HEALTHY ECOSYSTEM RESTORATION IN OXFORDSHIRE (HERO)

FEBRUARY 23 2022

SOCIAL DIMENSIONS OF NATURE RECOVERY ACROSS OXFORDSHIRE

OXFORD MARTIN SCHOOL

UNIVERSITY OF OXFORD

About HERO

Healthy Ecosystem Restoration Oxfordshire (HERO) is a three year programme (in the first instance) supported by the Oxford Martin School, under their new Programme on Biodiversity and Society. HERO will explore how Oxford University can play a role in efforts to restore ecosystems to health in Oxfordshire, by bringing the University's strengths in academic knowledge, research capacity and convening power to support ongoing and planned nature recovery activities by a range of local partners and stakeholders, including land-owners and farmers.

With its active network of nature recovery groups, Oxfordshire presents a compelling opportunity to test and showcase a portfolio of different ecosystem restoration strategies, to become a model county for nature recovery. HERO aims to build a community of practice between the University and local practitioners, and will also form a resource for the University and its constituent Colleges within broader institutional sustainability goals.

The HERO network brings together researchers from the natural and social sciences with local authorities, environmental organisations, landowners and community groups who are already working on a range of initiatives to help support nature's recovery and enhance the multiple benefits that nature provides in Oxfordshire. We also aim to invite prominent supporters of Oxford's biodiversity research in the business, finance, government and NGO sectors, to strengthen links with external stakeholders.

HERO aims to hold a regular series of workshops and seminars to examine key opportunities, challenges and evidence gaps around nature recovery in Oxfordshire, and also provide a limited amount of research resource to help fill evidence gaps.

About this workshop

This note presents the outputs from the fourth HERO workshop, which was attended virtually by 24 participants on the 23rd of February 2022.

The inception workshop in July 2021 identified the priorities for nature recovery across Oxfordshire. The second workshop in September 2021 identified the major challenges to adequate and reliable land mapping and the third workshop focused on evidence needs for a nature recovery strategy.

This fourth workshop refines the social science research agenda of HERO and outlines the socio-economic and cultural barriers to effective change in the Nature Recovery Landscape.

The session began with an overview, prepared by Connie McDermott and Mark Hirons, of the social science dimensions of HERO. Jamie Hartzell then presented the work done with Treescapes in mapping land ownership in Oxfordshire. These presentations highlighted the importance of understanding how land use governance, different systems of knowledge and values, and differences in people's financial means and access to natural areas shape socio-ecological systems. Participants pursued this reflection in breakout rooms of 5, consolidating their input on Miro, an online whiteboard platform.

7 themes emerged from this discussion surrounding socio-political governance challenges in HERO:

1. Identifying and gathering information
2. Building community engagement
3. Understanding stakeholder motivations
4. Mapping stakeholder perceptions
5. Power and ownership
6. Access and social justice
7. Well-being

PRESENTATION OF SOCIAL SCIENCES IN HERO

(1) UNDERSTANDING THE ROLE OF SOCIAL SCIENCES IN HERO

Connie McDermott described how the social sciences have been conceived in the proposal for funding in HERO. As envisioned by Connie and Mark Hirons, two social scientists on the HERO team, there is a need for an interdisciplinary framework to further integrate the social and natural science dimensions of the Natural Recovery (NR) landscape and its needs. Such a framework could help organize and prioritize the need for new data to support local initiatives and overcome socio-economic factors that may shape decision making and act as barriers to change. Connie mapped out four key social dimensions of clear relevance to HERO, namely governance, knowledge, values, and well-being.

Governance looks at both who steers society in nature recovery and how this is done. It therefore concentrates on how decisions surrounding nature recovery are made. This includes a multi-scale analysis of land use decision making and its impacts on outcomes (e.g., what is the relationship between land ownership/use and NR outcomes?). Decisions at multiple scales are relevant to NR in Oxfordshire, from national government policies and incentives (e.g., ELMS), to the governance of local community groups and farmer clusters focused on restoration. HERO research could contribute to better understanding how well these governance systems are working, and why, and perhaps identify 'best practices' or 'principles' for NR governance in Oxfordshire and beyond.

Understanding different types of knowledge, and whose knowledge is given a voice in NR is another important component of social science research. How does the University's generation of scientific knowledge impact practical or local knowledge or vice versa. How do these different forms of knowledge shape restoration in practice and how can they be better integrated in policy?

Values also undergird land use strategies and influence priorities. One challenge is therefore to untangle these different perspectives and navigate these different priorities. HERO social science research could delve into differences in values among landowners and land users, and possibly develop a 'typology' of land user values and priorities. Such a typology might help inform how best to tailor NR strategies to address these differences.

Finally, Well-being can be analysed in two ways. First, what health benefits can be derived from an access to green space? Second, how does this access link with individual or societal well-being, and for whom? How can we improve equity of access?

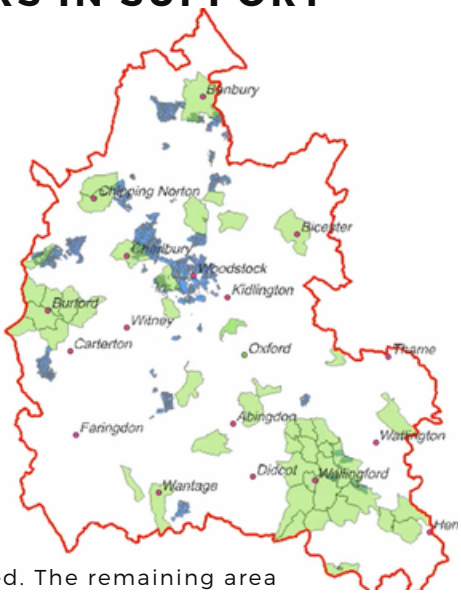
These multiple dimensions can be linked and integrated in the following working research framework:

How are opportunities & challenges for Nature Recovery in Oxfordshire shaped by:
a) Type of land ownership?
b) Landowner/ land user values, priorities, social capital, access to resources?
c) Land use policies and incentives?
d) Processes of governing and collective action?

How do a) – d) shape Nature Recovery outcomes (tree cover, habitats, etc.?
How can NR governance, policies, & incentives be better targeted to meet the different needs of different types of landowners and land users?

Some of the social science data and analyses this generates could be used to form a 'social overlay' (ownerships/user typologies) onto the biophysical maps to assess the relationship between social variables, land use zoning for NR or housing developments, and ecological conditions, such as tree cover and biodiversity. Jamie Hartzells presentation, summarized next, provided some illustrations how this could work, using the example of land use ownership patterns and their overlap with the Oxfordshire Nature Recovery Network.

(2) MAPPING OXFORDSHIRE'S LANDOWNERS IN SUPPORT OF NATURE RECOVERY



Jamie Hartzell's presentation invited participants to think of the ways mapping can inform NR strategies. Taking the example of Oxfordshire's landowners, Jamie Hartzell presented the recent work done by Oxfordshire Treescapes in collaboration with the Environmental Change Institute and other HERO members. An opportunity map was developed showing where woodlands, hedgerows, agroforestry systems and community orchards can be placed and what ecosystem services and societal benefits these can bring. Since November 2021, this map has produced 79 opportunity reports for parishes and landowners, covering 39,800 and 10, 725 hectares respectively. These reports cover 6% and 15% of Oxfordshire's farmland and parish land respectively. The objective of these opportunity maps is to identify where Parishes and landowners can work together to achieve nature recovery.

Although mapping is imprecise, the triangulation of different sources – official, historical, and local knowledge– which differ in reliability and precision, has produced a first outline of ownership in the county. To date, 77% of Oxfordshire's key landownership areas have been mapped. The remaining area is likely to be small privately-owned areas (i.e., private gardens) and unincorporated charities. However, the data should be regarded as a guide to likely ownership rather than a statement of fact. In fact, obtaining complete certainty on ownership requires a hefty administrative fee of 3 GBP per entry, which would amount to 1.5 million GBP to map all 500,000 of property titles in Oxfordshire. Circumventing this constraining data opacity surrounding land ownership, Treescapes used land registry listing of UK and overseas companies, Section 31 Highways declarations, DEFRA higher level grant application data and local knowledge.

Landowner	Hectares owned
Duke of Marlborough, Blenheim Estate	5,094 ha
Nils and Lillemor Penser, Compton Beauchamp Estate	3,857 ha
Church Commissioners for England	3,811 ha
National Trust	3,433 ha
Ministry of Defence	2,661 ha
Christchurch College, Oxford	2,232 ha
Ditchley Park	2,069 ha
David and James Calcutt, Astley Bridge Farm, Merton	2,065 ha
Ben Smith And Sons (Wantage) Ltd	1,998 ha
Robin Cayzer, 3rd Baron Rotherwick, Cornbury	1,965 ha

Table 1: Largest landowners in Oxfordshire.

This mapping provides some answers to asking who the big landowners are. Whereas a quarter of the county is owned by 26 landowners, half of the county is owned by 172 landowners: or 0.07% of its 250,000 landowners. 1,500 landowners have holdings of 5 hectares or more, with only 800 landowners with holdings of 20 hectares or more. Most land is in the hand of private farms, although some large non-agricultural estates are considerable, particularly educational institutions. Although this translates a highly disproportionate level of land ownership in Oxfordshire, it points to the high impact that the 172 landowners can make if they change their land use policy.

Once the landowners have been identified, it should be asked what motivates a landowner to engage or not engage with nature recovery? Can these motivations differ? One way of approaching this question is to compare the different aims of the major landowners. Whereas Blenheim Estates has a "remit to share and protect its estate for future generations" and the National Trust focuses on passing down "historic, beautiful and natural places to people," the Ministry of Defence and Christ Church college have less immediate concerns for environmental stewardship. Furthermore, the charity requirements for an educational institution like Christ Church requires them to derive profits from the land they own. This economic requirement may therefore impede NR measures. Further research is therefore required to understand the motivation for nature recovery.

However, agency lies not necessarily in the landowner. Rather, land-use decision resides mostly with land managers. In Oxfordshire, there are 1,900 land managers managing over 5 hectares. 260 and 54 land managers manage 50 and 25% of the land respectively. Hence, 50% of Oxfordshire is farmed by 14% of its land managers.

The landowner-farmer relationship differs. Treescapes outlines three main types. The most straightforward instance is where a farmer is also the landowner. Secondly, tenants under pre-1995 inter-generational tenancies (AHA) benefit from life-time tenures. Finally, tenants under post-1995 Farm Business tenancies (AHA) have shorter tenancies. Shorter leases therefore mean that tenants have less interests to engage with long-term horizons required by nature recovery.

Land owner by type	ha
Not classified	85,202
Private farms	68,592
Estates	44,462
Private residences or businesses	18,039
Oxford University & Colleges	13,249
Government	11,129
Conservation charities	6,241
Private developers	5,900
Council or housing association	5,840
Churches	4,487
Total	**260,589**

Table 2: Amount of land per activity

Furthermore, the type of activity being pursued on the land may explain the differences in motivation The pi-chart shows that most land is composed of small farms and smaller estates. Oxford university itself and a handful of colleges own most of the land. In the case of the University, 75% of the university's holdings is Wytham Woods.

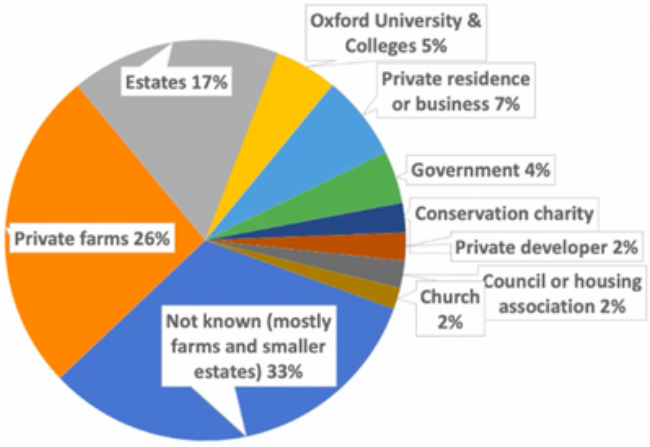


Chart 1: Share of land owned by landowner types

56 estates cover 17% of the County but represent a disproportionate percentage of the core recovery areas (24%). This is not surprising given the highly attractive nature of these estates – the highest concentrations being in the Cotswolds area. Moving forward, Jamie Hartzell thinks estates should be classified into inherited, acquired ('new money') and corporate estates since these different landowners will have different motivations, which hide very different conceptions of the land (e.g., land sparing vs. sharing).

Owner type	% of Core	% of Recovery	% of county
Estates	24%	21%	17%
Private farms	18%	27%	26%
Conservation charities	10%	3%	2%
Councils	4%	2%	2%
Developers	1%	2%	2%

Table 3: Share of nature recovery zones per landowner type.

DISCUSSION

- How is land mapping useful and who to? Who should have access to the data?
- What more do we need to do to complete the picture?
- What research would shed the lighter on owner's motivations to engage in nature recovery, be they positive or negative?
- What is the relative importance of farmers' motivations compared to landowners?

Participants agreed about the importance of understanding landowner and farmer motivations and constraints before attempting to engage with them. For Jamie Hartzell, it is less a matter of persuasion than a matter of discussion. This means understanding their identity and values. These motivations should not be guessed but surveyed through interviews. However, which people to interview is a critical consideration. It would be intuitive to focus on the 173 largest landowners to obtain efficient area-based results. However, over-focusing on size may lead to under-representation. For instance, there is sustained criticism in Scotland that small-scale community lands are underappreciated, despite having more social buy-in. Alternatively one might focus on a key grouping, such as the estates.

Similar questions arise when focusing on farmers and land managers rather than landowners. There is value in local, bottom-up and generational knowledge of the land. In fact, farming families have built up an intricate understanding of their land. For instance, a contractor may have just spent a few seasons, whereas families may have farmed land over a substantial amount of time. On the other hand, contract farmers are likely to cover large areas of farmland.

The mapping could also be used to provide HERO with an identification tool of landowners that are willing to do something new and different, but that have not necessarily built relationships with scientists. However, HERO should recognize that landowners differ in the amount of advice they have received. Some are overburdened by a plethora of advice by various stakeholders, whereas some landowners, particularly Parishes, have expressed a need for such consultancy.

Participants raised important points concerning the availability of this map and what information the public can derive from it. If it is used a tool for accountability, it can allow people to track what changes are being done on the land and by whom. However, HERO should be reflexive and sensitive concerning the way it communicates the work that has been done. It may lead to a breach in confidentiality, particularly for privately owned land.

Moreover, HERO members should be aware of the plurality of ways the land can be framed to achieve just outcomes. For instance, an unproductive lens to the land may undermine local food production and outsource our pollution elsewhere. Similarly, Oxfordshire needs to undertake its fair share of nature-based solutions and not outsource this responsibility.

Finally, this study of the overlap between nature recovery areas and land ownership could be done on many other metrics, such as public rights of way, flood alleviation, areas zoned for housing and so on.

DISCUSSION FOLLOWING MIRO EXCERCISE

Following a Miro exercise, the groups brought up seven major themes, which social sciences can elucidate.

1. Identifying and gathering information means identifying local farmer expert know-how, mapping existing interests and grounding this knowledge in scientific knowledge. This requires particular attention to framing information in a way that is easily understandable and informative.

2. Building community engagement. Participants argued that socially aware information gathering is necessary for an effective community engagement, which will be key for political buy. How can you create a greater sense of community through the landscape and engage people with landowners? How can you make the increasing amount of data convincing for landowners and communicate data in the right way?

3. Understanding motivations of landowners, land managers, tenant farmers (i.e., particularly those with shorter tenancies), and people (e.g., can adequate communication of the benefits of NR for flagship species increase people's political buy-in?). More generally, how are stakeholders responding to policy changes? This requires differentiating between landowners and managers since groups have different interests, which NR strategies must reflect. Participants suggested developing a body of evidence on successful examples of nature positive farming. Moreover, a call for push and pull discussions versus top-down persuasion was voiced.

4. Mapping different perceptions. Motivations differ based on the perceptions of social norms, which can influence decisions to adopt NBS/nature recovery practices. Social sciences can map different understandings of nature recovery or understand people's different attitude towards housing development or rewilding, thereby untangling land use perceptions as sharing vs sparing. HERO must account for different appreciations of nature, as orderly or untidy, and create awareness among young people of plural natures. Moreover, although an average of 74% of people are worried about climate change, HERO can investigate how this perception translates to awareness for the need for nature recovery. Finally, buy-in of landscape scale interventions depend on different perceptions of the landscape. How do you work with landowners to carve up the landscape for these interventions to make sense?

5. Power and ownership must be mapped to know who has the say over land use (e.g., landowner versus land manager). A theory of change must be developed to identify triggers of change (e.g., access to sustainable finance), spheres of influence (e.g., who talks to who and what the tensions are between small and large landowners) and desire for change (i.e., requires balancing the needs of nature recovery with the desire of using the land as you want).

6. Access and social justice. How do different groups perceive access? What is the disparity among economic classes? Participants raised the point that recovery can be understood as a form of reclaiming the land from which most people's ancestors have been displaced through the enclosures.

7. Physical and spiritual well-being. Participants emphasised the importance of green spaces for children enrichment, health but also for societal justice (i.e. public access). Given that the meaning of beauty and landscapes can vary among people, garden designers and landscape architects are important in helping landowners transform their land in ways that both fit their private needs, whilst maximising the space for the benefit of biodiversity, wildlife, carbon capture and public benefit.

NEXT STEPS

- Collate research ideas from the workshop.
- Develop social science work plan by refining research questions, identifying research partnerships and developing research design/methodologies.
- Consider how best to take forward the land ownership research
- Periodic updates at the monthly HERO meetings

ABOUT HERO

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ABOUT OUR FUNDER

THE OXFORD MARTIN SCHOOL

The Oxford Martin School is a world-leading research department of the University of Oxford. Its 200 academics, work across more than 30 pioneering research programmes to find solutions to the world's most urgent challenges. It supports novel and high-risk projects that often do not fit within conventional funding channels, with the belief that breaking boundaries and fostering innovative collaborations can dramatically improve the wellbeing of this and future generations. Underpinning all our research is the need to translate academic excellence into impact – from innovations in science, medicine and technology, through to providing expert advice and policy recommendations.

HERO WORKSHOP #4

HELD VIRTUALLY

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Participants:

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