the seropositive animals due to past exposure to the virus**
- **This network of sentinel animals should be in place in May, after the results of the cross sectional serological study were known**
- **For a few reasons, it was decided to start earlier: now**
- **The cattle will be tested with an individual milk test**





Monitoring

Sample size:

- In each compartment, 150 sentinel animals will be tested monthly (in order to detect a monthly incidence of seroconversion of 2% with a 95% confidence);

To be able to start with this number of seronegative animals, a preliminary test is performed and the number of animals tested during this preliminary test is higher





Monitoring

Sample size:

The number of animals tested during the preliminary test depends on:

- The estimated seroprevalence per compartment (results cross sectional study 28.02.2007)
- 3% of the farms stopping farming annually
- 25% replacement of animals annually
- A dry period of two months per year





Monitoring

Sample size:

- For the preliminary serological test: 6.500; these samples will be frozen to be able to check the origin of a sample in case of a seroconversion afterwards;
- Thereafter: $21 \times 150 = 3.150$ per month





Monitoring

Participating farms:

- We have started to ask farmers to participate on a voluntary basis
- The milk yield of the participating farms has to be controlled on a monthly basis
- The seronegative animals of the preliminary study will be tested each month
- If seroconversion of an animal is found, the animal will be blood sampled (serology and PCR)

