Workshop 3 presentation

UK
1. To what extent does your country include abatement of nitrogen emissions in local, regional or national nature policy

- **UK level:**
  - UK Biodiversity Framework
  - Habitats Directive requirements

- **Country level:** National biodiversity strategies
  - *Biodiversity 2020* - *A Strategy for England’s wildlife and Ecosystem Services*

- **Local level:**
  - National Planning Policy Framework – air pollution
  - Habitats Regulations Assessments under Town & Country Planning and Environmental Permitting.
  - Looking to develop Nitrogen Action Plans at the N2K site level.
2. To what extent are nature policy targets taken into account in air pollution policy or agricultural policy?

• These policy areas have come closer together
  
  – In England, benefits from air quality, agriculture and biodiversity being located in the same government department;
  
  – Close collaboration in development of new Rural Development Programme for England; biodiversity input into NECD discussions; tackling pressures from air pollution and agriculture built into biodiversity strategy;
  
  – Joint research funding for evidence projects.
3. Is nitrogen policy seen as local, regional, national or European responsibility?

• There needs to be responsibility at all levels to perform different roles e.g.
  – European: Setting overarching framework to achieve shared ambition; mechanisms to tackle transboundary pollution; ensuring appropriate join up across the DGs; access to financial instruments.
  – National: Setting country level frameworks and ensuring join up across different policy areas to maximise synergies and ensure that the right mechanisms are in place to deliver.
  – Local: Implementing measures to deliver results on the ground; join up between delivery bodies at the local level
4. What indicators and/or response variables are used to support nature policy and nitrogen impacts?

• Critical load and level exceedance

• Common Standards Monitoring

• Development of assessment tools
  – Midpoint/pressure metrics to evaluate benefits of reductions in N deposition

  Endpoint Metrics
  – Metric of habitat quality in response to CCE “Call for Data”
  – Valuation of N impacts on Ecosystem Services
Benefits of marginal reductions in N

• N emissions and deposition are declining, but the “area of sensitive habitats where the critical load is exceeded” changes little.

• N persists and accumulates in soil, but there are some immediate benefits of reduction.

• Recommended *pressure* metric: "N deposition above Critical Load in previous 30 years.

• Recommended *midpoint* metrics: %N in moss (low deposition); N leaching (high deposition).
Developing a metric of habitat quality

- Multimove model predicts habitat suitability for individual species (1342 UK plant and lichen species), based on observed prevalence in relation to several environmental gradients.

- Consultation with Habitat Specialists identified “habitat suitability for positive indicator species” as the best basis for interpreting predicted changes.

- Issues with approach: model can only predict habitat suitability for species & not cover i.e. N induced changes in habitat structure before any loss of species.
Valuing impacts of N on ecosystem service

- Developed methodology to spatially model air pollution impact + uncertainty analysis
- Applied new methodology to valuing N on ‘appreciation of biodiversity’
- Spatially quantify impacts of N on ecosystem services in UK, e.g. N on heathland species richness
- Value that impact within a tested and accepted environmental economics framework
- Use damage cost figures for those impacts in policy appraisal
- Provide evidence highlighting the benefits of emissions reductions for the natural environment
- Horizon scanning identified services that can be assessed next

Change in species richness with declining N deposition.
From 2007 to 2020