War-related excess mortality among civilians in the Netherlands during the end of World War II

From September 1944 to May 1945 by municipality

Estimated numbers of excess deaths

September 1944

October 1944

November 1944

December 1944

January 1945

February 1945

March 1945

April 1945

May 1945

Excess deaths

- 1,500
- 750
- 150

Frontline beginning of the month

Frontline end of the month

0   50 km

Estimated excess mortality ratios

September 1944

October 1944

November 1944

December 1944

January 1945

February 1945

March 1945

April 1945

May 1945

Excess mortality ratio

- 5.00 +
- 4.00 - 4.99
- 3.00 - 3.99
- 2.00 - 2.99
- 1.10 - 1.99
- < 1.10
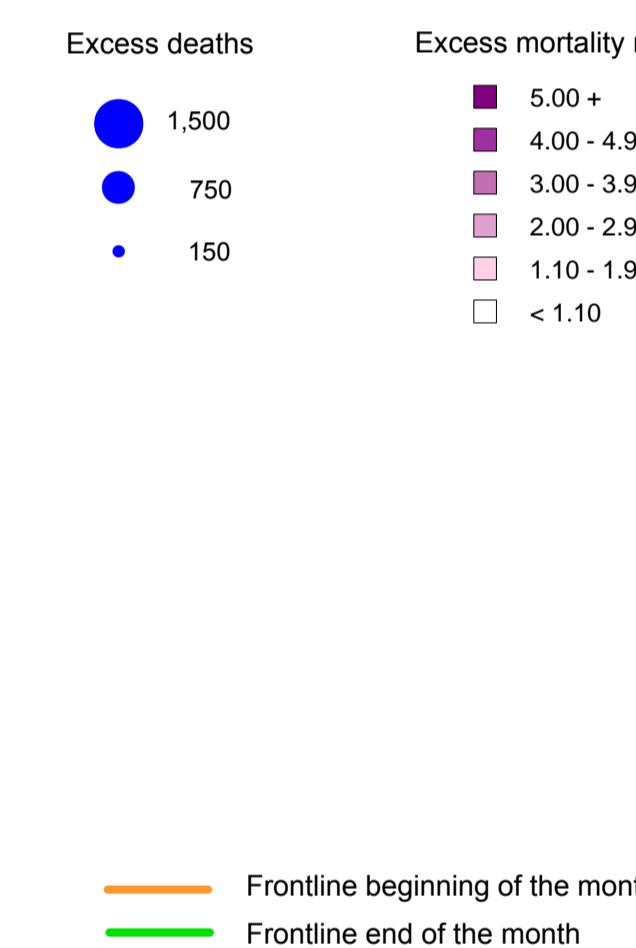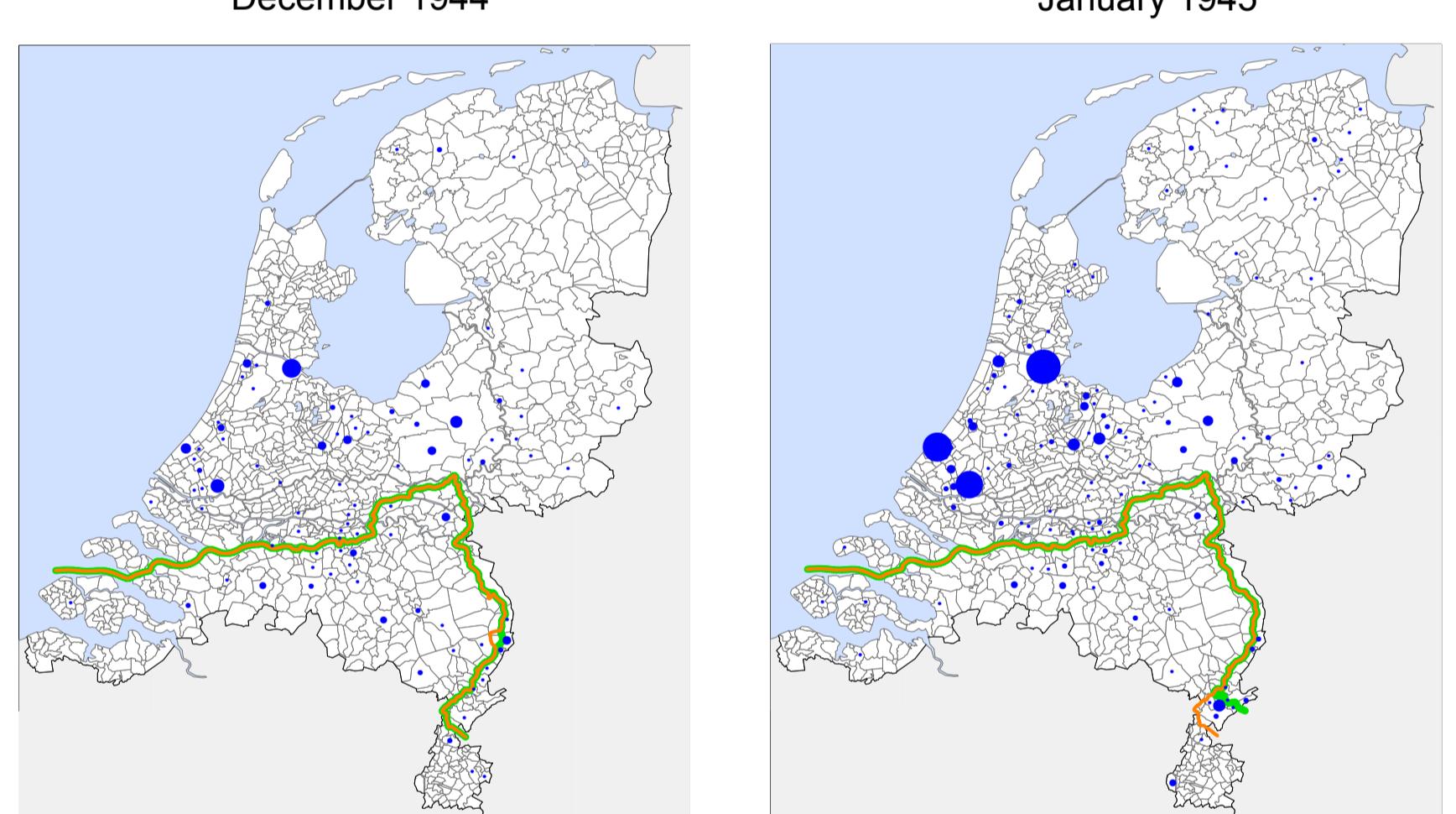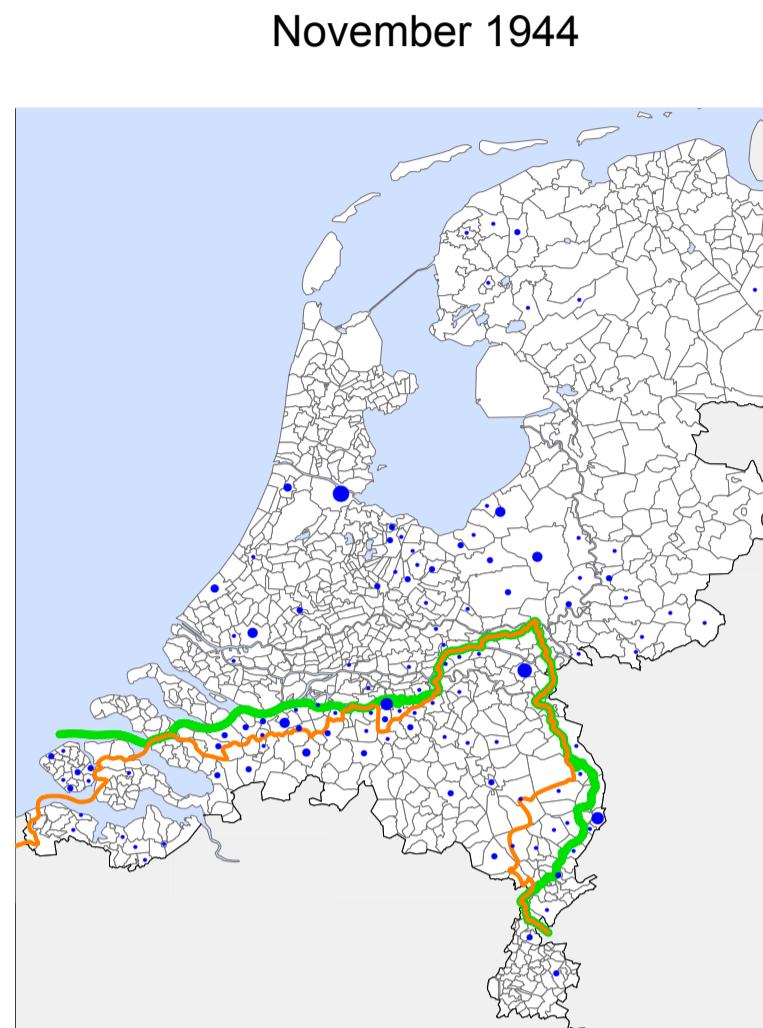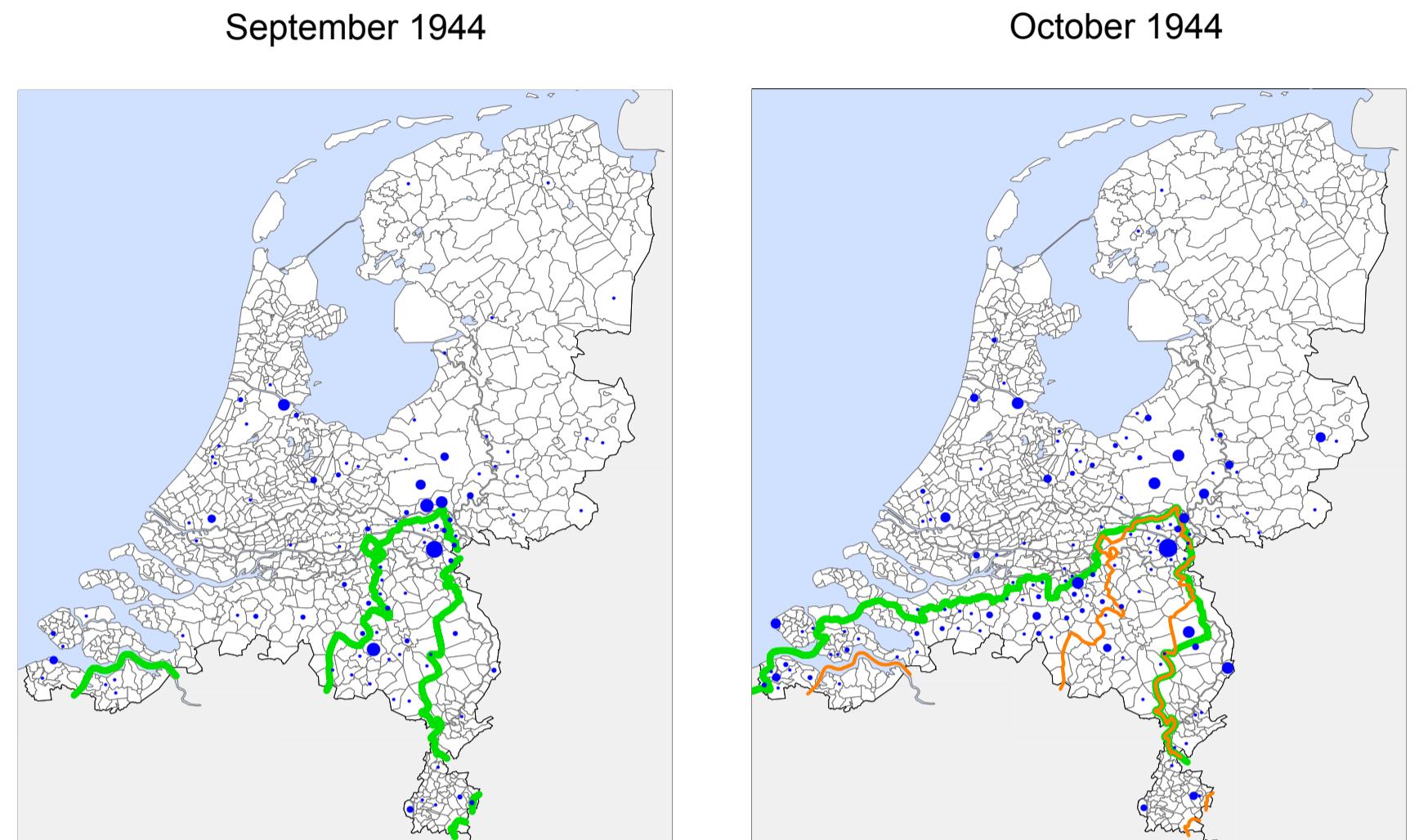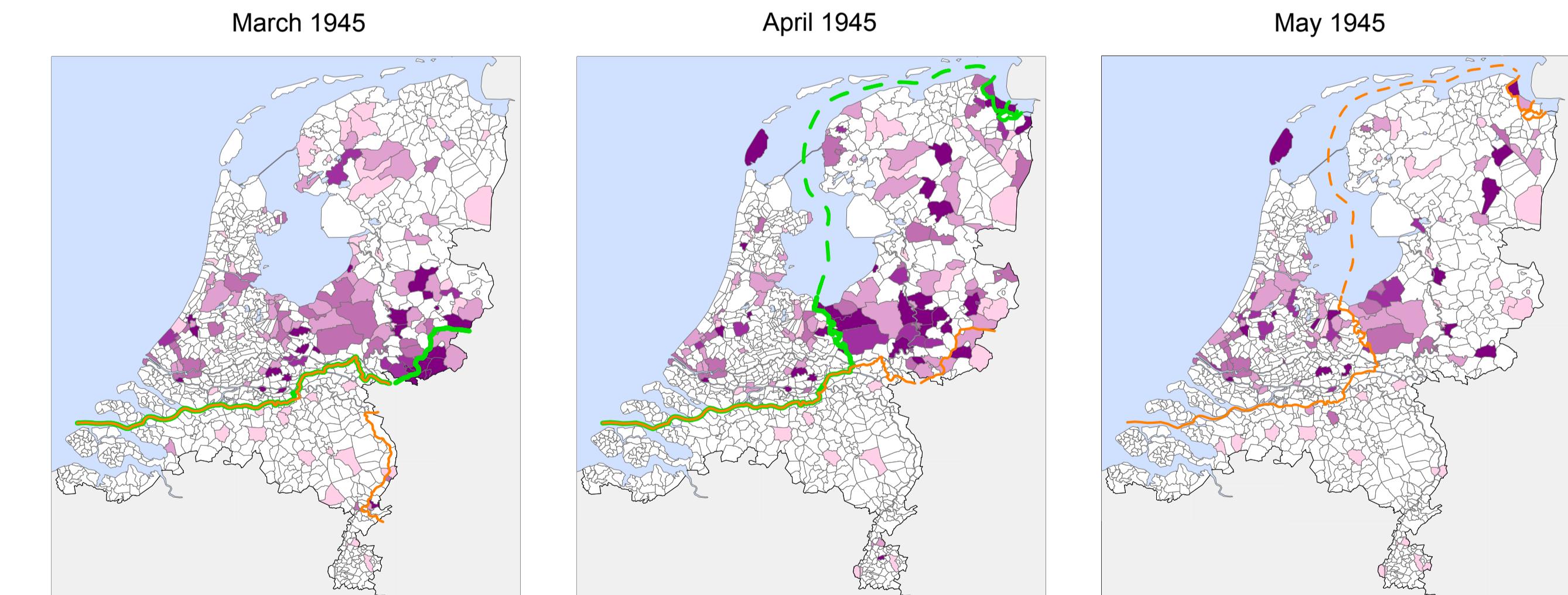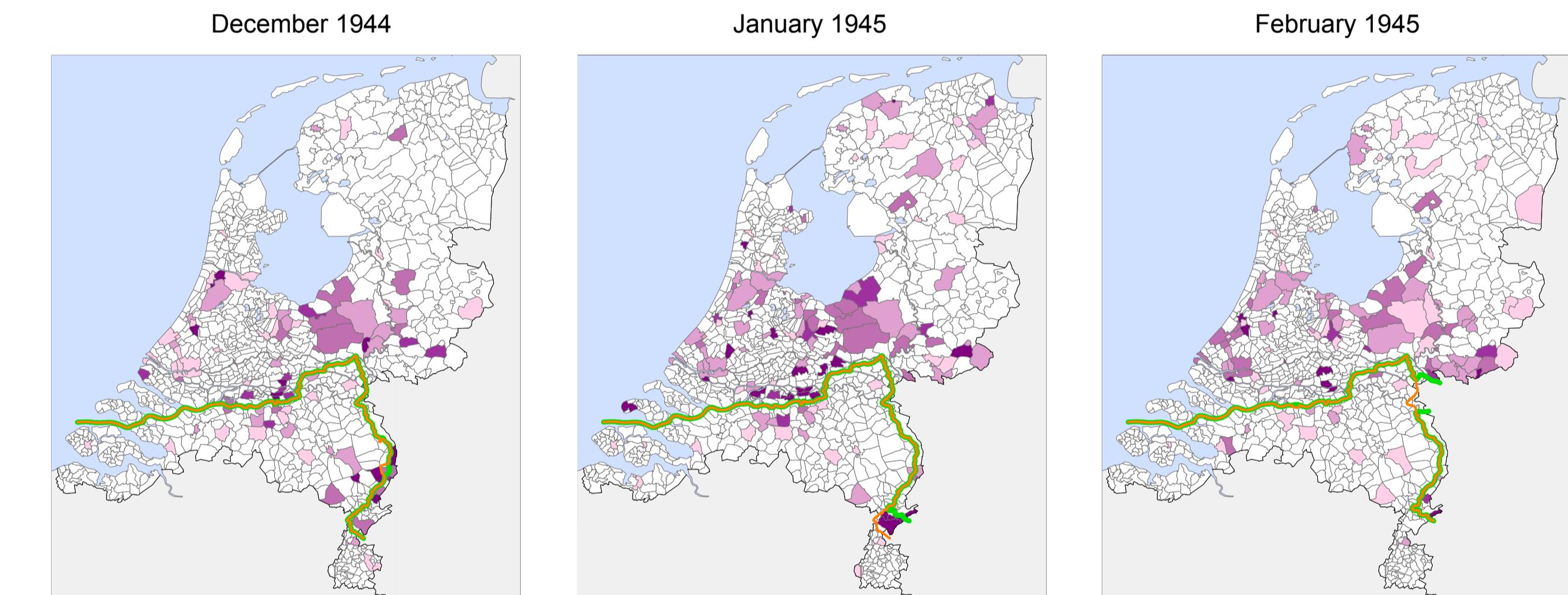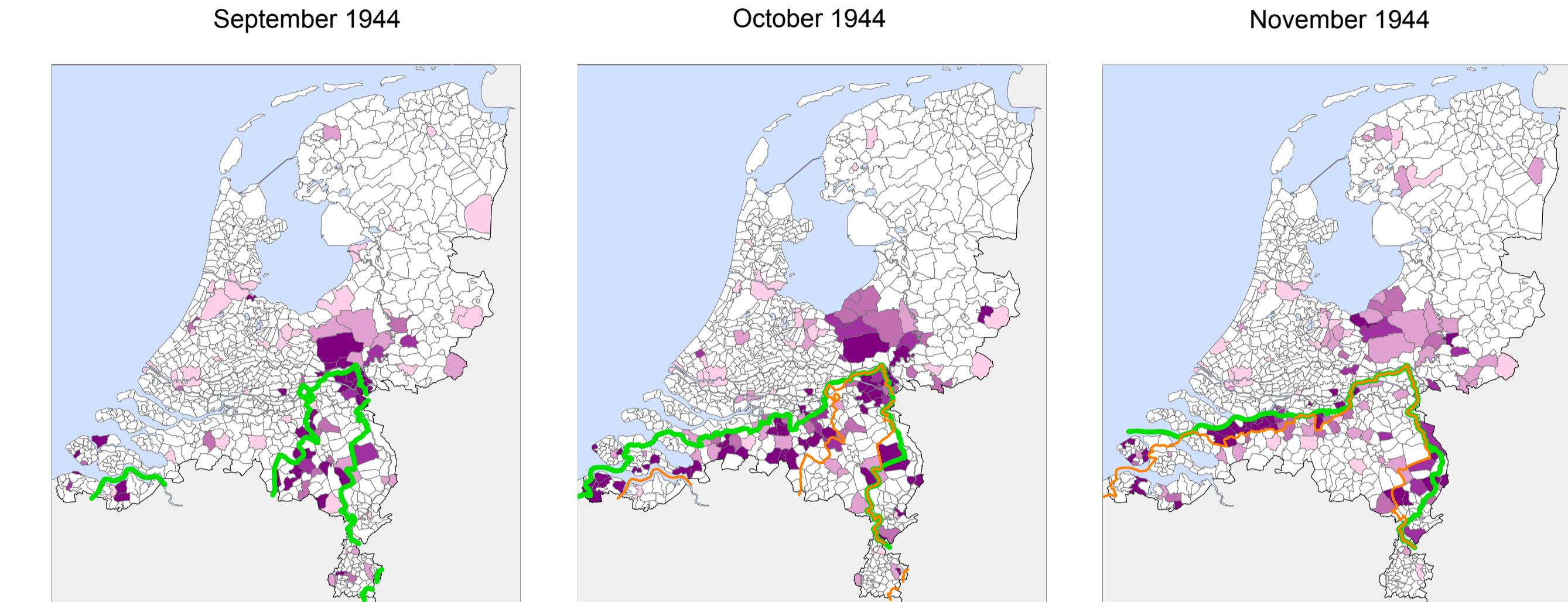
Peter Ekamper[a], Govert Bijwaard[a], Frans van Poppel[a] & L.H. Lumey[b]
[a] Netherlands Interdisciplinary Demographic Institute (NIDI-KNAW) & University of Groningen
[b] Department of Epidemiology, Mailman School of Public Health, Columbia University

Number of excess deaths = the actual number of observed deaths minus the expected number of deaths in "normal" circumstances.
Excess mortality ratios = the number of actual deaths divided by the expected number of deaths in "normal" circumstances (an excess mortality ratio of 3 means 3 times as many deaths than normally).
Estimation of "normal" pattern based on seasonal adjusted mortality in 1946-1947.
Data source: Calculations by NIDI using non-public microdata from Statistics Netherlands.

Map projection: Netherlands National System [EPSG: 28992], digital geometry from NLGis historical 1945 municipal boundary file.