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H2020-MSCA-RISE-2016
CURE-XF - 734353

Natural Environment Research Council (NERC) Centre for Ecology & Hydrology (CEH)

Presentation of Partners

NERC

CURE-XF Kick-off Meeting
CIHEAM Bari 28-29 September, 2017



**Centre for
Ecology & Hydrology**

NATURAL ENVIRONMENT RESEARCH COUNCIL



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NERC Centre for Ecology & Hydrology

- **NERC:** UK Government funding body for environmental science
- **CEH:** NERC's research institute in the terrestrial and freshwater environmental sciences
- 4 sites across the UK (Edinburgh and Wallingford/Oxford most relevant)
- 334 Research scientists, ~120 postgraduate students
- Broad range of research in 8 science areas



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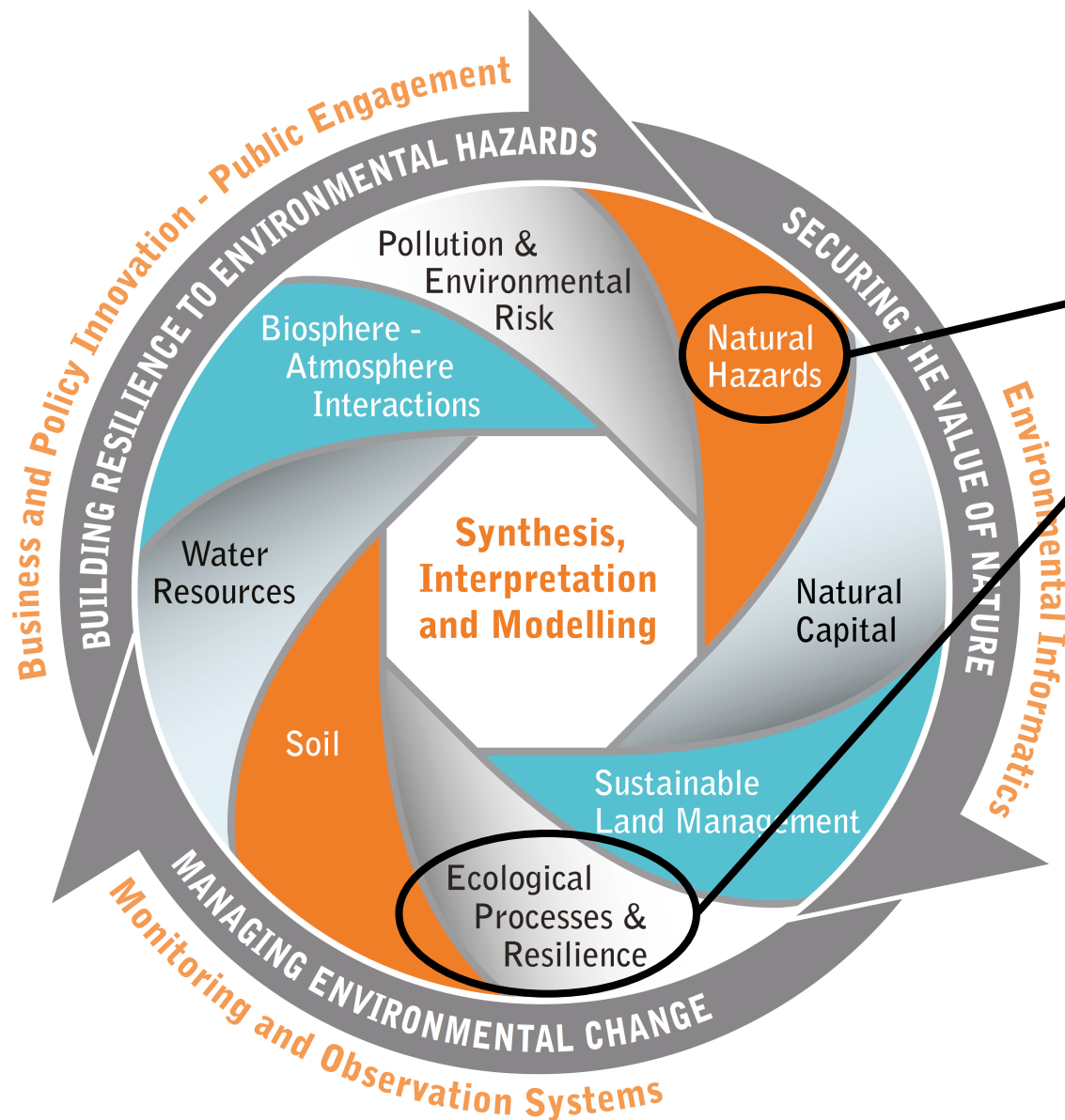


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Invasive species and disease ecology

Data (DAISIE, GB Non-Native Species Information Portal, UK Biological Records Centre)

Risk modelling (Species distribution models, dispersal and population dynamics, transport and contact networks)

Priority species (*Xylella fastidiosa*, *Phytophthora*, bluetongue virus, Harlequin ladybird *Harmonia axyridis*, ragweed *Ambrosia artemisiifolia*)

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➤ Main facilities

- Labs: Entomological and pathogen research (not quarantined), plant growth facilities
- Experimental fields: Range of experimental and long-term monitoring field sites
- Accommodation: Able to host visitors in our institutes (offices, labs, meeting rooms) but visitors will need to find independent accommodation (e.g. Edinburgh/Oxford)
- **Xylella team**: Dr Daniel Chapman, Prof. James Bullock, Dr Steven White



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➤ Main activities on *Xylella fastidiosa*

➤ Projects: XF-Actors, EFSA-funded project on modelling in plant health

➤ Research activities:

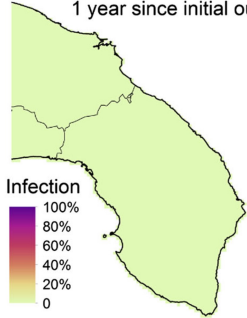
➤ Spatial epidemiological model for spread of the Italian epidemic (bacteria olive trees, weeds, insects)

➤ Dispersal/spread patterns

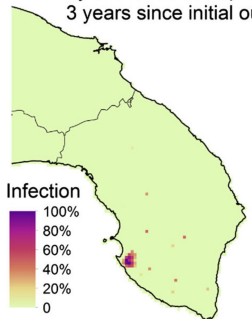
➤ How to plan surveillance and management

➤ Publications:

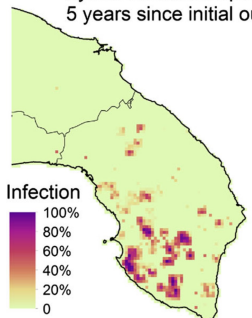
Xylella fastidiosa spread,
1 year since initial outbreak



Xylella fastidiosa spread,
3 years since initial outbreak



Xylella fastidiosa spread,
5 years since initial outbreak



Biol Invasions (2017) 19:1825–1837
DOI 10.1007/s10530-017-1393-5

ORIGINAL PAPER

Modelling the spread and control of *Xylella fastidiosa* in the early stages of invasion in Apulia, Italy

Steven M. White · James M. Bullock ·
Danny A. P. Hooftman · Daniel S. Chapman

RESEARCH PAPER

WILEY Global Ecology
and Biogeography

A Journal of
Macroecology

Global trade networks determine the distribution of invasive non-native species

Daniel Chapman¹ | Bethan V. Purse² | Helen E. Roy² | James M. Bullock²

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