

Overview

- Air pollution and risk assessment for ecosystems
- Current tools and approaches
- Learning from the Dutch Approach
- The case for integrated tools
 - User needs
 - Options evaluation
 - Current caselaw
- Project plan overview
- Discussion

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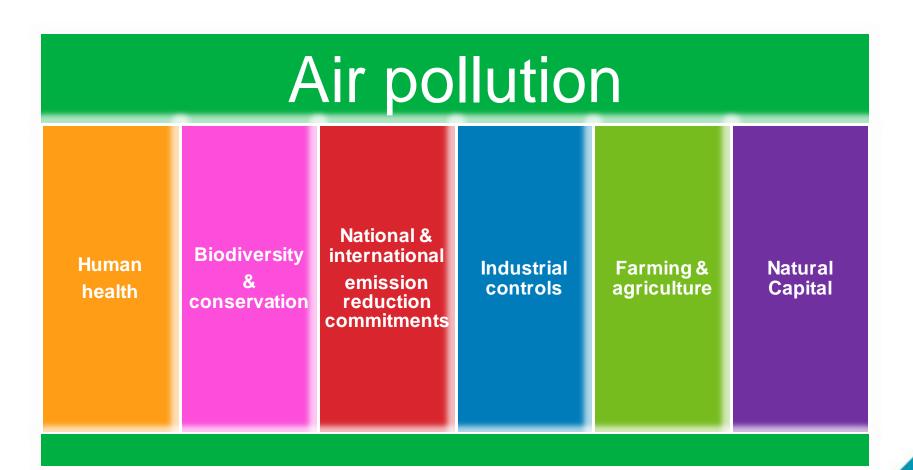
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Your thoughts.... Modelling Local Government Regulator **Emission** Conservation Assessinal Assessina Asse

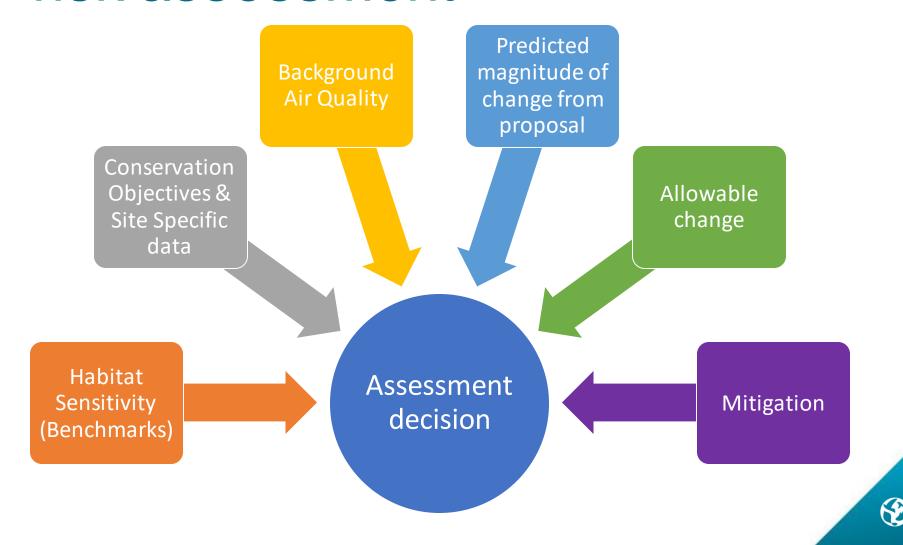


Air pollution and policy





Air pollution and ecological risk assessment

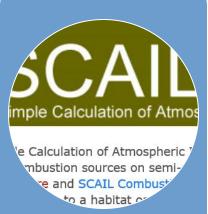


Current tools and data



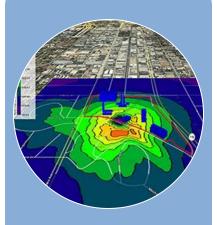
Protected site data

Free, online



Screening model

Free, online



Detailed modelling

Bespoke modelling

Cost to applicant



In-combination assessment

Variable data access

LPA or .gov.uk website



Current UK risk assessment

- Data is held in several locations
 - Air Pollution Information System
 - SCAIL Simple Calculator for Atmospheric Impact Limits
 - Detailed modelling in individual applications
- Divergent interpretation of the same evidence in UK countries
- Confusing for applicants and can be costly
- Sometimes time-consuming for applicants, regulators and local authorities



How the UK got to this point

2013-2015 2016 2017 2018 2019 2020 14 AERIUS launched • NL 5 year freeze • AERIUS Pre- Wealden Options • Dutch Nitrogen Decisions across in NL to discovery Project **Judgment** appraised and Judgment UK limited by

- on development
- UK and Dutch Gov't run Nitrogen Deposition and the Nature Directives Workshop
- AERIUS tools developed by Dutch

- implemented integrated approach to nitrogen (PAS)
- Dutch N Tour -**UK** attended

- in UK
- Call for better spatial visualisation in APIS and better data sharing
- ITAPA Discovery Project
- External consultation and user needs defined
- UK ITAPA Options developed
- Confusion about in-combination assessment

- business case for integrated tool
- Seek RPF funding to implement solutions identified in ITAPA
- Agree to continue to pursue funds

- SR19 bid for ITAPA integrated tool
- Significant legal challenge in NI further limits planning decisions

- caselaw
- Inter-agency Air **Pollution Group** agree to tackle risk assessment as UK issue



Learning from the Dutch Integrated Approach to Nitrogen (PAS)



Ecological Restoration Measures Assessment and monitoring using AERIUS



Why implement the PAS?

2005 - 2008

2009 - 2010

2011-14

2015

2016-19

2019-2020

Series of permits overturned because framework was not legally tenable

No new

emissions

allowed for

agriculture so

licensing stalled

 Debate extends to include traffic and industry

State decides

to apply to all

sectors

approach needs

 Integrated Approach to Nitrogen (PAS) proposed

- PAS and AERIUS proposed and developed
- €8m investment in AERIUS
- PAS becomes law in Jun
- PAS and AERIUS Launch in Aug
- Dutch N Tour in Nov

- AERIUS **Implementation**
- Over €25m estimated saving in first 18 months
- 1500 permission issued

- Dutch Nitrogen Judgement
- Pause on permit issue due to challenge to PAS
- AERIUS Tool praised but need to re-work "room for development" concept

 Agreed threshold approach but overturned so deadlock

PAS is the Dutch Integrated Approach to Nitrogen



Aims of the PAS

PAS is the Dutch integrated approach to nitrogen

Aim: Achieve objectives for Natura 2000, while creating the necessary room for economic development.

Two overarching strategies:

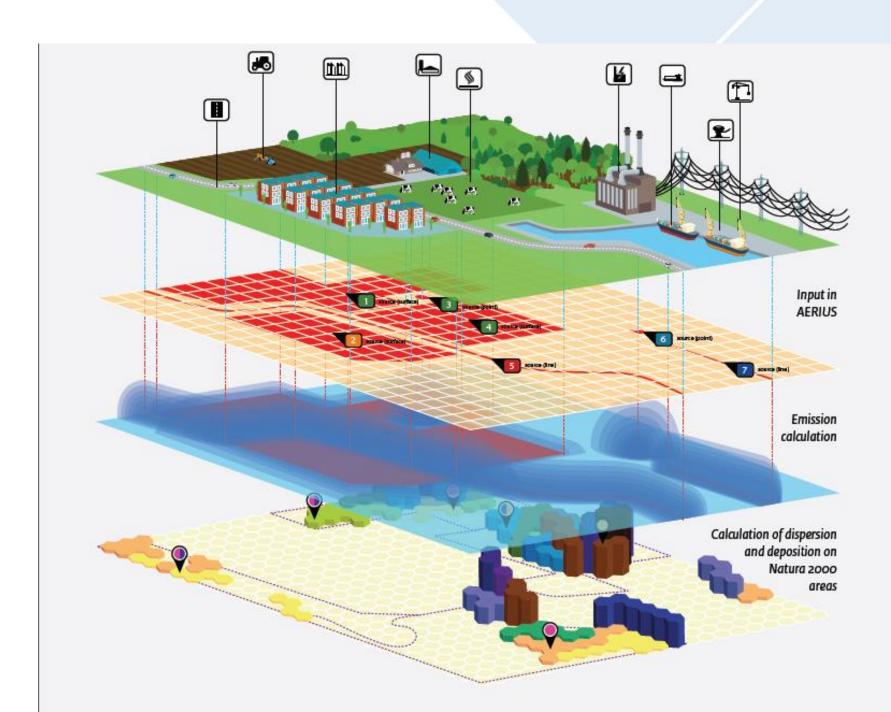
- reducing **nitrogen deposition**, whilst allowing economic development (room for development)
- implementing ecological restoration measures



AERIUS provides a free, simple and clear permit process for developers and decision-makers which reduced costs and streamlined sustainable development.

AERIUSOverview

- Open source, free and online
- Multiple pollutants
- Mapping interface
- Tests emission reduction options
- Dispersion model
- Protected site/habitat data
- Provides data for permit issue





Scope of AERIUS





Issuing permits managing available development room Analysis of actual deposition and trends. Asses amount of development room



Reduction of Nitrogen deposition









Connnect via webservice or provide manual input



Permit Request: Calculation

AERIUS Modules

- Calculator Dutch detailed modelling tool (eg advanced SCAIL/AST)
- Register system to submit applications, issue and record permits
- Monitor manages deposition/ reports trends, permit accounting and Dutch room for development
- Scenario provides overview of deposition under different scenarios
- Connect Chargeable service; network of people from government and industry
- AERIUS Extra data management tool for large projects/business













Which tool is top priority for your work?



ITAPA so far

Pre-Discovery Project

- Immediate government consultation restriction due to data license
- Feasibility assessment with readily available UK Data
- Options appraisal with ballpark costings
- **Decision:** Whether to pursue full Business Case



Business Case

- Seek views more widely (GDS authorization required)
- Full business case and detailed costings
- Define linkages with other initiatives and multiple uses for data
- Decision: whether to implement AERIUS-UK and how



AERIUS UK

- AERIUS developed with available UK data, preferred model, etc.
- Guidance/Training Launch
- Plan for data improvement and use to improve mapping/ modelling
- Trial period then require maintenance

Subject to funding



Technical Evaluation of AERIUS

Objectives

- Test data and technical requirements of AERIUS ✓
- Test effectiveness with more limited UK data (cf Netherlands) √
- Compare to existing tools and define benefits ✓
- Test potential for application in the UK ✓

Stakeholder feedback (gov only)

- Positive reception [©]
- additional applications (eg National Inventory) ©
- potential for integrating [©]

and therefore...included as option to address user needs for air pollution assessment tools ✓



ITAPA Phase 1: Options evaluation

WP1: Team Assignment & Stakeholder Engagement Plan

WP2: General User Needs

Wide consultation

User stories

Agree Themes WP3: Evaluation by Theme

Technical input

Theme-based assessments

Options

WP4: Options Appraisal

WP5: Business Case and Recommendation



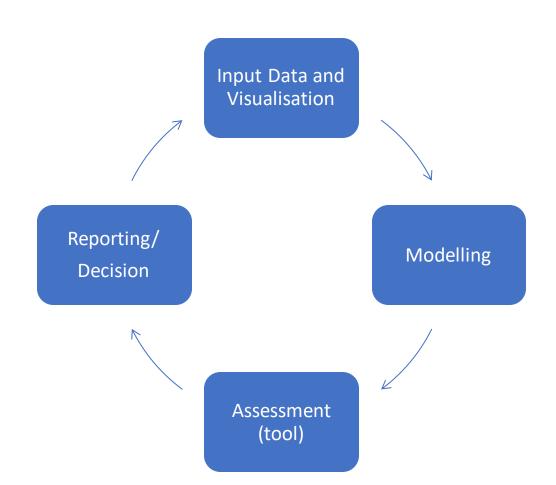
ITAPA and policy objectives



- Nature Strategies
- Clean Air Strategies
- Food & Farming
- Sustainable development



Integrated tool



- Data is held in one place and accessible
- Easy to visualise
- Easy to test mitigation alternatives
- Aligned use of evidence
- Clear for applicants, advisers, regulators and local authorities

Driver for data improvement and open data used to improve national reporting and targeting



Stakeholder feedback (so far)

- Supportive but would need to plan resource to input to tool development
- Clear benefit of UK working and alignment where possible
- Needs rigorous testing against current detailed modelling
- Concern about having to choose one model
- Concern about having one mechanism to make a decision
- Clear streamlining for in-combination assessment
- Clear benefit for open data, data access and harmonising data

CONCLUSION:

Challenging to implement and will require **discussion**but **worth the effort**



ITAPA so far (re-cap)

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Your thoughts....

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ITAPA Proposed Timing

Timing from start	Start	3 months	6 - 9 months	1 year	15 - 18 months
Increment	0	1	2-3	4	5-6
Milestones	Governance Structure	Stakeholder groups established	Technical demonstration	Quality assurance - Technical - User	Prioritise future developments
	Setup user groups Final detailed workplan	Agree technical choices	Guidance and training development	Development of final version for release	System maintenance Review and evaluation

- Increments of approximately 3 months
- Iterative and step-wise process
- Technical and policy workstreams



User needs and challenges

monitoring deposition verification acid modelling impacts

What do you need and how could ITAPA help?



Towards integration

buy-in inappropriate development criticised benefits stakeholders knowledge solutions reactive areas Netherlands. addressed tightening hesitancy consideration integrated continuing state-of-the-art limitations experience around local concerns robust tool account places permitting decisions quality already needs inevitable UK flying sectors plans brought restrictions justified studies SOURCES improve public etc approach process improvements air sector processes enough equitable comprehensive eveloping sters SCIIIIIIIISEd developing offers





ITAPA and current projects

- Open Data and digitisation of permitting/ decision making
- Data improvements habitat mapping, satellite data/monitoring, data integration
- Integrated working
 - Farm activity data (national atmospheric emissions inventory)
 - Habitat condition data held in one place
 - NECD reporting and monitoring repository
 - MET Office Integrated Modelling Project

What are you aware of that the ITAPA Project Plan should account for?

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