



VALUING NATURE

Taking the Bite out of Wetlands

Valuing Nature Annual Conference

Tim Acott, University of Greenwich

Tuesday 18th October 2016

Manchester Central Complex, M2 3GX



The Project



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Taking the bite out of wetlands: managing mosquitoes and the socio-ecological value of wetlands for wellbeing or

WetlandBITE!

AHRC / ESRC / NERC Funded

University of Greenwich: **Tim Acott, Adriana Ford**

Natural Resource Institute: **Gay Gibson, Frances Hawkes, Bob Cheke**

University of Bristol: **Peter Coates**

Cranfield University: **Anil Graves, Joe Morris**

University of Brighton: **Andrew Church, Neil Ravenscroft**

Public Health England: **Jolyon Medlock, Alex Vaux**

Forest Research: **David Edwards**

Supported by project partners:

Game and Wildlife Conservation Trust: Nick Southerton

Natural England: Ruth Waters

Wildfowl and Wetlands Trust: Ruth Cromie

University of Sheffield: Allister McGregor

Imperial College, London: Julie Urquhart

Environment Agency: TBC



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Aim and research questions

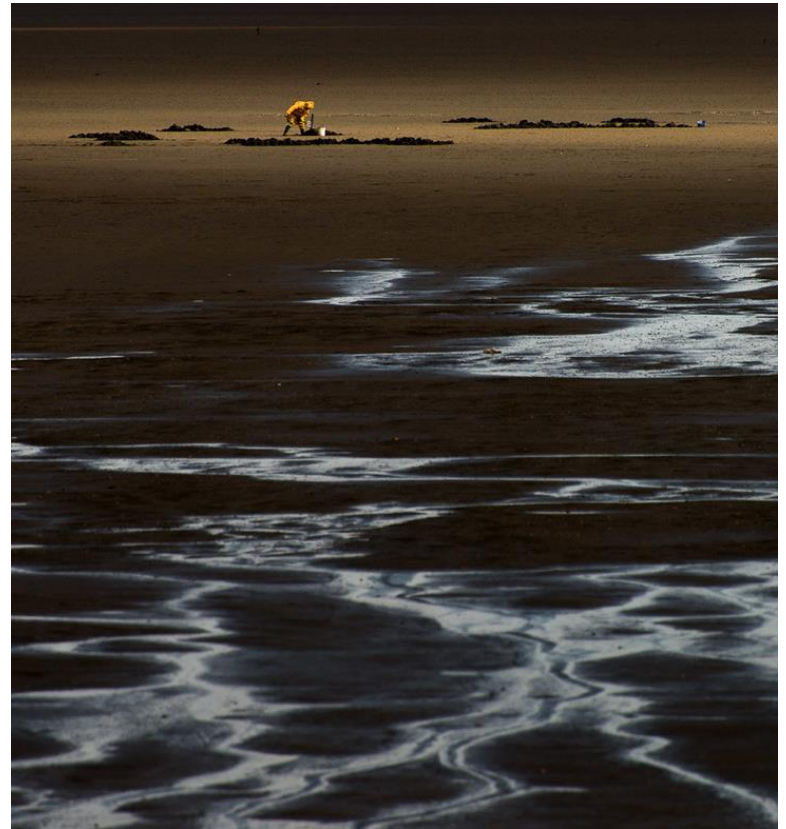


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Maximise **positive socio-cultural and ecological values** of wetlands for wellbeing and **reduce negative attitudes**

Research questions:

1. How can an ecological understanding of mosquitoes, plus socio-cultural/economic valuation, facilitate wetland management and expansion?
2. How can wetland creation and restoration be managed without risking human health and wellbeing due to mosquito –borne nuisance and disease?
3. How can we understand the range of serious concerns in sectors of the community about the creation and restoration of wetlands in local areas and provide guidance to ameliorate these concerns?
4. How can an interdisciplinary place-based approach to wetland valuation be used to produce practical guidance for end-users that is transferable to a range of wetlands types and resource management situations?



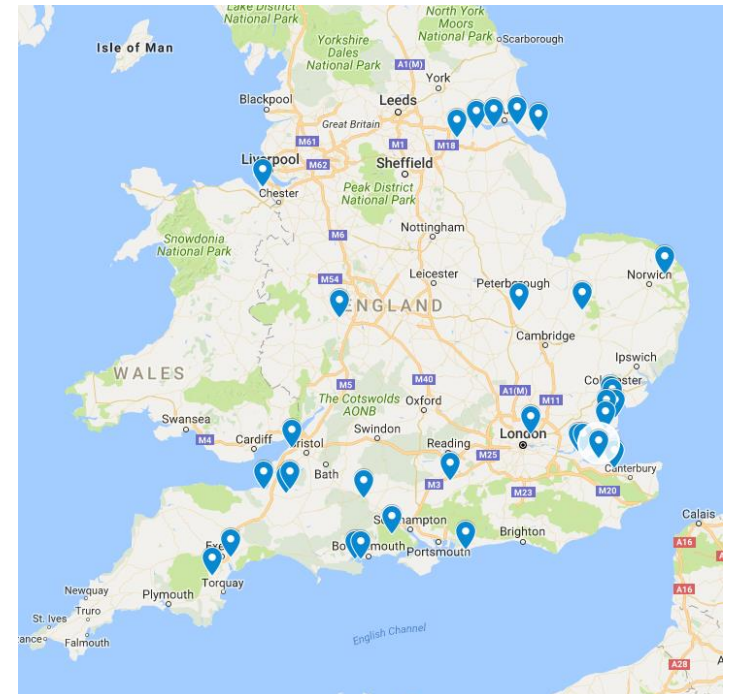
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Conceptual work and Methods: 12 case studies (3 in depth)

- WP 1: Conceptual approaches – Sense of place, ecosystem services (cultural), wellbeing (3D social wellbeing), co-construction (e.g. ANT)
- WP2:
 - Case studies (coastal managed realignment, arable reversion, urban wetlands, wet woodlands)
 - Ecological surveys
 - Economic valuation (e.g. questionnaire, interviews)
 - Sense of place / wellbeing (interviews, focus groups, community-voice, artistic lens (modified photo-elicitation), historical survey (e.g. oral histories, maps, texts).
- WP3: Information guidance production



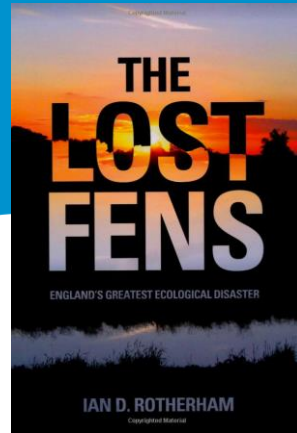
Overwintering mosquitoes munitions tunnel Cliffe Kent 2014



Narratives

The loss the the Fens in England is described as 'England's greatest ecological disaster'

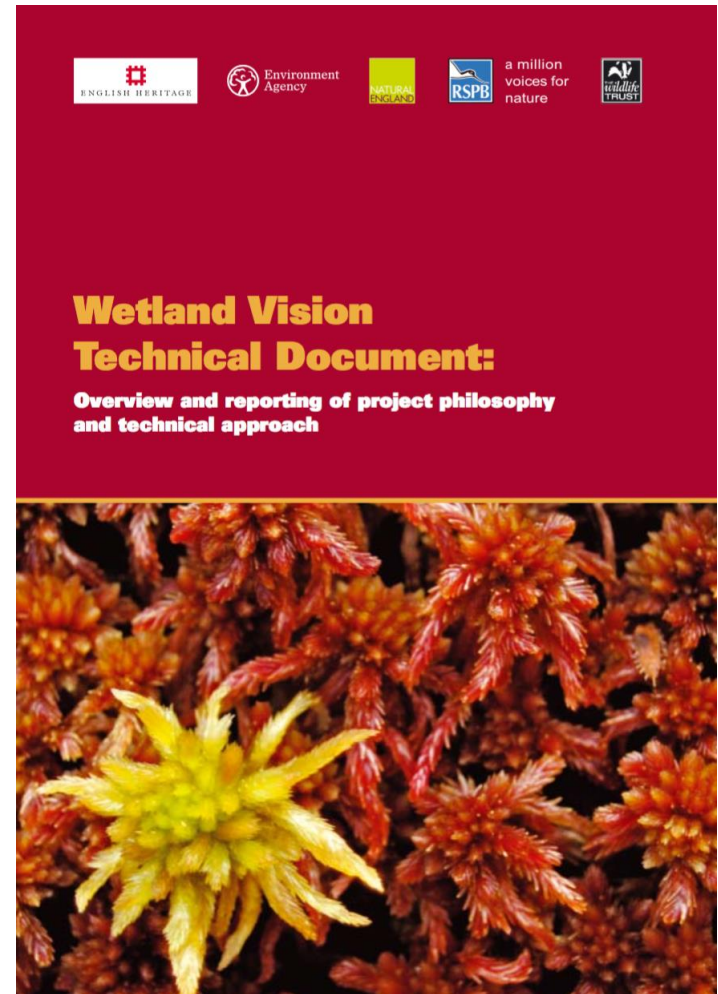
(Rotherham 2013, pg. 22)



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“Wetlands – swamps, marshes, mires, morasses, bogs, lagoons, sloughs, shallow lakes and estuaries, etc. – have been seen by many in ‘the west’ as places of disease and death, horror and the uncanny, melancholy and the monstrous- in short as back waters”. (Giblet 1996, pg. xi)



Emergent narratives



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- Narratives around productivism
- Climate change and extreme weather (increased risk of flooding)
- Possible response is wetland expansion
- But little is known about impact of wetland expansion on transmission of mosquito-borne disease
- This knowledge gap opens up space for speculation and the formulation of new narratives

Flooding on Somerset levels 2014



© 2014 David Sim

(source <http://www.ibtimes.co.uk/uk-flooding-crisis-aerial-photos-somerset-levels-1435932>)

Emergent narratives

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Theresa May - call a General Election

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TRENDING THERESA MAY POKEMON GO DAVID CAMERON WEATHER ANGELA EAGLE

Deadly mosquito found in the UK for first time since the 1940s

00:00, 9 FEB 2012 BY MIKE SWAIN

The culex modestus bears the West Nile virus which causes flu-like symptoms and inflammation of the brain and spinal cord

20 SHARES

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Killer: The mosquito is in Britain

A mosquito carrying a deadly virus has arrived in Britain. The insect, culex modestus, bears the West Nile virus which causes flu-like symptoms and inflammation of the brain and spinal cord. It has been found breeding in the marshes of north Kent and south Essex over the past two years – the first sighting of the insect in the UK since the 1940s. The mosquito is suspected of causing virus epidemics in southern Europe but last night experts stressed no one has ever been infected after being bitten here.

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Zika virus is confirmed in the UK: Four cases of pandemic that affects pregnant women found in the last six weeks, health watchdog reveals

- Four cases of the **Zika virus** have been confirmed in UK in last six weeks
- Public Health England: **Virus not believed to have been contracted in UK**
- **Cases of the pandemic, which affects pregnant women, 'travel associated'**
- Health officials **'expect to see more cases'** of travel associated infections
- See the latest Zika Virus updates at www.dailymail.co.uk/zikavirus

By SAM TONKIN FOR MAILONLINE

PUBLISHED: 12:49, 10 February 2016 | UPDATED: 02:11, 29 February 2016

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Four cases of the **Zika virus** have been confirmed in Britain, health officials revealed today. Public Health England said the pandemic – feared to cause abnormally small skulls and brain damage in babies – was identified in the last six weeks in those infected. A committee of MPs in Westminster were told that the four cases were 'travel associated' and not believed to have been contracted in the UK.

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Home News Nature Britain's warmer weather to bring deadly tropical disease-carrying mosquitoes within YEARS



DEADLY tropical diseases carried by mosquitoes and other blood-sucking insects could be endemic in the UK in the next few decades, health experts have warned.

By TOM BATCHELOR

PUBLISHED: 09:07, Mon, Mar 23, 2015 | UPDATED: 20:37, Sat, Apr 18, 2015

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Infected mosquitoes are thought to have been brought to Europe in imports of car tyres

“The scheme we are opposing is driven by dogma, the science does not support it... it...will reduce our iconic landscape to a mosquito infested swamp”.

Pathways to impact



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How to deliver impact:

- **End user participation:** PHE and other key stakeholders
- **Information and guides** targeted at different stakeholders
- **Project website** for decision support
- **e-book of real world cases** explaining the economic and social value of wetlands
- **Creative conversations** combining arts, humanities and sciences
- **Community voicings:** short documentaries to engage a general audience
- **Academic writings**



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Three Future Benefits



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- **Enhanced understanding** of the social and economic value of wetlands for wellbeing
- **Guidance for governance:** Support wetland creation/restoration while controlling mosquito related risk through intervention strategies
- **Contribution to a wider international discourse** on the value of cultural ecosystem services, including natural risk management



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