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ITAPA Planning Session 4: Policy Focus Group



#### Overview

- Air pollution and UK ecosystems
- Dutch PAS (Integrated Approach to Nitrogen)
- AERIUS the tool
- Meeting UK needs
- Discussion
  - Project plan
  - Policy drivers
  - Stakeholders
- Next Steps

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#### Air pollution and policy



#### How do air emissions reach ecosystems?



#### Effects on lower plants

#### Lichen



#### Healthy



Moss

#### Damaged by ammonia



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Images APIS

#### Effects on higher plants



Wavy hair-grass replacing heather





#### Wood sorrel lost to velvet grass

Images APIS



#### Animals and indirect effects



Through changes to foraging and breeding habitat

or as sources themselves...









White Clawed Crayfish Jenny Wheeldon 2016; Marsh Fritillary Allan Drewitt 2004; Greater Horseshoe Bats Michael Hammett 1998; Green tiger beetle Allan Drewitt 2015; Puffin Colony Outer Farne Islands Paul Glendell 2000



### UK policy context



- Effects sometimes hard to visualise
- Long term effects
- Exceedances across much of our protected habitat
- Many pollutants, sources and controls
- Risk-based decisions
  - Allowable increases
  - Focus on sensitive sites
  - UK country variation

#### Learning from the Dutch Integrated Approach to Nitrogen (PAS)



Ecological Restoration Measures Assessment and monitoring using AERIUS

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#### Why implement the PAS?

2005 - 2008	2009 -2010	2011-14	2015	2016-19	2019-2020
<ul> <li>Series of permits overturned because</li> </ul>	<ul> <li>State decides approach needs to apply to all</li> </ul>	<ul> <li>PAS and AERIUS proposed and developed</li> </ul>	<ul> <li>PAS becomes law in Jun</li> </ul>	<ul> <li>AERIUS Implementation</li> </ul>	<ul> <li>Dutch Nitrogen Judgement</li> </ul>
framework was not legally tenable	<ul> <li>Debate extends</li> <li>to include traffic</li> </ul>	•€8m investment in AERIUS	<ul> <li>PAS and AERIUS Launch in Aug</li> </ul>	<ul> <li>Over €25m estimated saving in first 18 months</li> </ul>	<ul> <li>Pause on permit issue due to challenge to PAS</li> </ul>
<ul> <li>No new emissions allowed for agriculture so licensing stalled</li> </ul>	<ul> <li>Integrated Approach to Nitrogen (PAS) proposed</li> </ul>		• Dutch N Tour in Nov	<ul> <li>1500 permission issued</li> </ul>	<ul> <li>AERIUS Tool praised but need to re-work "room for development" concept</li> </ul>
<ul> <li>Agreed threshold approach but overturned so deadlock</li> </ul>	p. op oood	PAS is Appro	s the Dutch I bach to Nitrog	ntegrated gen	Since Since

#### AERIUS Overview

- 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



Reduction of Nitrogen deposition

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CALCULATOR

RIUS

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



#### **Differences from UK**



- Higher background concentration/deposition
- Integrated Approach to Nitrogen in law
- Extensive ammonia monitoring network
- High resolution deposition data
- More activities require a "permit"
- Detailed mapping of Annex I habitats



## Similarities to UK

- Need for Habitats Directive compliance
- Habitats under pressure from air pollution
- Balancing economic growth with environmental quality
- Agriculture important to economy
- Variety of emission sources
- Thresholds approach challenged



#### **ITAPA and UK policy objectives**



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

Working Data Internationally Red Tape



#### How the UK got to this point

2013- 14	2015	2016	2017	2018	2019	2020
<ul> <li>NL 5 year freeze on development</li> <li>UK and Dutch Gov't run Nitrogen Deposition and the Nature Directives Workshop</li> </ul>	<ul> <li>AERIUS launched in NL to implemented integrated approach to nitrogen (PAS)</li> <li>Dutch N Tour – UK attended</li> </ul>	<ul> <li>AERIUS Pre- discovery Project in UK</li> <li>Call for better spatial visualisation in APIS and better data sharing</li> </ul>	<ul> <li>Wealden Judgment</li> <li>ITAPA Discovery Project</li> <li>External consultation and user needs defined</li> </ul>	<ul> <li>Options appraised and business case for integrated tool</li> <li>Seek RPF funding to implement solutions identified in ITAPA</li> </ul>	<ul> <li>Dutch Nitrogen Judgment</li> <li>SR19 bid for ITAPA integrated tool</li> <li>Significant legal challenge in NI further limits</li> </ul>	<ul> <li>Decisions across UK limited by caselaw</li> <li>Inter-agency Air Pollution Group agree to tackle risk assessment as UK issue</li> </ul>
<ul> <li>AERIUS tools developed by Dutch</li> </ul>			<ul> <li>UK ITAPA Options developed</li> </ul>	<ul> <li>Agree to continue to pursue funds</li> </ul>	planning decisions	
			<ul> <li>Confusion about in-combination</li> </ul>			

assessment

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### **UK User Needs**

- Data quality (monitoring and modelling)
- Data access
- Permitting/ decision-making
  - Variation in approach
  - confusing and time-consuming for applicants, regulators and local authorities
- Limited integration between local and national scale
- Strategies require measures that need permissions and risk assessment





## 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

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#### 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 take a lot of discussion but worth the effort



#### ITAPA so far



## **ITAPA Phase 2 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	Dataset collation Agree technical	Guidance and training development	acceptance Development of	System maintenance
	workplan	choices	·	final version for release	Review and evaluation

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



## 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?



#### How can I get involved?



Contributions

- Quality assurance
- User evaluation
- Validation
- Oversight
- Advice
- Stakeholder engagement

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- Stay informed
- Spread the word

#### Your thoughts....

Modelling Local Government Project Regulator Emission National onservation licant Policy Regional Plan Consultant ASSESSMENT Join the polls on www.menti.com

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