

relu

Rural Economy and
Land Use Programme

A case study in uncertainty from the LIT team: *Cryptosporidium*

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York Workshop, November 2010

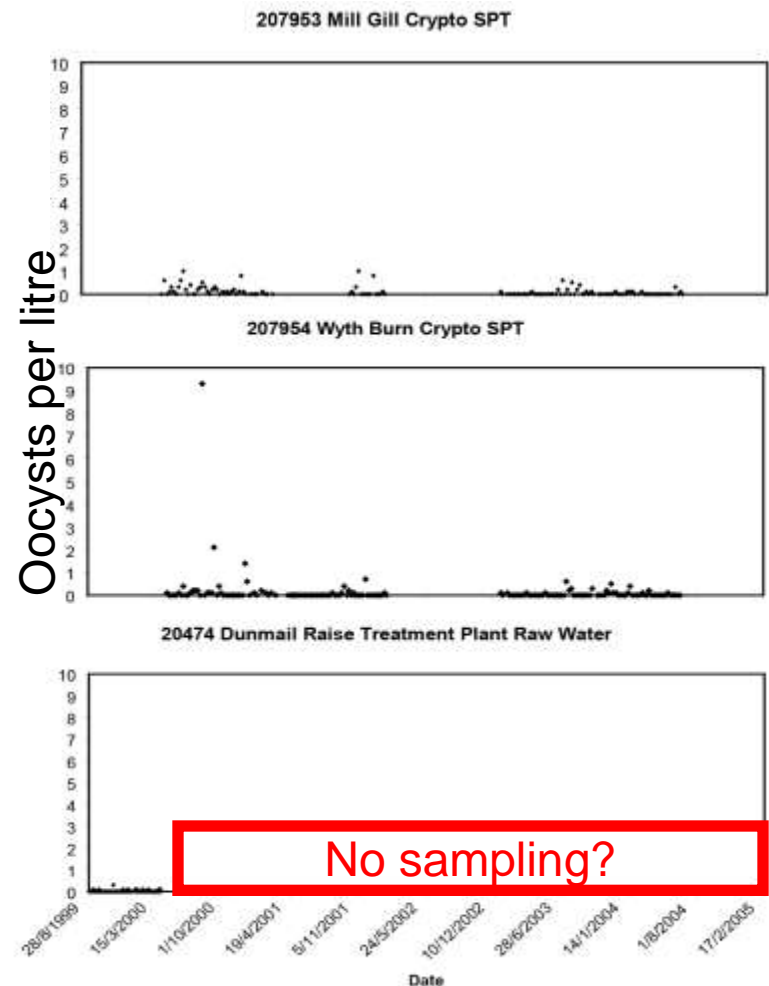
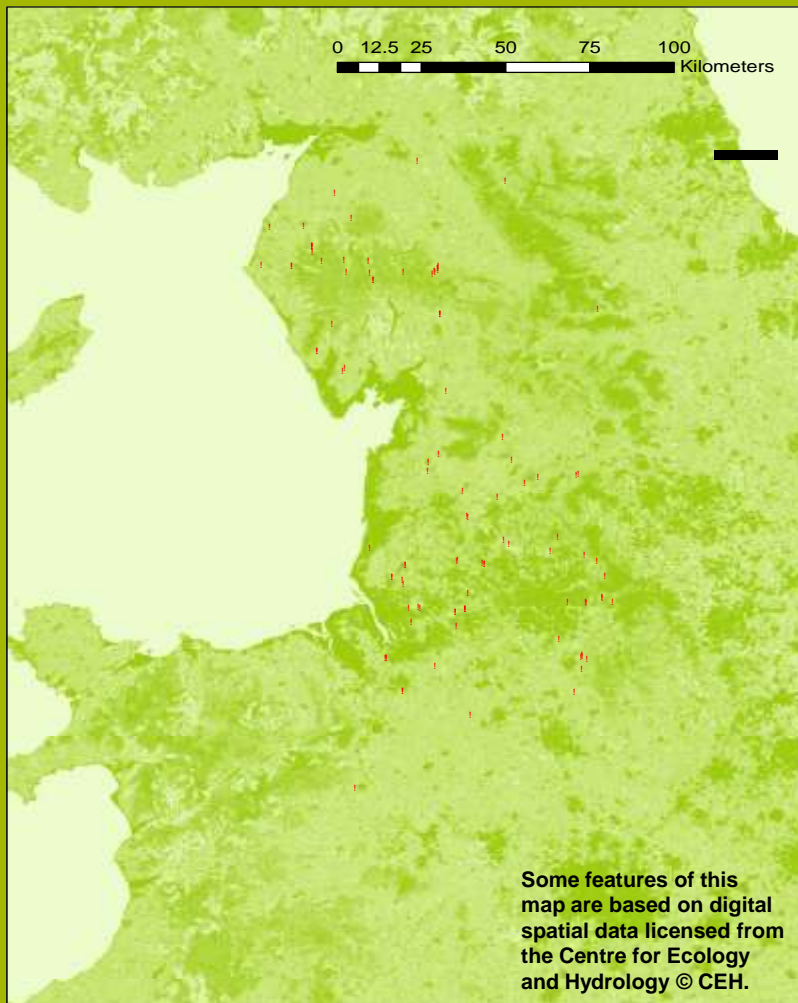
The Crypto. Clinic...Assessing strategies of containment for cryptosporidium: Uncertainties in data and evidence



Issues of accessibility and coverage, including 'blindspots' - the problem of missing data

- Governance issues, who owns the data, where do we get it from?
- Health Protection Agency similarities in missing data or not?
 - Under reporting – 'suffer and get on with it'
- Gaps in data

United Utility data from Northern England – 212 data points, temporal and spatial gaps....



Data gathering protocols

- Data without context
 - *i.e. Data may come with a unknowable history*
- Guiding assumptions of data generation
 - E.g. UU collect less frequent data from their own land than others
- Procedures and protocols of data collection
 - *i.e. sources of human error regardless of whether the assumptions are correct*

Source apportionment uncertainty

- Linking *Crypto* counts. to Environmental source
 - *i.e. problems that arise from tracking back counts to land use, topography and weather etc*
- Linking *Crypto* counts to Epidemiology
 - *i.e. problems in linking public health to the water quality component*

Case study from the Glasgow Mugdock example



Timeline

2000

2001

2002

Glasgow/
Edinburgh
consumers

Crypto Outbreak.
Ninety serious
clinical cases + 1
fatality

Crypto. Incident
and boil water
notice

Incident/
Outbreak
Reduction

Scottish
Water

Discussions on
Filtration

Planning
App.
submitted

Application
Rejected

Treatment
works built

Land use

Intensive sheep farming

Market price
at all time low

Late 2001
Sheep
removed from
catchment

No farming

Scottish
Executive

1999 Call for
proposals on
cryptosporidium

Discussions on
the role of
genotyping

No genotyping

University
researchers

Funded to
develop
genotyping

DWI co-funding

Publication 2002/3

Timeline: Containing Crypto in Glasgow & Edinburgh

Concluding remarks

- *Crypto.* example designed to illustrate some the underpinning uncertainties of 'evidence' in SoCs and highlight the basis upon which innovations in SoC occur in real world circumstances
- Exposing uncertainties and capacities to innovate through such case studies brings the analytical framework to life and underpins, in part, the consultation phase of the research
- Generic similarities to *E. Coli*?