

Pestivirus infection in Northern Ireland ovine and caprine populations

Emma Campbell, James McConville, Joe Clarke, Aoibheann Donaghy, Asa Moyce, Andrew W. Byrne, Sharon Verner, Sam Strain, Paul Bourne, Maria Guelbenzu-Gonzalo

Contact: emma.campbell@afbini.gov.uk

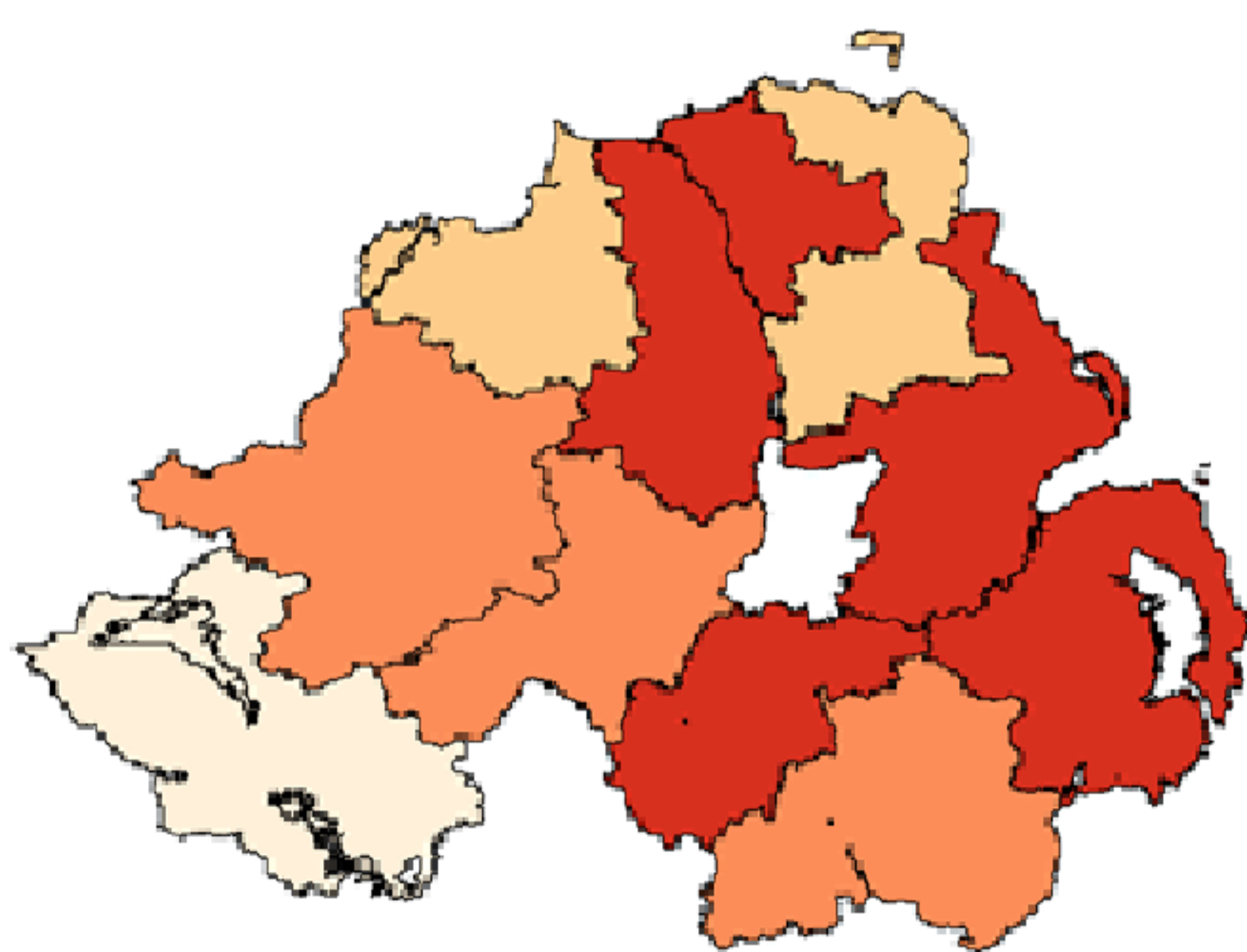
Introduction and methods

- Bovine viral Diarrhoea (BVDV) and Borders disease (BDV) causes infertility, abortion, stillbirth and small and weak offspring.
- Need to evaluate possible reservoirs of infection and prevalence in N. Ireland.
- Antibodies tested for using ELISA assay.
- SNT used to differentiate between BVDV and BDV infection.

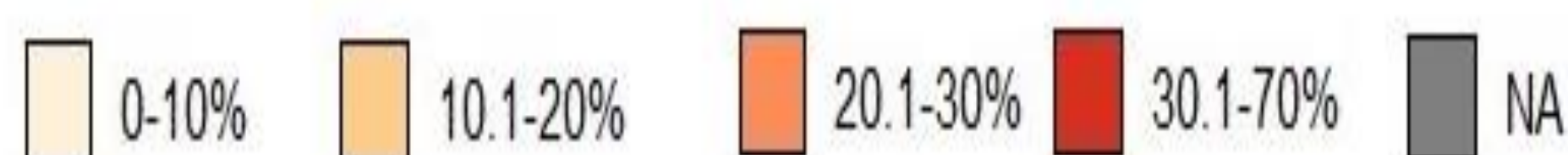
Results

- 197 flocks & 3418 animals participated.
- Animal prevalence of **1.7%**.
- Flock prevalence of **17.3%**.
- Mean flock prevalence of **9.7%**
- **52.6%** sheep infected with BVDV.
- **13.1%** decrease in flock prevalence between 1999 & 2018.

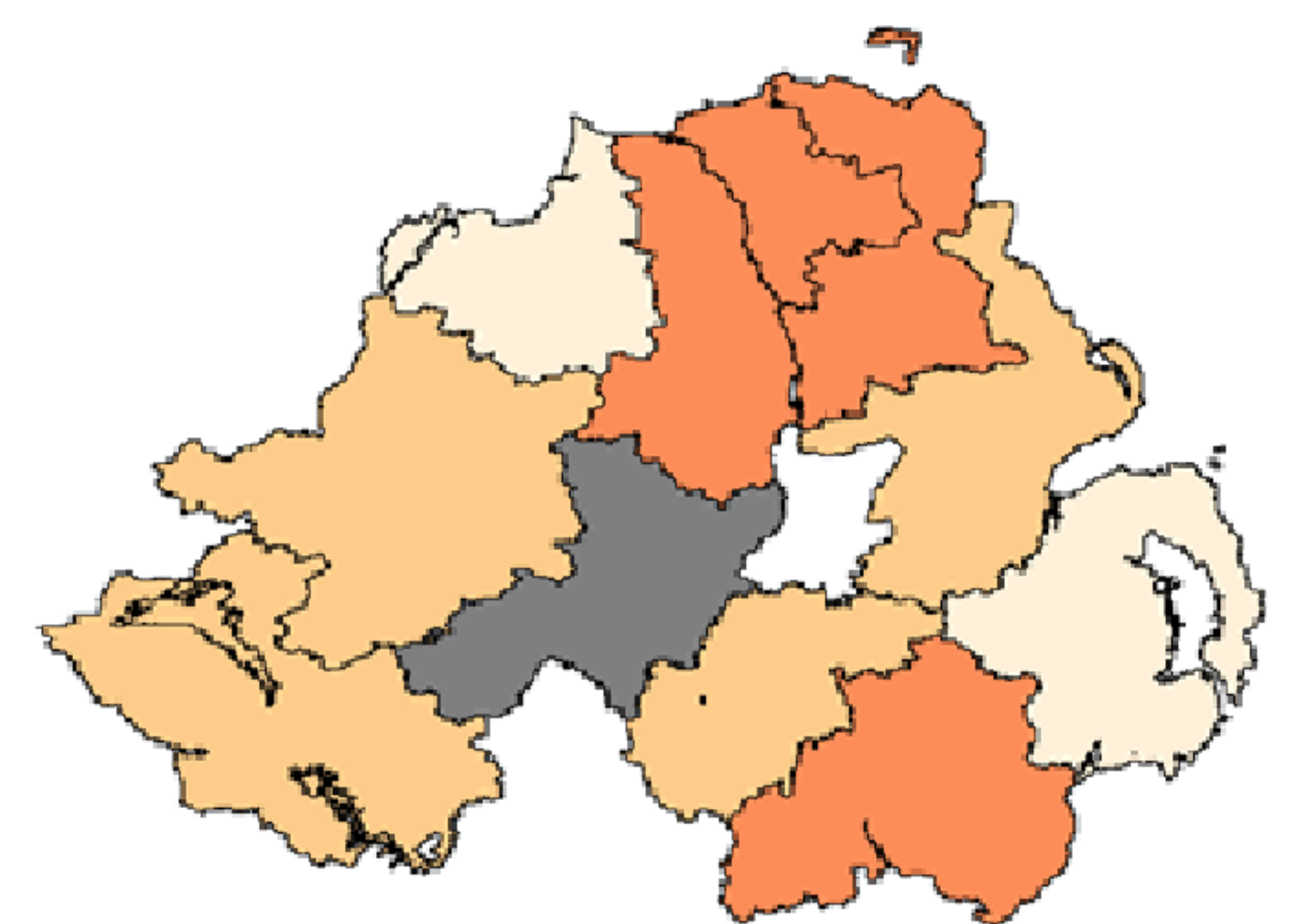
Flock prevalences:1999 vs 2018



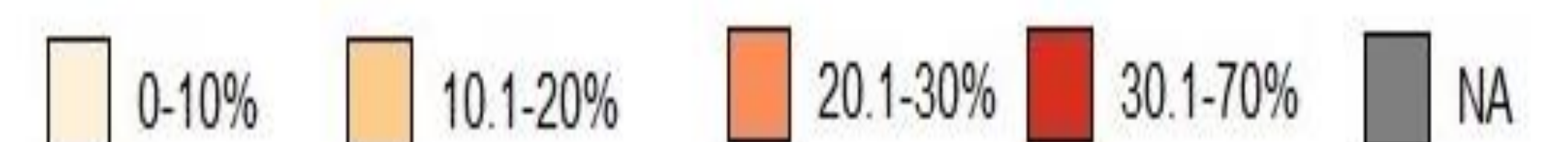
1999 flock seroprevalence



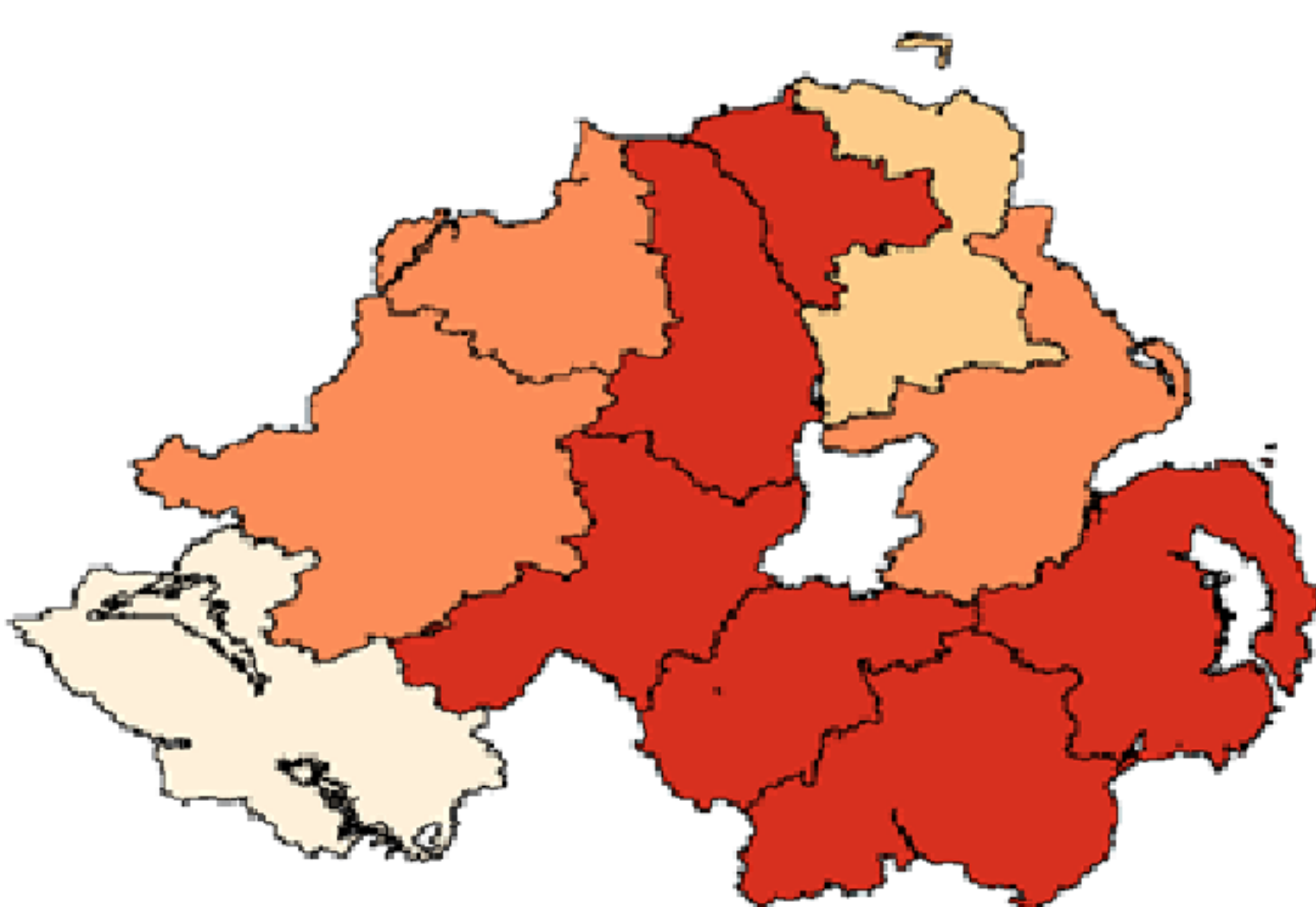
Marked flock prevalence decrease in Armagh, Newtownards and Larne DVO regions.



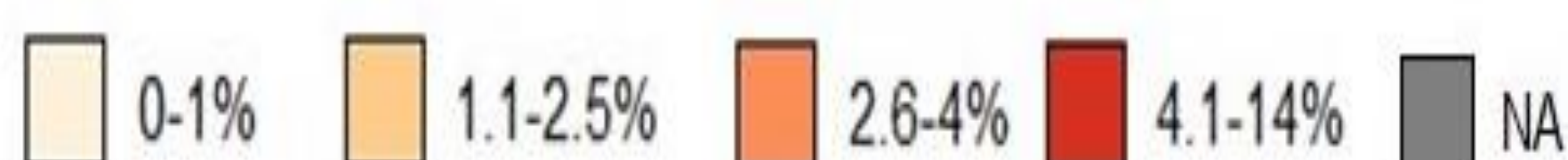
2018 flock seroprevalence



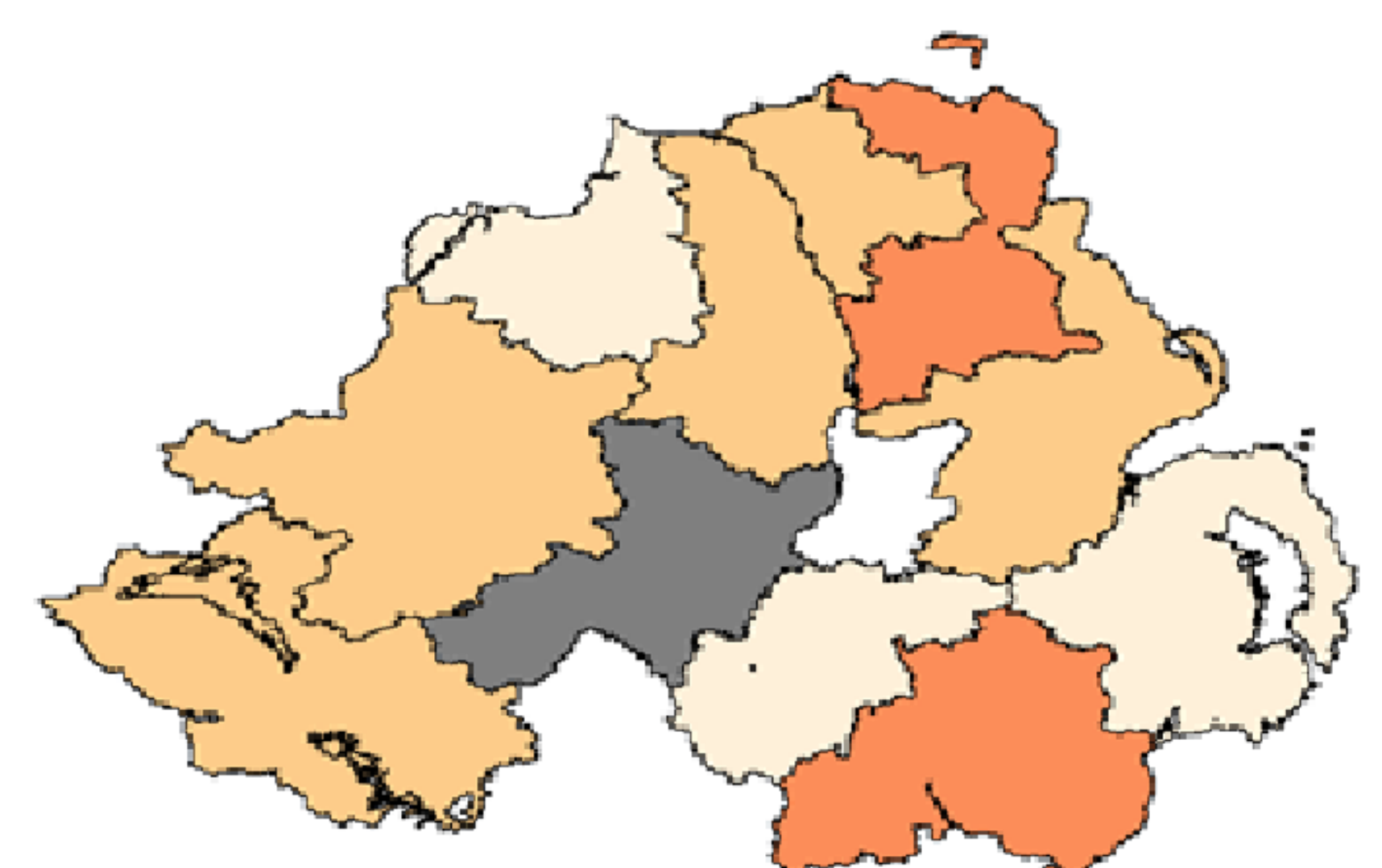
Animal prevalences:1999 vs 2018



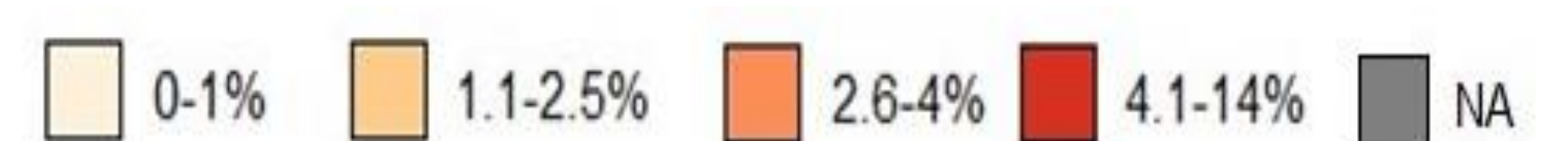
1999 animal seroprevalence



Marked animal prevalence decrease in Armagh and Newtownards DVO regions.



2018 animal seroprevalence



Discussion

- Northern Ireland BVD eradication programme works.
- Has a secondary effect on other pestivirus infections in sheep and goat populations.
- Sheep and goat flocks may present BVDV (re) infection reservoirs.
- Further work needed to elucidate other factors.
- Potential for un-examined wild host populations to also act as virus reservoirs.
- Currently working on genetic sequencing.