

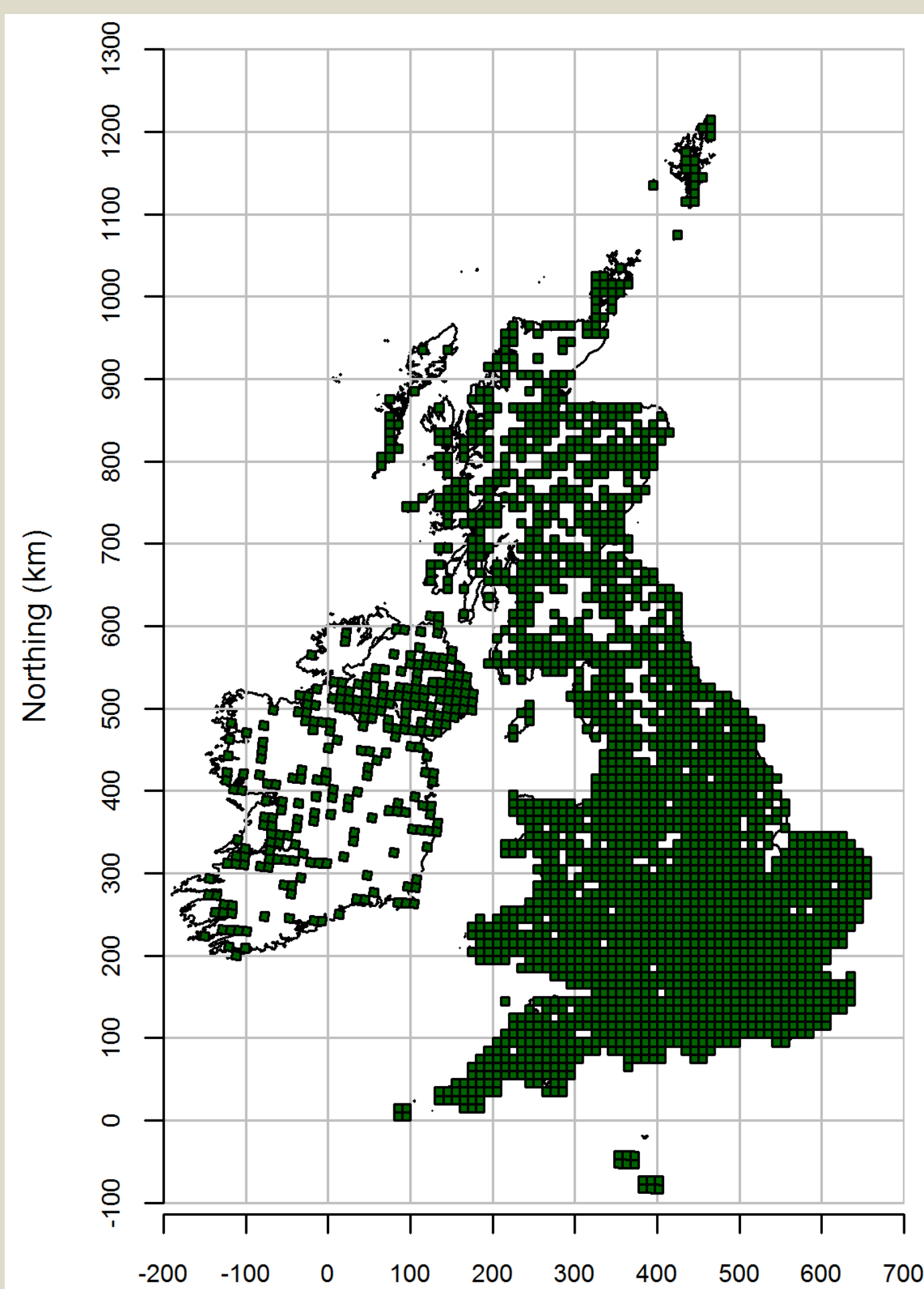
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Many people have concerns that the chemicals we discharge into the natural environment are harming wildlife. Chemical regulations are designed to prevent this, but it is unclear if we can safely assume that the results from laboratory-based hazard tests reflect what happens in nature. Are we being unnecessarily over-precautionary or letting wildlife down by missing chemical induced declines?

In this new, NERC funded, 4-year project (ChemPop), we will review long-term, geo-located, wildlife records from the UK using suitable statistical approaches to compare population change against chemical exposure. The influence of all other recorded co-variables will also be examined. Can we see population effects where chemical exposures are at their highest?

Terrestrial (20 yr plus record)

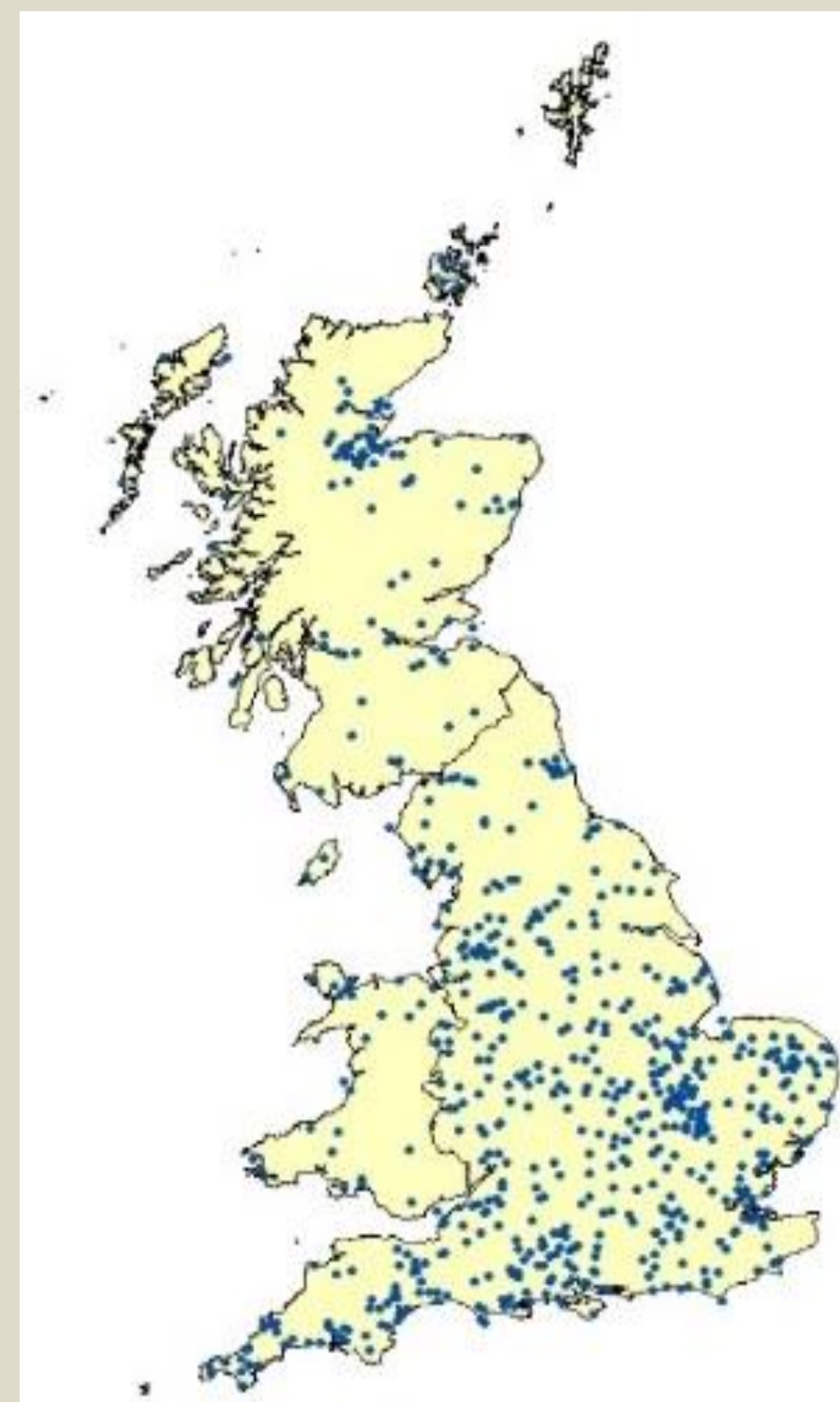


Map of biological records for terrestrial insects



Predatory beetles
Arable area spiders
Hover flies
Butterflies & moths

Predicted pesticide exposure



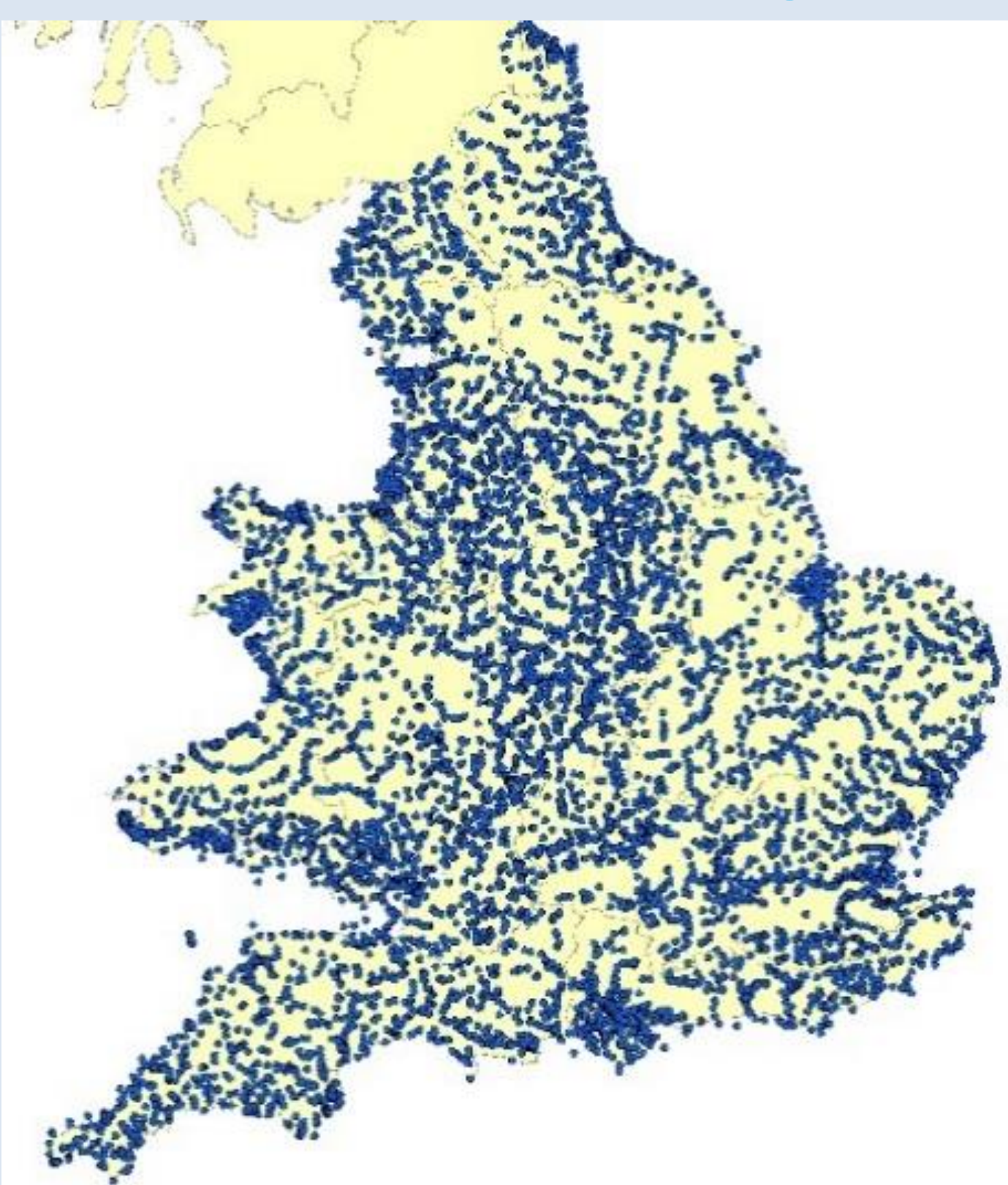
Collected sparrowhawk carcasses 2001-2016



Specific pressure of rodenticides and Sparrowhawks (body burden)



Freshwaters (up to 30 yr record)



Location of macroinvertebrate long-term monitoring sites



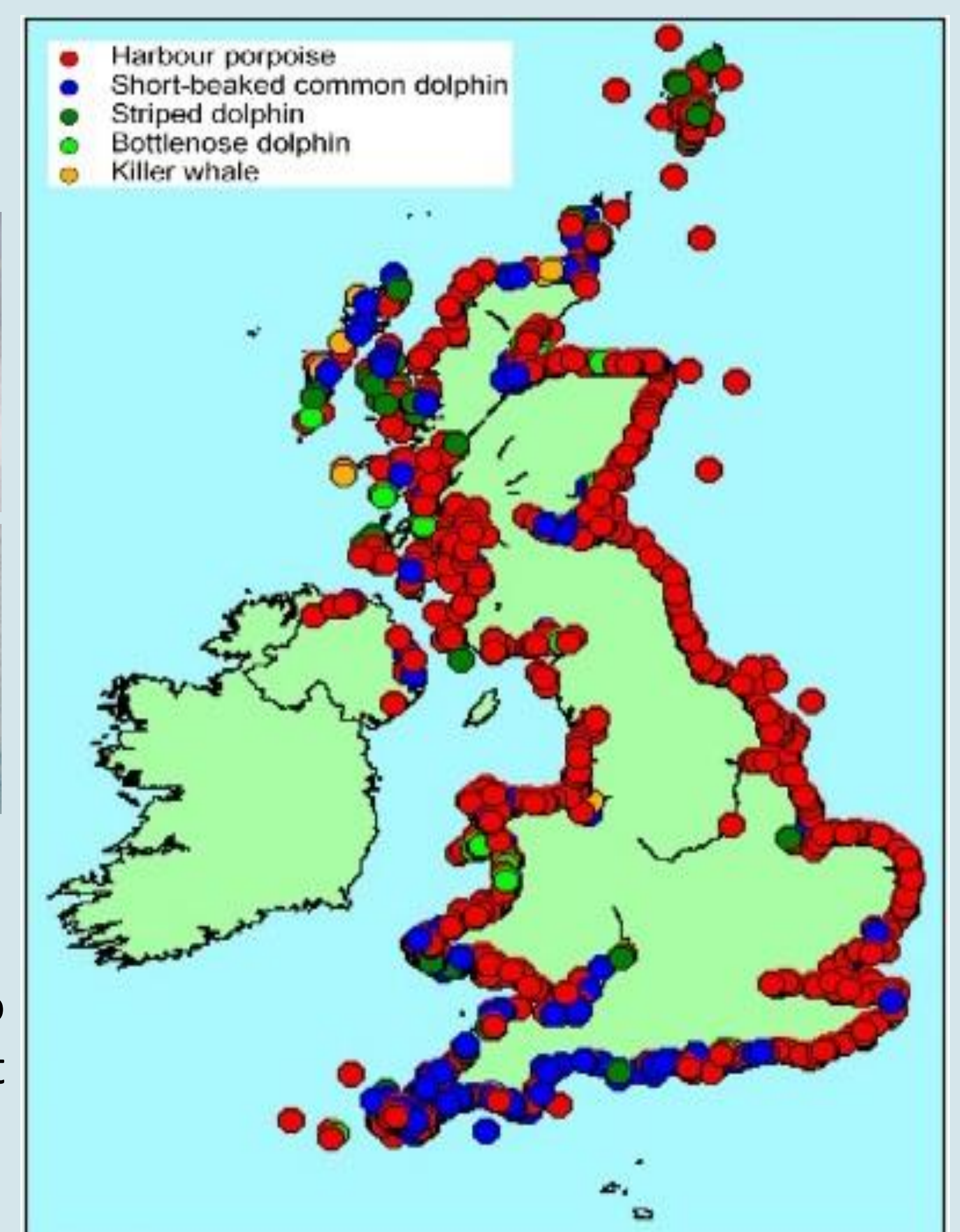
Macroinvertebrates
Fisheries

Predicted wastewater and agricultural exposure

Marine (up to 20 yr record)



Reviewing population Trends of different cetaceans with respect to body burdens of different POPs



Origin of stranded cetaceans for which chemical analysis has been carried out