iCASP Response to Environmental Audit Committee Inquiry: Invasive Species

April 2019

iCASP

1. Yorkshire Integrated Catchment Solutions Programme (iCASP) is a five-year (2017-2022) Natural Environment Research Council-funded partnership established to support the UK Industrial Strategy. iCASP aims to generate £50 million+ of benefits to Yorkshire's economy by influencing investments, informing policies and strategies, identifying cost savings, and creating new products and jobs. It will do this through projects that support the use of environmental science in catchment management. As well as regional impact, iCASP is aspiring for national and international influence through sharing the experience of regional projects at the national level, and by exporting catchment management expertise and products internationally.

2. iCASP partners are: University of Leeds, University of Sheffield, University of York, National Centre for Atmospheric Science, Arup, Bradford Metropolitan Borough Council, City of York Council, Dales to Vales River Network-Yorkshire Dales Rivers Trust, Environment Agency, IUCN UK Peatland Programme, JBA Trust, Leeds City Council, Linking Environment and Farming, Met Office, Natural England, National Farmers' Union, Pennine Prospects, Yorkshire Water, Yorkshire West Local Nature Partnership, and Yorkshire Wildlife Trust. iCASP is also looking to work with additional organisations through its projects.

3. iCASP is based out of water@leeds at the University of Leeds, one of the largest interdisciplinary centres for water research in any university in the world.

4. iCASP has already had success in providing evidence for major flood risk mitigation business cases in Yorkshire, and supporting the development of the Leeds City Region Green and Blue Infrastructure Strategy.

5. Further information about iCASP can be found at https://icasp.org.uk/

Response to Inquiry

6. **This response is from the iCASP Programme Office based at the University of Leeds, rather than on behalf of all of the iCASP partners.** It addresses the following five questions from the Inquiry. iCASP is supportive of the response made to this Inquiry by the Yorkshire Invasive Species Forum.

7. In the 'Chair's comments' in the Terms of Reference of this Inquiry, the following statement is made: "Climate change means that invasive species are migrating to the UK where we're witnessing a dramatic rise in range and numbers. These are plants, fish and insects that pose a threat to our indigenous wildlife and human health, and are already costing our economy almost £2 billion a year". The main driver of the introduction to the UK and secondary spread (spread of invasive non-native species, INNS, from one region to another within the UK) is human activities

including trade, agriculture, transport, and recreation[1]. Climate change may affect the likelihood that a species that is introduced establishes a population, but is not the main reason for arrival of INNS in the UK. Prevention is the first line of defence against the impact of INNS, so it is important that we prioritise slowing the introduction and spread of INNS as a result of human activity.

(i) How well is the UK and its overseas territories managing the impact of invasive species and controlling the risks of further invasion?

8. The UK needs greater focus on prevention, including biosecurity, to slow the introduction and spread of INNS. The UK is not a leading country in biosecurity, but lags decades behind New Zealand and Australia. The UK needs greater investment on controlling the risks of further invasion and spread of INNS. For example, compare the expenditure in biosecurity the Animal and Plant Health Agency (£217 million in 2016-2017) who have inspectorates to ensure border biosecurity, with the expenditure on INNS biosecurity (£922k in 2016-7)[2]. The UK has some voluntary biosecurity campaigns (e.g. Check, Clean, Dry; Be Plant Wise) but biosecurity awareness and capacity across stakeholders is patchy[3].

9. The UK benefits from the EU Regulation on Invasive Alien Species and the associated lists of species. Risk assessments have been developed for eradication feasibility[4].

10. Environment Agency requirements on water companies to improve biosecurity to reduce the risk of INNS spread during their activities is important - but there is need for research funding to identify and test ways of achieving this.

(ii) What are the risks of invasive non-native species migrating to the UK from future climate change?

11. The main driver of the introduction (introduction to the UK) and secondary spread (spread of INNS from one region to another within the UK) is human activities including trade, agriculture, transport, and recreation[5]. Climate change may affect the likelihood that a species that is introduced establishes a population. In addition, the changing climate is likely to increase tourism, and recreational activities can lead to the introduction and spread of INNS.

[1] Seebens H, Blackburn TM, Dyer EE, et al (2018) Global rise in emerging alien species results from increased accessibility of new source pools. Proc Natl Acad Sci U S A 115:E2264–E2273. doi: 10.1073/pnas.1719429115 https://www.pnas.org/content/pnas/115/10/E2264.full.pdf

[2] Wildlife and Countryside Link 'Brexit: plant and animal biosecurity - Written evidence for the House of Lords EU Energy and Environment Sub-Committee' https://www.wcl.org.uk/docs/HoL_biosecurity_inq_evidence_%20April2018.pdf

[3] Sutcliffe, C., Quinn, C.H., Shannon, C. et al. Biol Invasions (2018) 20: 399. https://doi.org/10.1007/s10530-017-1541-y

[4] Booy, O., Mill, A.C., Roy, H.E. et al. Biol Invasions (2017) 19: 2401. https://doi.org/10.1007/s10530-017-1451-z

[5] Seebens H, Blackburn TM, Dyer EE, et al (2018) Global rise in emerging alien species results from increased accessibility of new source pools. Proc Natl Acad Sci U S A 115:E2264–E2273. doi: 10.1073/pnas.1719429115 https://www.pnas.org/content/pnas/115/10/E2264.full.pdf

(iii) Where should the four nations prioritise resources to tackle invasive species?

12. **Prevention of the introduction and spread of INNS.** Biosecurity must be a priority as it is the most effective and cost-effective option. Treatment of established INNS is costly, requires years, and often can only control rather than eradicate. Prevention should be prioritised. Strong biosecurity is essential at borders to prevent new species from entering the country which will complement plant and animal health officers. Importantly, strong biosecurity is also key to reducing wider spread and associated costs of new and established INNS.

(iv) How effective have the European Union's Invasive Alien Species Regulations been at addressing and tackling invasive species?

13. The EU Regulation on Invasive Alien Species has three main aims: prevention, early detection/ rapid response and management of invasive species. The prioritisation of prevention is key to the EU Regulation and increases the effectiveness of national legislation which focuses more on control of particular species.

(v) How should the UK work with the European Commission and others internationally to reduce the risk of invasive species?

14. Prevention of the introduction and spread of INNS is the most cost effective method of guarding against the costs of INNS. It is imperative that the UK ensure biosecurity legislation is resourced and enforced for invasive species as well as for plant and animal health. Invasive species do not comply with borders and therefore the UK must ensure that it adopts the EU Regulation into domestic legislation post EU Exit and continues to cooperate with the European Union.

Future work to support this Inquiry

15. iCASP has just started a project to support local authorities in Yorkshire to develop biosecurity practice to reduce the spread of aquatic invasive non-native species. iCASP would be happy to provide the Committee with further information on this project and/or to elaborate further on the responses provided above - please contact iCASP@leeds.ac.uk