

<b>Institution:</b> University of Cumbria (UoC)		
<b>Unit of Assessment:</b> UOA14: Geography and Environmental Studies		
<b>Title of case study:</b> Rewilding and species reintroduction research shapes global policy and local conservation programmes		
<b>Period when the underpinning research was undertaken:</b> 2008 – 2020		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b> Ian Convery	<b>Role(s) (e.g. job title):</b> Professor of Environment	<b>Period(s) employed by submitting HEI:</b> 2002-Present
<b>Period when the claimed impact occurred:</b> 2017 – 2020		
<b>Is this case study continued from a case study submitted in 2014?</b> N		
<p><b>1. Summary of the impact</b> (indicative maximum 100 words)</p> <p>In a context of increasing nature depletion, our research is benefitting nature and people by informing the regulation and implementation of species restoration and reintroduction programmes, as well as international approaches to 'rewilding'. At the local level, it has been used to make decisions on UK reintroductions of the lynx and beaver, and to implement species reintroduction and community engagement programmes for some of the UK's most deprived communities. At the global level, it has underpinned rewilding policy at the International Union for the Conservation of Nature and prompted the organisation to issue new definitions, guidelines and standards. These will support the international conservation community to use rewilding strategies as means of addressing global declines in biodiversity and reconnecting people with nature.</p>		
<p><b>2. Underpinning research</b> (indicative maximum 500 words)</p> <p>Since 2008, and through the Centre for Wildlife Conservation (2008-2016) and Centre for National Parks and Protected Areas (2016-Present), a body of conceptual and empirical research has been conducted contributing to the field of rewilding and the relationships between people and communities. Rewilding has emerged over the last 20 years from its roots as a radical conservation movement in the US, to the conservation mainstream; encapsulating philosophical and ecological transformative landscape-level change in conservation. However, as the 'vision' of rewilding has spread more widely, it has taken on a variety of subsidiary and often contradictory meanings, generating confusion, uncertainty and trepidation amongst some communities, and in some cases, entrenching divisions between conservationists and other groups.</p> <p>R1 examined the 'Wild Ennerdale' (WE) initiative in the English Lake District, and its key findings articulated the disparities between WE's view of engagement and participation and the corresponding feelings of alienation, dispossession, and dislocation expressed by some members of the local community. R2 demonstrated public support for reintroductions (in this case, the White-tailed sea eagle) and reinforced the need for early community engagement to ensure wide and longer term support for 'rewilding' programmes and initiatives. Taking a more global outlook, R3 examined the significant potential of rewilding for progressive conservation, but pointed to its current fragmentation as a clear limiting factor needing to be addressed.</p> <p>In 2016, Convery was appointed Co-Chair of the newly-formed 'Rewilding Task Group' (RTG) of the 'Commission on Ecosystem Management' - one of the six commissions providing '<i>know-how and policy advice</i>' to the International Union for Conservation and Nature (IUCN) – '<i>the global authority on the status of the natural world and the measures needed to safeguard it</i>'. Following the establishment of the RTG, Convery led a programme of engagement and consultation, leading to a set of rewilding principles to be adopted by the IUCN. These principles, which emerged from engagement with 'rewilding pioneers', at workshops in Florida, London, the Society for Ecological Restoration conference in Cape Town (September 2019), and Tsinghua University Beijing (October 2019), are outlined on the IUCN website. Subsequently, Convery co-authored R4, a spatial meta-analysis which identified priority areas for conservation, and proposed 'cost effective zones' which could be targeted to increase protected area designation.</p>		

Building on Convery's work with the IUCN, and through R2, and R1, further research and development has been undertaken on community based reintroductions of flora and fauna for rewilding. This includes R6 on the public engagement and proposed reintroduction of the Eurasian lynx to Kielder Forest, conducted 2017-2019. The findings presented in R6 suggested that lynx should not be reintroduced, highlighting the critical nature of community involvement. In this case, information sharing and transparent communications constrained public participation.

### 3. References to the research (indicative maximum of six references)

- R1. Convery, I. & Dutson, T. (2008) Wild Ennerdale: A cultural Landscape. *Journal of Rural & Community Development*. Vol. 3, No. 1. <https://journals.brandonu.ca/jrcd/article/view/105>.
- R2. Mayhew, M., Convery, I. Armstrong, R. & Sinclair, W. (2015). Public perceptions of a white-tailed sea eagle (*Haliaeetus albicilla* L.) restoration program. *Restoration Ecology*. 24: 271–279. [doi.org/10.1111/rec.12310](https://doi.org/10.1111/rec.12310).
- R3. Van Maanen, E. & Convery, I. (2016). Rewilding: The realisation and reality of a new challenge for nature in the twenty-first century. In Convery, I. and Davis, P. (Eds.), *Changing Perceptions of Nature* (pp.303-319). Boydell Press. ISBN: 9781783271054.
- R4. Cao, Y. *et al.* (2020). Cost-effective priorities for the expansion of global terrestrial protected areas: Setting post-2020 global and national targets. *Science Advances*. Vol. 6, no. 37. [doi.org/10.1126/sciadv.abc3436](https://doi.org/10.1126/sciadv.abc3436). (All authors contributed equally).
- R5. Hawkins, S. *et al.* (2020) Reintroducing lynx to UK. *Restoration & Ecology*. Vol. 28, Issue 6. Available at: [doi.org/10.1111/rec.13243](https://doi.org/10.1111/rec.13243). (Convery contributed to research design, data collection and analysis and writing/editing manuscript).

R3 has been edited by Convery and Davis (Newcastle), published by Boydell Press, with Convery providing a chapter with Maanen (Rewilding Foundation). The other underpinning outputs have been published in peer reviewed journal articles.

### 4. Details of the impact (indicative maximum 750 words)

**Context:** As we enter a 6<sup>th</sup> mass extinction, global protected areas and the traditional model of protectionism conservation are failing. Rewilding offers a new approach, and the idea that we can (re)create natural habitats and wild landscapes simply by allowing wildlife and natural processes to reclaim areas of land has captured scientific and public imagination. However, the lack of consistent use and a universally accepted definition of rewilding has led to misrepresentation in both practice and policy application, leading to conflict, and negative outcomes for people and nature. In a context of nature depletion and increased awareness of nature's role in sustaining mental and physical health, our relationship with nature must improve. Our research has sought to catalyse change at a global and coordinated scale with people and communities at the centre.

#### Impact 1: New International regulation and guidance for rewilding

The International Union for the Conservation of Nature (IUCN) is the global authority on the status of the natural world and measures needed to safeguard it. Its members include 208 states and government agencies (e.g. DEFRA, UK, and Department of State, Bureau of Oceans and International Environmental and Scientific Affairs, USA), and 1200+ NGOs and indigenous peoples organisations (e.g. National Geographic Society, World Wildlife Fund). The IUCN World Conservation Congress sets strategic direction every four years, informed by an active network of scientific advisors across six 'commissions'. The Commission for Ecosystems Management (CEM) focuses on "promoting ecosystem-based approaches for the management of landscapes and seascapes". Convery convened the CEM's first Rewilding Task Force, following invitation from the CEM Chair (S1), to deliver two aims: 1) develop a proposal for 'Rewilding' to become a CEM thematic groups; and 2) develop 'rewilding guiding principles' for IUCN adoption. This represents a global first – an internationally recognised 'rewilding' definition; utilised on a global scale by the conservation community, with coordination and monitoring (in a similar way to the IUCN red list).

The first of these aims was achieved in April 2020, with the IUCN formally adopting 'rewilding' as a CEM theme. This transition and IUCN adoption was underpinned by Convery's research and evidence base, which has affected IUCN policy direction and provides permanence within the IUCN system: taking rewilding as a means of addressing biodiversity loss into mainstream conservation. The second aim was achieved in November 2020, with the CEM publishing the 'Rewilding Principles' online outlining and a new definition for rewilding already adopted by the Global Charter for Rewilding Earth (Wilderness Foundation, 2020) (S2i). The principles have been endorsed by many leading scientists, including the lead author of the "Global Scientists' Warning to Humanity: A second Notice" (November 2017), which included 15,364 scientist co-signatories from 184 countries (S9).

The Rewilding Principles, and their significance, have been formalised further as part of Resolution 085 (S2ii), accepted and approved by the IUCN World Conservation Congress 2020. The resolution notes *"the emergence of rewilding as a new, cost-effective approach to enhancing biodiversity, connectivity, ecological resilience and ecosystem service delivery"*. It calls on the Director General (DG) to establish an IUCN-wide working group to agree adoption of the rewilding principles, and *"to develop parameters and guidelines for applying rewilding approaches,"* and *"submit to Council an evidence-based IUCN Policy on rewilding,"* encouraging *"the DG, Commissions and Members to use this Policy to promote rigorously planned and participatory rewilding approaches as a way to reinstate or enhance ecosystem function(s) and viable species populations."*

This represents a significant moment for the IUCN and will lead to internationally recognised regulations and guidelines for rewilding and centralised monitoring and reporting. This policy change is significant as the IUCN sets several international standards, such as for reintroductions and translocations (moving animals/plants). 'Rewilding' will therefore be subject to the same levels of scrutiny and international standards. This resolution was originally due to be ratified in July 2020 as part of 'Motion 100' at the IUCN World Conservation Congress, Marseille. However, due to Covid-19, Congress was postponed to September 2021, but chose to adopt the resolution outside of the meeting in December 2020 so that work can start (S2iii). This represents a change in IUCN policy, and an important moment for rewilding to become a critical tool in addressing global climate change and species loss.

### **Impact 2: Research informed decisions on UK reintroductions of the Lynx and Beaver**

In addition to research on 'rewilding principles' being utilised at the international regulatory scale, Convery has worked at a national scale in relation to their early adoption and implementation in practice. This includes a research-informed review of the public consultation to reintroduce the Lynx to Kielder Forest, Northumberland, recommending it not to proceed due to insufficient consultation and potential negative impact.

UOC (Convery as lead) together with AECOM and Clifford Chance, worked with the Lynx UK Trust on the proposal to reintroduce the Lynx to the UK. This included community engagement and consultation processes on the reintroduction. An *Interim Community Consultation Report (2017)* recommended that insufficient communication and engagement had been carried out, threatening the longer-term viability of the project. This recommendation (latterly published as R6) was cited in Natural England correspondence (S3) to the (then) Secretary of State (SOS), Rt Hon Michael Gove MP, who had decided to *"take this decision myself"* (S5) on the Lynx reintroduction. The Natural England correspondence to the SOS stated that: *"Further engagement with the local community, recommended in the consultants' report, was not followed up and involvement with landowners and the local community has been a concern throughout."* This correspondence ultimately led to the SOS's non-adoption of policy in relation to the Lynx reintroduction, reiterating Natural England's stance (underpinned by the report) that *"the proposal did not demonstrate sufficient local support for the project"*. It was additionally cited by Northumberland National Park in their advice to Natural England on the proposed reintroduction (S4).

This collaborative project with AECOM and Clifford Chance also led to the establishment of a new wildlife conservation NGO - the Lifescape Project, which designs and undertakes conservation projects aiming to support wildlife, transform landscapes, and help to provide a future for all life. Convery was invited to be a Director, and a key output has been the establishment of the 'Natural Capital Laboratory' which involves 'rewilding' 100 acres of land in the Highlands of Scotland with an aim to restore native forest, inspire people to connect with the environment, and reintroduce locally extinct species. Convery serves on the Steering Committee with responsibility for ensuring activity is research informed. The research, including R5 and R4, has informed AECOM's development of the Digital Natural Capital Account (S8) which allows the public to explore the Natural Capital Laboratory - with photos, videos and audio bringing to life the habitats and species present, as well as the ecosystem services and values they provide. This account is a 'live' record, and updates as activities, data, conditions, and environmental and social values change over time, stimulating public interest and engagement in research on rewilding.

UOC has a strong partnership with Cumbria Wildlife Trust (see Impact 3), and this led to involvement in the Cumbria Beaver Group. Building on his research on reintroductions (R2) and community consultation (R5), Convery, as an invited member of the Group, contributed to the evidence base, the community consultation, and IUCN protocols which informed the approach to DEFRA for approval of the Beaver's reintroduction to the Lowther Estate in Cumbria (S10i). As a result of this combined approach, the first beaver five-year trial in the North West was approved in January 2020, with two species released in October 2020. The beaver is now present in Cumbria for the first time in 400 years, and has generated significant public interest (S10ii).

### **Impact 3: Implementing 'rewilding principles' to support wildlife and communities**

Convery leads a knowledge exchange and research programme ('Back On Our Map' [BOOM]), which received one-year 'development' funding from the National Lottery Heritage Fund (NLHF) (£174,500, 2017-18) followed by a 'delivery' grant (£1,265,200, 2019-2023). BOOM is a four-year project commencing in 2019 with an overall aim to restore, via citizen science and community participation, up to 12 species of flora and fauna to South Cumbria.

The development phase involved species feasibility work with stakeholders and an extensive consultation programme with affected communities, and the quality of the consultation helped the project to meet the "*high quality threshold*" and to be a "*high priority for funding*" at the NLHF Board of Trustees meeting (26 March 2019) (S7). The development phase engaged with 526 individuals across 10 locations; enhancing public understanding of 'lost' species (and how species influence our cultural heritage, place names etc.), and informing public attitudes around species reintroductions. This included events in Barrow-in-Furness, where 24.5% of the District's Lower Super Output Areas (c1500 people) represent the highest decile (1 of 10) of multiple deprivation. In this context, the project gave a 'voice' to Barrow communities, stimulating interest in conservation and allowing them to ultimately shape the 'delivery' phase. This included: ensuring a budget for transporting participants to reintroduction sites (as residents highlighted this as a potential barrier); local nature-related craft with local Mind groups, planting and growing activities, and children's activities. Since the project commenced in September 2019, and despite the Covid-19 restrictions, BOOM delivered the following outcomes for wildlife by the end of 2020 (S6i):

- 3000 Cowslips grown and planted volunteers as food plants for Duke of Burgundy butterflies
- 680 aspen trees planted in south Cumbria, a species which is seen as a potential replacement for the ash, with ash dieback expected to kill around 80% of the UK's species.
- 20 cameras placed at sites in Grizedale Forest to identify pine marten populations and establish a case for their reintroduction at this site.

Outcomes for people include:

- Establishment of a new community growing area in Barrow-in-Furness, and provision of a polytunnel, equipment and training opportunities for local people.
- Training for 54 individuals on dormouse reintroduction and aspen cultivation.
- Prisoners at Haverigg creating and caring for their own woodland inside the prison grounds, benefitting mental health and transition into the community, and enabling prisoners to acquire

conservation skills. The prison's community outreach manager said working with BOOM had brought many benefits: *"The project has meant our residents are able to make an invaluable contribution to native tree cultivation and improving wildlife across the area"* (S6ii, iii).

- 147 children growing meadow wildflowers during the UK's first Covid-19 lockdown.
- 19 Students involved in surveying, site tasks and interpretation.
- 67 people involved in consultation, talks and awareness raising events.
- 145 volunteer workdays achieved (7 hours/day) with 75 new volunteers, 22 from areas of high indices of multiple deprivation (116 registered in total on the volunteer database).
- 15 'Grow at Home' volunteers to continue growing during future Covid restrictions.
- Creation of a 0.6FTE 'Community Engagement Officer', funded by the project, but employed by Morecambe Bay Partnership (MBP) as a means of facilitating engagement with communities across the project area across BOOM and other MBP projects.

The project would not have been possible (in both phases) without the underpinning research and evidence base, championed by Convery internally and amongst regional stakeholders and partners, including Natural England, Forestry Commission, Cumbria Wildlife Trust and MBP.

#### 5. Sources to corroborate the impact (indicative maximum of 10 references)

- S1. Testimonial by Chair of the IUCN's Commission on Ecosystem Management of Nature indicating Convery's involvement in the CEM. [Corroborator 1].
- S2. i) The Rewilding Principles. <https://www.iucn.org/commissions/commission-ecosystem-management/our-work/cems-thematic-groups/rewilding>; ii) Resolution 085. [https://portals.iucn.org/library/sites/library/files/resrecfiles/WCC\\_2020\\_RES\\_085\\_EN.pdf](https://portals.iucn.org/library/sites/library/files/resrecfiles/WCC_2020_RES_085_EN.pdf); iii) Motion 100. <https://www.iucncongress2020.org/motion/100>. Publically available online. Provided as PDF.
- S3. Natural England Correspondence to Secretary of State outlining recommendations not to approve lynx reintroduction (based on research report). <https://www.gov.uk/government/publications/lynx-reintroduction-in-kielder-forest/lynx-reintroduction-in-kielder-forest-natural-england-advice-to-the-secretary-of-state#ecological-feasibility-and-risk-assessment>. Publically available online. PDF provided.
- S4. Northumberland National Park Correspondence to Natural England outlining recommendations not to approve lynx reintroduction (based on research report). <https://www.northumberlandnationalpark.org.uk/wp-content/uploads/2018/05/Natural-England-NNPA-response-to-Lynx-Proposal.pdf>. Publically available online. PDF provided
- S5. Letter from Michael Gove outlining reasons not to approve lynx reintroduction (based on S3, S4 and research report). [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/903121/letter-from-sos-to-lynx-uktrust-181203.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/903121/letter-from-sos-to-lynx-uktrust-181203.pdf). Publically available online. PDF provided.
- S6. i) Sayers. J., (2020) BOOM Quarterly Report. *Back On Our Map Project*. PDF provided. Media coverage includes: ii) BBC News. (29 November 2020). *Cumbria prison inmates help save rare aspen from deer*. <https://www.bbc.co.uk/news/uk-england-cumbria-55121472>; iii) Penna. D, (29 November 2020). *Inmates help save threatened aspen after thousands are grown on prison grounds*. <https://www.telegraph.co.uk/news/2020/11/29/inmates-help-save-threatened-aspen-thousands-grown-prison-grounds/>.
- S7. Testimonial letter from Investment Manager, National Lottery Heritage Fund on Convery's involvement in the BOOM project. [Corroborator 2].
- S8. Testimonial letter from Associate Director of Environmental Economics, AECOM, on Convery's contribution to the Natural Capital Laboratory. [Corroborator 3].
- S9. Testimonial letter from Professor of Ecology, Oregon State University, on the adoption of the rewilding principles by global conservation community. [Corroborator 4].
- S10. i) Testimonial letter from Conservation Manager, Cumbria Wildlife Trust on the contribution of the research to Cumbria's Beaver reintroduction. [Corroborator 5]. ii) <https://www.bbc.co.uk/news/uk-england-cumbria-54690598>