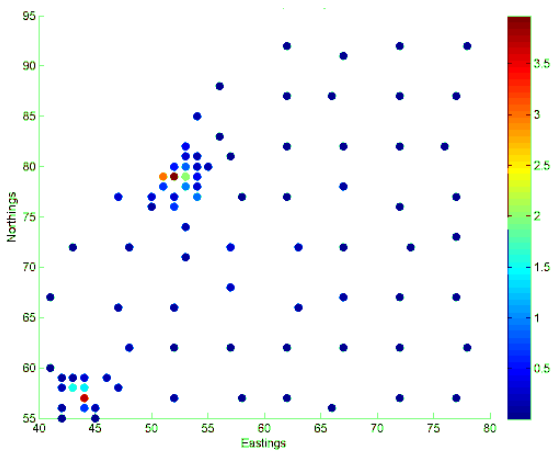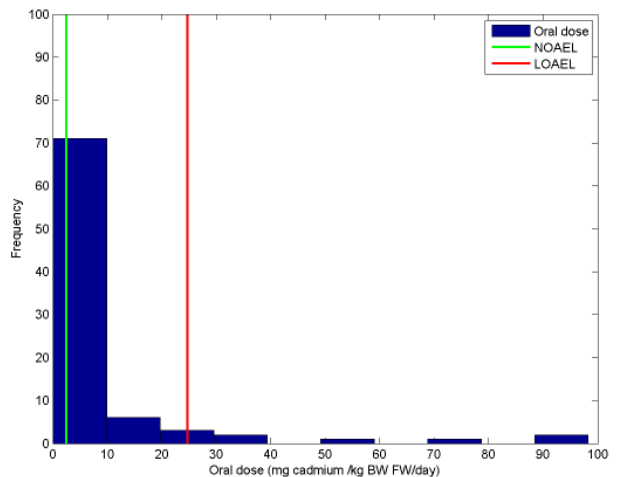# EcoTRANS for Modelling food-chain transfer from contaminated land

EcoTRANS is a software package for estimating the risk and potential food-chain transfer of metals from contaminated sites to a range of wildlife receptors.

EcoTRANS Overview

- Models daily dose of contaminants to 10 indicator receptors commonly found at UK sites.
- Species are representative of different tropic levels and include both mammal and bird species.
- Daily dose is compared to No Observed Adverse Effect Levels (NOAEL) and Lowest Observed Adverse Effect Levels (LOAEL).
- Provides a Hazard Quotient (HQ) to estimate risk.
- Outputs are provided as Excel spreadsheets and maps of the concentrations of contaminants in the food items, dose to receptor and the HQ at each sampling point.

EcoTRANS Features

- Fast and simple to run.
- Models concentrations in food items (soil, plant, soil invertebrate and small mammals).
- Unique UK Wildlife Exposure Factor database.
- Can be used during Tier 1 of the EA Ecological Risk Assessment framework.
- Can be used to target further site investigation.
- Warning messages are displayed when the data is outside of the working range of the models.

EcoTRANS Input Parameters

- Uses total metal soil concentration as a primary input parameter.
- Data is inputted on a co-ordinate basis to allow a spatial characterisation of the concentrations of contaminants in food and receptors and their likely risk.
- Optional data can be inputted to improve the reliability of the modelling including soil pH, surface water concentrations and soil calcium concentrations.
- Site specific vegetation and soil invertebrate data can be used in the model to reduce the reliance on modelled food item concentrations.