

A glimmer of hope - The African Swine Fever epidemic in Estonian wild boar population may have started to subside



*katja.schulz@fli.de

K. Schulz¹, C. Staubach¹, S. Blome², A. Viltrop³, I. Nurmoja^{3,4},
F.J. Conraths¹ and C. Sauter-Louis¹

¹Friedrich-Loeffler-Institut (FLI), Institute of Epidemiology, Greifswald-Insel Riems, Germany, ²Friedrich-Loeffler-Institut (FLI), Institute of Diagnostic Virology, Greifswald-Insel Riems, Germany, ³Estonian University of Life Science, Institute of Veterinary Medicine and Animal Sciences, Tartu, Estonia, ⁴Estonian Veterinary and Food Laboratory (VFL), Tartu, Estonia

Background

- First introduction of African swine fever (ASF) into wild boar in eastern Estonia in September 2014 (study area “East”, Figure 1).
- Since 2016 ASF epidemic also in the western part of Estonia (study area “West”, Figure 1).

Hypotheses

- Detailed analyses of laboratory test results help determining the temporal status of the epidemic.
- The current ASF epidemic in Estonian wild boar seems to decline.

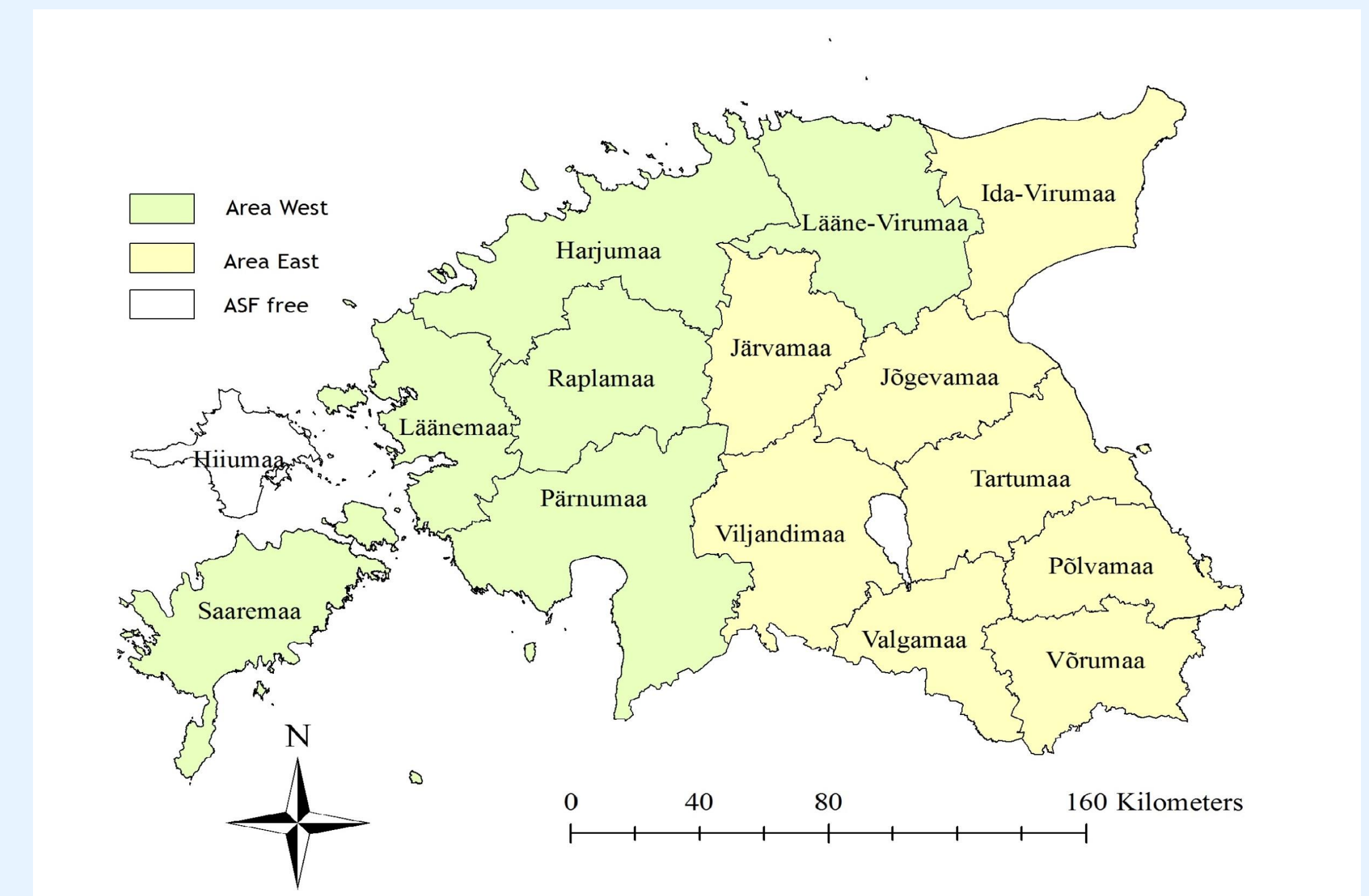


Figure 1: Study area in Estonia divided into “East”, where the African swine fever epidemic started in 2014, and “West”, where it started in 2016.

Methods

Calculation of

- Prevalences of samples of group A1 (Figure 2).
 - Prevalences of samples of group A2 (Figure 2).
- using a hierarchical Bayesian space-time model.

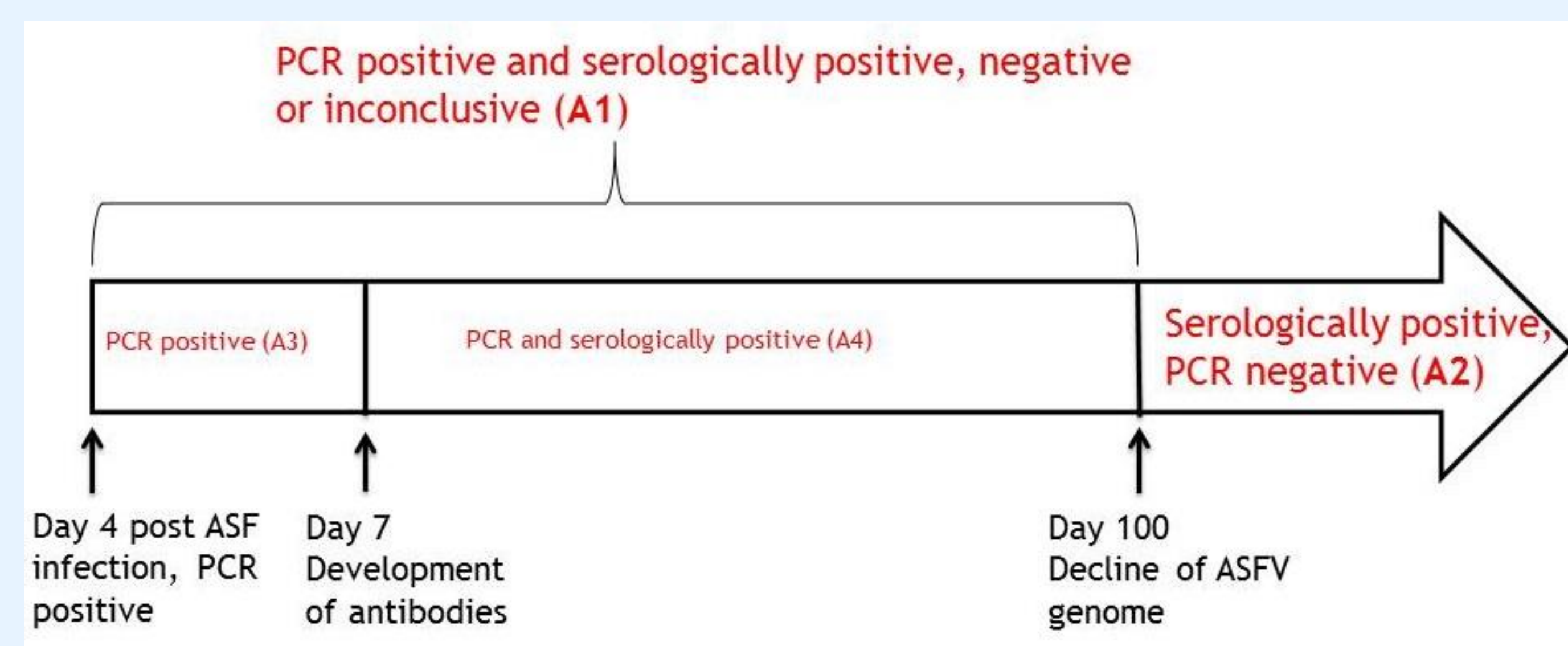


Figure 2: Timescale illustrating the course of laboratory test results for ASF.

Results

- Decrease in PCR-positive samples over time (Figure 3) => low ASF incidence.
- Increase in seropositive samples (group A2) in both areas (Figure 4) => increasing number of “survivors”.

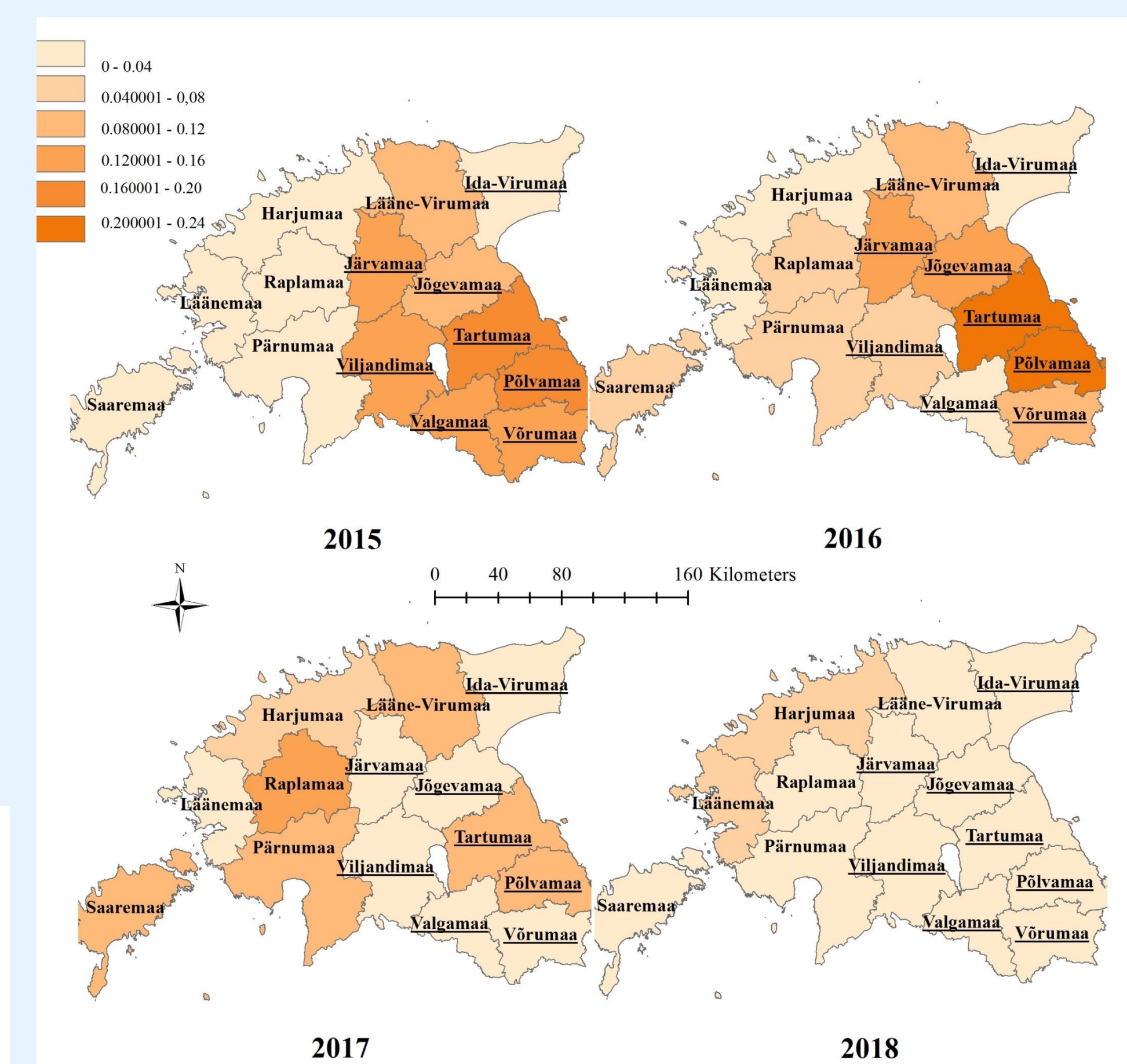


Figure 3: Prevalence estimates of all PCR positive samples irrespective of their serological test result in the counties of “East” (underlined counties) and in the counties of “West” for the different years of the study period.

THEN

IF

- No new entry from neighboring countries
- No infectious virus in environment
- No carrier animals

ASF in wild boar might be on its way to subside in Estonia

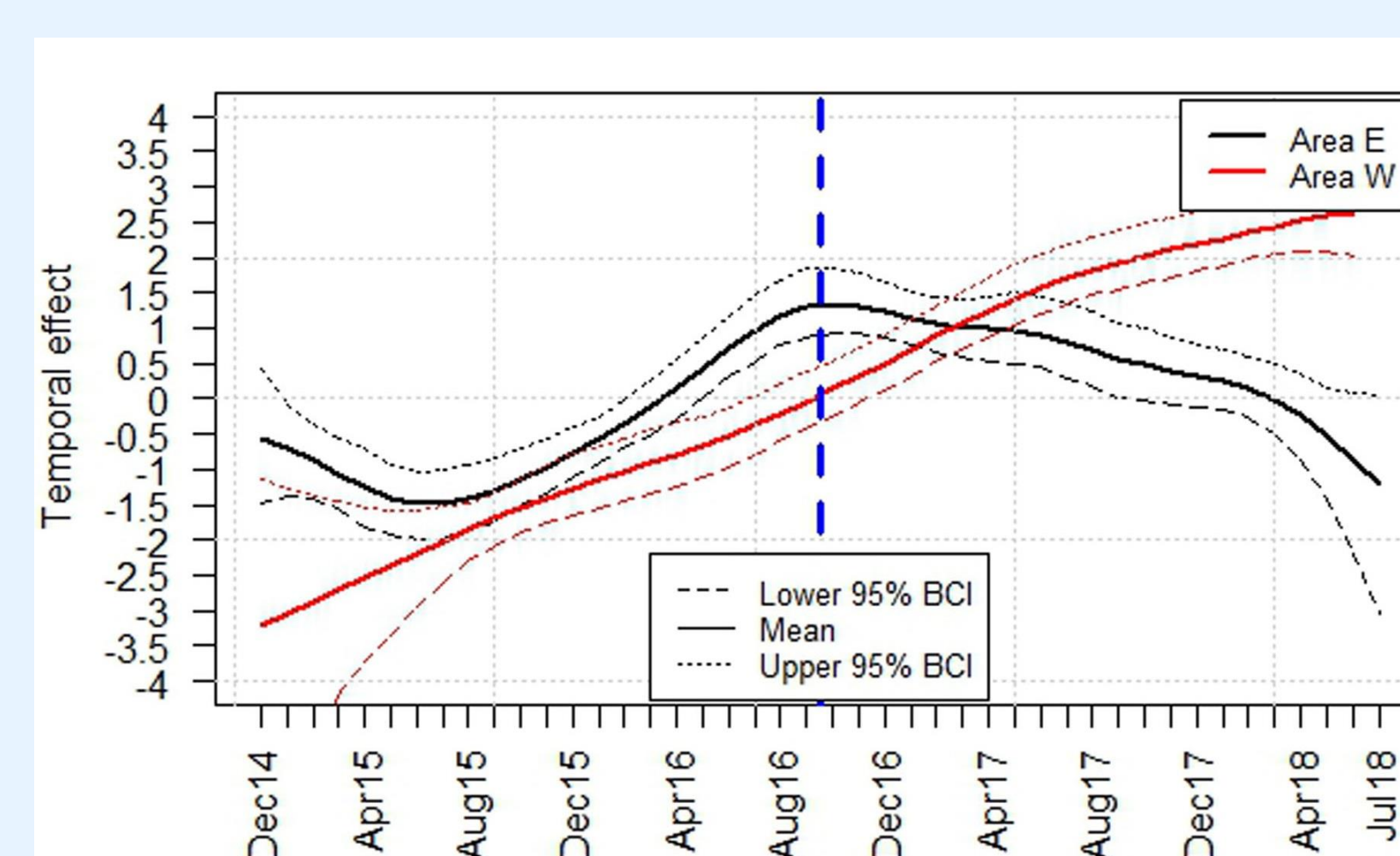


Figure 4: Median temporal effect of all samples from area “East” (E) and area “West” (W) that tested exclusively serologically positive on the logit prevalence.