REWILDING AND THE RURAL ECONOMY

How Nature-Based Economies can help boost and sustain local communities

REWILDING BRITAIN

CONTENTS

FOREWORD

By putting nature at the heart of a green recovery, we can drive locally-led economic regeneration in a way that is good for nature, climate and people.

REWILDING BRITAIN

CONSERVATION CAPITAL

Nature is our life support system, our best carbon sink, and our ally in mitigating the impacts of climate breakdown. We are learning at amazing speed about the role that living systems play in our shared prosperity, and how nature can bounce back – if we let it.

We know that to avert a climate and ecological disaster we need to act swiftly and decisively to protect, restore and rewild the natural world. To do so we must start working with nature instead of against it. We must create local economies that are regenerative and restorative by design, which support human prosperity within nature's flourishing web of life.

We have joined forces with Conservation Capital, a specialist consultancy and investment firm with over 15 years' experience in developing and financing nature-based businesses around the world, to provide a compelling vision for the creation of Nature-Based Economies across Britain.

We demonstrate how the people-led approach we propose can help rewild and restore nature while invigorating a much needed economic transformation of rural and coastal communities. Across a number of economic sectors we provide examples from real businesses to show how investing in nature and nature-based businesses can help us transition to a low carbon future while delivering real social and economic benefits today.

To achieve this we are calling for the UK and devolved governments to invest in new thinking and joined-up action to unleash the extraordinary potential of Nature-Based Economies.

More than ever before we must combine human ingenuity with the genius of nature.

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EXECUTIVE SUMMARY

One of the greatest challenges of the 21st century is to sustain human wellbeing without destroying our natural environment. In the face of the climate and ecological crises we need to align human aspirations for a good life with the defence of our life-support systems. We need to create prosperity today without compromising the prosperity of future generations.

This is a particular challenge in rural and coastal areas, where many jobs and incomes are vulnerable or depend on increasingly extractive industries. As the threats of ecological and climate breakdown intensify, some of these industries have become harder to sustain environmentally. And as globalisation and consolidation have progressed, they have become ever less capable of sustaining employment or providing economic security.

For powerful social and environmental reasons, we need to catalyse a transition from extractive to regenerative economies. Rewilding Britain believes that we can do so by putting nature at the heart of a **green economic recovery**.

Rural and coastal communities are among the most deprived in Britain. A lot of talk and effort has been focused on using clean energy and manufacturing to bring jobs to our industrial heartlands in pursuit of a green recovery. But rural and coastal communities are in danger of being left out. By nurturing place-based jobs and promoting small and medium enterprises built on regenerative principles, we can ensure that these communities benefit from wider green investment.

We believe that a new and thriving ecosystem of employment can be built around the restoration and rewilding of nature. Rewilding Britain's own analysis reveals that rewilding projects in England have increased jobs by more than 50% (see case study p18). As Dr Neil Hudson, the Conservative MP for Penrith and the Border, has said: "To level up rural areas, we need to rewild them"[1].

To this end, we propose the creation of localised **Nature-Based Economies** across 30% of Britain by 2030. We would like to see each Nature-Based Economy supporting a diversified, resilient and just economic transition alongside the large-scale restoration and rewilding of nature. We will show how this will help revitalise local communities and support the UK and devolved governments meet existing nature and climate commitments (30% by 2030 and net zero by 2050 respectively). Nature-Based Economies should incorporate:

- *Core rewilding areas* (at least 5% of Britain) which focus on restoring and reinstating as wide a range of natural processes, habitats and missing species as possible to form mosaics of native forest, peatlands, heaths, species-rich grasslands, wetlands, saltmarshes, kelp beds, seagrass and living reefs. With minimal or no human impact or extraction of resources.

- *Regenerative areas* (at least 25% of Britain) which support a diverse range of land and marine uses and enterprises, generating value for the local economy while allowing nature to flourish, e.g. continuous cover forestry, nature-based tourism, recreational fishing, regenerative aquaculture and high-nature value/wild meats.

For this to happen, governments, public bodies, businesses, farmers, foresters, fishers and local communities will need to come together to develop collaborative place-based visions for the economic restoration of communities, coupled with the ecological restoration of our land and seas.

We therefore want to see the development of local land and marine plans, bringing different sectors together to maximise ecological, social and economic returns. Our findings suggest that new structures are not required. These plans can be led by locally trusted anchor institutions. These include local councils, National Park Authorities, Local Nature Partnerships or community organisations. Among other functions, they can coordinate local participation in decision-making, broker access to public and private financing, and develop locally-branded marketing.

We urgently need to re-orientate both public and private finance towards a transition to Nature-Based Economies. While government spending on nature and climate has increased, there is still a huge financing gap. This will not be difficult to fill if there is the political will. Until very recently, for example, the UK Government was still providing £10.5 billion a year in public support for fossil fuels[2]. Major financing institutions are also increasingly interested in investing in solutions to address climate change.

The UK Government has increased annual public investment on R&D to a record £22 billion to create a "greener, healthier and more prosperous future for the UK"[3]. We want to see a significant proportion of this money used to unleash a wave of innovation in nature-based activities and enterprises.

Rewilding Britain is calling for the UK and devolved governments to make a bolder financial and political commitment to nature's recovery. This aim aligns with the UK's role in hosting the UN Climate Change Conference, COP26; as a signatory to the Leaders' Pledge for Nature; and as a participant in the UN Decade on Nature Restoration.

We are asking the UK and devolved governments to:

1 TRANSITION TOWARDS NATURE-BASED ECONOMIES ACROSS 30% OF BRITAIN

- Incentivise the creation of Nature-Based Economies across at least 30% of Britain's land and seas, including *core rewilding areas* and *regenerative areas*, as part of a green recovery.
- Integrate Nature-Based Economies within the upcoming Nature Green Paper, outlining how we plan to meet our target to protect 30% of Britain's land and sea for nature's recovery by 2030.
- Mandate all National Park Authorities (NPAs), Protected Area and Marine Management Organisations to create locally-led Nature-Based Economies, leading the way with at least 10% *core rewilding areas*.

2 EMBED NATURE-BASED ECONOMIES WITHIN LOCALLY-LED LAND AND MARINE USE PLANS

- Support the creation of integrated local land and marine use plans linked to the development of Nature-Based Economies that are shaped by local communities and led by trusted anchor institutions.
- Mandate relevant authorities – e.g. local councils, NPAs, Local Nature and Land Use Partnerships, forestry agencies – to back the development of locally-led Nature-Based Economies.
- Enhance localised decision-making by diversifying public, private and community ownership models within Nature-Based Economies, for example through extending Scotland's Community Right to Buy to England and Wales.

3 INCENTIVISE NATURE-BASED ECONOMIES THROUGH COORDINATED FINANCING AND REGULATION

- Re-orientate a significant amount of public funding towards the establishment of Nature-Based Economies, especially for *core rewilding areas*.
- Encourage equivalent increases in private capital investment focused on integrated business models which deliver nature's recovery alongside thriving local communities.
- Develop locally-driven public investment vehicles which provide concessionary finance to small and medium nature-based enterprises and reinvest the returns in new projects.
- Empower local anchor institutions to attract and coordinate significant inward investment and ensure that benefits accrue to the local economy.
- Establish integrated regulatory processes and practices which support the development and implementation of Nature-Based Economies in alignment with local land and marine use plans.

4 UNLEASH A WAVE OF NATURE-BASED BUSINESS INNOVATION

- Re-orientate public innovation funding towards the establishment of Nature-Based Economies to support nature's restoration and place rural and coastal communities at the forefront of a just economic transition.
- Establish 'nature-based enterprise zones' with associated packages of support for nature-based businesses aligned to locally determined land/marine use plans.
- Integrate other innovation support mechanisms within Nature-Based Economies such as ensuring adequate investment in internet connectivity and local infrastructure.

NATURE AND THE ECONOMY

IT IS ONE OF THE DEFINING CHALLENGES OF THE 21ST CENTURY: HOW TO RESTORE NATURE AND PROTECT OUR CLIMATE AT THE SAME TIME AS PRODUCING THE FOOD AND RESOURCES ON WHICH WE ALL DEPEND?

There is a growing global consensus that our socio-economic models must take natural habitats and biodiversity into account if we are to fend off catastrophic climate change. This thinking is reflected in a number of high-profile reports and initiatives:

- The Dasgupta Review[4] noted that, until recently, nature was considered an externality to conventional economic models. It argued that the many benefits which nature brings to businesses (and also to their workforce and consumers) must now be properly incorporated into any economic model.

- The UN Climate Change Conference (COP26) in Glasgow recognises that, if we are to achieve government targets of net carbon zero by 2050, huge changes are needed which require "public finance for the development of infrastructure to transition to a greener and more climate-resilient economy", as well as private finance to fund technology and innovation[5].

- The UN's recently launched Decade on Ecological Restoration aims "to prevent, halt and reverse the degradation of ecosystems on every continent and in every ocean"[6]. Doing so, it argues, "can help to end poverty, combat climate change and prevent a mass extinction."

- The UK Government's National Food Strategy acknowledges that "the food we eat – and the way we produce it – is doing terrible damage to our planet and to our health."[7] It states that climate change, biodiversity loss and land use are among the major issues facing the food system.

The Leaders' Pledge for Nature saw 88 nations, including the UK and devolved governments, commit to reverse losses to the natural world and protect 30% of the UK's land and seas by 2030[8]. Within the pledge, leaders recognise that "the benefits of restoring natural resources vastly outweigh the costs by up to tenfold, and the cost of inaction is even higher" and that "a transformative change is needed: we cannot simply carry on as before"[9].

The need to reboot economies after the COVID-19 crisis could be a moment for such a transformation. Recovery will only come with significant investment to revive economies. Many are calling for this to be a 'green recovery': one that focuses on solutions that will benefit people and the planet for years to come[10]. This includes vital investments in technologies like clean-energy and zero emissions transport.

However, relatively little consideration has been given to how the economies of rural and coastal areas can transition while helping to restore vital natural systems. Such solutions are more likely to win public backing in light of COVID-19. Consumer indicators suggest that consciousness of the natural world is at an all-time high thanks to the role which nature has played in many people's lives since lockdowns[11].

Rewilding Britain is therefore calling for nature's recovery to be put at the heart of the economy by adopting an integrated, localised and nature-based approach to land and marine use. In short, we want to incentivise Nature-Based Economies across at least 30% of Britain.

We propose that these areas should focus on the large-scale restoration and rewilding of ecosystems while also driving a diversified, resilient and just economic transition for rural and coastal communities[12]. They should be highly productive for nature, provide a high level of ecosystem services like carbon sequestration and flood mitigation and play an important role in societal wellbeing.

We can show that the transition to localised Nature-Based Economies has the potential to boost numbers and diversity of jobs and to benefit livelihoods. Rewilding Britain's own analysis reveals that rewilding projects in England have increased jobs by more than 50% since embarking on rewilding (see case study, p18).

THE UK HAS PLEDGED TO PROTECT 30% OF ITS LAND AND SEAS BY 2030

A mosaic of habitats like these at Westacre Estate can help wildlife thrive and offer high value recreational opportunities for people to reconnect with nature

A huge variety of nature-based enterprises have already emerged and there is exciting potential for on-going innovation given sufficient investment. Many businesses and commercial leaders now recognise that they have a key role to play in finding solutions to the nature and climate emergencies. Increasingly, they are being influenced by their customers, investors and employees, many of whom worry whether their personal purpose is misaligned with corporate purpose[13].

Forward-thinking business leaders are also aware of the certainty of regulatory and policy change which will constrain old-fashioned business models and facilitate new environmentally-driven ones. And they are looking for ways to differentiate their products to achieve competitive advantage in an increasingly environmentally-conscious consumer market.

IN THIS REPORT WE:

- describe what we mean by a Nature-Based Economy
- explore what nature-based economic areas look like
- provide practical suggestions for how they might be enabled at a local level across Britain
- describe the key economic sectors within a Nature-Based Economy
- provide case studies to illustrate the benefits that can be realised
- propose what policies are required to achieve them.

WHAT IS A NATURE-BASED ECONOMY?

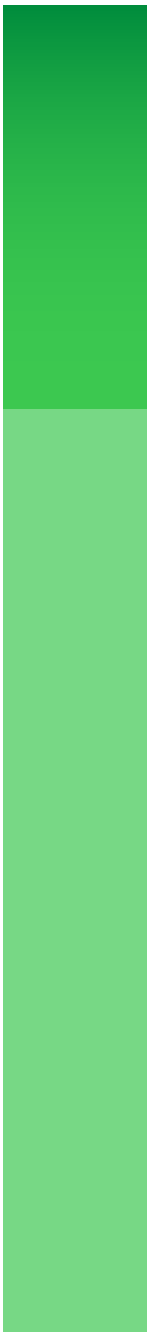
REWILDING BRITAIN DEFINES A NATURE-BASED ECONOMY AS ONE WHICH HELPS NATURE HEAL AND FLOURISH AND SUPPORTS PROSPEROUS COMMUNITIES.

Rewilding Britain defines a Nature-Based Economy as one which helps nature heal and flourish and supports prosperous communities. We propose that nature-based economic areas need to be established across at least 30% of Britain by 2030 if nature and climate targets are to be met in any meaningful way.

Our vision is that Nature-Based Economies should consist of two distinct but interconnected areas: 1) *core rewilding areas* and 2) *regenerative areas*.

We propose that *core rewilding areas* and *regenerative areas* – all moving up the scale of rewilding[14] – should be nature 'positive' and carbon 'negative'. They will provide a full suite of ecosystem services such as flood mitigation, clean water and wellbeing benefits for surrounding areas and the country as a whole. They will also generate economic value for, and provide connectivity through, the higher resource-use areas that cover the remaining 70% of Britain with the following features.

30% BY 2030



5%

CORE REWILDING AREAS

Focus on restoring and reinstating as wide a range of natural processes, habitats and missing species as possible to form mosaics of native forest, peatlands, heaths, species-rich grasslands, wetlands, saltmarshes, kelp beds, seagrass and living reefs – with minimal or no human impact or extraction of resources.

25%

REGENERATIVE AREAS

Support a diverse range of land and marine uses and enterprises, generating value for the local economy while allowing nature to flourish, e.g. continuous cover forestry, nature-based tourism, recreational fishing, regenerative aquaculture and high-nature value/wild meats.

70%

HIGHER RESOURCE-USE AREAS

Used for delivering high and sustainable economic productivity, so that food and other resource needs can be provided – allowing less productive areas elsewhere to transition to Nature-Based Economies. These areas support higher productivity agriculture, forestry, fishing, etc., and also include urban areas.

Importantly, Nature-Based Economies should not be achieved at the expense of intensifying production beyond sustainable levels or as an excuse not to reduce carbon emissions or to increase biodiversity loss in surrounding higher resource-use areas[15].

In Nature-Based Economy areas, existing rural and coastal enterprises and production sectors should be incentivised to transition towards a high-nature value model. While maintaining some traditional activities, they would also create higher-value products with an emphasis on local provenance in agriculture and forestry. High quality nature tourism (and sustainable forms of hunting, where applicable) would be offered to attract visitors and spending in the area, creating new businesses and employment opportunities within the wider economy.

Marine areas would be both protected[16] and restored, creating increased economic value from higher value fisheries and sustainable harvesting in the medium to long term.

There will be a balance between the level of wild nature (including protection of existing natural areas and habitat restoration) and the needs of farming, forestry and indeed all forms of economic (and residential) activity in the area.

Nature-based economic areas will be more attractive places to live in. They will lead to diverse, high value jobs being created in local communities, harnessing new technologies and greater infrastructure connectivity such as high-speed broadband. Local entrepreneurship will foster a stronger sense of connection and integration between people and land/marine use across each area and help to sustain culture and community.

We recognise this is a long-term approach. While significant progress can be made by 2030, it will take a lot longer to fully realise the ecological and economic returns on investment for Nature-Based Economies. However, what will emerge is a system which enhances livelihoods and creates jobs in rural/coastal economies; promotes good stewardship of land, forests, seas; protects and restores critical ecosystems; encourages sustainable food production; and rewards people for the actions they take to protect the environment[17].

WHAT WILL EMERGE IS A SYSTEM WHICH ENHANCES LIVELIHOODS AS WELL AS PROTECTING AND RESTORING CRITICAL ECOSYSTEMS.

Could storks become a familiar sight in our towns and countryside once again, as they are at rewilding site Knepp Estate?

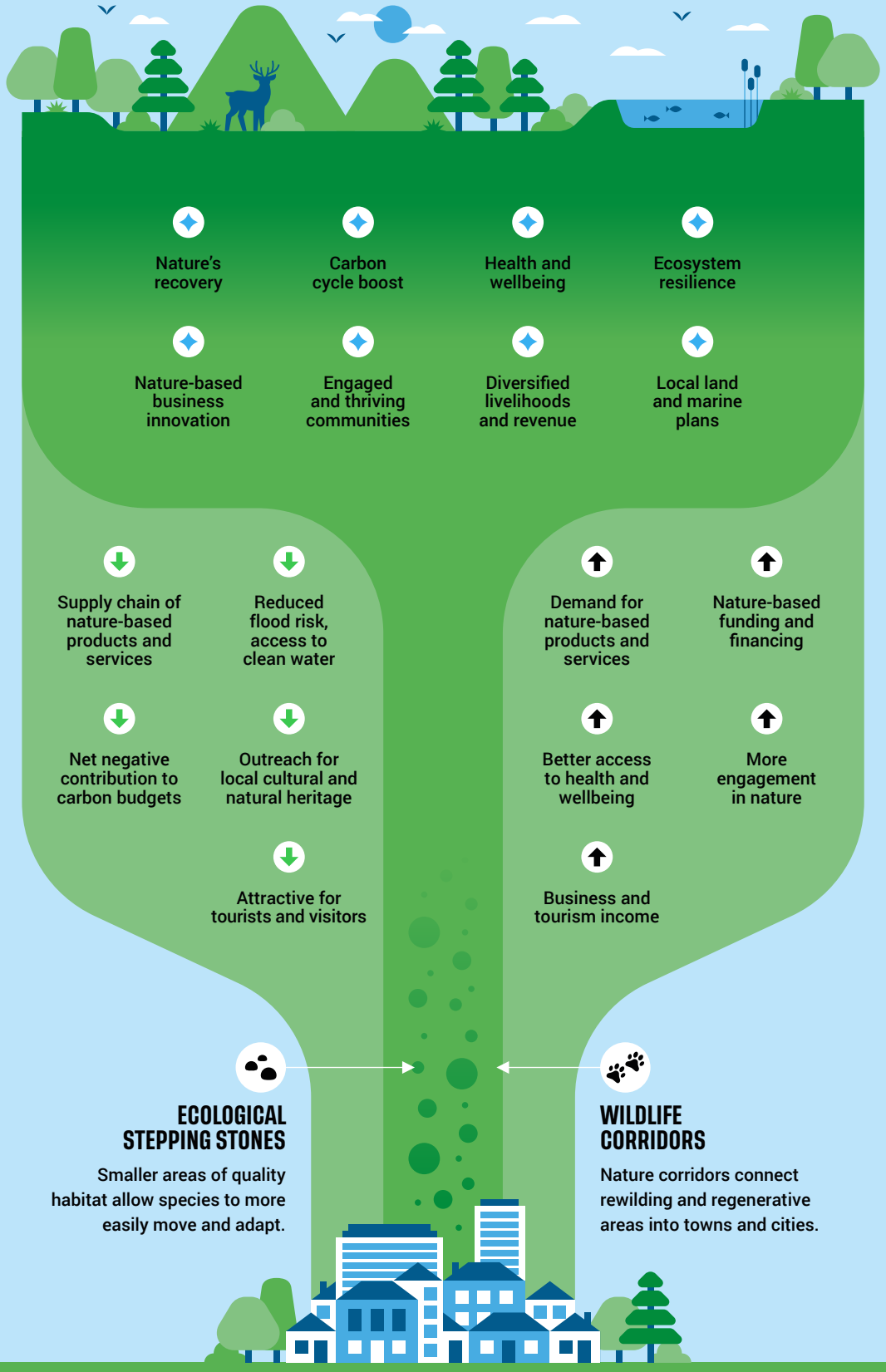
NATURE-BASED ECONOMY: INVESTMENT AND RETURNS

THE INVESTMENTS AND INTERVENTIONS NEEDED TO CREATE NATURE-BASED ECONOMIES, AND THE ECOLOGICAL, SOCIAL AND FINANCIAL RETURNS THAT FLOW FROM THEM

	CORE REWILDING AREAS / REGENERATIVE AREAS	HIGHER RESOURCE-USE AREAS
INVESTMENTS	• Rewilding and restoration interventions • 'Wild' and high nature value products and services • Low-impact infrastructure and technology (*regenerative areas*) • Blended financing • Nature-based enterprise zones • Training and education • Enabling, integrated regulatory framework	• Sustainable higher yield agriculture, forestry, fisheries, aquaculture, etc.
ECOLOGICAL RETURNS	• Carbon negative • Biodiversity positive • Reduced flood risk • Healthy, stable soils • Increased water quality and retention	• Carbon net zero • Biodiversity sustained • Stable soils • Damaging practices controlled
SOCIAL RETURNS	• Increased human health and wellbeing • Active engagement in nature • Access to high nature value products and services • Locally-led shared purpose • Thriving sense of community • Educational opportunities	• Inclusive access to nature through wildlife corridors • Access to affordable and nutritious food • Increased human health and wellbeing • Facilitation of important social benefits, e.g. youth at risk
ECONOMIC RETURNS	• Revenue from supply of 'wild' and high nature value products and services • Diversified local employment opportunities and income streams • Revenue and spending in the local area (multiplier effect)	• Market demand for nature-based products and services • Crops and products in economically productive areas

A GREEN RECOVERY

HOW NATURE-BASED ECONOMIES BENEFIT SOCIETY AND THE ENVIRONMENT



5%
CORE REWILDING AREAS

25%
REGENERATIVE AREAS

70%
HIGHER RESOURCE-USE AREAS

WIDE-RANGING BENEFITS

Nature-Based Economies benefit the livelihoods and environment of the local area.

NATURAL FLOW

Nature-Based Economies provide economic and wellbeing advantages for surrounding towns and cities.

A GROWING DEMAND

Demand from higher resource-use areas brings greater investment into Nature-Based Economies.

WHAT DOES A NATURE-BASED ECONOMY LOOK LIKE?

IMAGINING A FUTURE WHERE NATURE IS AT THE HEART OF ECONOMIC THINKING.

PRESENT DAY

COMPARE 2030 PERSPECTIVE

In this illustrative example, the primary source of employment historically in this area was textiles, which grew at the time of the thriving wool industry. Since the mid-20th century, the industry has been in decline along with the original mills and factory buildings. The economy is now largely reliant on farming and forestry alongside employment in the public and service sectors.

INVESTMENTS

1. Limited inward investment
2. Reliance on public subsidies
3. Local spend rarely stays in local area

ECOLOGICAL RETURNS

4. Small nature reserves
5. Flood damage to local town
6. Net positive carbon emissions

SOCIAL RETURNS

7. Shops and community spaces have closed
8. Poor transport connections and infrastructure
9. Young people leave to find work

ECONOMIC RETURNS

10. Lack of diverse local employment
11. Farming incomes in decline
12. Large-scale forestry operations

2030 PERSPECTIVE

COMPARE PRESENT DAY

A series of interventions has transformed the region. Communities and businesses have come together to develop new land and marine use plans. These include the restoration and rewilding of a mosaic of habitats. Nature-based investment and enterprise funding has revitalised local businesses and nurtured innovative business models. Improved public transport better connects the region with a city less than two hours away.

INVESTMENTS

1. Rewilding and restoration activities
2. Nature-based financing and enterprise
3. Training and education

ECOLOGICAL RETURNS

4. Mosaic of flourishing habitats
5. Restored river and wetlands 'slow the flow'
6. Higher carbon capture and storage

SOCIAL RETURNS

7. Local engagement in decision-making
8. Better connected transport and infrastructure
9. Community cohesion and sense of place

ECONOMIC RETURNS

10. Thriving range of nature-based businesses
11. Increased local employment and revenue
12. Diverse and integrated local supply chains

	THE PRESENT DAY	2030 PERSPECTIVE
 **ECOLOGICAL RETURNS**	Rural land is largely used for agriculture and forestry. There is a small but underfunded nature reserve. Much of the moorland area is used for intensively-managed grouse shoots or grazing, where extensive peatlands are largely degraded due to moorland burning and drainage schemes. Overfishing, including by trawling and dredging, means that the seabed is depleted. The impact of climate change is also being felt locally, with several major floods in the main river system resulting in damage to farmland and the main market town.	A mosaic of flourishing habitats are appearing across the land and sea boosted by rewilding and restoration activities. Rivers and wetlands are being restored, 'slowing the flow' to prevent flooding; naturally regenerated woodlands mixed with peatlands and heathlands are emerging across the uplands; new species – from beavers, to pine martens, lynx and storks – are returning or being reintroduced. Marine Protected Areas have been established where trawling and dredging have ceased and some areas have no extraction. Living reefs, seagrass beds and kelp forests are bouncing back.
 **SOCIAL RETURNS**	Schools in the main market town have historically enjoyed a good reputation. Young families in the wider area moved to the main town for work and for educational opportunities, but with limited employment opportunities many have had to leave the area altogether. Few school-leavers can find work locally. Many go off to university, others find jobs in larger centres where there are a wider range of opportunities. Several rural primary schools, shops and community facilities have had to close.	Local people, businesses, community organisations and councils have come together to develop collaborative place-based visions for the land and sea. Communities are thriving - sustaining local schools, businesses and public spaces. People are engaged in nature through outdoor learning, citizen's science and local volunteering. A network of walking and cycling trails has improved access to the countryside. Local health authorities encourage access to new nature spaces for mental wellbeing. Local entrepreneurship is inspiring the younger generation and enabling them to stay in the area.
 **ECONOMIC RETURNS**	Poor transport connections and slower broadband connectivity mean the area has struggled to attract new and tech-enabled business. Unemployment is high; staff retention can be a challenge. Upland farming has suffered sustained decline and is facing change and uncertainty due to the removal of EU subsidies. Small landholdings are giving way to fewer, larger farms. Profit from tourism is relatively low. The region has attractive hillsides and coastline, but its diverse features are not well marketed. Several local businesses, like shops and wholesalers, are struggling. With depleted fish stocks the coastline now supports very few local fishing vessels.	A wide range of nature-based businesses are flourishing, including continuous cover forestry, recreational fishing, nature-based tourism and high-nature value/wild grazing. A new generation of local consumers and producers is emerging, with innovative micro-business concepts being launched, many of which leverage the trend towards rural living and home-working which started during the COVID pandemic. Existing and new businesses have seen an opportunity to better integrate products and services as well as develop locally-branded marketing. Increased economic activity is having a positive knock-on effect on other sectors of the local economy including construction, hospitality and local shops.

IN FOCUS:

REWILDING BOOSTS AND DIVERSIFIES JOBS

OUR STUDY OF SITES ACROSS ENGLAND SHOWS AN INCREASE IN JOBS THANKS TO REWILDING

It's a common misconception that rewilding means fewer job opportunities. After all, letting natural processes take the lead implies that fewer people will be needed to work the land.

However, Rewilding Britain's own analysis shows that's not the case. To assess the impact of rewilding on jobs and volunteering opportunities, we carried out a detailed analysis of 33 projects within the Rewilding Network in England in 2021.

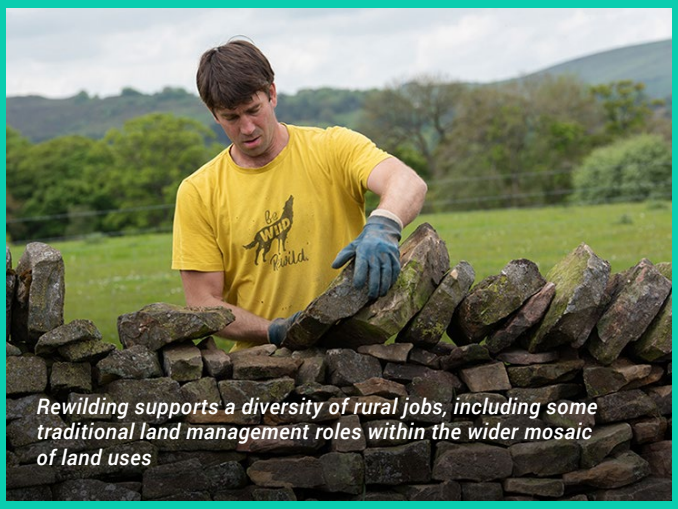
The sample projects – all members of the Rewilding Network – cover an area of 53,175ha, of which 33,327ha have been assessed as rewilding.

The analysis reveals that rewilding has resulted in a 54% increase in full-time equivalent jobs. Before rewilding began, the projects supported 173 full-time equivalent posts. Over an average of 10 years of rewilding, this number had grown to 267 jobs. And it's likely to increase as many of the projects are at the early stages of rewilding. As they develop, it is expected they will attract new and more diverse enterprises.

Not only has the number of jobs increased, so too has their diversity. All of the projects continue to produce food and support livestock, therefore retaining land management jobs. However, they've also created demand for new roles and skill sets, ranging from ecologists, wildlife guides, wardens, forestry roles, site managers to nature-based tourism, education, community engagement and communications. These add to the pre-rewilding baseline roles of farming, gamekeeping, and some wardens and forestry.

In addition, the projects have led to significant increase in volunteering. The number of volunteering opportunities rose from 61 positions to 810 after rewilding commenced – a thirteenfold increase. Volunteer roles include citizen science and monitoring, education and engagement, and wardens.

The rewilding projects also earn income from a much wider range of sources. Before embarking on the rewilding journey, they were mostly funded through the Basic Payment scheme, Countryside Stewardship, and meat and dairy sales. Now they are also funded through other enterprises such as film/photography services, business rentals, solar energy, education, visitor admissions, outdoor sports, health and wellbeing services, weddings, tourism, glamping and camping, conferences and specialist food and drink. This diversity of income increases the resilience of rewilding projects in the medium and long-term, as well as the job opportunities available to local communities.



Rewilding supports a diversity of rural jobs, including some traditional land management roles within the wider mosaic of land uses

INCOME SOURCE	BEFORE REWILDING	AFTER REWILDING
Basic Payment Scheme	28	22
Countryside Stewardship	21	28
Lamb	17	7
Beef	10	26
Crops	16	6
B&B	1	5
Camping/ glamping	3	14
Education	2	10
Nature-based tourism	0	14
Large grants/ donations	0	12

ENABLING FACTORS FOR A NATURE-BASED ECONOMY

SETTING OUT THE EIGHT MEASURES REQUIRED TO CREATE THRIVING NATURE-BASED ECONOMIES.

We have identified a number of key enabling factors for the creation and long-term success of a Nature-Based Economy.

We believe there to be a compelling environmental and societal case for building Nature-Based Economies. However, their creation will require interventions and support from government, business, landowners, sea-users and many other stakeholders. These will take time and effort to put in place, but once achieved they will allow Nature-Based Economies to thrive over the long term.

Nature-Based Economies will have to be seeded and supported by inventive government policies, as well as the re-focusing of certain existing institutions and new approaches within business and local government. In particular, national, devolved and local governments have a significant role to play in creating the underpinnings for Nature-Based Economy areas. They can open up new funding streams, invest in training and education, and set and enforce environmental regulations.

THE FOLLOWING SECTIONS EXPLORE IN MORE DETAIL THE EIGHT MEASURES WE CONSIDER TO BE ENABLING FACTORS FOR A NATURE-BASED ECONOMY. AT A GLANCE, THESE ARE:

1. **Create integrated locally-led land/marine use plans**
2. **Anchor change in locally trusted institutions**
3. **Embed participatory governance and local decision-making**
4. **Employ a spectrum of rewilding and restoration approaches**
5. **Create shared economic, environmental and societal value**
6. **Incentivise through the provision of blended finance**
7. **Catalyse nature-based innovation and entrepreneurship**
8. **Provide enabling legal and regulatory frameworks**

REWILDING MARGINAL LAND CAN INCREASE EMPLOYMENT BY MORE THAN 50%

1. CREATE INTEGRATED LOCALLY-LED LAND USE AND MARINE PLANS

Current land-use planning is largely confined to the built environment. The planning systems in England, Wales and Scotland were set up to control urban sprawl and help protect rural areas from development and industrialisation. When the 1947 Town and Country Planning Act was passed, farming and forestry were explicitly excluded from its remit. However, the intensification of farming and expansion of commercial forestry in the second half of the 20th century has caused significant habitat and species loss.

Planning authorities are increasingly recognising the need to influence wider land use beyond the built environment. This is evidenced by the declarations of climate and ecological emergencies made by many local councils and the growing number of National Park Authorities (NPAs) putting nature recovery and carbon sequestration at the heart of their strategic visions. For example, the Lake District NPA's draft Management Plan proposes: "Core areas of nature recovery will cover a minimum of 10% of the National Park by 2025, where natural processes are being restored at scale and nature can recover and thrive."[18]

New legislation is also likely to see planning authorities extend their remit. The UK Government's Environment Bill will set up new Local Nature Recovery Strategies (LNRSs). These oblige planning authorities in England to draw up new maps showing areas of land where nature is helped to flourish and connectivity between nature reserves is strengthened. The same Bill proposes the creation of Biodiversity Net Gain, which will oblige developers to deliver at least a 10% improvement in 'biodiversity value' by creating new habitat elsewhere.

The weakness is that these new measures are complex and they risk being siloed from other, more powerful drivers of local land use. LNRSs are likely to be subordinate to Local Plans, which allocate land for building homes, roads and other developments. Both Local Plans and LNRSs remain separate from Local Economic Partnerships, which make strategic decisions about local economies and investing in businesses. The new Local Nature Partnerships[19] may act to bridge this gap, but they have a limited remit.

Instead, we now need overarching local land and marine use plans which involve local people deciding how the spaces we live, work and play in are used for nature, economy and society. Within Nature-Based Economies these plans should integrate nature's recovery with economic diversification to reinvigorate rural communities. Relevant proposals and precedents already exist, for example:

- Scotland's proposed Regional Land Use Partnerships[20] are in their early stages but could provide a model which inspires similar approaches in other parts of the UK.
- The recent National Food Strategy recommends the creation of a national Rural Land Use Framework.[21]
- The Food, Farming & Countryside Commission is also exploring and trialling local land use frameworks.[22]
- The Well-being of Future Generations (Wales) Act provides a legal framework for public bodies to take a joined-up approach to improving social, cultural, environmental and economic wellbeing.
- Eleven regional English Marine Plan areas have recently been established and both Wales and Scotland have National Marine Plans that cover inshore and offshore waters.
- Community-led land and marine use plans, such as the ones developed by the Langholm Initiative (see case study, p29) or COAST (see p48), are increasingly integrating economic regeneration, ecological restoration and carbon capture.

A key function of local land and marine use plans must be to arbitrate between competing uses, whether for housing, agriculture, fishing, rewilding or carbon capture. Prioritising a particular outcome in certain areas – sometimes called 'zoning' – is one way of doing this. The UK Government's forthcoming Planning Bill proposes a system of land-based zoning to replace the current discretionary planning system. This is controversial, as it reduces democratic participation in the planning process by removing the public's ability to object to (or support) a specific development. But there are ways to introduce zonal planning which maintain and even extend public participation in how land is used beyond the built environment. For example, a local land use plan could invite public deliberation over where to establish new rewilding areas, what economic activities to support in *regenerative areas* and how to support local farmer clusters to create new catchment natural flood management schemes.

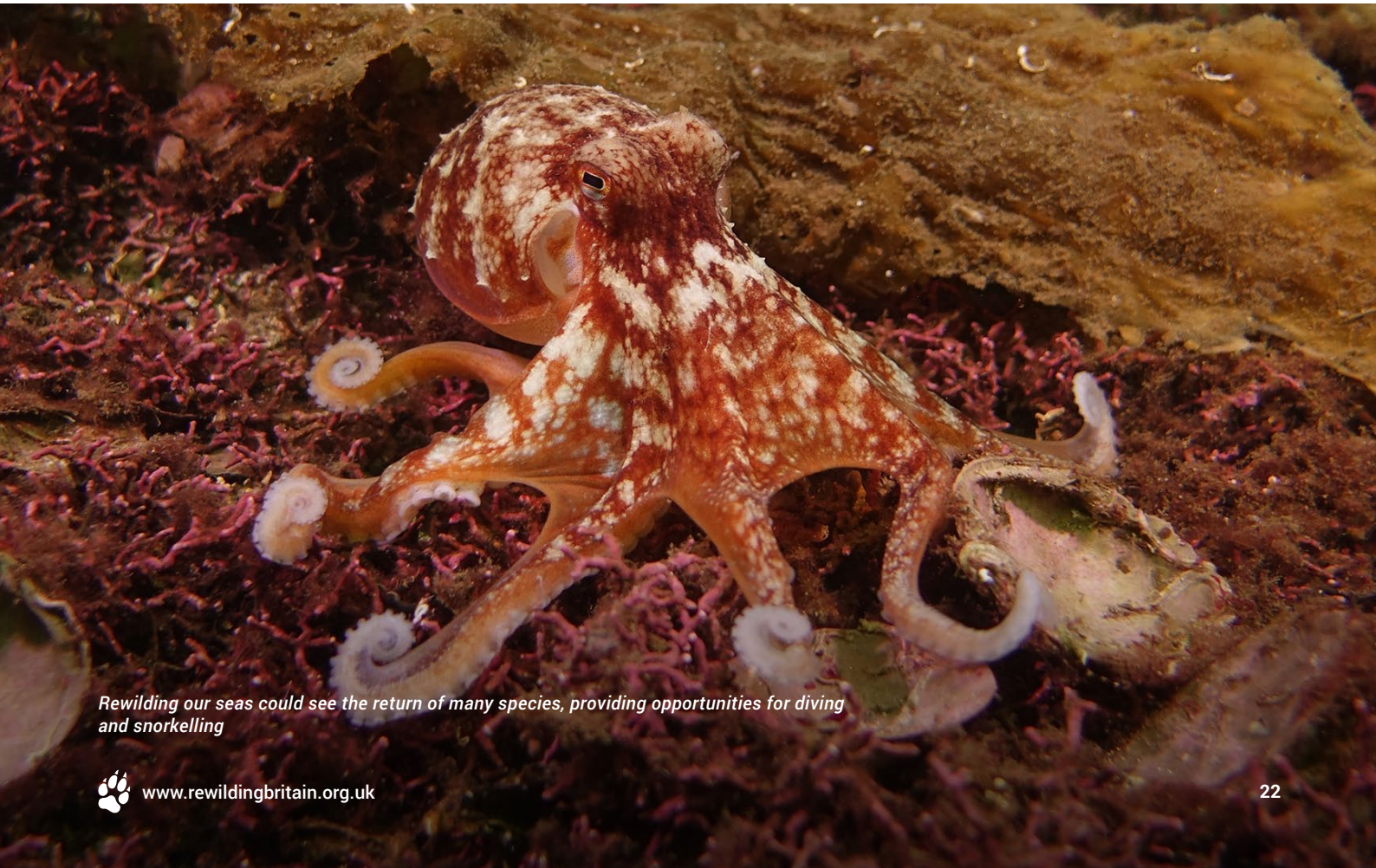
The system of Metro Mayors and Combined Authorities in England might offer opportunities for trialling land

use plans. Combined Authorities (CAs) already have a greater responsibility for 'spatial planning' than individual councils, owing to their need to plan more strategically across wider areas. For example, Greater Manchester CA has shown interest in how the Peak District is best managed, particularly following the devastating Saddleworth Moor fire in 2018. Other authorities, such as Cornwall, are developing integrated plans using the concept of 'doughnut economics'[23] "which fulfil the basic needs of all people without exhausting environmental resources"[24].

With respect to the marine environment, National Marine Plans exist for Scotland and Wales. England has just adopted an integrated marine planning framework which aims to manage "how we use, develop, protect and enhance our marine environment"[25]. In many cases the process from the inception of these plans to completion has taken a decade, so their effectiveness has yet to be tested. But issues that have arisen so far include: a lack of strict specificity about which activities should take place where; their lack of connection with the public; the complexity of engaging the wide range of stakeholders involved; and their focus on development control rather than on environmental enhancement.

There are examples of communities taking control of local marine plans with benefits for nature and the local economy. The work of the Community of Arran Seabed Trust (COAST) led to the establishment of the first no-take zone in Scotland in Lamlash Bay in 2008[26] (see p48). Studies have shown that marine life has returned at dramatic levels in these waters. Some species have increased by nearly 400% since protection measures were brought in, helping to restore exploited fish stocks[27]. As the UK Government rolls out more Highly Protected Marine Areas, the example set by COAST could be inspirational.

In any land use and marine planning process, it will be essential to avoid looking at economic sectors in isolation and to prioritise the creation of shared value (see further below). At present, government policy risks becoming disjointed and ultimately ineffective. For example, we may have one department looking to increase carbon sequestration, another focusing on biodiversity, and another on availability of affordable housing. In the future we propose that these different departments need to coordinate more effectively towards the delivery of integrated land and marine use plans. In support of Nature-Based Economies, these plans ultimately need to be locally generated, have a binding influence on decision-making and be supported by an equally integrated regulatory framework[28].



Rewilding our seas could see the return of many species, providing opportunities for diving and snorkelling

2. ANCHOR CHANGE IN LOCALLY TRUSTED INSTITUTIONS

Nature-Based Economies, and the land and marine use plans that guide them, are best generated by place-based organisations that are invested in the local area. 'Anchor institutions' – those which have an important local presence and can play a driving role in economic renewal – can include local councils, National Park Authorities, large local businesses and employers or community organisations.

The Centre for Local Economic Strategies, through their work on 'community wealth-building'[29], particularly in Preston in northwest England, has identified a number of ways in which anchor institutions can build inclusive wealth. These provide insights into how a Nature-Based Economy could operate in future as a people-centred approach to local economic development, which redirects wealth back into the local economy, and places control and benefits into the hands of local people.

Anchor institutions can help generate economic, social and environmental benefits for the local area, for example by paying fair wages, employing people from poorer areas and changing how they procure goods and services. By procuring more from the local economy, anchor institutions ensure more of their spending stays in the area. This provides benefits back to them through higher consumer spending or better public health. For example, between 2012/13 and 2016/17, Preston City Council increased total spending within the Preston area from 5% to 18.2% and within Lancashire from 39% to 79.2%. Within a Nature-Based Economies this approach can help to support local supply chains for nature-based products and services, providing benefits for local small businesses and people, and also better-connecting supply chains to external demand.

In Scotland, the Langholm Initiative is a community development trust that acts as an anchor organisation for local people and businesses. It recently led a community buyout of 2,100ha of grouse moor and woodland which it intends to transform into a nature reserve. At the same time, it wants the buyout to act as a springboard for wider regeneration (see case study, p29).

3. EMBED PARTICIPATORY GOVERNANCE AND LOCAL DECISION MAKING

Local people and communities need to be at the heart of any decisions about land and marine use change. This is especially important because in many rural and coastal communities there are already concerns about the potential loss of livelihoods from rapid land/marine use change and the decline of local culture and language.

Each local area will need to shape a transition to a Nature-Based Economy which balances prosperous communities with flourishing ecosystems. This can be achieved through a variety of approaches including building dialogue, trust, and mutual respect through participatory governance; actively engaging under-represented groups; improving local livelihoods; responding to expressed needs and concerns; enhancing local tenure, property and land ownership; and ensuring the fair and equitable distribution of benefits and responsibilities. A more localised, place-based process of decision-making also offers opportunities for greater innovation, as different areas develop different solutions to suit their own local contexts.

Schemes like the Regional Land Use Partnerships in Scotland, Marine Plans and Local Nature Recovery Strategies present opportunities to embed and institutionalise local decision-making. These should encourage an open discussion with those who actively manage and work on the land and sea, including farmers, foresters and fishers, alongside local residents, businesses and community organisations. Leveraging public finances rather than relying solely on private finance can help to ensure more inclusive access to the benefits of Nature-Based Economies, especially in the more deprived rural and coastal communities.

Examples from Porto Alegre in Brazil to Tower Hamlets in London show that participatory governance and community wealth building can result in better meeting local needs[30]. However, the trend is currently going in the other direction: central government control of local government spending in the UK has increased from 60% of expenditure in the 1970s to 85% in the 2000s. Local budgets have reduced as a result. For example, Liverpool council's budget has fallen by 63% since 2010[31].

The reintroduction of missing species like beavers, where appropriate, can help re-establish natural processes

4. EMPLOY A SPECTRUM OF RESTORATION AND REWILDING APPROACHES

The establishment of Nature-Based Economies aims to restore, rewild and protect a mosaic of interconnected natural and semi-natural habitats across our land and seas. Within *core rewilding areas* and *regenerative areas* a spectrum of approaches can be used to achieve this. These must be relevant to local conditions and implemented at many different scales. Ideally they should provide connectivity into urban areas to increase access to nature. These approaches include:

Core rewilding areas:

- re-establish natural processes and allow nature to drive changes with minimum human intervention, free from set outcomes and fixed end points.
- increase species and habitat diversity by restoring natural disturbance regimes and trophic systems (food webs), including the return of threatened and missing species wherever possible and appropriate.
- prioritise natural regeneration, or where this is demonstrably not possible, assisted regeneration and/or tree planting[32].
- use culling only where needed to manage herbivore numbers in order to sustain ecosystem recovery in the absence of wild predators such as lynx and wolf.
- promote and support 'wild enterprise' involving non-extractive and/or 'leave no trace' activities.

Regenerative areas:

- prioritise and incentivise productive systems which work with and mimic natural processes, e.g. continuous cover forestry, naturalistic grazing, harvesting of natural products, recreational fishing, nature-based tourism and low-impact fishing or field sports.
- provide habitats along continuous corridors through higher resource-use areas through which species can more easily move and expand their ranges.
- preserve more highly managed conservation sites with noted high biodiversity value e.g. species-rich hay meadows or sites managed for specific ground-nesting birds.
- cease destructive activities such as trawling and dredging, large-scale infrastructure developments, polluting activities and non-sustainable resource use.
- facilitate species dispersal across barriers such as major roads and other infrastructure, e.g. green bridges, wildlife tunnels, etc.

Implementing these rewilding and restoration activities can help boost the number and diversity of local jobs. Rewilding Britain's own data has shown how rewilding marginal land can increase employment by 54% and diversify jobs without halting traditional agricultural activities (see case study, p18). Other analysis suggests that an expanded programme of nature-restoration, peatland restoration, woodland creation and urban green infrastructure alone could create "at least 16,050 jobs in the 20% of constituencies likely to face the most significant employment challenges"[33] post-COVID.

5. CREATE SHARED ECONOMIC, ENVIRONMENTAL AND SOCIETAL VALUE

Creating shared value[34] is a key component of a Nature-Based Economy. This means building economic value so it also creates benefits for society and the environment.

People and businesses create shared value through reciprocation and working together. A Nature-Based Economy must ensure, however, that those who create public value are rewarded. For example, a hill farmer could reduce flood severity and river pollution downstream through woodland regeneration. But if this reduces the amount the farmer can produce and therefore the money they might make, it is less likely that these public goods will be provided.

The process must also solicit participation from non-landowning companies and organisations which have a long-term vested interest in natural ecosystems and land use, such as water utility companies, local factories or NHS services.

Landscape Enterprise Networks are an example of a pioneering approach to aggregating demand for environmental goods[35]. For example, private sector landowners and businesses and autonomous local organisations might stand to gain from afforestation in a local area: a water company could benefit from more natural filtration of water runoff in the local watershed, a factory located on flat land might experience reduced flooding, and a local NHS service could benefit from more green space for improvement in physical and mental health. Provided the benefits exceed costs and there is an institutional framework for decision-making and budgeting, all may be willing to pay for this outcome in some way.

The growing frequency of extreme weather events and severe flooding in parts of the UK has highlighted the need for an improved approach to land use planning. Despite the £5.2 billion committed by the UK Government in 2020 for flood defences over the next six years, the significant role of natural flood management received surprisingly little attention. Only £0.2 billion of this funding has been earmarked for "innovative projects such as sustainable drainage systems and nature-based solutions"[36].

Using natural ecosystem approaches to floodplain management could be a key component of wider Nature-Based Economy models. For example, the New Forest Life III project restored 10km of straightened rivers by reinstating meanders and improving floodplain connection, which resulted in a 21% reduction in flood peak magnitude. The project reconnected and restored 261ha of riparian woodland and 141ha of wetland habitat[37], further resulting in new nature-based tourism and recreational opportunities. In 1997 New York City decided to invest in protecting and enhancing the Catskills/Delaware watershed rather than building a new water filtration plant, producing a cost saving of $6-$8 billion over 10 years[38].

Beavers present a particularly exciting form of management with an emphasis on rewilding. In the Devon Beaver Project, peak water flows leaving the site are 30% lower during storm events than elsewhere[39]. Furthermore, beaver ponds result in lower diffuse pollutants downstream[40] and SRUC's study of the Knapdale beaver trial in Argyll estimated total benefits in the range of £1 million to £6.7 million[41] arising from a range of ecosystem services and nature-based businesses.

There are wider societal benefits of a nature-based approach to land and marine management. Providing people with greater access to nature can lead to significant improvements in physical and mental health:

- Natural England estimates that access to quality green space saves the NHS around £2.1 billion per year in healthcare costs.
- An estimated £1.4 billion could be saved in healthcare costs by reducing sedentary behaviour by 1%[42].
- London's public parks provide an estimated total avoided cost in improved mental health of £370 million per year[43].

Also, if a local area invests in nature, thereby creating a better and healthier place to live and raise a family, it is likely that more people will want to stay in or move to the area. Trends in the UK property market since the COVID-19 pandemic show a sharp increase in the desire of people to move from urban areas to the countryside.

With appropriate policy and budgetary mechanisms, these environmental and societal benefits potentially create future direct revenue streams for landowners and entrepreneurs. They can offer accommodation and recreational services to visitors with health benefits framed as part of their product offering in part funded by local health authorities.

6. INCENTIVISE THROUGH PROVISION OF BLENDED FINANCING

The change towards a nature-based economic model will require new and creative forms of finance. Significant capital flows will be needed, and quickly, to restore and protect ecosystems at any meaningful scale. This will require a blend of commercial, public and grant finance.

There are an ever-increasing number of financial instruments available to support and leverage environment-focused commercial businesses in ways that could help catalyse and sustain local Nature-Based Economies. These include: direct nature fees, green taxes, grant funding, impacting investing, Payment for Ecosystem Services, 'green' and 'blue' bonds, crowdfunding, grant-capitalised incubator and buy-out funds (see more detail on each in appendix 1). There is also mounting evidence that UK and devolved governments and major institutions are prepared to invest more in nature and climate change mitigation-focused projects:

- The UK Government has set up a £640m Nature for Climate Fund, designed to provide additional funding for natural climate solutions like woodland creation and peatland restoration.
- The new Scottish National Investment Bank has stated that its primary focus is climate change mitigation and consequently environmental investing.
- Reforms to government subsidies, such as the Environmental Land Management scheme, propose to financially support farmers and other landowners to increase carbon sequestration on their land and restore degraded ecosystems.

However, a major limiting factor in the applicability of many commercial financing mechanisms to local Nature-Based Economy models is the transaction cost of financing small and medium-sized businesses, and the typically short investment timescales of most funders. Most available environmentally-focused finance (for now at least) tends to flow into larger, more risk averse businesses and infrastructure projects such as renewable energy. We therefore need new and different mechanisms which fit the profile of the kind of businesses which will typically be present in local Nature-Based Economies.

There is a strong case for using public financing to fund restoration activities, capital costs and potentially local land ownership, especially for *core rewilding areas*, and to help unlock private capital for 'riskier' enterprises. Private capital will also need to be leveraged and could work alongside public money to expand the scale of activities. But private capital will usually only support projects that offer well risk-adjusted returns. Careful analysis is needed of what capital is required, what the return potential is and what blend of finance is necessary. Concessionary finance of various types, such as public guarantees or first loss mechanisms, have a role to play in assisting nature-focused businesses that might face greater risks in the markets they operate in.

There may be scope for locally-driven public investment vehicles to be created, providing concessionary finance to nature-based businesses within Nature-Based Economies. Local anchor institutions can play a number of key roles by: acting as 'aggregators' for nature-based products and services; brokering access to public and private financing; promoting business partnering to attract investment and increase revenue; providing branded marketing that celebrates the natural, cultural and economic identity of each local area; and linking supply value chains to external demand.

All types of finance ought to be accompanied by careful 'conditionality' to ensure that nature-focused outcomes are achieved in addition to commercial ones. It's crucial that all financing provides clear and coordinated long-term incentives within well-enforced regulatory frameworks which support and safeguard implementation. There are also risks associated with the monetisation and capitalisation of ecosystems, which could exacerbate existing detriments to ecosystems and communities (including loss of control over – or even of – ownership of land). These need to be better understood and mitigated with safeguards.

Sustainable kelp harvesting is just one example of the type of innovative new enterprises we expect to see in a Nature-Based Economy

7. CATALYSE NATURE-BASED INNOVATION AND ENTREPRENEURSHIP

Nature-Based Economies can help to foster a new generation of businesses which offer financial returns, while also creating ecological and social benefits. Supporting innovators to develop, test and commercialise nature-based processes, products, services and business models will be crucial. Already, innovative micro-business concepts are being launched, many of which leverage the trend towards rural living which has been precipitated by lockdowns and home-working during the COVID-19 pandemic. Pilot projects are also underway to innovate and test new business models which deliver substantial ecological restoration[44]. Further investment will be required to expand the range of 'proven' business models for both *regenerative areas* (with more predictable cash flows from food, fibre, wood products, leisure and tourism, etc.) and *core rewilding areas* (where revenue opportunities are more limited and public funding may be needed).

Providing clear signals of demand for nature-based solutions can also give confidence to entrepreneurs and investors. This might include establishing Nature-Based Economies as Enterprise Zones[45] which foster high-nature value productive systems, new micro-enterprises and nature-based solutions. These should come with associated packages of support such as: innovation funding; business advice and mentoring; business rate discounts; research and development tax credits; and simplified local authority planning.

There are currently no Enterprise Zones with an integrated, large-scale nature-based focus. However, relevant examples include the North Devon Biosphere Reserve Woodland Enterprise Zone[46], and the South Downs National Park Authority Food Enterprise Zone[47]. They provided support for the production of woodland and whole estate management plans respectively (where these could not be funded by other means).

Other ways to support innovation include:

- Provide localised extension services and training to support land/marine managers who wish to diversify their skills, e.g. in natural regeneration, restoring natural processes, continuous cover forestry and extensive livestock production.

- Influence and make connections with potential investors. For example, the UK Business Angels Association estimates that some 18,000 business angels privately invest an average of £850 million each year[48].

- Facilitate knowledge exchanges between land/marine managers to help foster local nature-based economic development. For example, the Rewilding Network[49] established by Rewilding Britain is providing peer learning and knowledge sharing support to create a community of rewilding practitioners and entrepreneurs across Britain.

- Run challenge funds to reward and support clusters of nature-based innovators to develop and scale up their businesses beyond initial design[50].

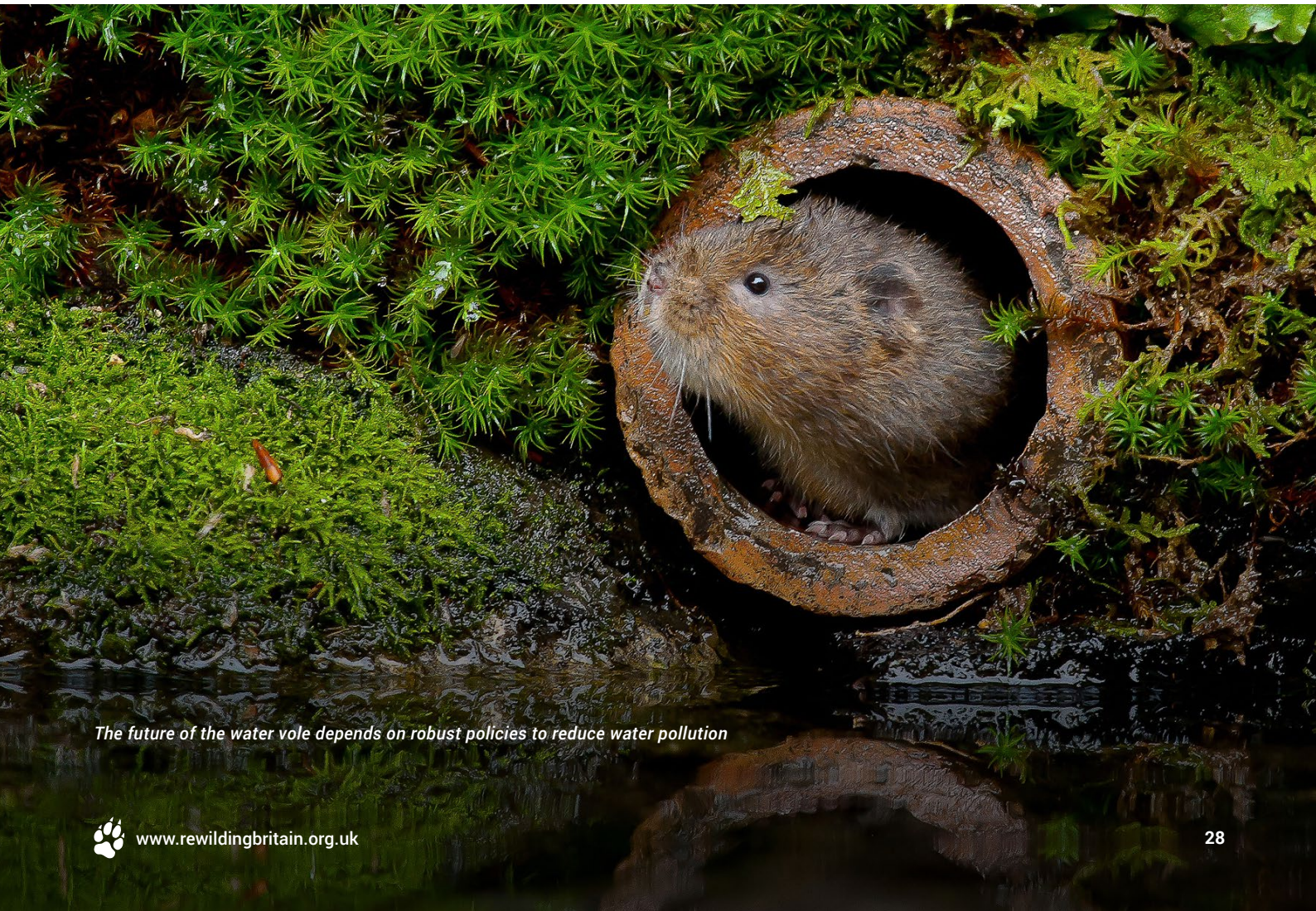
Internet connectivity, transport and other infrastructure investment will play a key role in supporting the transition to Nature-Based Economies. Internet availability and speed are often – if not universally – cited in rural areas as a barrier to economic development. Addressing this will be crucial for attracting inward investment and retaining/evolving existing businesses, especially with the rise in people working from home post-COVID. This will also greatly enable home-working or partial home-working, and rural areas in the UK have a significant opportunity to attract and retain people who have the option to work from home. Transport infrastructure needs will depend upon the context, but there is an opportunity for areas to invest heavily in the infrastructure which supports public transport (e.g. reconnecting rail links) as well as charging networks for electric vans and vehicles.

8. ENSURE ENABLING LEGAL AND REGULATORY FRAMEWORKS

Nature-Based Economies need to be supported by integrated legal and regulatory frameworks that are effectively enforced. A simple set of performance standards for land and marine use activities are needed to give clarity to nature-based initiatives, and to provide assurance that outcomes are deliverable. These standards will also underpin public finance initiatives and avoid market-side confusion. Strict enforcement of existing and new environmental regulations (e.g. around water pollution, habitats and species protections, etc.) will help nature-based businesses to secure competitive advantage over those competing businesses who do not positively adapt.

Yet, monitoring and enforcement of existing regulation is hugely under-resourced: each farm in England can expect a visit from the Environment Agency once every 263 years[51]. While many farmers comply with regulations and take care of their land, those who wish to pollute are relatively free to do so, creating little economic incentive for good practice. The UK's rivers are in a shockingly poor state, for example, with only 14% being in good ecological condition[52]. WWF report that up to one third of farmers in England are non-compliant with water protection laws[53], while the Environment Agency's River Axe N2K project in 2016 found that 49% of farmers were directly polluting the river[54]. Enforcement of water quality regulations, however, is very limited. In 2016, the Environment Agency found that 95% of farms in the River Axe catchment did not comply with storage regulations[55].

We also currently have very uneven regulatory frameworks. For example, on land there are (at least) three different regulatory systems. Agriculture is lightly regulated, woodland creation is fairly robustly regulated by the Forestry Commission or equivalents, while developments such as renewable energy are regulated by local authorities under the planning system. This is confusing and often provides competing and contradictory incentive structures. Coordinated and consistently-enforced regulatory processes are needed that work to support and incentivise the delivery of local land and marine use plans.



The future of the water vole depends on robust policies to reduce water pollution

IN FOCUS: LANGHOLM INITIATIVE

A SURPLUS OF £1.29M AFTER 26 YEARS

HOW A COMMUNITY LAND BUYOUT IS ACTING AS A SPRINGBOARD FOR WIDER REGENERATION

Earlier this year, the Langholm Initiative completed the largest ever community buyout of land in southern Scotland.

Formed 25 years ago to help the former textile town tackle industrial decline, the Langholm Initiative is the community development trust that acts as an anchor organisation for local people and businesses. It acquired 2,100ha acres of grouse moor and woodland for £3.8 million on behalf of the local community, and intends to transform the land into the Tarras Valley Nature Reserve, which will protect and restore peatlands and ancient woodlands, and provide a haven for rare hen harriers.

A short-eared owl hunting over the moor

But this doesn't mean abandoning the land to nature and removing people from the area. Far from it.

Hand in hand with nature recovery, the community wants the buyout to act as a springboard for wider regeneration. The ambition, says development manager Angela Williams, is to build a 'Nature-Based Economy' around Langholm which generates jobs and income for the local community.

The southern tip of the moor is within walking distance of Langholm itself. "The aim is to use the moor as a catalyst for sustainable tourism, for bringing more

The rewilding of the moor will support a greater diversity of species, such as these pink-footed geese

people into the town," says Angela. "We feel strongly that the town has to feel the benefits."

Over the next few years, in consultation with the local community, the Langholm Initiative plans to attract tourists to the area through developments which could include the creation of a glamping site, all abilities trails and a hen harrier observatory. Several buildings on the moor will also be redeveloped to generate income, while a number of people will work to restore the land, attend grazing animals and manage woodland. The ambition is that local people and local suppliers will benefit either directly or indirectly.

The money to buy the land from Buccleuch Estates was raised after a lengthy fundraising campaign. To secure the funding, the Langholm Initiative commissioned a business plan to convince major backers such as the Scottish Land Fund that the buyout would not only benefit nature and the local community but would also deliver financial sustainability.

The business plan concluded that the nature reserve would indeed boost local tourism, employment, training and housing opportunities for the local community. If development work is carried out, the plan said the land could generate a surplus of £1.29 million after 26 years; £1.05 million of this could be used to fund development itself, leaving an overall cash surplus of £292,000.

"Economic impacts could be similar to the Galloway Kite Trail which created 20 full-time equivalent jobs over an 11-year period," said the report. Already, four new full-time and two part-time jobs have been created since the moor came into community ownership in March, says Estate manager Jenny Barlow.

"Large scale ecological restoration, a sustainable nature-based economic model and community engagement are central to everything we're doing"

Jenny Barlow, Estate manager

This economic development, of course, runs hand in hand with plans to ensure that the moor captures carbon and mitigates climate change. "Large scale ecological restoration, a sustainable nature-based economic model and community engagement are central to everything we're doing," says Barlow.

Community engagement is a big part of the plan

KEY ECONOMIC SECTORS IN A LOCAL NATURE-BASED ECONOMY

A MYRIAD OF INDUSTRIES IS LIKELY TO UNDERPIN SUCCESSFUL NATURE-BASED ECONOMIES. WE SHOWCASE SIX OF THEM OVERLEAF.

A Nature-Based Economy, just like a natural ecosystem, should feature a diverse range of economic sectors working together within an integrated model.

It may be, however, that a particular local business or sector is the main employer in the area (for example, the forestry sector in Northumbria and the tourism sector in Cornwall). This will mean that each local Nature-Based Economy will have to use its own particular starting point to create a more rounded system of businesses and land uses.

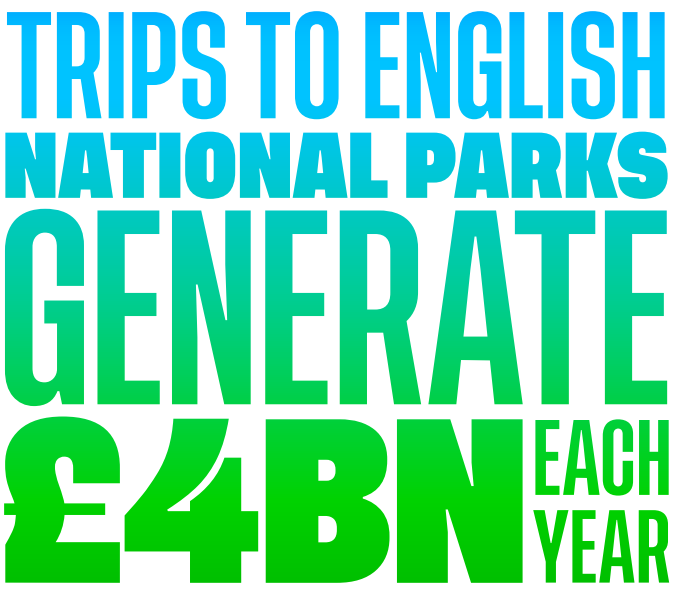
Inevitably, this will result in a number of different ways forward rather than a one-size-fits-all approach. At all times, though, it is important to remember that synergy and integration across sectors and businesses is vital for a Nature-Based Economy to function effectively.

The characteristic features of a Nature-Based Economy should include:

- Exploring and promoting economic activities which help to enhance and sustain nature (and derive benefits from doing so).
- Supporting forms of production which restore and mimic natural processes as much as possible, e.g. semi-natural grazing, continuous cover forestry, etc.
- Developing synergies between nature-based businesses, to enhance their individual and collective commercial performance.

We analyse six of the more obviously relevant economic sectors below. Within each we highlight how the following sectors might evolve from their present characteristics and the types of interconnections that could be developed within a Nature-Based Economy.

1. **Nature-based tourism**
2. **High nature value farming and local food economies**
3. **Reforestation and diversified forest businesses**
4. **Coastal protection and marine-based enterprises**
5. **Sustainable habitat management and field sports**
6. **Regenerating ecosystems through payments for public goods**



Wild sites can provide unique locations for special stays

1. NATURE-BASED TOURISM

Nature-focused tourism is growing faster than any other sector of tourism. As such, it represents a major opportunity for creating local Nature-Based Economies in the UK. The sector generates around £1.4 billion a year and 39,000 full-time equivalent jobs in Scotland alone[56]. Visit Scotland, the national tourism agency, estimated that some 1.2 million trips are made to or within Scotland for the primary purpose of viewing wildlife. In 2017, UK tourists made over half (56%) of these visits and accounted for 75% of spending (£364 million)[57].

Tourism has broader ripple effects in the wider economy, potentially bringing benefits to farmers and local food producers and service providers such as tour operators, accommodation providers, restaurants, retailers, craft enterprises and transport operators. Evidence suggests that nature-based tourism is a more inclusive income generator than other forms of tourism. A poll carried out in 2014 by the Adventure Travel Trade Association found that 65% of the total trip cost associated with typical nature-based adventure tourism stayed in the local economy, compared with just 5% for 'normal' tourism[58]. Nature-based and adventure tourism also rely more on local knowledge, which puts local people in a strong position to provide the best value experiences.

Visitors also place a premium on healthy nature. Trips to national parks in England, for example, have generated £4 billion per year and supported 48,000 full-time equivalent jobs (in turn representing 38% of all jobs in the areas which are local to these parks[59]).

Nature-based tourism need not necessarily be confined to national parks to be successful. For example, Knepp Estate's nature tourism business – comprising 'wild safaris', camping, glamping and a shop – now has a turnover of around £800,000 per year (see case study, p35).

The COVID-19 pandemic has changed the characteristics of tourism in the UK in the short to medium-term, with short-haul and staycations replacing more long-haul tourism destinations. The health benefits of spending time in nature have also been reinforced. This provides an opportunity for communities living in both urban and rural areas to create shared value around nature-based recreation, with the potential to realise a variety of environmental, health and economic benefits for local areas.

Of course, careful planning is required within local land/marine use strategies to avoid the risks

associated with 'over tourism'. The past two years of the pandemic have shown that pressures on popular natural beauty spots (such as Snowdonia in Wales[60]) can become very challenging to manage. The North Coast 500 route in the Highlands of Scotland is also suffering from overcrowding and associated problems such as litter due to a lack of visitor management facilities. Consideration also needs to be given to the development of tourism which can generate year-round (or close to year-round) employment for local people.

Future tourism product development as part of local Nature-Based Economies need not be complicated. It can be affordable and accessible to a broad demographic, requiring little specialist equipment. It can also leverage existing trends towards outdoor activity experiences in nature. In Scotland, for example, walking is by far the most popular activity among visitors, representing nearly 1.8 million trips, followed by wildlife watching, with well over a million trips[61], followed by adventure sports and mountain biking[62].

Creative experiences and accommodation accessible by cycling and hiking routes can complement existing accommodation offerings, which typically have focused on the towns of many areas. In *core rewilding areas*, 'leave no trace' activities that can be developed without permanent infrastructure should be encouraged, e.g. hiking, camping, kayaking, climbing and cross-country skiing. In *regenerative areas*, lodges, cabins and low-impact infrastructure set in nature could be built using sustainable wooden construction techniques, alongside rehabilitating traditional structures. This could provide revenue for local construction businesses and leverage the area's natural assets.

In any local Nature-Based Economy, there would usually be scope for a locally-owned destination management company to promote the area and facilitate collaboration between local businesses. The company would be a key information source for visitors on activities, accommodation and sites to visit. A locally-led and integrated approach to tourism development also ensures that the risks noted above can be anticipated and mitigated within a broader visitor management strategy.

Reconnecting with the environment is at the heart of nature-based tourism

SPOTLIGHT: NATURE-BASED TOURISM

Nature recovery projects can enable new and innovative nature tourism experiences. Canopy & Stars, Off Grid Travel and Nearly Wild Camping are examples of creative accommodation businesses.

Rewilding can also provide opportunities for wildlife watching and guided tourism businesses, such as Naturetrek, Saddle Skeddadle, Wilderness Scotland and Colin Prior Photography.

IN FOCUS: KNEPP ESTATE

£800,000 YEARLY TURNOVER

NATURE-BASED TOURISM AND WILD MEAT HAVE HELPED KNEPP ESTATE DIVERSIFY ITS REVENUE STREAMS

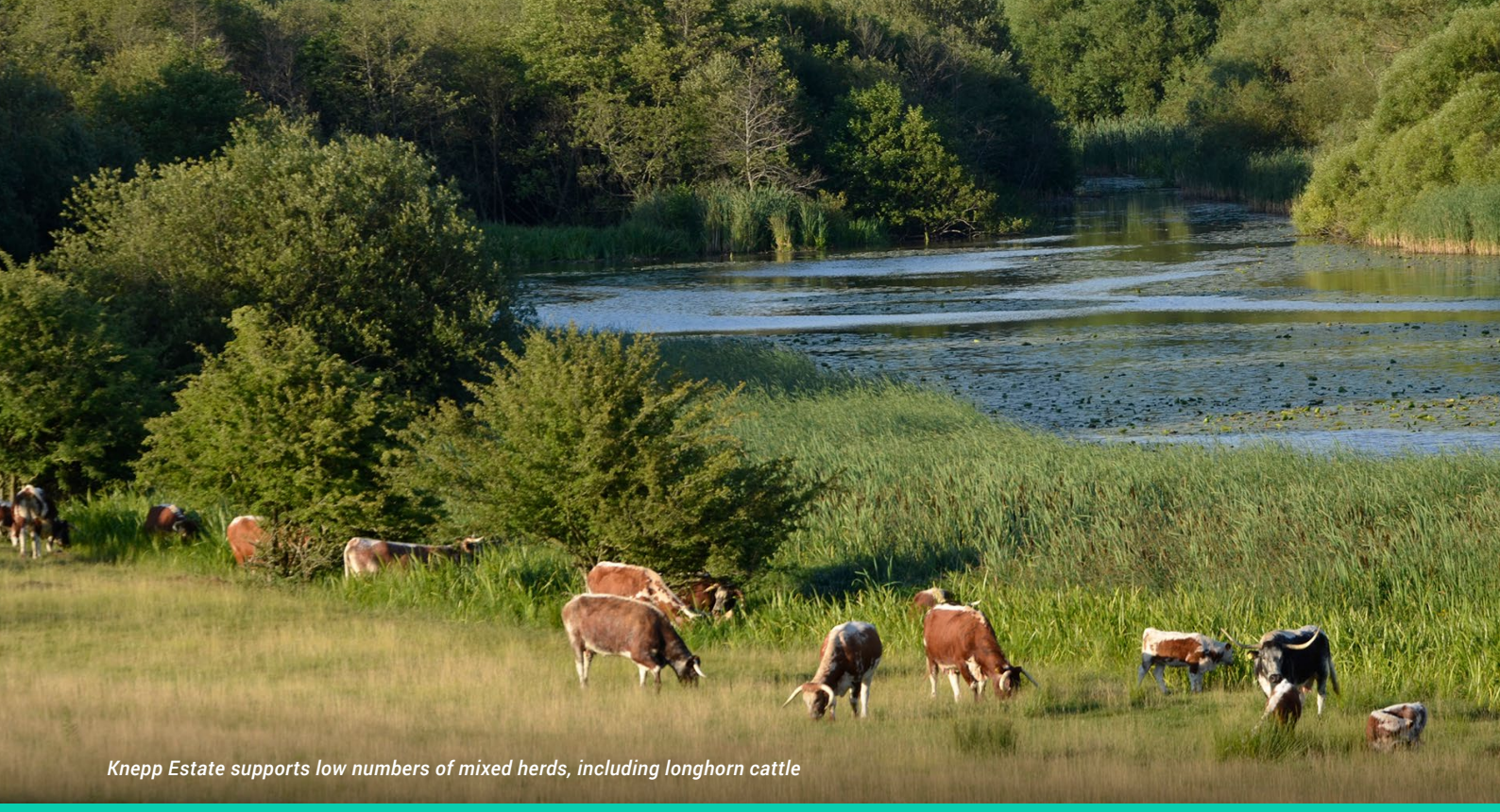
Charlie Burrell and Isabella Tree have transitioned the estate from farming to wilding over the last 20 years

Knepp Estate is probably the most famous rewilding project in Britain.

But while its storks and purple emperor butterflies are renowned, much less well-known is its successful business model. Knepp's nature tourism business – comprising 'wild safaris', camping, glamping and a shop – now has a turnover of around £800,000 per year, with a 22% profit margin (£190,000).

Charlie Burrell and Isabella Tree (pictured, left), who run Knepp Estate, have carried out detailed analysis on how their estate performs against other comparable ones. Using data from Savills to 'benchmark' Knepp against other rural estates, the analysis shows Knepp greatly outperforming the average English rural estate, as well as the average for the southeast. While much of this is due to Knepp's residential and commercial lets, the estate does better than average on agricultural gross income alone.

Indeed, Knepp's £/ha profits from in-hand farming have consistently outperformed the English average for in-hand farming estates over the past 20 years, as measured by Savills' benchmarking survey. As Isabella Tree relates in her book *Wilding*, it's over this period of time that Knepp has made the transition to rewilding.



Knepp Estate supports low numbers of mixed herds, including longhorn cattle

Using another measure – Defra's Farm Business Survey – Knepp Estate's in-hand farming profits have also performed better than cereal farms in southeast England over this same period. It's done even better when the comparison is made with lowland grazing livestock in the southeast.

Some of Knepp's farming income has come through farm subsidies: a combination of the Basic Payments Scheme and, more substantially, Countryside Stewardship (and previously Higher Level Stewardship) as payment for the environmental benefits of Knepp's rewilding approach. But the estate has also sought to become less reliant on such schemes, partly by diversifying out of agriculture through its eco-tourism offer, and partly by increasing the profit margins for its produce.

Knepp produces around 35 tonnes of meat a year from its livestock and deer. Currently, most of this is sold wholesale, but a few cattle are butchered and retailed direct through their farm shop, adding an astonishing profit of £1,500 per animal over the wholesale price. Charlie Burrell estimates that if there was sufficient demand to retail all of Knepp's 'wild meat' in this way, the estate could replace its BPS income stream entirely. While it's not quite that easy, it's one reason why Knepp has invested in an on-site state-of-the-art butchery, which the estate predicts will have a turnover of £500,000 to £700,000 within five years.

Charlie and Isabella's long-term aim is to diversify the estate's income sources further over the coming years, moving towards a fairly even split between rents, farm produce, tourism and future Environmental Land Management scheme payments. Doing this, they hope, will make Knepp more resilient to whatever the world can throw at it – be that uncertainties around farm payment systems, Brexit trade deals, or future pandemics.

"There's clearly space for many more rewilded estates offering camping and wildlife safaris"

Charlie Burrell, Knepp Estate

Even though COVID-19 has dented Knepp's tourism, there appears to be 'an insatiable appetite for getting out and connecting to nature', as Charlie puts it. Is the market saturated? No, says Charlie; there's clearly space for many more rewilded estates offering camping and wildlife safaris. When it's put to him that there can only ever be one Knepp, his answer is as succinct as it should be encouraging to would-be rewilders: "Rubbish!"

Wildlife safaris provide a new form of income

The Horned Beef Company's mission is to find a "truly sustainable land management model that is economically and ethically sound"

2. HIGH NATURE VALUE FARMING AND LOCAL FOOD ECONOMIES

Agriculture is an obvious focus in the shift towards a Nature-Based Economy. 71% of land in the UK is devoted to agriculture, two thirds of which is used for livestock[63]. The sector is already in a significant period of transition and there is a general sense that post-Brexit subsidies and policy support will place a far greater emphasis on environmental benefits. However, the practical and economic implications of this are yet to be fully understood.

Agriculture contributed £9.5 billion to the UK economy in 2018 (0.6% of GDP), employing 426,000 people (1.5% of the workforce) and producing 53% of food consumed[64]. Agriculture in the UK has for years received generous subsidies through the European Union (EU) Common Agricultural Policy (CAP). In 2018, landowners received £3.4 billion through CAP, 80% of which was in the form of Direct Payments, made simply on the basis of the area of land under productive agriculture.

Handcrafted gin from rewilding sites is just one of the nature-based products that could benefit from innovative local supply chains

SPOTLIGHT: LOCAL PRODUCE DISTRIBUTION

Innovative food distribution models can be adapted by high-quality local producers in a nature-based economy. For example, Robomart is a food delivery service developed in California which lends itself to local food production models. Meanwhile Lifvs is an innovative network of rural grocery stores in Sweden which harnesses technology, and Balgove is an award winning farm shop in Scotland created by a local landowner, now working in partnership with other farmers.

Many farms are reliant on these payments. 42% of UK farms would have made a loss in 2016/17 were it not for subsidy support[65]. In certain areas like Wales this rises to 73% of Less Favourable Area (LFA) cattle and sheep farms in 2018/19[66]. Grazing livestock farms made an average annual loss of over £16,000 from livestock in the same year and only generated profits when subsidies and diversified incomes were taken into account[67]. Following Brexit, EU subsidies in England are being replaced with an Environmental Land Management scheme (ELMs). Land managers will be paid for providing public goods such as access, carbon sequestration and biodiversity. The exact form that ELMs and devolved nation equivalents will take remains unclear. This, combined with the potential for opening up UK food markets to lower-standard produce post-Brexit, means that it is a time of significant uncertainty and anxiety for those engaged in farming in the UK. But it is also an opportunity to develop more diverse and resilient income streams, e.g. localised markets for higher quality local produce, alongside other high nature value products and enterprises.

A number of reports are helping to shape thinking about UK agriculture, and are relevant to the creation of Nature-Based Economies. The government-commissioned National Food Strategy argues that land must be net-negative for the economy to meet net zero, and that more land should be freed up from farming to repair carbon sinks and to create more space for nature. It proposes four steps to halve the UK's land footprint for food – the biggest of these being eating less meat. The report states that "at present too much of our land is given over to livestock"; it calculates that 85% of the farmland (both domestic and overseas) that feeds the UK is used to rear animals. But many of the upland areas of England used for grazing are highly marginal where the "least productive 20% of our land produces only 3% of our calories". These upland areas could, in theory, not be farmed at all if we reduced waste in the system. The report states: "Giving 9% of the least productive farmland to nature would mean we produce 1% less calories." These same upland areas are also, fortuitously, where our biggest carbon stores – peat bogs – are to be found and where there is also significant potential for allowing natural regeneration[68].

The Climate Change Committee's report[69] also concludes that 71% of land is too much to be allocated to agriculture and that emphasis should be on farming less land in a more productive way. It suggests that 20% of agricultural land should be released for carbon sequestration by 2050 and says that doing so would be possible without reducing the UK agriculture sector's contribution to UK food consumption.

This doesn't have to be at the expense of farm profits. Stocking a range of livestock species, in particular traditional breeds, offers the opportunity to reinstate a more "natural" form of herbivory in *regenerative areas*. For example, a recent study of hill-farm profitability found that farm profits could be increased by reducing output to a level where stocks were supported only by natural grazing[70]. Here, the application of additional inputs such as fertilisers and feeds served to reduce

profits. This study shows how extensive, semi-natural grazing of livestock and the recovery of nature can make marginal farming businesses more economically resilient. While production levels of such regenerative farming approaches are lower, the profit margins can be higher as they are on Knepp Estate in Sussex (see case study, p35).

In addition to securing a competitive advantage in their core production businesses, farmers who adopt nature-positive practices would benefit from spin-off business opportunities. This can help farmers to gain and diversify economic returns[71], e.g. through ecotourism, sale of livestock and timber products. This transition and diversification can be incentivised through 'public payment for public goods' schemes like ELMs, triggered by increases in biodiversity and carbon sequestration. For a successful example of this diversification, see the case study about the Wild Ken Hill family farm in Norfolk, p40.

There is the potential for high nature value produce from *regenerative areas* to be coupled with innovative supply chain models – where local depots act as centralised processing/packaging facilities. This could see, for example, a semi-wild meat production business working in collaboration with other local producers, e.g. of wild herbs, to market and deliver fresh products. Cases already exist where electric vehicles provide rapid, fresh deliveries on demand using a mobile phone app. Local grocery stores and businesses could also be supplied daily with fresh and local produce alongside a small network of farm shops and cafes. This has to be balanced with the need to guarantee access to affordable and nutritious food across all income groups and to ensure minimal food wastage.

Longhorn cattle distribute a huge variety of seeds around a landscape through their gut, hooves and fur

SPOTLIGHT: WILD GRAZING TO FARM FORESTRY

Many farmers are switching to the production of traditional, extensively-grazed beef as a wilder way of farming. This results in the kind of dynamic wood pasture which once blanketed much of Britain. The Horned Beef Company is linking this approach with innovative sales and supply strategies. Customers pre-order the beef which is released six times a year – and is consistently sold out.

Creating new pastoral woodland which, in time, is grazed by livestock is also a potential diversification strategy. Trees can provide a local wood fuel source and while it is growing can provide shade and improve the health of livestock. On Netherurd Farm in Peeblesshire a surplus of £5,000 has been realised over 15 years by replanting felled woodland and a further £3,100 by extending native woodland[72].

IN FOCUS: WILD KEN HILL

200 DAYS OF SCHOOL VISITS PER YEAR

HOW REWILDING IS HELPING A FAMILY FARM TO BOOST REVENUES, PROFITS AND EMPLOYMENT

Education is central to the project

Wild Ken Hill, a family-owned holding in west Norfolk of 1,600ha, achieved national prominence this year when it was selected as the base for BBC Springwatch in 2021.

Over 12 hours of live broadcasting on BBC2, millions of viewers enjoyed watching a host of Wild Ken Hill's wildlife – from avocets to oyster catchers to marsh harriers. At the same time, they learned about the estate's pioneering approach to conservation, rewilding, and regenerative agriculture.

Wild Ken Hill began turning over 400ha of poor quality farmland and forestry to nature in 2018. Crops continue to grow on another 800ha using regenerative agriculture techniques to protect the long-term fertility of its soils.

There were two principal motivations for Wild Ken Hill's change in approach. Firstly, the estate wanted to address the worsening biodiversity and climate crisis head-on. Secondly, it was keen to future-proof its operations from Brexit (and the likely loss of Common Agricultural Policy payments) and other commercial challenges.

Three years in, project manager Dominic Buscall says that revenues, profits and employment on the estate

Oyster catchers at Wild Ken hill enjoyed some time in the limelight on BBC Springwatch

have increased since making the radical changes. He explains that rewilding is already helping Wild Ken Hill to generate more income than it used to. Wild Ken Hill's rewilding area comprises 200ha of former farmland and 200ha of woodland. Historically, the gross margin on the poor quality farmland was £375/ha. Now it is £550/ha, thanks to environmental payments from the Countryside Stewardship Scheme (CSS). The woodland, which generated very little income before, is also receiving money from the CSS.

Wild Ken Hill has added one full-time equivalent post since embarking on its rewilding project, recruiting a conservation leader. It now has six and a half full-time equivalent roles. Some of the jobs have evolved. As pheasants are no longer reared for shoots, a game keeper has adapted his skills to become a wildlife ranger.

Volunteering has grown to 10 people. Wild Ken Hill actively engages with its local community, hosting groups of children on up to 200 days a year and presenting to local churches and clubs. "The interaction between us as land managers and the community has grown significantly since the project started," says Buscall.

Wild Ken Hill also plans to develop enterprises focused on nature-based tourism. The estate wants to offer camping and glamping, a visitor centre and a range of outdoor activities with a nature focus. Recently, it launched guided tours of the site. 800 tickets have sold so far this year, with an average price of £35 a head. Wild Ken Hill has also arranged a number of bespoke visits for companies who pay to visit the estate.

"Quite quickly, we think it will become a multi-million source of revenue. That potentially doubles, if not more, the size of our overall enterprise"

Dominic Buscall, Project manager

Buscall says this diversification should help the estate weather any changes to CSS funding in future years, and help to grow Wild Ken Hill's income. "Quite quickly, we think it will become a multi-million source of revenue. That potentially doubles, if not more, the size of our overall enterprise."

Monitoring rewilding is key to tracking its success

Nature-Based Economies are an opportunity to increase native woodland cover in the UK while diversifying into sustainable forestry models

3. REFORESTATION AND DIVERSIFIED FOREST BUSINESSES

Under present forestry models, commercial conifer plantations lie at one end of the spectrum, and no-take ancient woodlands at the other; little else exists in between. The development of Nature-Based Economies is an opportunity to significantly increase native woodland cover across Britain while also diversifying into forestry models which enhance nature's restoration and provide local employment.

The UK is a significant consumer of global timber[73]. Direct and indirect employment from forestry provides 16,000 full-time equivalent jobs in the UK, with primary wood processing generating £1.88 billion in economic returns[74]. Timber prices have increased significantly since Brexit. Forestry for timber production on farms has been shown to be more viable than sheep (for lamb) in certain upland systems. A recent study by SAC Consulting for a farm site in Eskdalemuir,

Scotland, for example, confirmed that forestry is more economically viable than farming on certain types of existing agricultural land[75]. This is driving conversion of marginal agricultural land, particularly in upland regions, towards commercial forestry production, a trend that is expected to continue if not accelerate.

Where land conversion to forestry is inappropriate this can impact not just biodiversity but also local jobs; it can contribute to rural displacement, as plantations are typically managed through centralised forest operations. Currently the forestry sector in the UK is dominated by a few, mostly public sector players. Forestry England, Forestry and Land Scotland, Natural Resources Wales and Forest Service together account for 40% of all softwood production[76]. Despite efforts among these parties to move towards more biodiverse, multi-functional forms of management, half of the UK's woodland area is composed of non-native species. Forest cover is amongst the lowest in Europe at just 13%[77].

Native woodland expansion alongside a diversification into more regenerative and community-based forestry systems should be a key element of a Nature-Based Economy. Both rural communities and biodiversity stand to gain from more ecologically diverse woodlands. However, the impacts must be closely planned for and managed through local land use plans.

The creation of new native woodlands, with all the carbon, biodiversity, ecosystem service and recreational benefits this brings, should be incentivised through privately or publicly funded schemes such as carbon payments. Locally grown, sustainable timber can also provide both an important source of local revenue alongside long-term stores of sequestered carbon (particularly if used in products which have a long-term use pattern). For example, 85% of new homes in Scotland are already built using wood[78]. However, there is not always a positive relationship between the rate of carbon draw-down of a managed forest and the size and long-term permanence of its carbon stocks[79]. Expanding the demand for UK timber, if not planned carefully, could lead to biodiversity loss depending on the type and intensity of forestry production.

Landowners and surrounding rural businesses can benefit from forestry through integrating farming, forestry, tourism and ecosystems services payments. Savills recently modelled a number of scenarios for cutting carbon emissions and found that by growing organic produce and converting a third of land to forestry, an arable farm could sequester 1 tCO2e/ha/yr with a gross margin of £542/ha, compared to net emissions of 1.6 tCO2e/ha/year and £662/ha in the baseline. This is without accounting for the opportunities for generating additional funds through ELMs, carbon payments[80] or nature/farm tourism.

Westacre Estate grows a range of native tree species

SPOTLIGHT: SAWMILLS AND TREE NURSERIES

Local and mobile sawmills can boost financial and biodiversity returns from smaller managed woodlands. Investment could see new local sawmill businesses produce timber from high-nature value forestry systems. Examples include Murthy Sawmill and Boat of Garten Sawmill.

Local tree nurseries can also thrive by diversifying into producing native trees species to support the combined needs of rewilding and commercial forestry replanting. For example, Westacre Estate rewilding site supports a tree nursery growing a range of native tree species for a mainly local market.

Ownership of forests by a more diverse set of stakeholders could also encourage more multi-functional management approaches. These could better reflect local conditions, and could be combined with additional benefits such as social housing, developing local skills and establishing local processing facilities, etc. North West Mull Community Woodland is a good example. The woodlands were purchased from Forestry Commission Scotland through the National Forest Land Scheme in 2006 and the community company has since built a haulage route and an all-access path to an archaeological site, established a micro-hydro scheme and now runs a firewood business[81].

Other initiatives to include under-represented groups in forest ownership are evident in the many micro-forestry models around the world. Komaza, a Kenya-based company, provides support for farmers across the forestry value chain, producing timber at a lower cost than large plantations[82]. So far, they have helped 25,000 smallholder farmers to plant over six million trees, single-handedly doubling Kenya's rate of commercial tree planting[83]. Evidence from Ejidos in Mexico also suggests that involving traditionally marginalised people such as women and young people more in forest management significantly reduces rural out-migration and in turn encourages more innovative land management solutions[84]. To work and compete with large forestry enterprises, these small-scale operations need aggregation both in establishment/management but also in harvesting and marketing, e.g. through clustering or cooperatives.

Locally-sourced timber can enhance other linked or value-added products such as tourism accommodation and bespoke furniture. Makar Homes, for example, plan to build tourism accommodation on the Bunloit estate from locally sourced timber[85]. A potential virtuous cycle of timber products is evident here: an area with more diverse ownership models will support more ecologically diverse forestry which will attract more tourists to the area, and in turn generate more demand for accommodation and the local timber from which this can be built.

SPOTLIGHT: TIMBER MANUFACTURING AND DESIGN

UK government policies to support low-carbon construction models have created opportunities for local timber manufacturing businesses. They can partner with local sawmills and forest owners to produce materials for a variety of timber building designs. Examples include Makar Homes, ECOSystems Technologies and IndiNature.

Bespoke kitchen and furniture design and manufacturing firms can be attracted by the availability of high quality locally grown timber. Leveraging the brand of the local area, outfits like Kenton Jones can go on to supply local households and businesses.

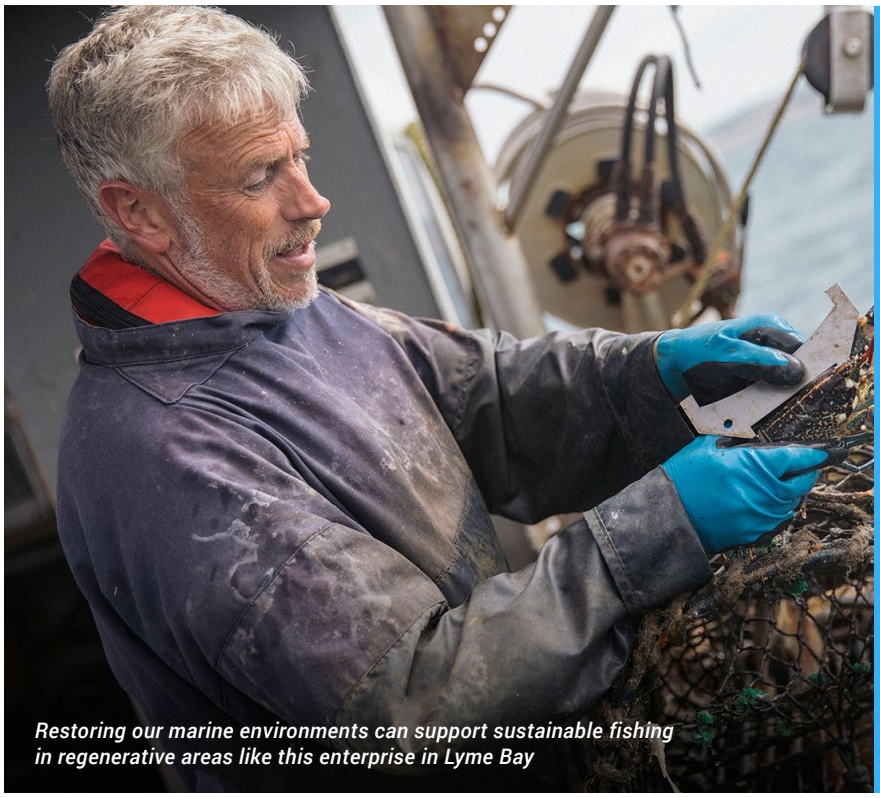
With the right framework in place timber manufacturing businesses can work hand in hand with local sawmills

Scarborough-based SeaGrown is working to turn sustainably harvested kelp into everything from biodegradable plastics to cosmetics, textiles and biochemicals

4. COASTAL PROTECTION AND MARINE-BASED ENTERPRISES

Many local areas contemplating a move towards a Nature-Based Economy will include coastline or inland watercourses. We believe that the protection and restoration of marine and freshwater habitats could lead to increased economic prosperity for local communities.

Marine Protected Areas (MPAs) – and the increased protection afforded by Highly Protected Marine Areas (HPMAs) – are equivalent to the regenerative and *core rewilding areas* of our Nature-Based Economies model. They can play an important role in helping to restore marine habitats and supporting wider social and economic benefits. However, while MPAs presently account for 38%[86] of UK waters, only 0.00003% are fully protected from dredging and trawling. Reports of illegal dredging in protected areas such as Gairloch point to insufficient enforcement of already very limited protections[87]. This is having a negative impact both economically and ecologically: the number of



Restoring our marine environments can support sustainable fishing in regenerative areas like this enterprise in Lyme Bay

SPOTLIGHT: COMMUNITY-LED PROTECTION

Within *regenerative areas*, fish stocks and marine species can recover substantially and support recreational fishing and diving, hand-diving for scallops, lobsters and langoustine, etc. These can all be linked to innovative local businesses.

The COAST project on the island of Arran (see Case Study p48) and the Reserve Seafood brand being set up by the Lyme Bay Reserve are examples of this.

people employed in wild catch commercial fisheries is falling, and only around a third of UK fish stocks are being harvested sustainably[88].

We have a choice between either a prolonged, perhaps irreversible decline in fish stocks, or bringing in meaningful restrictions that ensure the recovery of fish stocks alongside more diverse marine and coastal economies. These measures can bring about quite rapid economic benefits. A recent cost-benefit analysis of implementing a ban on trawling and dredging in European MPAs showed a net positive economic impact within five years. At this point the ecosystem service recovery benefits outweighed fishing losses and administrative costs of the MPA[89]. However, it should be recognised that, unless carefully planned, a ban can lead to short-term costs to some groups (fishers) even while generating long-term benefits to the environment and wider society.

Careful planning and the phasing-in of alternative income streams can offset the loss of income from fisheries while managing catch intensity in a way that allows fish stocks to recover. A recent review into the socio-economic effects of Marine Protected Areas (MPAs) also highlights the link between MPAs and enhanced tourism income. Increased visitor numbers are attributed to improvements in environmental quality, a stronger marketing position, and the role of MPAs in coordinating work across the tourism sector[90]. In these *regenerative areas*, alternative incomes could include adapting fishing fleets to offer boat trips and other marine adventures, drawing on fishing knowledge of the coastline and marine environment. Indeed recreational fishing already supports more jobs[91] than commercial fishing, fish farming and processing combined[92] and is more likely to be based within local coastal communities. The designation of Lyme Bay in southwest England as an MPA added £2 million to the total value of tourism and recreation in the area[93].

Sustainable management also involves less damaging means of catching seafood. This is particularly important in the near-shore (0-3 nautical miles), which are important fish nurseries and provide the greatest recreational benefits for local people and visitors. One study found that each kilogram of Nephrops (langoustine or Dublin Bay Prawn) caught by trawling results in 33,000m^2 of seabed being swept and disturbed with a by-catch of 4.5kg. Conversely, doing so by creeling results in just 1.8m^2 of seabed being altered and only 0.15kg of by-catch. On the Swedish west coast, where creel contributes 20% of the catch, the creel fishery affects the same area of sea floor in an entire year as trawling does in one hour[94]. Creel-caught Nephrops are also a higher-value product, commanding prices of £8.71/kg compared

to £4.80/kg for trawl-caught[95]. The removal of trawling from near-shore areas would also increase the catch and profitability of creel fisheries as the ecosystem recovers from trawling damage and gear conflict is significantly reduced[96].

Better protection of the marine environment can also be an opportunity to develop innovative enterprises which improve marine health and support local livelihoods. These include some forms of restorative aquaculture[97] such as edible bivalve and seaweed harvesting.

Inland waterways also have important biodiversity, fishing and recreational value. Freshwater angling in England alone generates 27,000 full-time equivalent jobs[98]. A clean and attractive environment was found to be more highly valued by anglers than the size and abundance of fish. This reinforces points made in earlier sections of this report: taking sectors in isolation is to overlook the shared value that can be created from managing land and sea for multiple functions.

Wild swimming has grown hugely in popularity in the UK in recent years (especially during the lockdowns of the COVID-19 pandemic), but poor water quality limits its wider recreational potential. This activity presents a real opportunity for improvements in physical and mental wellbeing: cold water swimming is believed to treat depression[99] and protect against dementia[100]. And yet, aside from the River Wharfe in Yorkshire, no rivers have designated bathing status in England and are considered safe enough to swim in[101]. This is because of a combination of run-off from agriculture and the discharge of raw sewage into rivers.

Beyond the environmental and wider public benefits, estimates from the Environment Agency indicate that local economic benefits of cleaning up our waterways could be significant. Achieving the Government's target of ensuring three-quarters of England's rivers, lakes and wetlands are in good condition by 2027 would boost the economy by £8.4 billion through increased tourism, recreation, flood resilience and quality of life[102].

Thriving seas support a diversity of enterprises like this eco-tourism outfit on Mull

SPOTLIGHT: FROM BOAT TRIPS TO AQUACULTURE

Marine Protected Areas provide the basis for a range of new tourism experiences. The skills of local fishermen can be used to offer boat trips and marine adventures. Examples include Seafari, Helford River Cruises and Mull Charters.

The aquaculture of edible bivalves and seaweeds can have a positive impact on marine habitat for fish and invertebrates as well as providing business opportunities. Innovative businesses include Zeewaar, in the Netherlands, and Seagrown, off the coast of Scarborough. They can also develop compostable bio-packaging, as Scotland-based Oceanium is doing.

IN FOCUS:

COMMUNITY OF ARRAN SEABED TRUST

MORE THAN 12,000 VISITORS

HIGHLIGHTING THE ECONOMIC IMPACT OF A SUCCESSFUL MARINE RESTORATION PROJECT

The project is keen to engage locals in the marine environment

COAST is a world-renowned example of how a local community can protect and restore its marine environment, and in the process support local jobs and businesses.

In 1995, two Arran divers – Howard Wood and Don MacNeish – set up the Community of Arran Seabed Trust (COAST) to reverse the decline of fish stocks and the destruction of marine habitats in Arran's seas.

The dramatic decline of commercially important fish was largely a result of inshore bottom trawling and scallop dredging, which had decimated fish stocks in the Firth of Clyde. The practice had also damaged the seafloor and maimed fragile seaweed beds and kelp forests, which are vital nursery grounds for fish and shellfish.

After 13 years of campaigning, the community succeeded in establishing Scotland's first No Take Zone (NTZ) in Lamlash Bay, off Arran. In this small area of 2.67km^2, no fishing of any sort is permitted. Further campaigning led to the legal designation of the 280km^2 South Arran Marine Protected Area (MPA) in 2016. The MPA, which encompasses the NTZ, was created to protect sensitive marine features through the exclusion of scallop dredging and prawn trawling, while allowing for other, potentially more sustainable, fishing methods in various zones.

COAST was led by the local community, who drove action around No Take Zones

"The MPA has been one of the best things that's happened here," says local creel fisherman Ian Cusick. "It has kept all the dredgers out. It has proven itself over the years. The stocks have come right back – really healthy stocks."

COAST's success at reinvigorating the marine environment has had knock-on economic effects beyond fishing. COAST itself now employs four full-time equivalent staff members, and has two regular freelancers working for it.

In particular, Arran's protected areas have begun to attract more visitors. As a result, in 2018, COAST opened a Discovery Centre to engage more locals and visitors in marine activities and learning. The Centre welcomed 12,137 visitors from September 2018 to the end of 2019.

Snorkellers and scuba divers are also coming to see the results of COAST's efforts, bringing economic benefit to the island. Many dive groups visited over summer, some of them opting specifically for Arran as they had heard of the No Take Zone and wanted to explore it.

The Centre itself has set up Snorkel Taster Sessions, and this summer COAST launched The Arran Snorkel Trail in partnership with the Scottish Wildlife Trust. Arran's MSP Kenneth Gibson points out that marine tourism accounts for 14% of all of Scotland's tourism, and says the Trail will "put the island up there as a sustainable marine holiday destination."

"The Marine Protected Area has been one of the best things that's happened here. It has kept all the dredgers out"

Ian Cusick, local creel fisherman

Meanwhile, two new kayaking businesses have established themselves in the area in the past three years: Otter's Tail Adventures and Kayak Arran. Proof, it seems, that nature's recovery and economic growth can go hand in hand.

A rich tapestry of marine habitats have returned to the area, including scallops

In the absence of predators, there is a role for deer control across many rewilding projects

5. SUSTAINABLE HABITAT MANAGEMENT AND FIELD SPORTS

There is a role for sustainable shooting and stalking in a Nature-Based Economy. Given the absence of top predators in the UK, both can help balance natural food webs and support naturally functioning ecosystems. Stalking and sporting estates can also attract domestic and international guests willing to pay significant fees to shoot game, bringing revenue into local areas. They are often considered a part of the cultural and social fabric of many rural and isolated regions.

But there is scope for evolution in the current model. Modern British fields sports are considered by many to be unsustainable, with management focused on maximising species numbers in most locations, often at the expense of the natural environment.

Many stalking and sporting estates cover a significant land area. As a result, they are facing increasing pressure for land management changes in line with UK Government policies on climate change mitigation,

largely focused on woodland creation and peatland restoration. Many landowners are now embracing more diverse models of management which can both create more jobs and bring wider environmental, social and economic benefits to rural communities.

Examples from around the world suggest that there is opportunity for a higher financial value sporting experience, targeting a premium market, enhanced by the fact the experience will take place in an important natural area. Studies in Norway have found that reduced densities of moose and deer species can have a positive impact on stalker satisfaction, through increasing the size of the trophies. In the UK, as in Norway, stalking can help to manage populations of large wildlife species, as well as to maintain the productivity of the environment and species diversity[103].

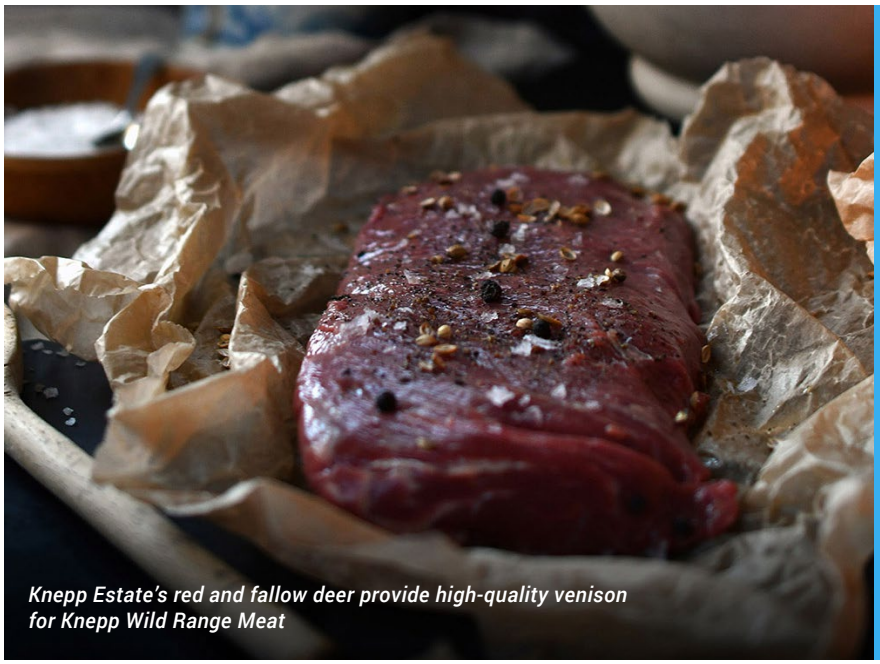
A review of pricing models suggests that estates would be able to charge much higher fees as part of creative accommodation/guiding packages. Some sporting estates in the UK, such as the Letterewe Estate in the Highlands, are pioneering this model already[104]. A move towards this approach would place more emphasis on guiding skills. Consequently, it is likely to lead to increased earnings for local stalkers (and indeed all employees involved in providing the stalking experience) and to attract more young people to the sector.

While stag stalking can be profitable, hind stalking is always more challenging in economic terms. Stalking in the depths of winter holds less appeal, as does the need for precision and skill (not necessarily the case with some paying clients) to achieve cull targets. Perhaps a more politically and economically creative model is to consider alliances between sporting estate owners and clubs and associations in the local area for low cost 'community stalking' experiences during the hind season.

The field sports sector also forms the basis for a more sustainable wild meat business in certain local areas. For example, the local business Forest to Fork in the Highlands of Scotland works with landowners to manage deer numbers and butcher and distribute venison to local markets[105].

Grouse moors will be relevant for any transition, as the degraded state of many of the UK's upland natural landscapes represents a missed economic opportunity. Grouse moors represent approximately 8% of the UK's uplands but employ fewer than 1,800 people[106] and compare less favourably with other economic activities. For example, in Scotland grouse shooting attracted 6,500 overnight stays a year.

This is minimal compared with the wildlife tourism sector in general and in particular birdwatching focused tourism (some bird species, especially raptors, are often persecuted on grouse moors). Burning of grouse moors will also limit the scope for landowners to benefit from climate change mitigation related economic opportunities as summarised in the next section.



Knepp Estate's red and fallow deer provide high-quality venison for Knepp Wild Range Meat

SPOTLIGHT: WILD MEAT PRODUCTS

Stalking businesses can partner with wild meat product providers to create high-quality wild meat products. Examples include the North Harris Trust, which operates a stalking club for local community members, and Forest to Fork, which offers deer management services to forest owners and has created a range of creative wild meat products.

Peat bogs are an important global carbon store

6. REGENERATING ECOSYSTEMS THROUGH PAYMENTS FOR PUBLIC GOODS

Voluntary and mandatory carbon payments and other forms of Payment for Ecosystem Services can be used to support Nature-Based Economies. However, they must be orientated towards the delivery of local land and marine use plans and help to build shared value for communities. Consideration is already being given to how landowners can deliver public goods via reforms to farm payments – such as the Environmental Land Management scheme being set up by the UK Government, and similar schemes being considered by the Welsh and Scottish Governments. Their precise design is still being worked out, but they are likely to incentivise a more sustainable approach to food production as well as better outcomes for nature and climate.

Since the UK Government pledged to bring all greenhouse gas emissions to net zero by 2050, the role of land and marine environments in sequestering carbon has received greater attention. Analysis by the Committee on Climate Change identifies that net UK emissions from agriculture, peatlands and land use can be reduced from 58 million tonnes of CO2/yr (2017 baseline) to 21 million tonnes of CO2/yr by 2050[107] through a combination of low-carbon farming practices and reduced consumption of the most carbon-intensive foods. Rewilding Britain's own calculations suggest that rewilding 30% of the UK could help sequester 53 million tonnes of CO2/yr on land alone[108]. And yet, even though agriculture represents 10% of UK greenhouse gas emissions, it has proven harder to decarbonise than other sectors of the economy. Agriculture emissions fell just 16% between 1990 and 2016 compared to 42% for the economy overall[109].

The establishment of Nature-Based Economies could potentially be incentivised through carbon payments which are privately financed or publicly funded. We would like to see the establishment of a mandatory economy-wide carbon pricing mechanism that incentivises reductions in carbon emissions while raising dedicated revenue to help fund natural-based solutions[110]. Voluntary carbon markets have existed for over 15 years. They involve private sector companies (as well as individuals and other organisations) paying for projects that sequester carbon with a premium paid for also delivering additional biodiversity and social outcomes. Yet relatively few projects of any scale have been created in the UK. Currently there is an under-supply of European and other international 'offset' projects. Analysis suggests global demand could increase by a factor of 15, to over $50 billion by 2030[111].

Voluntary carbon markets can provide finance for projects, although the functioning and efficiency of these markets is uncertain. While high performance certification standards ensure the credibility of many nature-based carbon credits (not all by any means), there are concerns about how effective a voluntary market can be in supporting restoration projects and delivering climate change mitigation benefits. Challenges include a lack of visibility around prices, lack of common definitions around economic development and biodiversity co-benefits and low market transparency. Barriers to accessing carbon funds still exist for small landowners who do not have the scale and available funds to commit to certification. Collaboration between multiple landowners, potentially coordinated through anchor institutions, could help increase access to available payments. There are also growing concerns about some companies and individuals buying large tracts of land simply to offset their emissions or harvest carbon payments. This risks distorting land prices with little evident benefit to local communities.

The planning system is also expected to contribute to habitat enhancement under the Environment Bill. Biodiversity Net Gain (BNG) of at least 10% will be mandated for most housing and development. Enhancements to natural habitats are to be delivered on-site to the extent possible but off-site enhancements may be permitted. These are to be secured through planning obligations or conservation covenants. It is hoped that BNG will spur a new era of private sector investment into nature, and establish a 'biodiversity unit market', providing another source of finance for habitat restoration.

However, several concerns around the government's BNG policy remain. The omission of major infrastructure projects from the BNG requirement is widely criticised, given the often large footprint (or land take) of such schemes. BNG implementation to date also points to some risks around the delivery of wider landscape benefits. Evidence from analysis of over 1,600 house-building and infrastructure projects during 2020 showed that the majority focused on scrub and grassland habitats, that net gain claims may be overstated and and that they typically did not perform important ecological functions such as connectivity with surrounding habitats[112]. Enforcement by councils is also a concern, as current guidance advises enforcement action should only be undertaken if the violation results in serious harm to a local public amenity. Generally, failure to deliver the appropriate quality or type of habitat within the development footprint will not qualify, and would be essentially unenforceable.

For BNG to be a tool that delivers genuine environmental improvements and public benefits, it is important that lessons from early implementation inform roll-out. Guidance for councils, with clear definitions of metrics and exchange rules around baselines and no net loss are needed, building on knowledge about the restorability of different habitats in different contexts[113].

SPOTLIGHT: CARBON FUNDING INITIATIVES

Forest Carbon develops woodland creation and peatland restoration projects for carbon capture and ecosystem services in the UK. Using corporate carbon funding they have supported the creation of 200+ new woodlands since 2006, removing over 2 million tonnes of CO2e from the atmosphere.

The Family Forest Carbon Program in the US aims to ensure carbon markets also benefit smaller family landowners by offering payments to those owning 30-2,400 acres.

Corporate carbon funding helps native woodlands grow

RECOMMENDATIONS

REWILDING BRITAIN IS CALLING FOR THE UK AND DEVOLVED GOVERNMENTS TO MAKE A BOLDER FINANCIAL AND POLITICAL COMMITMENT TO NATURE'S RECOVERY.

Meeting our nature and climate commitments is untenable without transforming our economic model. Localised Nature-Based Economies – which help nature to heal and flourish while supporting prosperous communities – must be established across 30% of Britain to enable us to meet those targets and to drive a diversified, resilient and just rural/coastal economic transition.

Rewilding Britain is calling for the UK and devolved governments to make a bolder financial and political commitment to nature's recovery. This should be a key pillar of our role as hosts of the UN Climate Change Conference and as signatories to the Leaders' Pledge for Nature.

We propose four recommendations within which we make specific policy proposals:

1. **Transition towards Nature-Based Economies across 30% of Britain**
2. **Embed Nature-Based Economies within locally-led land and marine use plans**
3. **Incentivise Nature-Based Economies through coordinated financing and regulation**
4. **Unleash a wave of nature-based business innovation**

THE GOVERNMENT HAS BEEN GIVING £10.5BN A YEAR TO THE FOSSIL FUEL INDUSTRY

1 TRANSITION TOWARDS NATURE-BASED ECONOMIES ACROSS 30% OF BRITAIN

By incentivising Nature-Based Economies across 30% of Britain we can place nature's recovery at the heart of a green economic recovery. These should support the emergence of:

- *Core rewilding areas* (at least 5% of Britain) which focus on restoring and reinstating as wide a range of natural processes, habitats and missing species as possible with minimal or no human impact or extraction of resources.
- *Regenerative areas* (at least 25% of Britain) which support a diverse range of land and marine uses and enterprise, generating value for the local economy while allowing nature to flourish.

To put this in perspective, currently 28% of the UK's land and 36% of our seas[114] are designated as protected areas. They are already mandated to prioritise the protection and restoration of nature alongside supporting local livelihoods and societal wellbeing. However, many of them are failing. In England's national parks, 75% of Sites of Special Scientific Interest are in a poor condition and often in a worse state than elsewhere. At sea, bottom trawling is taking place across 98% of the UK's offshore Marine Protected Areas, with extremely damaging consequences[115]. Prioritising the creation of Nature-Based Economies in and around our protected areas could therefore provide a starting point for action.

To achieve this recommendation, UK and devolved governments should:

- Incentivise the creation of Nature-Based Economies across at least 30% of Britain's land and seas, including *core rewilding areas* and *regenerative areas*, as part of a green recovery.
- Integrate Nature-Based Economies within the upcoming Nature Green Paper, outlining how we plan to meet our target to protect 30% of Britain's land and sea for nature's recovery by 2030.
- Mandate all National Park Authorities, Protected Area and Marine Management Organisations to create locally-led Nature-Based Economies, leading the way with at least 10% *core rewilding areas*.

2 EMBED NATURE-BASED ECONOMIES WITHIN LOCALLY-LED LAND AND MARINE USE PLANS

Rural Land Use Frameworks, Land Use Strategies and Marine Plans have already been proposed at the national level, although most have yet to be fully implemented. It is now important to deepen the foundations of a green recovery through place-based decision-making processes. We recommend that local land/marine use plans be developed that bridge decisions across sectors to maximise shared value for nature, economy and local community. These should encourage an open discussion between those actively managing and working the land and sea, including farmers, foresters and fishers, alongside a diverse range of residents, businesses and community organisations.

This doesn't need to involve establishing new structures. Localised land/marine use plans can be developed by existing anchor institutions, such as community organisations, local councils, National Park Authorities or even local businesses. Importantly, these can provide multiple functions including coordinating local participation in decision-making, brokering access to public and private financing, promoting business partnering and providing locally branded marketing.

To achieve this recommendation, UK and devolved governments should:

- Support the creation of integrated Local Land and Marine Use Plans linked to the development of Nature-Based Economies that are shaped by local communities and led by trusted anchor institutions.
- Mandate relevant authorities – e.g. local councils, National Park Authorities, Local Nature and Land Use Partnerships, forestry agencies – to back the development of locally-led Nature-Based Economies.
- Enhance localised decision-making by diversifying public, private and community ownership models within Nature-Based Economies, for example through extending Scotland's Community Right to Buy to England and Wales.

3 INCENTIVISE NATURE-BASED ECONOMIES THROUGH COORDINATED FINANCING AND REGULATION

Significant capital investment is needed to meet our nature and climate commitments in any meaningful way. As we've seen with the COVID-19 pandemic, this is not difficult if there is the political will. Until very recently the UK Government was still giving £10.5 billion a year in public support for fossil fuels[116].

Public finance and spending on nature and climate has already increased. Major financing institutions are increasingly interested in investing in solutions to address climate change[117]. But given the scale of the need there is still a huge gap in financing commitments. We now urgently need to re-orientate both public and private financing towards a transition to Nature-Based Economies in support of a green recovery.

To achieve this recommendation, UK and devolved governments should:

- Re-orientate a significant amount of public funding towards the establishment of Nature-Based Economies, especially for *core rewilding areas*.
- Encourage equivalent increases in private capital investment focused on integrated business models which deliver nature's recovery alongside thriving local communities.
- Develop locally-driven public investment vehicles which provide concessionary finance to small and medium nature-based enterprises and reinvest the returns in new projects.
- Empower local anchor institutions to attract and coordinate significant inward investment and ensure that benefits accrue to the local economy.
- Establish integrated regulatory processes and practices which support the development and implementation of Nature-Based Economies in alignment with local land and marine use plans. Create simple performance standards with effective enforcement and monitoring.

4 UNLEASH A WAVE OF NATURE-BASED BUSINESS INNOVATION

Businesses, institutions and governments around the world have taken note of the opportunity for creating environmental, societal and economic value through nature-based solutions. This is having a knock-on effect on both corporate and public funding for innovation. For example, the UK Government is to increase annual public investment on R&D to a record £22 billion to create a "greener, healthier and more prosperous future for the UK"[118].

We want to see this used to unleash a wave of innovation in nature-based productive activities and enterprises. We have already highlighted many such businesses e.g. in 'wild' and adventure tourism, new distribution models for local produce, local sawmilling and timber manufacturing, and restorative aquaculture. Other businesses could respond to a new generation of local consumers and producers, many of them leveraging the trend towards rural living and homeworking accelerated by the COVID-19 pandemic.

To achieve this recommendation, UK and devolved governments should:

- Re-orientate public innovation funding towards the establishment of Nature-Based Economies to support nature's restoration and place rural and coastal communities at the forefront of a just economic transition.
- Establish nature-based enterprise zones with associated packages of support for small and medium nature-based enterprises such as: business rate discounts, advisory support, capital allowances (tax relief) for investment and simplified local authority planning.
- Integrate other innovation support mechanisms within Nature-Based Economies such as: providing focused local extension services; running challenge funds which reward innovation; supporting relevant education and training; and ensuring adequate investment in internet connectivity and local infrastructure.

GOVERNMENT INVESTMENT MUST BE USED TO UNLEASH A WAVE OF NATURE-BASED BUSINESS INNOVATION

APPENDIX

APPENDIX 1: GLOSSARY OF TERMS

Afforestation	The process of establishing trees or woodland in an area where there was no previous tree cover.
Anchor institution	An institution with an important local presence which, alongside its main function, plays a significant role in creating and reinforcing local economic ties and making a strategic contribution to the local economy.
Carbon capture	The long-term storage of carbon in plants, soils, geologic formations and the ocean.
Community wealth building	A people-centred approach to local economic development, which redirects wealth back into the local economy, and places control and benefits into the hands of local people.
Core rewilding area	An area which focuses on restoring and reinstating as wide a range of natural processes, habitats and missing species as possible to form mosaics of native forest, peat bogs, heaths, species-rich grasslands, wetlands, saltmarshes, kelp beds, seagrass, living reefs, etc. No or minimal human impact or extraction of resources.
Nature-Based Economy	An economy which helps nature heal and flourish, and supports prosperous communities.
Natural forest and woodland	A forest or woodland that has reproduced naturally, usually composed of native and naturalised tree species.
Natural regeneration	The regeneration of trees and woodland through natural processes (e.g. seed dispersal), as opposed to planting by people. It may be assisted by human intervention, e.g. by scarification or fencing to protect against wildlife damage or domestic animal grazing.
Regenerative area	An area which supports a diverse range of land and marine uses and enterprises which generate value for the local economy while allowing nature to flourish, e.g. continuous cover forestry, nature-based tourism, recreational fishing, regenerative aquaculture and high-nature value/wild meats.
Regenerative farming	Holistic farming practices that aim to improve soil health and reverse climate change by expanding biodiversity, improving the water cycle, increasing organic matter in soil structure, and transferring carbon from the atmosphere to the soil.
Restorative aquaculture	Methods of aquaculture, e.g. of edible bivalves and seaweed, which seek to rehabilitate and enhance entire ecosystems.
Rewilding	Large-scale restoration of ecosystems to the point where nature is allowed to take care of itself. Rewilding seeks to reinstate natural processes and, where appropriate, missing species – allowing them to shape the landscape and the habitats within.

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APPENDIX 3: FINANCING LOCAL NATURE-BASED ECONOMIES

FINANCING MECHANISM	OVERVIEW	ADVANTAGES	DISADVANTAGES	BENEFICIARIES	FUNDING TIMEFRAME	EFFORT LEVEL
PHILANTHROPY & GRANTS	Voluntary finance from private foundations, businesses, public agencies and individuals who donate with no expectation of a direct financial return. Relevant for creating the underlying 'enabling' conditions for a Nature-Based Economy, such as for habitat restoration, training for new skills, infrastructure and studies/analysis which can facilitate new economic activity.	Good source of finance for innovative and as yet unproven economic activity Very useful for de-risking new models and positioning them for follow-on commercial finance Enables learning and knowledge exchange, which may not be feasible with commercial finance Working with new networks of donors and public financing partners can help cultivate critical learning and adaptation	Significant time spent on proposals that may not be funded Can result in a project-focused approach that doesn't support long-term organisational strategy Support is highly dependent on donor strategy and willingness, and risks an organisation's agenda being driven by donor interests / short-term public funding priorities	Non-profit organisations, local community organisations, early-stage entrepreneurs (or those contemplating change), landowners and land managers	Short	Medium
DIRECT NATURE FEES	Direct payments for access to or direct use of nature. A form of Payment for Ecosystem Services which is mostly generated through tourism and recreational activity in areas with high natural value. e.g. entrance fees to a nature reserve, or licences/permits to operate a business in a natural area. Relevant for landowners (public and private) who are seeking to rewild and/or protect natural land in 'core' zones and who are seeking to generate direct payments whilst wider shared environmental goods payment systems evolve.	Fee structures can lay the foundation and create the framework for other financial mechanisms Contribute to funding diversification and financial self-sufficiency Enhance public perception of a site's value Allow increased management and control of site access Encourage valuation of ecosystem services Build relations with local stakeholders	Not a significant source of funding and can be unstable If not earmarked, income can be allocated to other purposes than nature Inherent risk of over-commercialisation of sites with management losing sight of core nature objectives Potentially not inclusive – possible cost barrier to low-income households	Public and private natural areas, whether officially designated or not	Long	Low

FINANCING MECHANISM	OVERVIEW	ADVANTAGES	DISADVANTAGES	BENEFICIARIES	FUNDING TIMEFRAME	EFFORT LEVEL
GREEN TAXES	A green tax is a tax paid by consumers on products or services that are not environmentally friendly with the intention of offsetting their negative impact. Any green tax is an opportunity to increase funding for nature from local or national government budgets, and could provide a new and reliable source of income for transition towards local Nature-Based Economies.	Provides regular and reliable source of revenue for nature As systems for tax collection usually exist, there is no need to set up a new collection system or bureaucracy Establishing fiscal instruments with a wide tax base means nature conservation / rewilding activity is less tied to individual donors Taxes that capture the economic benefits of resource use guide economies towards sustainability Green taxes can potentially create double dividends by lowering existing taxes	Major challenge earmarking proceeds for nature conservation / rewilding Need for strong institutional and fiscal capacity Potentially difficult to introduce new taxes – political acceptability may require substantial campaigning which increases costs May require a change in existing legislation Capturing full environmental costs and benefits is data intensive Scale of application in local area contexts may be challenging – would likely need a coordinated national approach	Agencies in charge of public natural areas and qualifying private landowners	Long	Medium
IMPACT INVESTING	Impact investments are designed to create positive impact beyond financial return and require management of social and environmental performance in addition to financial risk and return. Impact investment is distinct from socially responsible investment (SRI), which generally seeks only to minimise negative impact rather than actively create positive social or environmental benefit. Can be highly targeted (and therefore relevant for individual local businesses) or more collective (higher level with area-wide focus)	Interest in supporting innovative, emerging initiatives Ability to connect to local issues/themes Generate large amounts of funding for environmental and social purposes May tolerate less than a market rate of return with longer investment timescales Encourage the development and adoption of standardised metrics, benchmarks, and / or ratings	Presently operate only large portfolios ranging from $5 – 100 million or more due to transaction costs Often fragmented and dominated by individual investor tastes. May require significant effort to identify and align different parties around shared objectives and make the deal Still in early stage development and lacks track record, performance analysis, guidelines and frameworks	Private businesses	Medium	High

FINANCING MECHANISM	OVERVIEW	ADVANTAGES	DISADVANTAGES	BENEFICIARIES	FUNDING TIMEFRAME	EFFORT LEVEL
BIODIVERSITY OFFSETS	Biodiversity offsets are a new form of finance whereby 'developers' (e.g. an airport or a house-builder) compensates for the impacts on biodiversity arising from their development by financing creation of nature in a similar habitat context elsewhere. They are an increasingly popular but controversial tool in financing nature – and it is essential that all efforts to mitigate impact at the original site have first been demonstrated.	Existence of a standard Offer a conceptual framework to cooperate with oil and gas and other major industries who may not have any presence in the local area but may nevertheless be relevant Can provide substantial additional resources from the private sector to finance nature	Permanence of measures taken in the context of a biodiversity offsets programme is difficult to secure Additionality of biodiversity offsets programmes can be difficult to prove Wider ecological connectivity objectives may not be realised due to emphasis on on-site enhancements to habitat condition Limited enforcement powers for local councils under current planning guidance means	Public and private natural areas	Long	High
PAYMENTS FOR ECOSYSTEM SERVICES	Payments for Ecosystem Services (PES) are based on a straightforward proposition: pay (or compensate) landowners to adopt new or modify existing land management practices in ways that maintain or increase the health and performance of ecosystem services. PES use two main vehicles to achieve positive impact for nature: area-based vehicles and product-based vehicles.	Require commitment and stewardship from all parties Incorporate economic value of ecosystem services in financial decision-making Often have associated socio-economic benefits Enable the development of a baseline and monitoring and evaluation systems for tracking biodiversity status and management performance Can be tailored to a local context such as a watershed	Can involve high transaction costs and securing contracts can be challenging Some access rules hamper participation by poorer communities and can disadvantage non-sellers Potential leakages of impact where protecting one site/ location creates pressure elsewhere Uncertainty in markets such as carbon results in a wait-and-see approach from landowners	Providers of ecosystem services (landowners, farmers, produce organisations)	Long	Medium
GREEN BONDS	A green bond is a form of debt security or legal contract for money owed that can be bought and sold between parties. Green bonds are issued to raise capital specifically for the financing of 'green' environment or climate related projects.	Successful financial mechanism to finance green initiatives Convincing financial instrument that can mobilise private capital Green bonds market is rising sharply and projected to continue to do so in the future Generally benefit from a high credit rating which makes repayments easier Thriving due to low interest rates	Mechanism is not well adapted for financing nature as 'safe' business models in nature contexts remain difficult to identify and implement No green bonds specifically dedicated to nature have so far been issued (most relate to renewable energy, etc.) Lack of standards and an agreed definition of what can be considered as 'green' Scale may be insufficient in local area contexts	Private sector businesses	Long	Medium

FINANCING MECHANISM	OVERVIEW	ADVANTAGES	DISADVANTAGES	BENEFICIARIES	FUNDING TIMEFRAME	EFFORT LEVEL
BLUE BONDS	Based on the same approach as green bonds issued by governments or developing banks, 'blue' bonds could be issued to fund sustainable marine businesses such as fishery transition projects.	Generate funding sufficient for full operationalisation Access to 'economies of scale' as majority of issuance costs are in setting up processes Improved internal governance structures, communication and knowledge sharing Articulation and enhanced credibility of sustainability strategy	In a pilot phase, there is high reputational risk Significant upfront and ongoing transaction costs of labelling and associated administrative, certification, reporting, verification and monitoring requirements	MPA managers, fishing or aquaculture businesses	Medium	High
CROWD-FUNDING	Finance raised by themed public financing campaigns, usually coordinated by specialised crowdfunding agencies/companies. Can apply to philanthropic causes (e.g. a rewilding effort in a specific local area) or for commercial contexts (e.g. funding a new local business, or an infrastructure requirement which might support local businesses).	Due diligence by 'crowd' investors is limited to the pre-screening by the crowd funding agency Presently requires limited regulation (although this may change in future) Highly applicable for mission-led businesses Can be structured to involve several rounds of funding over time Increasingly used by innovative, purpose led businesses as a means to engage with customers	Can be time consuming for the investee business Unclear outcome if the target funding is not raised	Local community groups and NGOs, private businesses	Short	High
GRANT CAPITALISED INCUBATOR FUNDS	Recognising that private commercial impact investors will in many cases prove to be risk averse, there is a role for philanthropy or public grant funded 'incubator funds' in catalysing local Nature-Based Economies. These funds provide early stage funding on advantageous terms (usually unsecured) to new and innovative businesses.	Enables higher risk and early stage businesses to be financed Reduces cost of due diligence for follow-on investors Additional scope for innovation and learning	Can serve to distort true commercial viability of businesses May create unfair competitive advantage in the local economy for recipients	Private businesses	Medium	Medium

FINANCING MECHANISM	OVERVIEW	ADVANTAGES	DISADVANTAGES	BENEFICIARIES	FUNDING TIMEFRAME	EFFORT LEVEL
GRANT CAPITALISED BUY-OUT FUNDS	A major challenge for investors in the kind of small and medium sized (and often privately owned) businesses which exist in a typical local area is the 'exit' from the investment. These funds can help to ensure a guaranteed 'exit' for private investors and might help the original entrepreneur to buy back their business or facilitate management buy-outs.	Helps to reduce risk of investment by private investors (most are concerned by prospects for exit) Helps to ultimately ensure that businesses remain locally owned	Potential follow on risk for the buy-out fund itself as the performance of the business in the long term may not be sustained (and exit may be difficult to structure for the fund itself other than through a long-term debt arrangement)	Private businesses	Long	High

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