

Scenario I:

General geochemical survey prior to a detailed MND study to:

- *show likely spatial variation of deficiency*
- *identify location for detailed experimentation*

Available information:

- *General estimates of deficiency prevalence in population*

Suitability of method to quantify uncertainty with respect to sample density:

Suitable

Prediction Interval

Offset Correlation

Not Suitable

Conditional probability

Implicit loss function

Scenario II:

Detailed geochemical survey after the MND study to:

- *identify uncertainties and greatest risk over a sub-region*
- *Plan intervention strategies to address deficiency*

Available information:

- *Cost of deficiencies (e.g. Disability adjusted life years- DALYs)*
- *Cost of interventions*
- *Threshold values of soil and crop micronutrient status which indicate deficiency risk*

Suitability of method to quantify uncertainty with respect to sample density:

Suitable

Prediction Interval

Offset Correlation

Implicit loss function

Not Suitable

Conditional probability

Scenario III:

General geochemical survey to:

- *identify sites to trial new crop varieties which accumulate micronutrients*
- *Provide information to support trial planning including soil micronutrient status and pH*

Available information:

- *Background information on soil conditions required by the varieties*

Suitability of method to quantify uncertainty with respect to sample density:

Suitable

Prediction Interval

Conditional probability

Not Suitable

Offset Correlation

Implicit loss function