RESAS Science, Evidence and Policy Conference
Our Dynamic Earth

"Bridging the Gap"

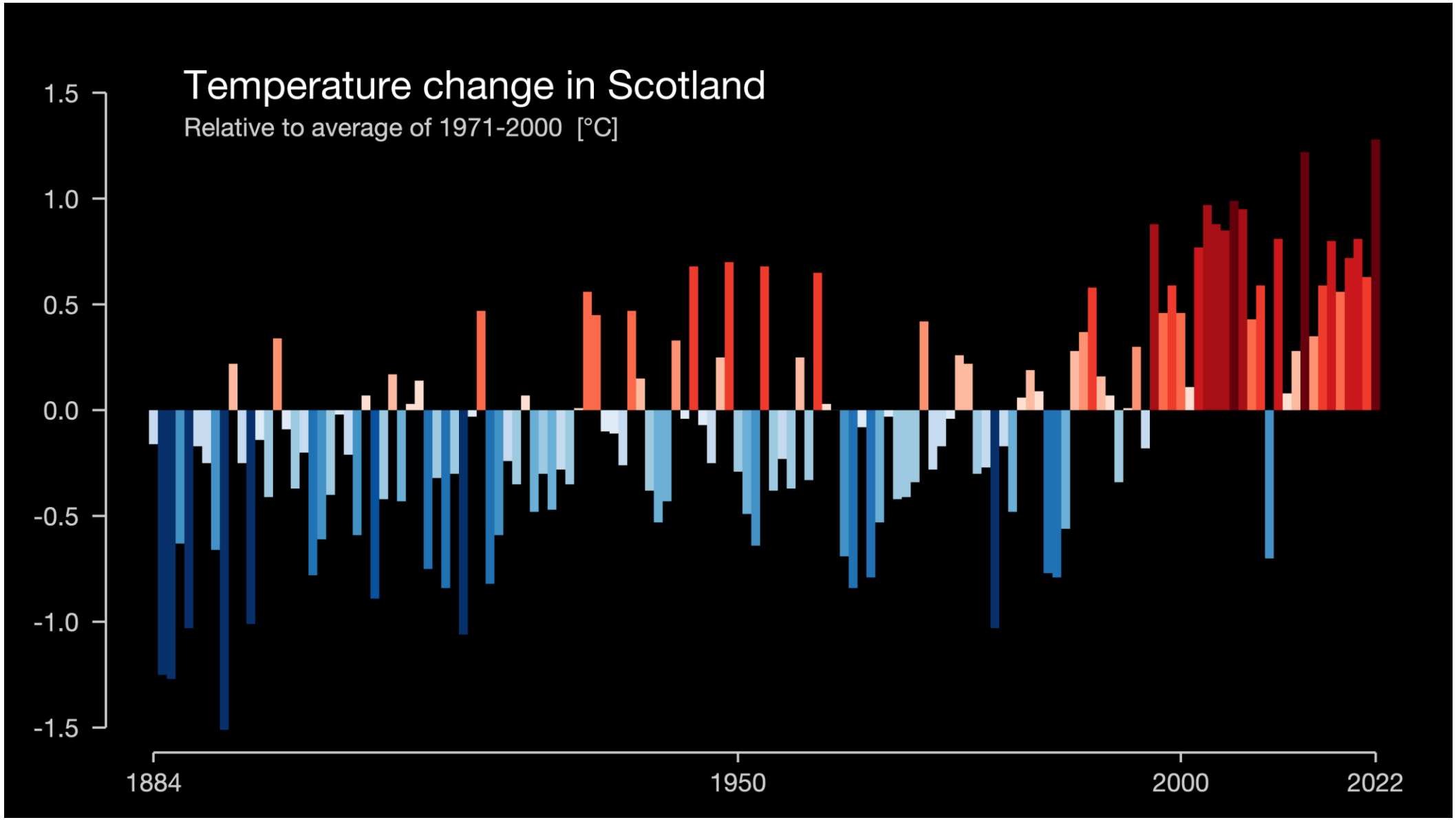
Professor Lorna Dawson SEFARI Gateway
& James Hutton Institute

18th May 2023

“Bridging the gap between science and policy to achieve our climate and nature goals”

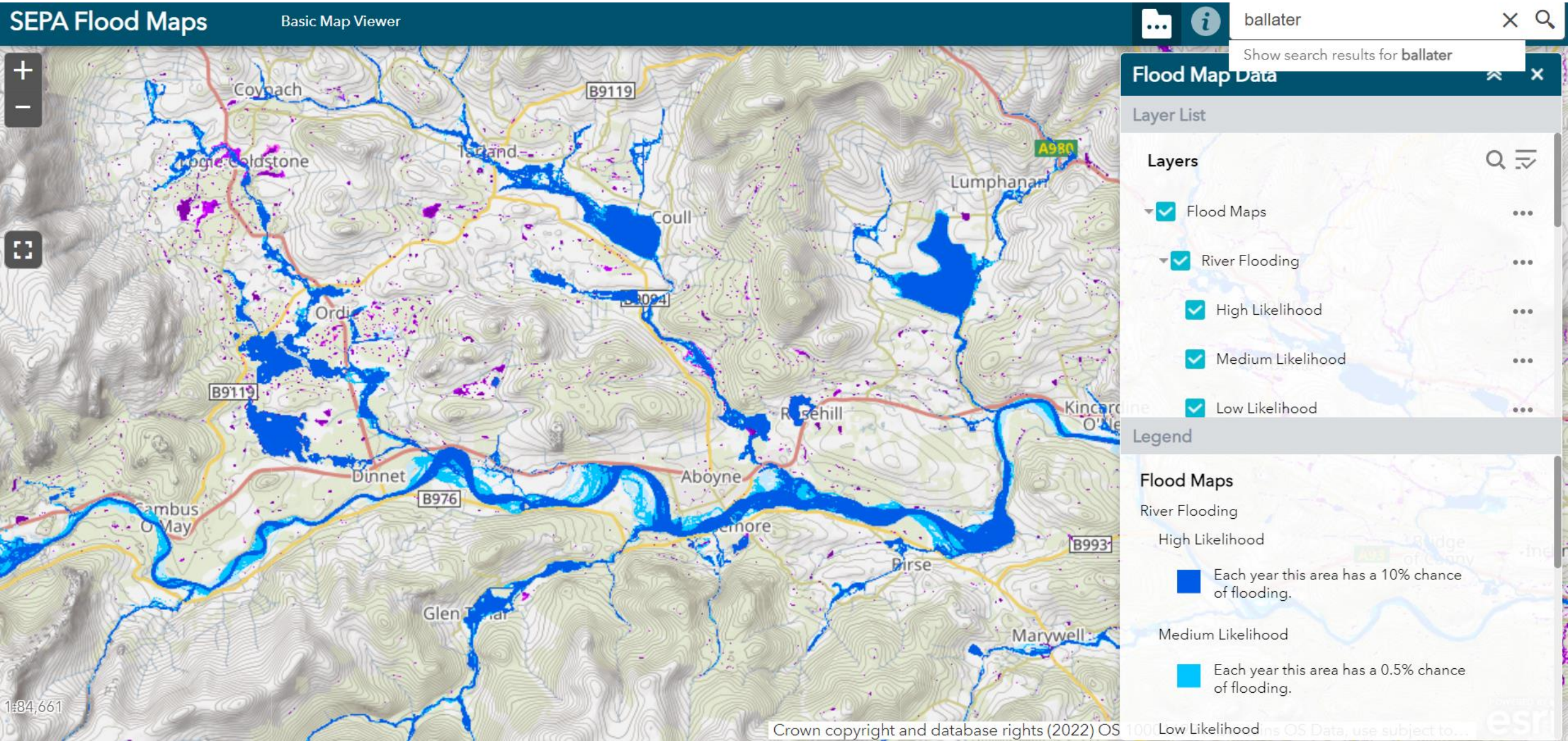
Drivers of change

Challenges and Opportunities: Climate Change



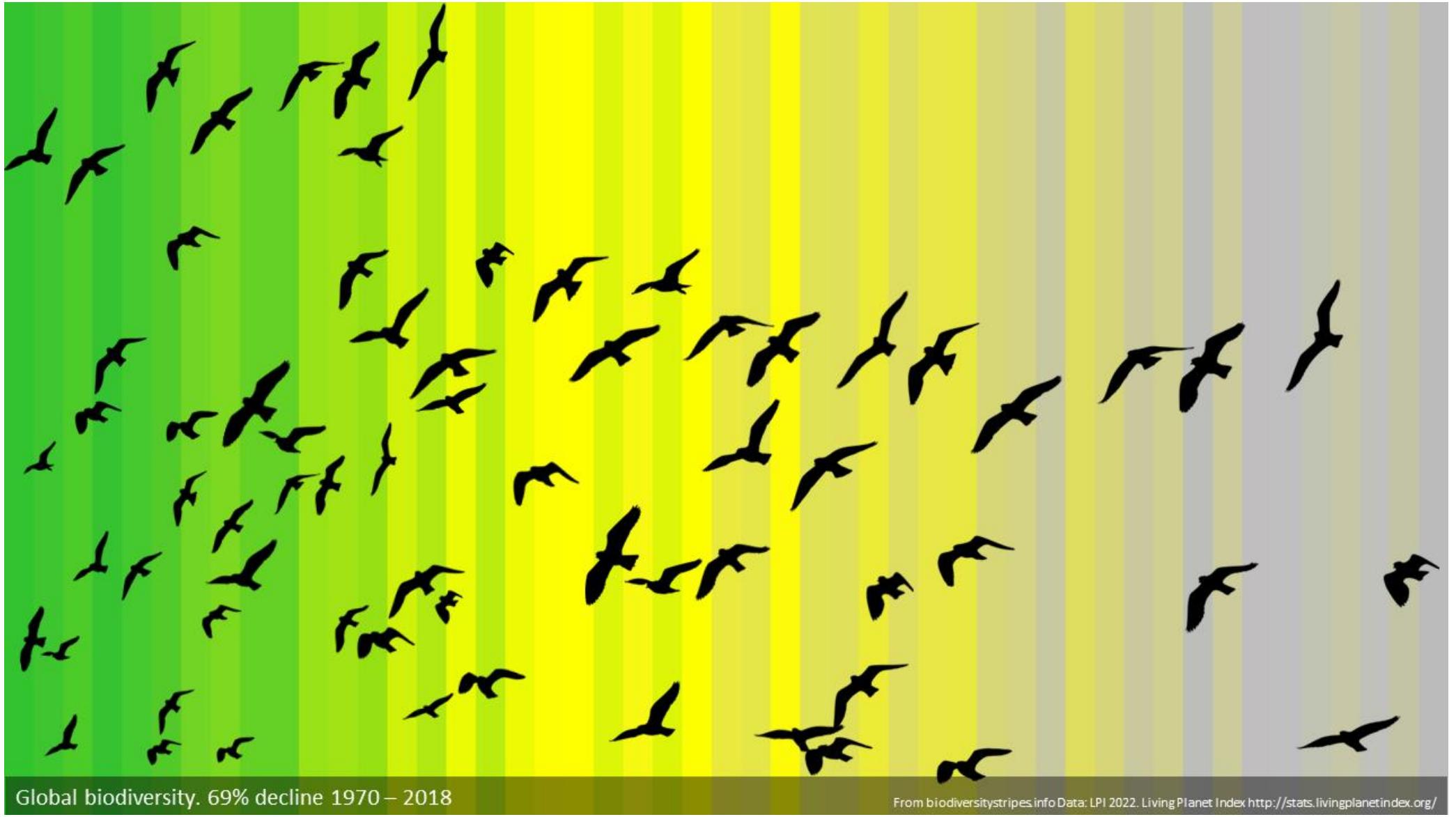
Scotland 1854 to 2021 Data: University of Reading

https://showyourstripes.info/s/europe/unitedkingdom/scotland


SEPA Flood Maps
Basic Map Viewer
ballater
Show search results for ballater
Flood Map Data
Layer List
Layers
Flood Maps
River Flooding
High Likelihood
Medium Likelihood
Low Likelihood
Legend
Flood Maps
River Flooding
High Likelihood
Each year this area has a 10% chance of flooding.
Medium Likelihood
Each year this area has a 0.5% chance of flooding.
Low Likelihood
Coynach
Tarland
Coull
Lumphanan
Ordi
Dinnet
Aboyne
Dirse
Marywell
B9119
B976
B993
A980
1:84,661
Crown copyright and database rights (2022) OS

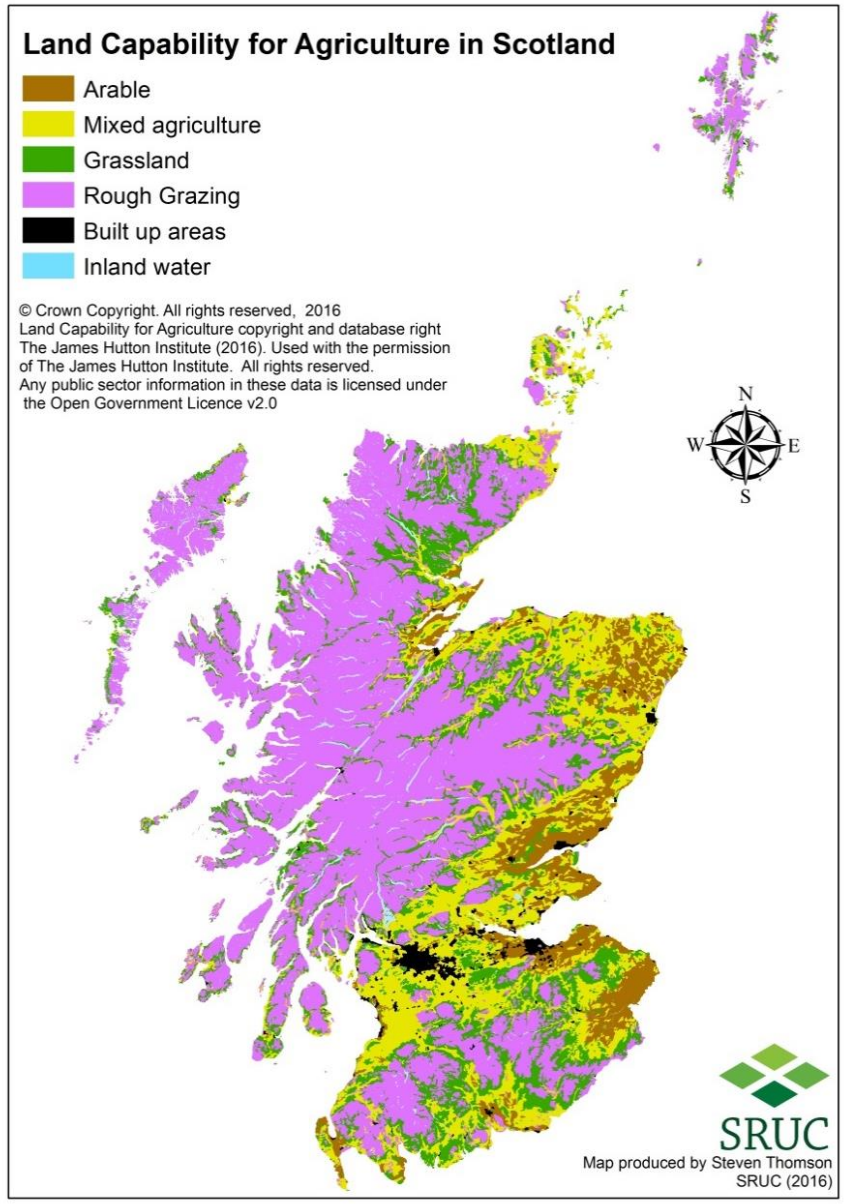

SEPA Flood Maps
B9
1:84,661
WARNING
RAIN
FLOODLINE
0345 988 1188
esults for ballater
has a 10% chance
has a 0.5% chance

Challenges and Opportunities: Biodiversity crisis



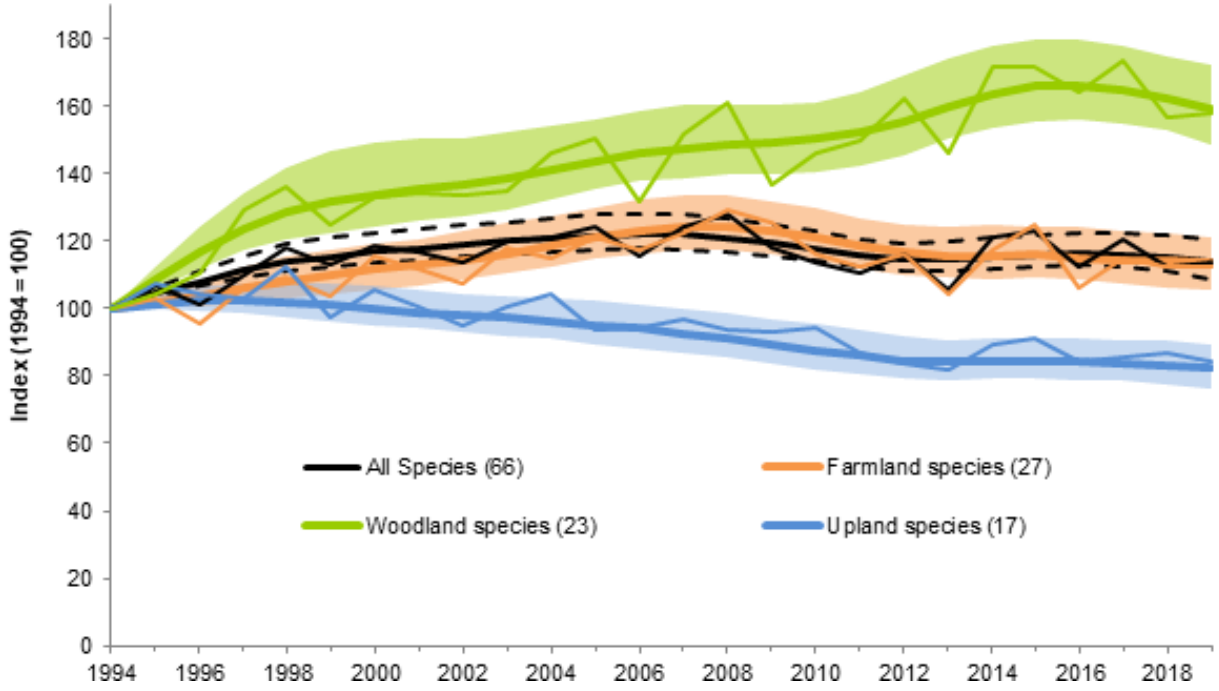
biodiversitystripes.info
LPI 2022. Living Planet Index database. 2022. (www.livingplanetindex.org).
University of Reading
https://showyourstripes.info/s/europe/unitedkingdom/scotland

Challenges and Opportunities: biodiversity crisis



Index of Terrestrial Breeding Birds in Scotland: 1994-2019

https://www.nature.scot/doc/official-statistics-terrestrial-breeding-birds-1994-2019



Declining Farmland Birds:

- Kestrel (-82%)
- Lapwing (-58%)
- Oystercatcher (-43%)
- Rook (-25%)

Declining Upland Birds

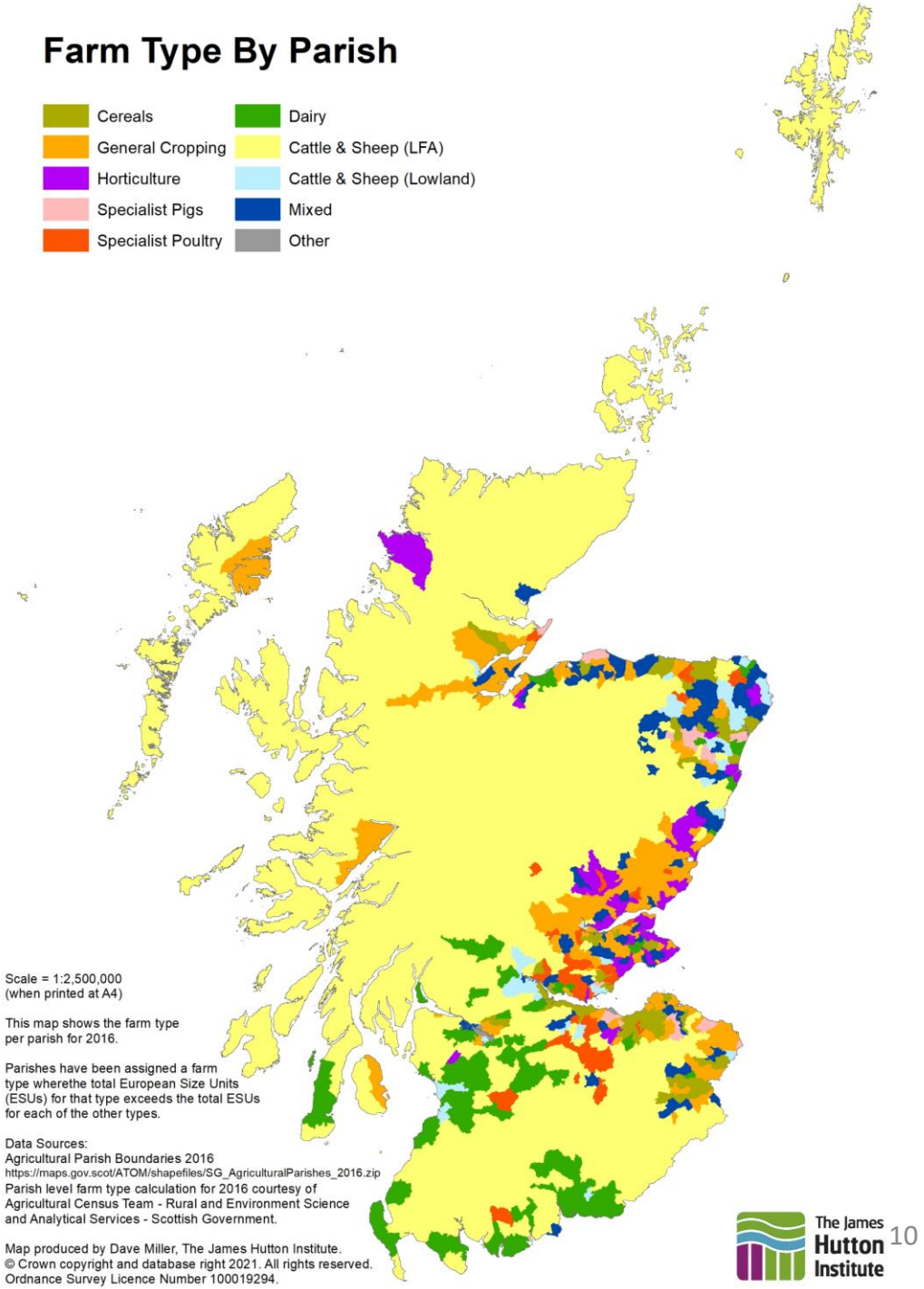
- Dotterel (-66%)
- Black Grouse (-58%)
- Curlew (-56%)
- Hooded Crow (-49%)

UK Farmland Birds. 55% decline 1970 – 2019

From biodiversitystripes.info Data: Indicator C5 – Birds of the wider countryside– Farmland birds.
Department for Environment, Food and Rural Affairs, UK. 2021. UK Biodiversity Indicators 2021. Contains public sector information from Defra, licenced under the Open Government Licence v3.0

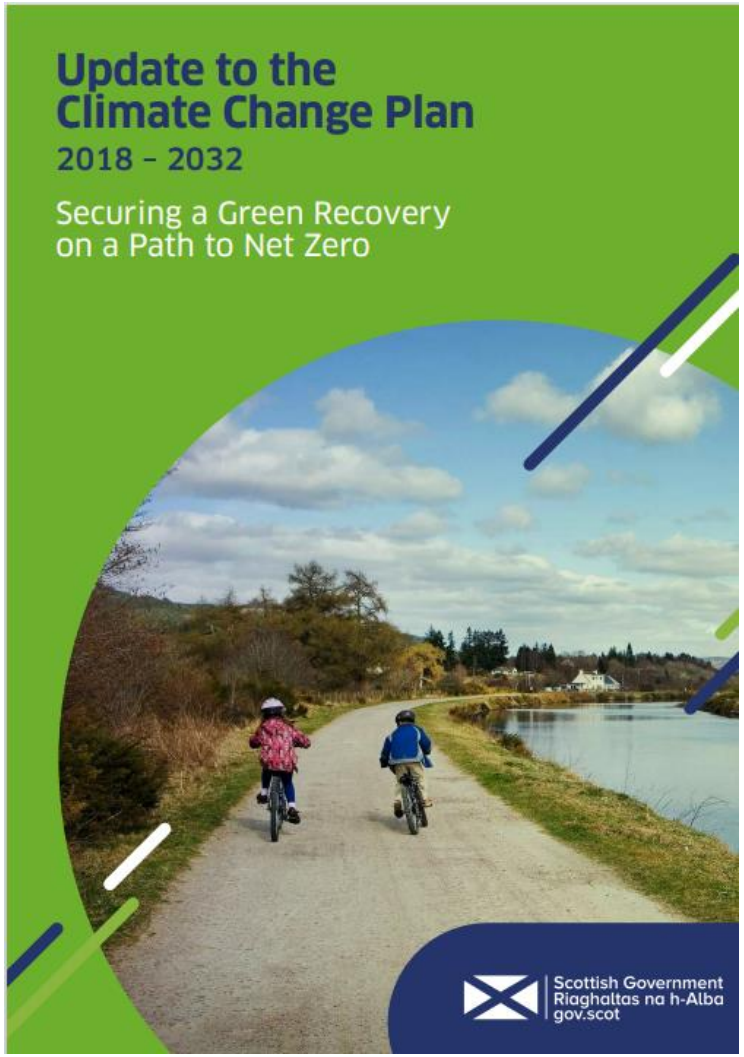
Evidence and action is needed

- Increased demand for food
- Increased demand for space
- Climate change
- Biodiversity crisis
- Global pandemic
- Brexit and world trade
- Geopolitical shocks
- Technological advances
- Cost of living crisis



Policy context

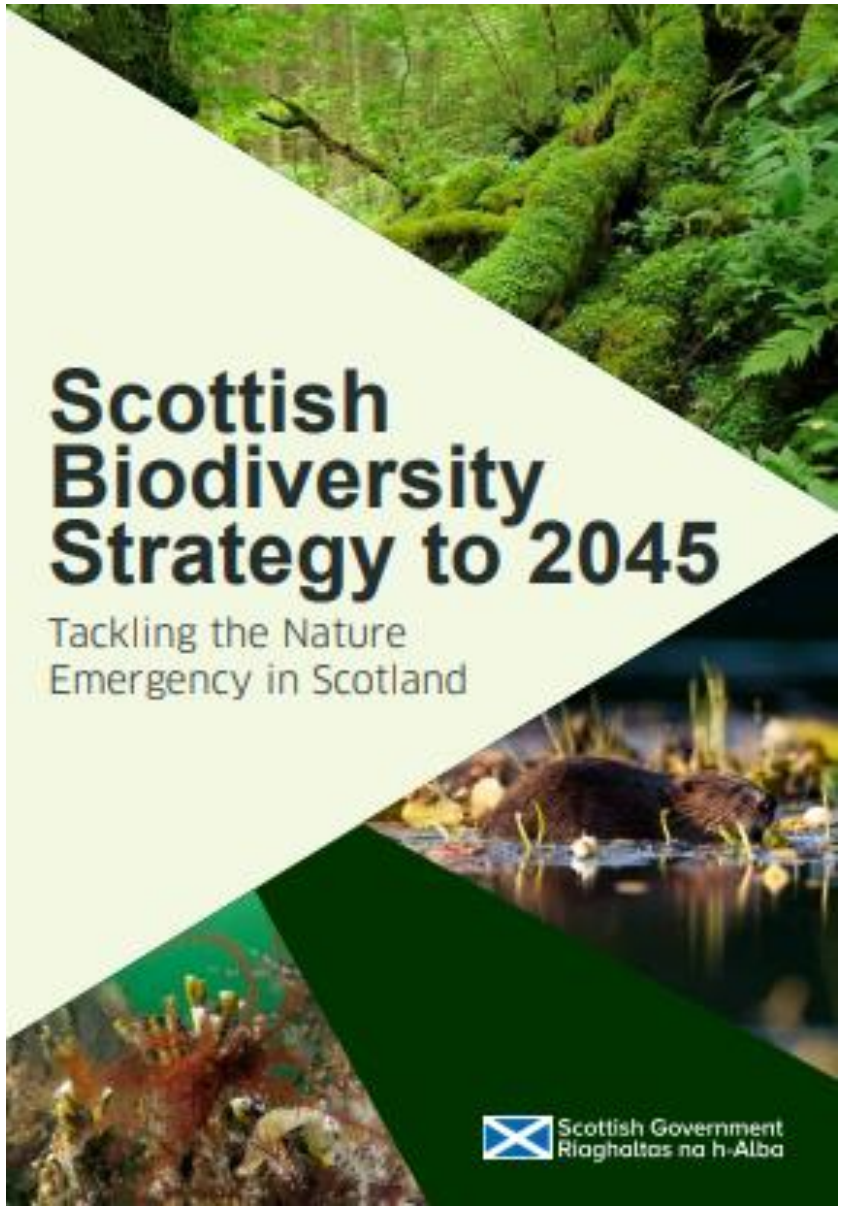
Climate goals



Ambitious targets to end contribution to climate change by 2045

Committed to reduce emissions by 75% by 2030 (compared with 1990) and to net zero by 2045

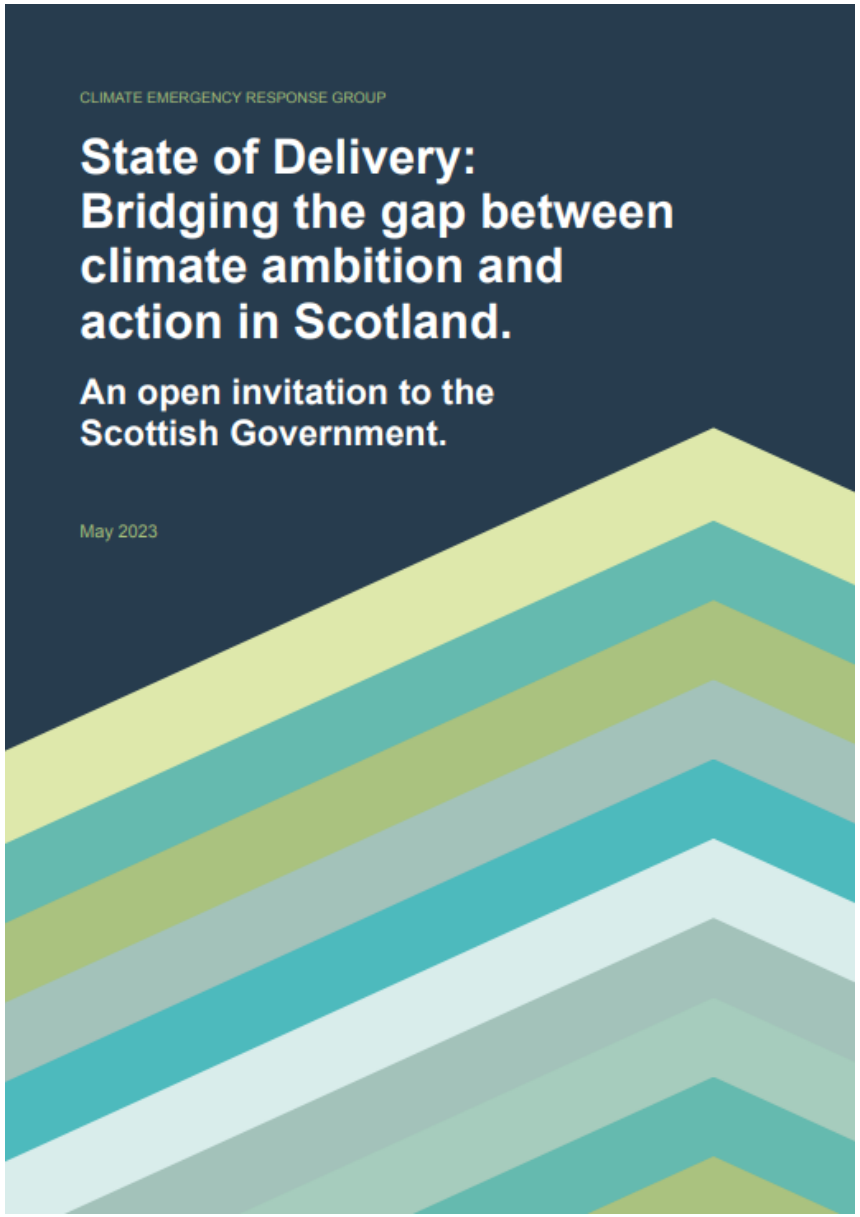
Nature goals



This strategy sets out a clear ambition -

for Scotland to be Nature Positive by 2030, and to have restored and regenerated biodiversity across the country by 2045

Linking policies across Scotland



Climate Emergency Response Group

CERG-Report-May-2023.pdf

Examples of research delivering to policy
RESAS Strategic Research Programme

SEFARI is the **S**cottish **E**nvironment, **F**ood & **A**griculture **R**esearch **I**nstitutions

The James Hutton Institute

BioSS

Moredun

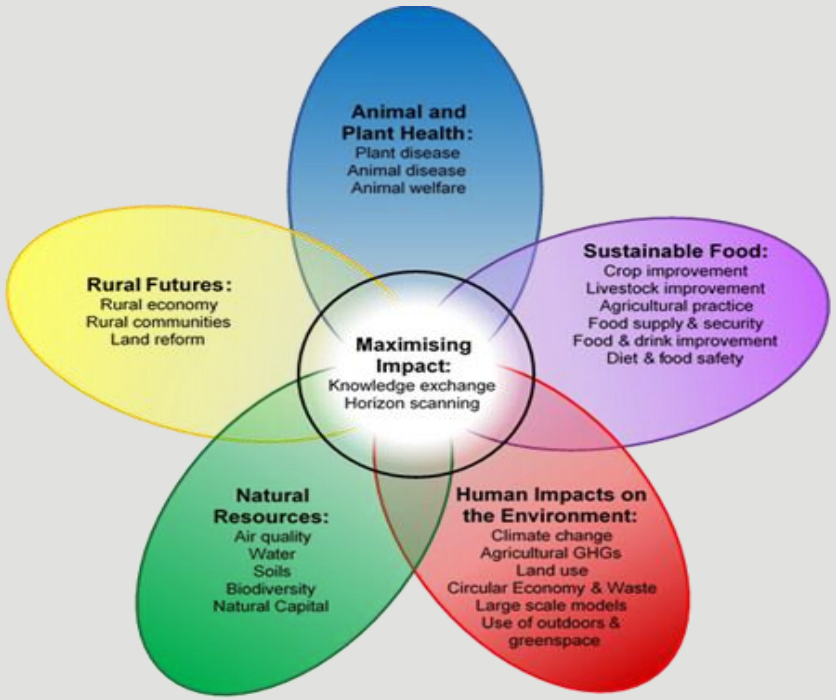
The Rowett Institute

SRUC

Royal Botanic Garden Edinburgh

Strategic Portfolio- Environment, natural resources & agriculture

Mid to long term research



National Capacity

SEFARI
LEADING IDEAS FOR BETTER LIVES

Centres of Expertise (CoE)

CREW Centre of Expertise for Water

CXC ClimateXChange

EPIC Epidemiology, Population Health and Infectious Disease Control

PHC Plant Health Centre

SEFARI Gateway Knowledge Exchange Impact Hub

- plans for a CoE for Biodiversity

Strategic Research ⟷ National research resources, expertise & data ⟷ Policy, Practice, Innovation, Engagement

Delivered through Partnerships of SEFARI, Scotland and other UK universities, Research Institutes & Agencies

Scottish Government
Riaghaltas na h-Alba
gov.scot

SEFARI

Research meeting multiple needs: the Environment Strategy

The Strategic Research Programme provides knowledge input across a broad range of policy areas, e.g. those within the Environment Strategy

The Environment Strategy for Scotland
By restoring nature and ending Scotland's contribution to climate change, our country is transformed for the better - helping to secure the wellbeing of our people and planet for generations to come

Scotland's **nature** is protected and restored, with flourishing biodiversity and clean and healthy air, water, seas and soils	We play our full role in tackling the global **climate** emergency and limiting temperature rise to 1.5°C	We use and re-use **resources** wisely and have ended the throw-away culture	Our thriving, sustainable **economy** conserves and grows our natural assets	Our healthy environment supports a fairer, healthier, more inclusive **society**	We are responsible global citizens with a sustainable **international footprint**
New Scottish Biodiversity Strategy & Delivery Plan	Climate Change Act	Circular Economy Strategy: Making Things Last	National Strategy for Economic Transformation	Fourth National Planning Framework	Scotland's Vision for Trade
Natural Environment Bill	Climate Change Plan Update	Circular Economy Bill	Climate Emergency Skills Action Plan	National Transport Strategy 2	
Marine Nature Conservation & Litter Strategies		Food Waste Reduction Action Plan	Just Transition Plans	Cleaner Air for Scotland 2	Global Affairs Framework
Cleaner Air for Scotland 2	Scottish Climate Change Adaptation Programme 2		Infrastructure Investment Plan	Good Food Nation Bill	
River Basin Management Plans	Net Zero Nation: Public Engagement Strategy	National Litter & Flytipping Strategy	Vision for Agriculture	New Local Food Strategy	International Development Strategy
			Agriculture Bill	Regeneration Strategy	
Scottish Soils Framework		New Waste & Recycling Route Map	Scotland's Forestry Strategy	Human Rights Bill	

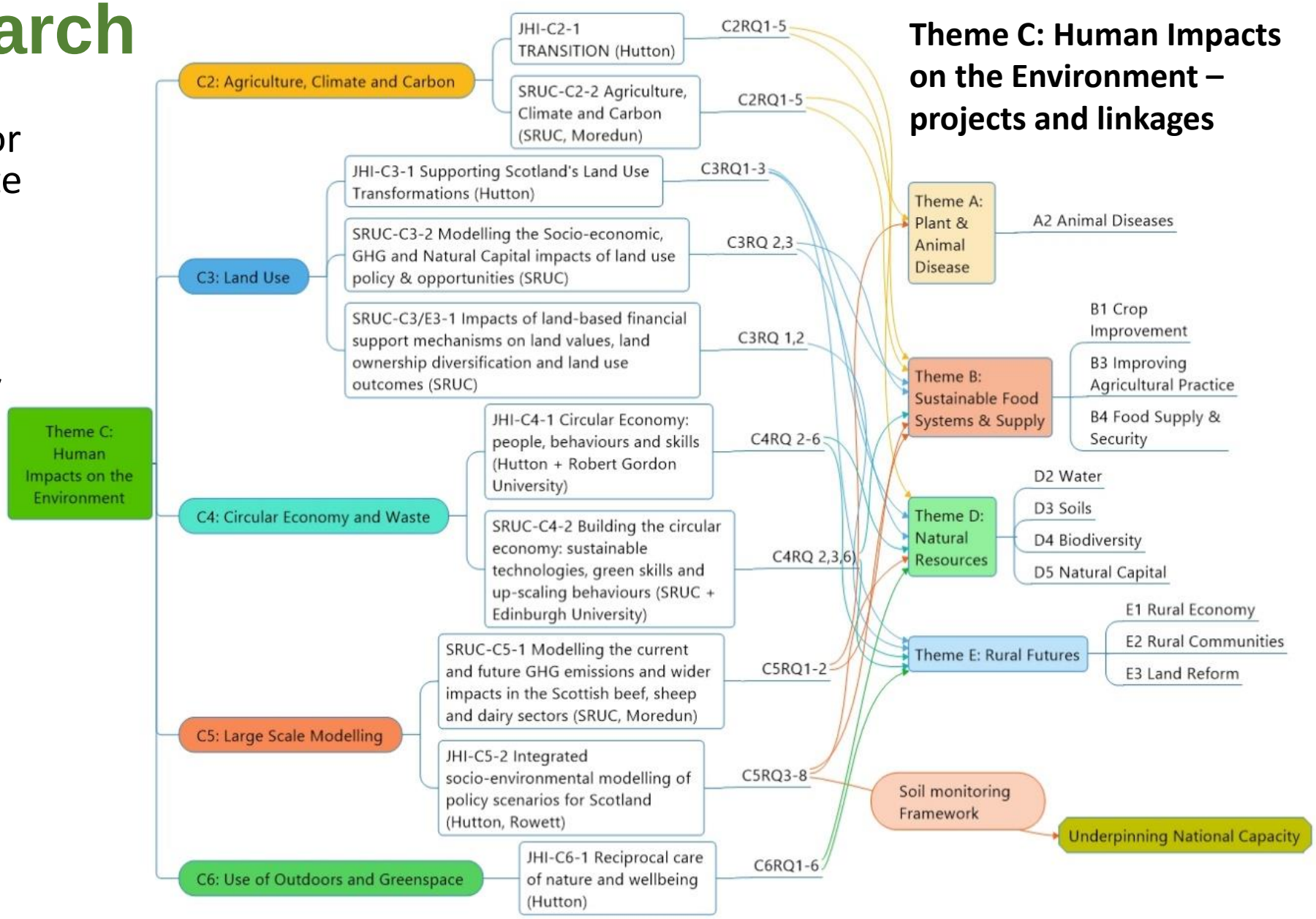
Third Land Use Strategy, National Marine Plan & New Blue Economy Strategy

Integrated research

Delivers to high level aims for a wellbeing economy, climate change mitigation and adaptation, developing the Circular Economy. Climate change and biodiversity research is included in many SRP projects.

- Quantification of GHG emissions from land use
- Land Use Transformations for multiple benefits
- Reducing waste
- Large Scale Modelling: agents and environment
- Use of greenspace

Theme C: Human Impacts on the Environment – projects and linkages



Emerging policy support areas

- Opportunities to reduce Scotland's environmental footprint through reduced consumption
  - Informs the new Environment Strategy
  - Challenge is to address the 'wicked problem' of achieving sustainability whilst maintaining economies
- Addressing complexity in achieving multiple objectives for land:
  - Place-based solutions balancing the needs of people with goals for Net Zero, Biodiversity enhancement, food, water and energy security under a changing climate

Diversity of climate change/mitigation biodiversity research in Scotland: virtual tours

Peatland restoration

Livestock greenhouse gas emissions

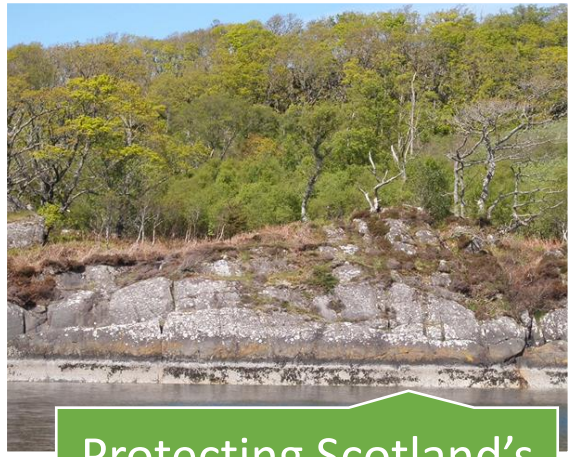
Parasites and animal health

Climate positive farming

Multifunctional seascapes

Urban raingardens

Innovative crops



Protecting Scotland's Rainforests

The James Hutton Institute

SRUC

Rowett Institute of Nutrition and Health
University of Aberdeen

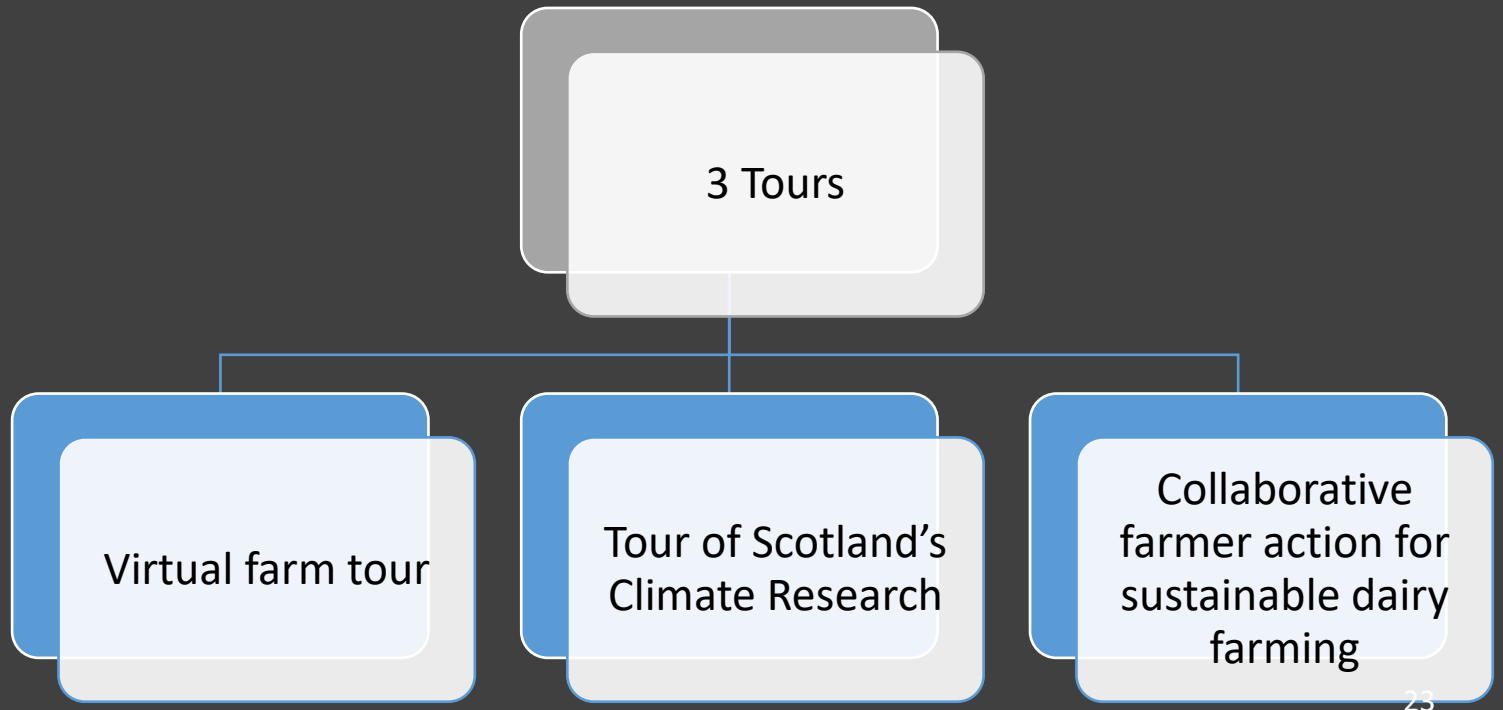
Royal Botanic Garden Edinburgh

first milk

Moredun

SEFARI
LEADING IDEAS FOR BETTER LIVES

On SEFARI: Virtual tours



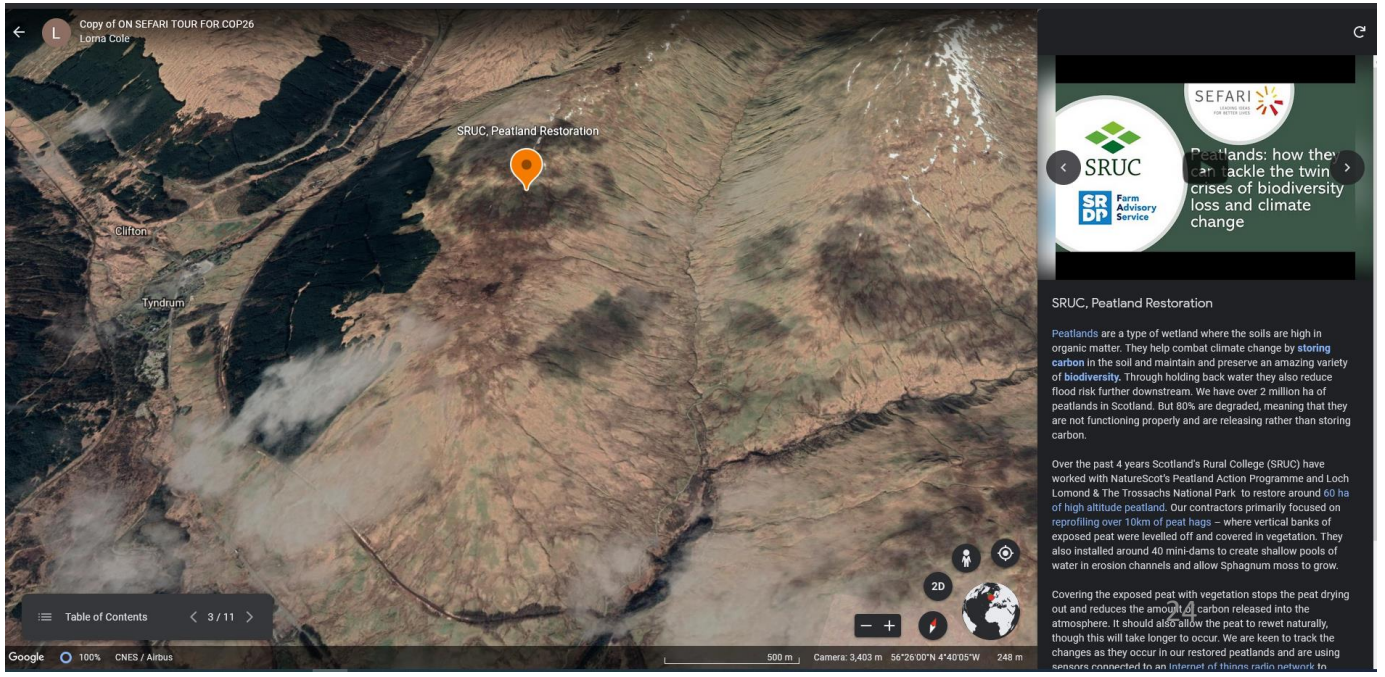
This looks absolutely amazing! It is so user friendly and such a high quality. We will certainly get this out to schools and share your resource widely.

Aileen Hamilton: Science Connects

These interactive learning resources will help ensure that RHET's learning resources keep pace with digital technology.

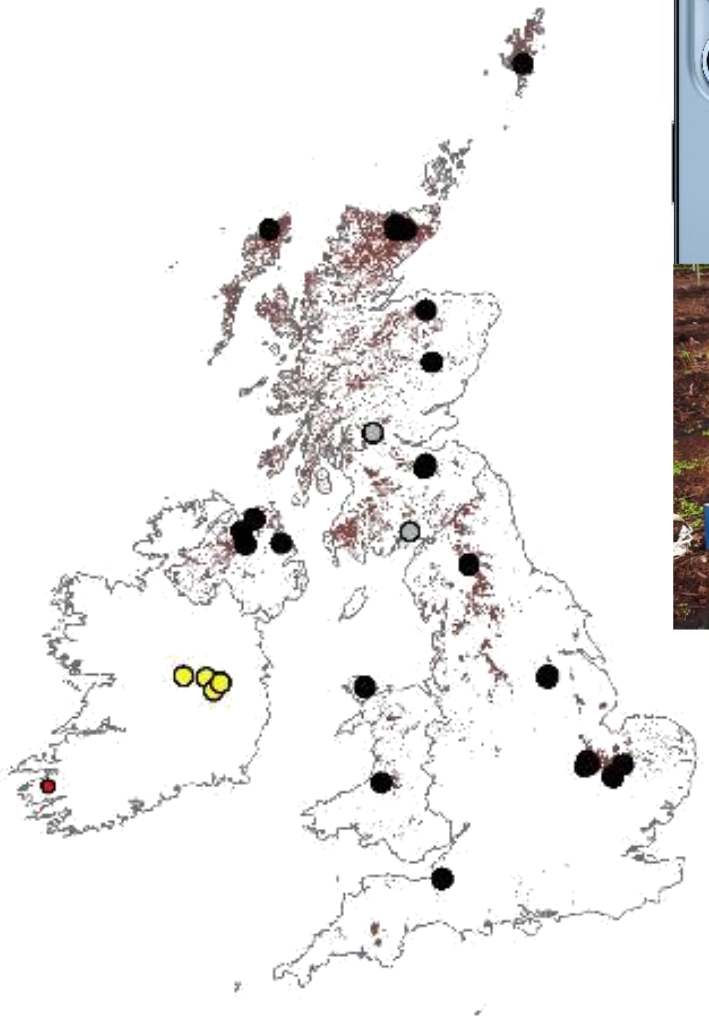
Sara Smith: The Royal Highland Education Trust

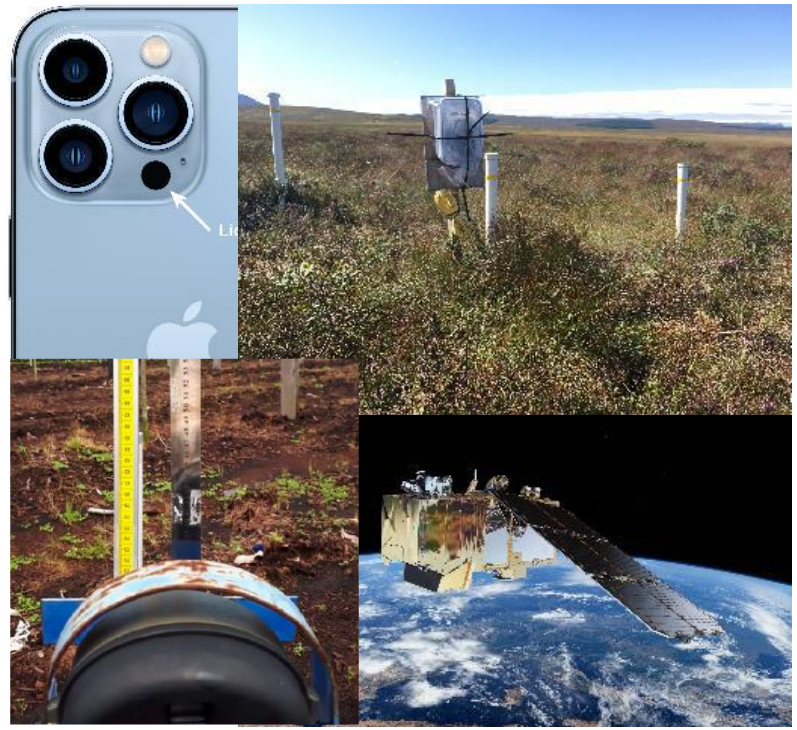
Visit Tour Live



Peatland science – driven by policy evidence needs

- Data from the Eddy-covariance-based greenhouse gas flux monitoring network
- Earth Observations-based modelling of peatland condition covers evidence needs
- Direct field observations of peat depths, ecological condition and losses of carbon





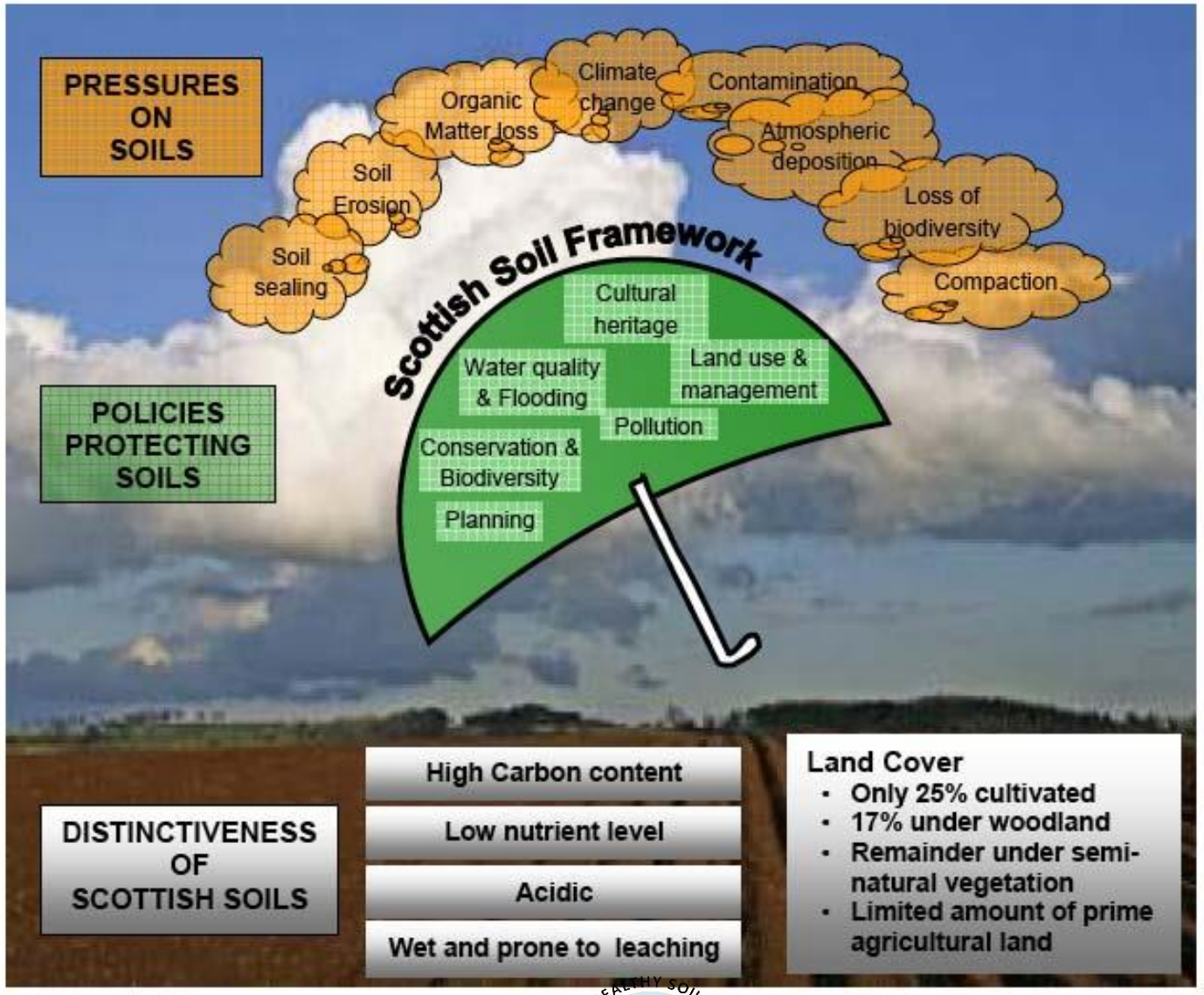
Four main current research projects:

- CentrePeat (RESAS SRP 2022-27)
- MOTHERSHIP (NERC, 2022-27)
- WetHorizons (EU/Innovate UK 2022-26)
- Grassland on peat (UNC, RESAS, 2022-27)

Pressures & Policies Soils

No single soils policy, but
"integral to <u>many</u> policy areas"

There is huge potential for soil research from the SRP to deliver more integrated outputs for a range of policy areas….building on relationships developed in the previous RESAS programme.



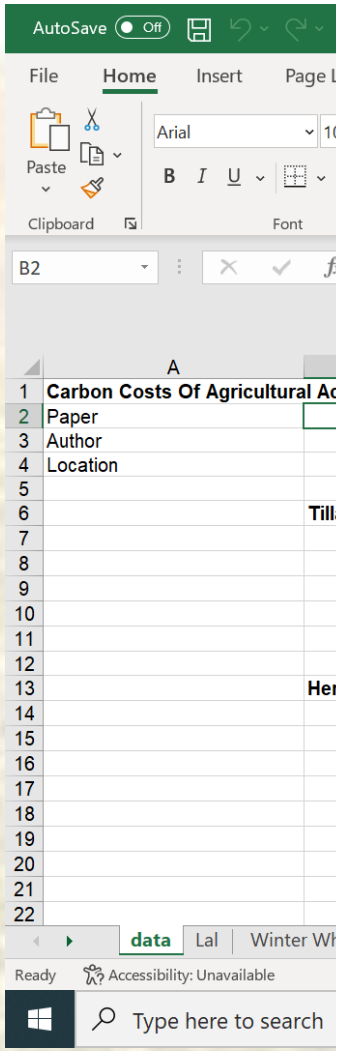
SRUC

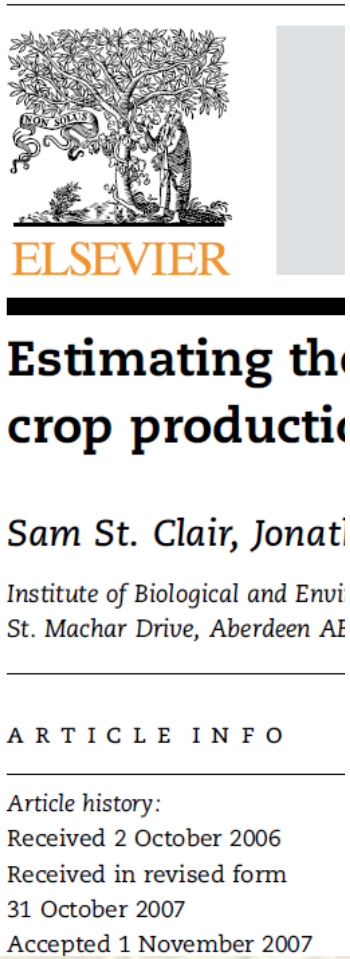
HEALTHY SOILS FOR A GREEN RECOVERY

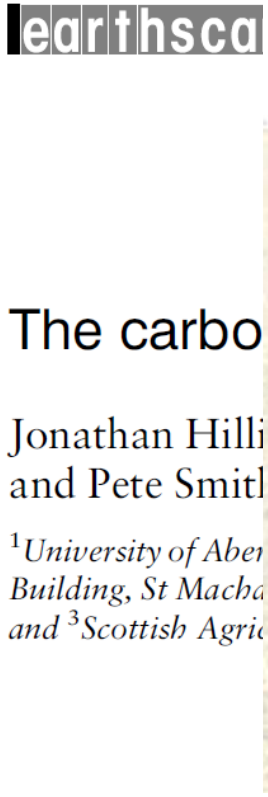
The James Hutton Institute

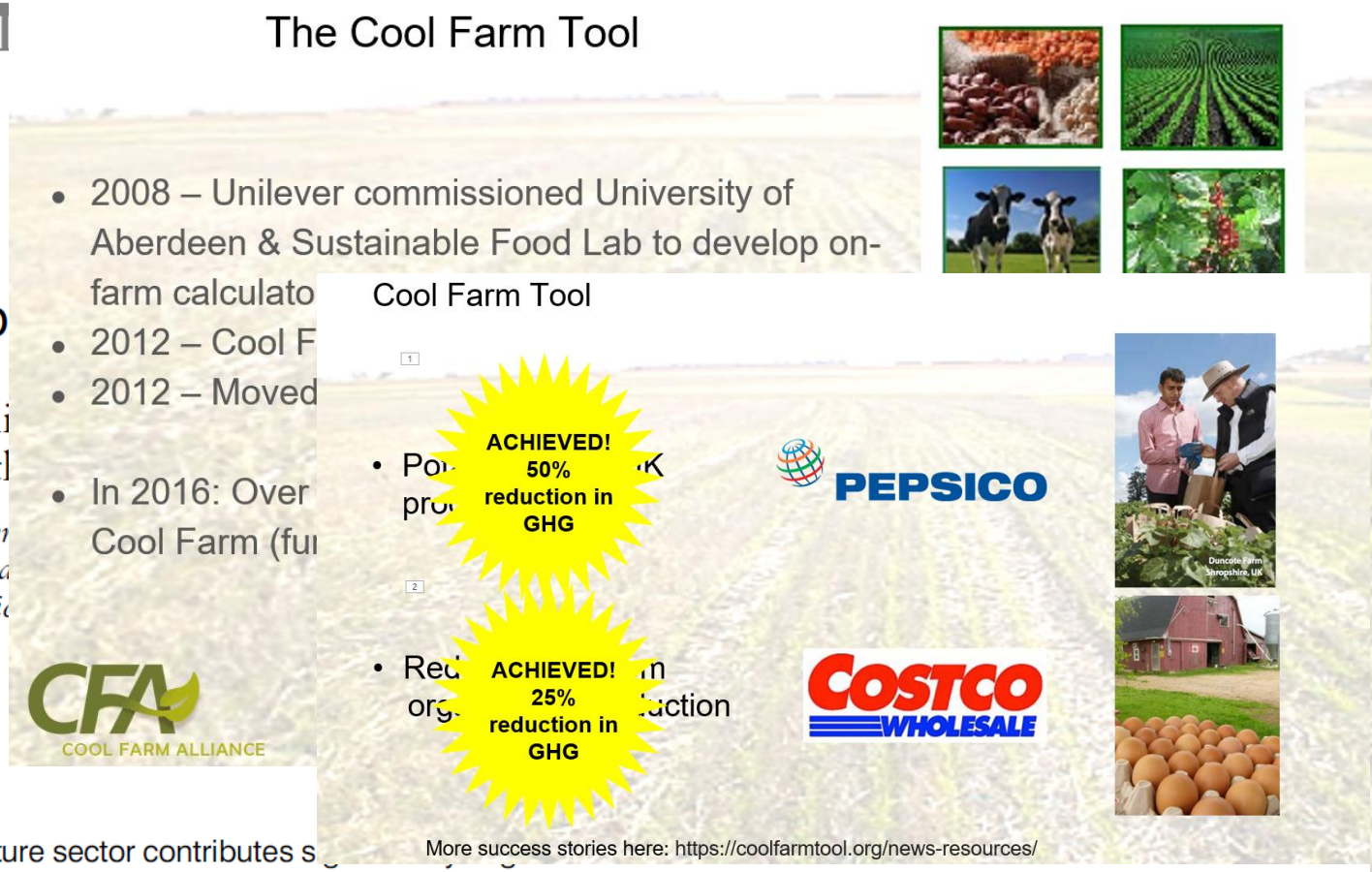
The Cool Farm Tool

Started with an Honours project in 2005-2006; Sam St Clair





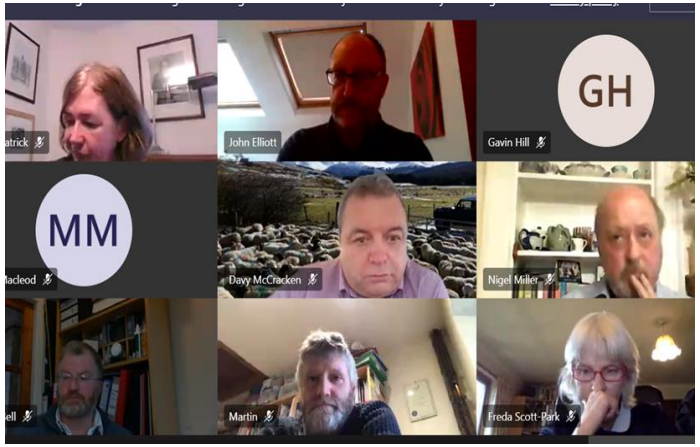




The agriculture sector contributes s
bio-fuel production) when compared to a range of former land-use baselines.

Livestock health & GHG emissions – informing policy

- Established AH&GHG Specialist Advisory Group, to discuss disease priorities & practical interventions
- Worked with UK-wide Ruminant Health & Welfare Group to produced ‘Acting on Methane’ Report
- Outputs have helped inform policy and disease priorities as part of SG ARIOB & DEFRA AH&W discussions



Upland Digital Hub conducting research and demonstration which is informing range of policy and practice developments

Precision Agriculture and the Internet of Things (IoT)

CENSIS
censis.org.uk

SheepNet

EuroSheep

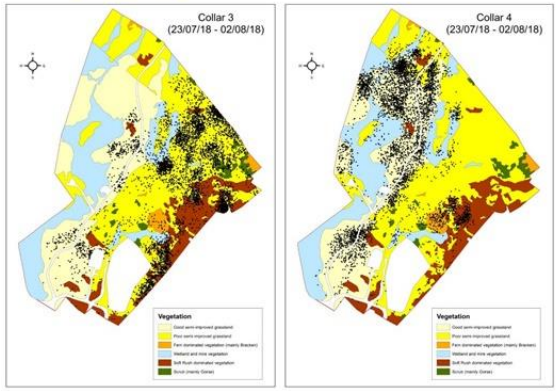
https://eurosneep.network/

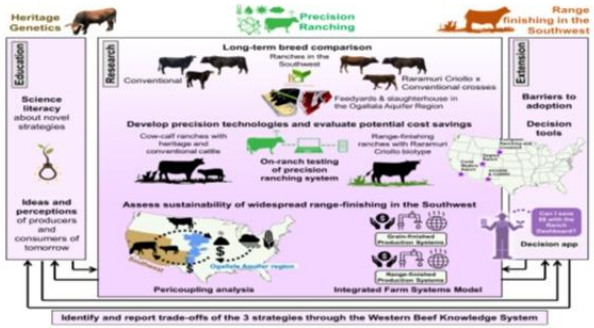
TECH CARE

https://www.facebook.com/TechCareproject/

Sm@RT
Sm@ll Ruminant Technologies

https://h2020-smart.eu/





https://southwestbeef.org/

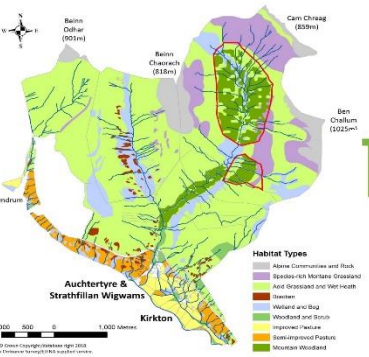
Upland Digital Hub

Scottish Forestry
Coilltearachd na h-Alba

Trees on Farms

Wild PARK
LOCH LOMOND & THE TROSSACHS NATIONAL PARK

Scottish Biodiversity Strategy 2030 and 2045



RESAS

Ecosystem Services (2016–22)
Multiple Benefits (2022–27)

SOSE Digital Testbeds

NatureScot
Scotland's Nature Agency
Buidheann Nàdair na h-Alba

Peatland ACTION

Agriculture Reform Implementation Oversight Board

The Glen Finglas experiment

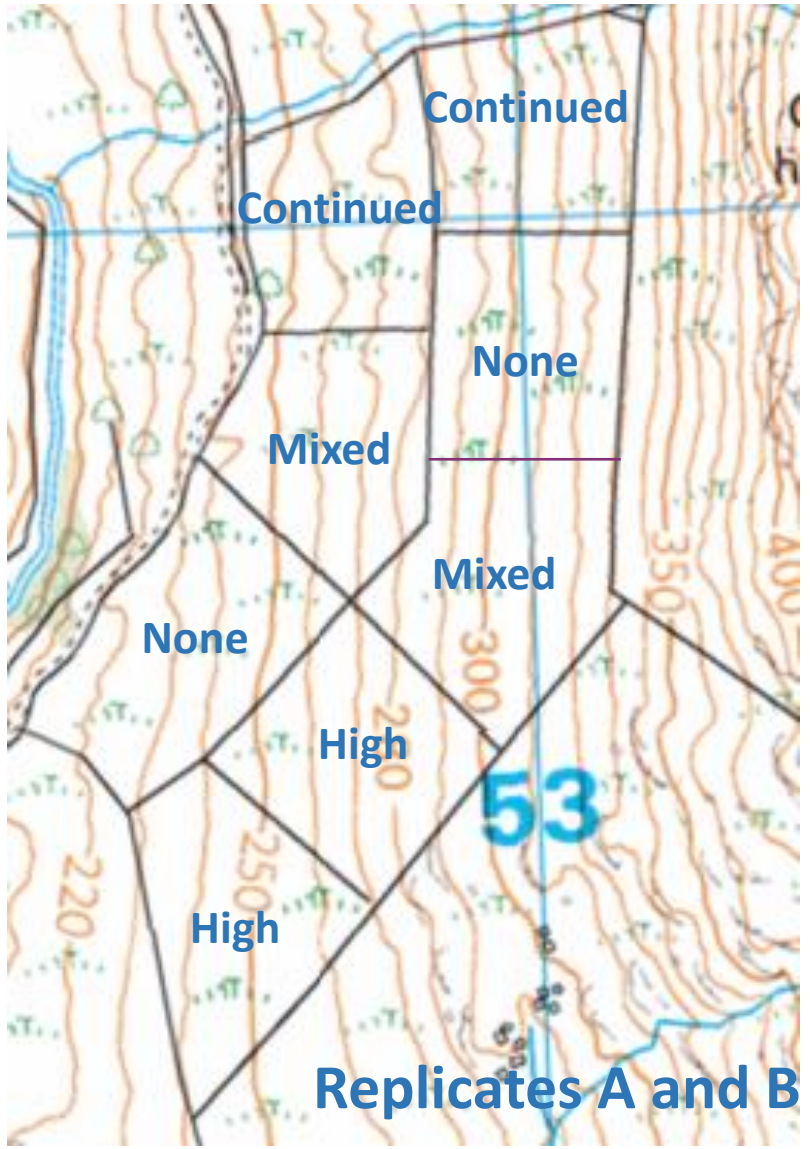
Long-term (2002)

Large-scale (24 plots, 3.3 ha each, c. 180 m x 180 m) – big enough to be mapped by the OS – one third of experiment shown

Well replicated (x6)

Four treatments

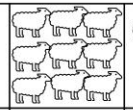
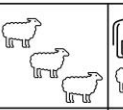
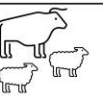
- Continued - three ewes per plot (0.9 ewe ha^{-1}), the control treatment as this was the grazing level pre-experiment
- High – nine ewes per plot
- Mixed – two ewes per plot plus a month of two cows, overall offtake = Continued
- No grazing



What have we learnt

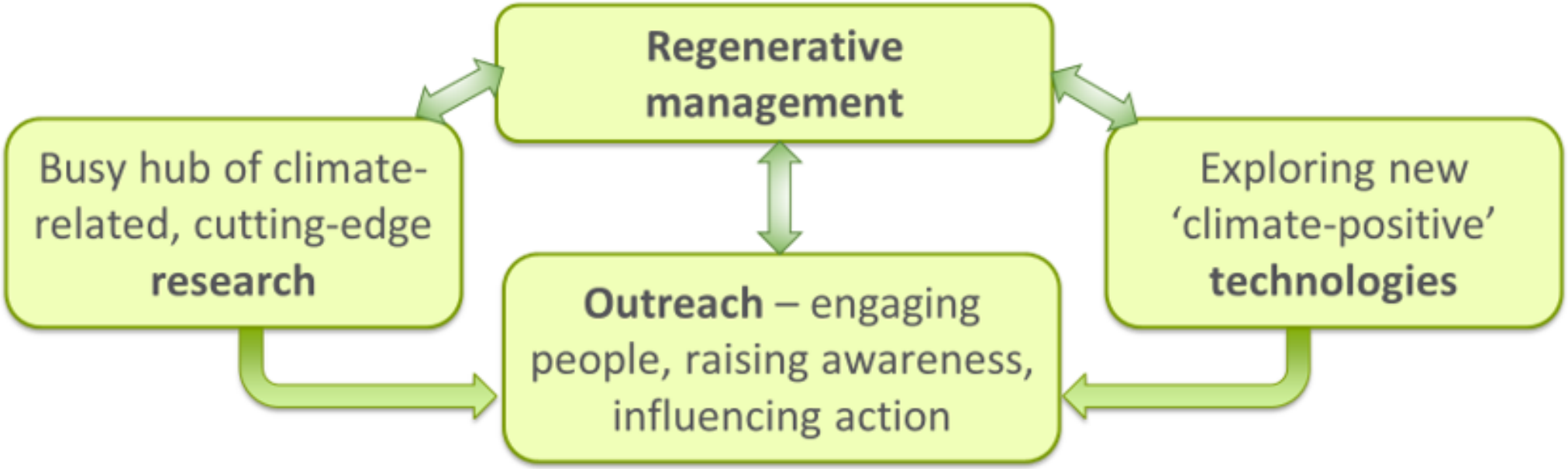
- Upland, wet habitats are very resistant to change
- Once trees establish, the bird community shifts significantly
- Individual species and different groups behave quite differently – decisions about land use affect some species/groups positively and some negatively. Always winners and losers.
- Upland policy development gets even more complicated if flood control, carbon and other services are added to what biodiversity to prioritise

Complex trade-offs. No treatment is best at everything

				No grazing
Plants				
Diversity	High	Low	Mod	Low
Stability	High	Mod	High	Low
Heterogeneity	Low	Mod	Low	High
Herbivores				
Plant bug abundance	Low	Mod	Mod	High
Plant bug diversity	High	Low	Mod	High
Moth abundance	Low	High	Mod	High
Moth diversity	Low	Mod	Mod	High
Vole abundance	Low	Mod	Mod	High
Predators				
Spider abundance	Low	Mod	Mod	High
Spider diversity	Low	Mod	Mod	High
Carabid beetle abundance	High	High	Mod	Low
Carabid beetle diversity	High	High	Mod	Low
Fox activity	Low	Mod	Mod	High
Meadow pipit numbers	High	Mod	High	Low
Bird diversity	Low	Low	Low	High

Glensaugh Climate-Positive Farming Initiative

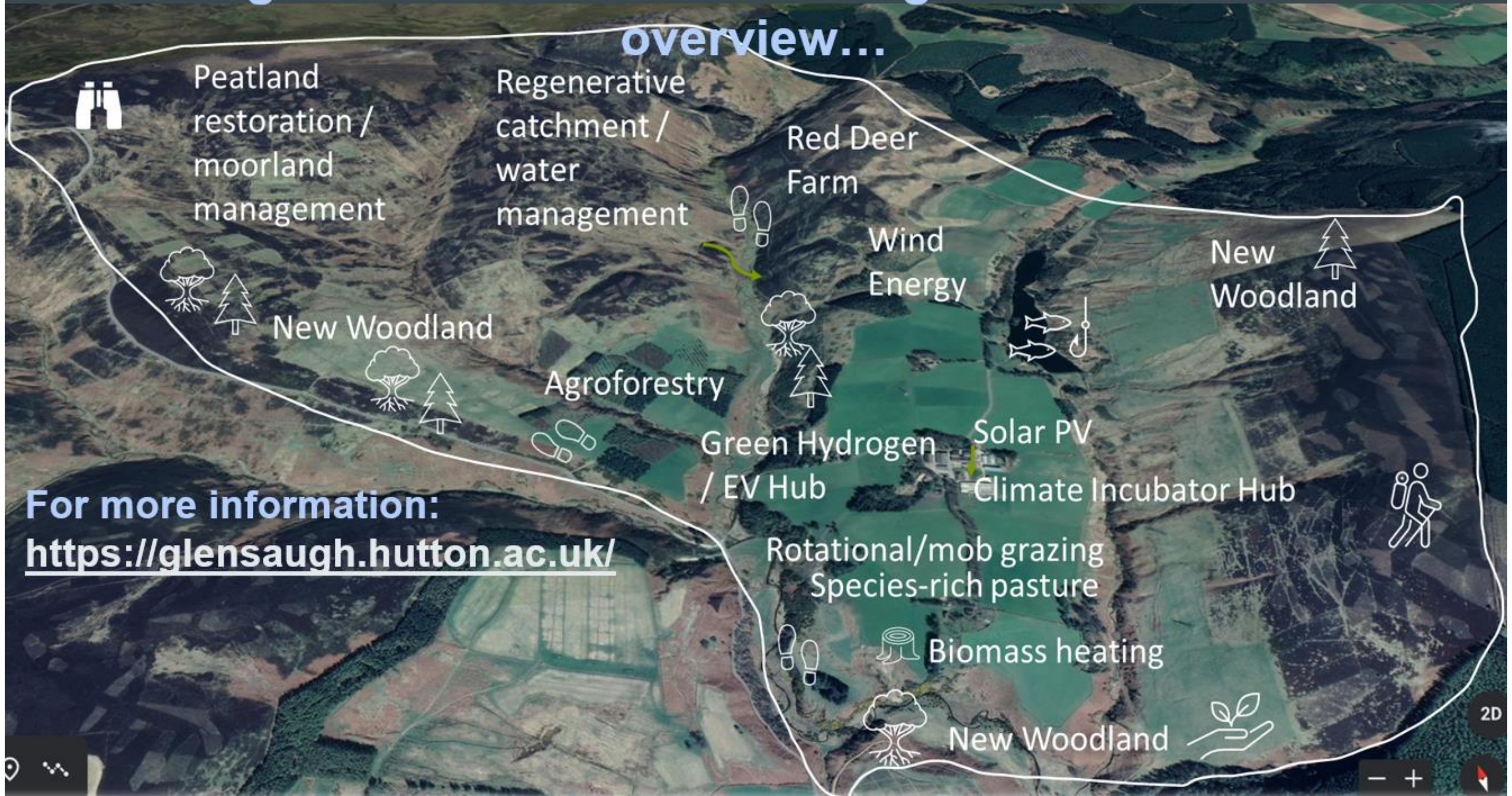
Ambition and approach – four essential ingredients



Testing and demonstrating transformations in land management and farm business operations; addressing the significant contribution that this sector can make towards climate and biodiversity targets.

"Tackling the climate and biodiversity crises with transformative farming and technological innovations"

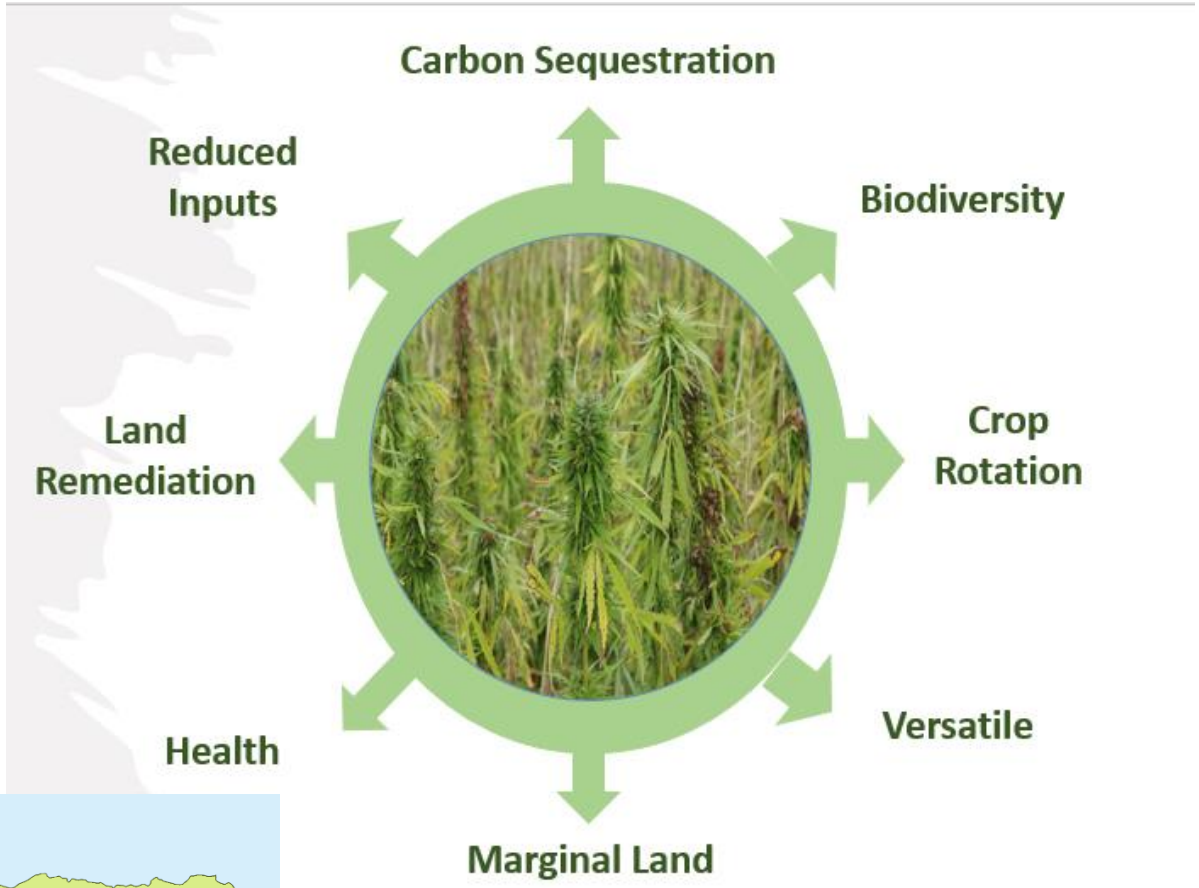
Glensaugh Climate-Positive Farming Initiative – illustrative overview…



For more information:
https://glensaugh.hutton.ac.uk/

Hemp

- High in protein and fibre
- Good balance in ω-fatty acids
- Rich in micronutrients; K, Ca, Mg, Fe, P & Zn
- Contains beneficial bioactive molecules
- Reduces hunger
- Modulates gut hormones
- Beneficially regulates sugar metabolism
- Net zero crop



THE SCOTSMAN News you can trust since 1817

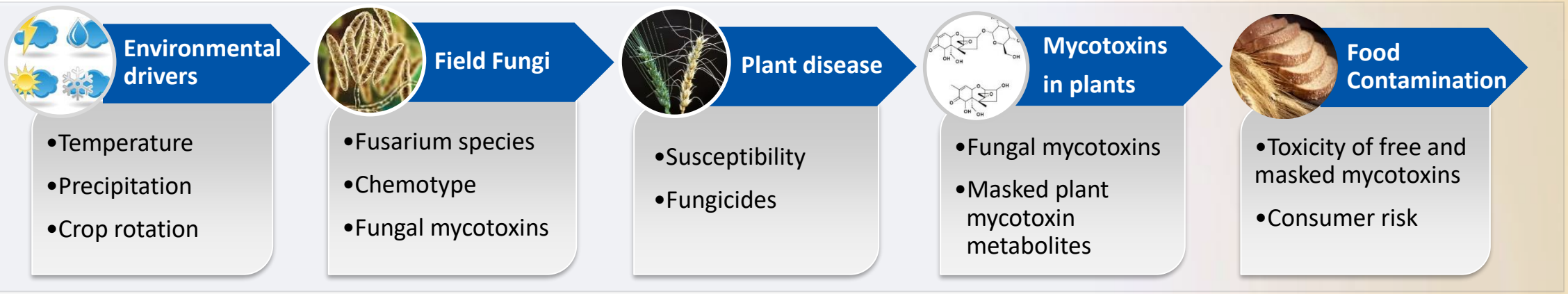
Opinion Sport Arts & Culture Food & Drink Lifestyle Homes Scottish Herita

Environment

Sustainable Scotland: Cannabis crops could help Scottish farmers turn carbon neutral, report finds

Mycotoxins and masked mycotoxins in food: Science to influence policy

UNIVERSITY OF ABERDEEN
The Rowett Institute



Impacts

- ✓ **Mycotoxins are prioritised in FSA Risk Analysis process post EU-exit**
- ✓ **Scientific Advice provided as member of FSA Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment**
- ✓ **Future EU regulatory limits to include masked mycotoxins**

This work is funded by the Scottish Government Rural and Environment Science and Analytical Services (RESAS)

Examples of research delivering to policy
Centres of Expertise

Centres of Expertise (CoE)

- plans in the future for a CoE for Biodiversity

Strategic Research ⟷ National research resources, expertise & data ⟷ Policy , Practice, Innovation, Engagement

Delivered through Partnerships of SEFARI, Scotland and other UK universities, Research Institutes & Agencies

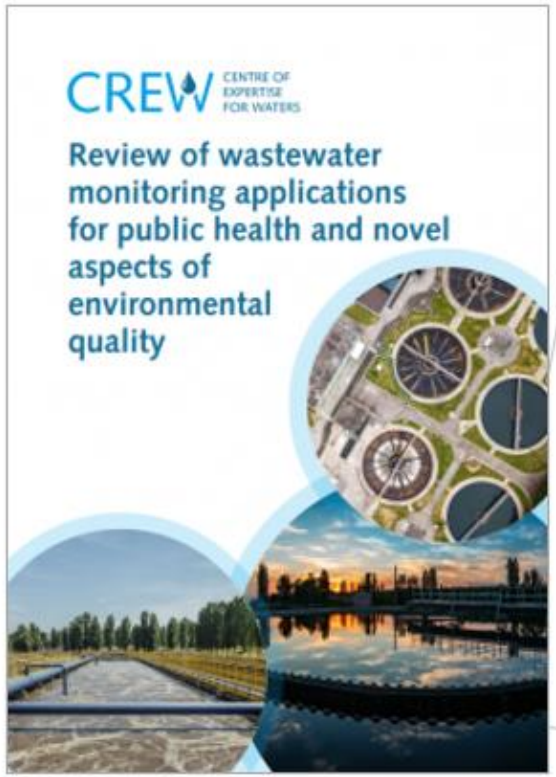
CREW CENTRE OF EXPERTISE FOR WATERS

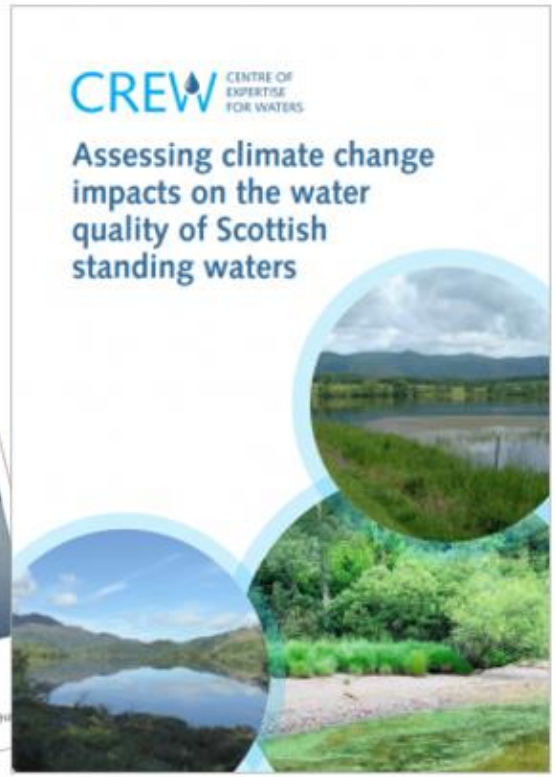
Thematic areas

CREW CENTRE OF EXPERTISE FOR WATERS

Examples of impact from previous Programme

Water Quality ↔ Risk Management ↔ Hydrological Extremes

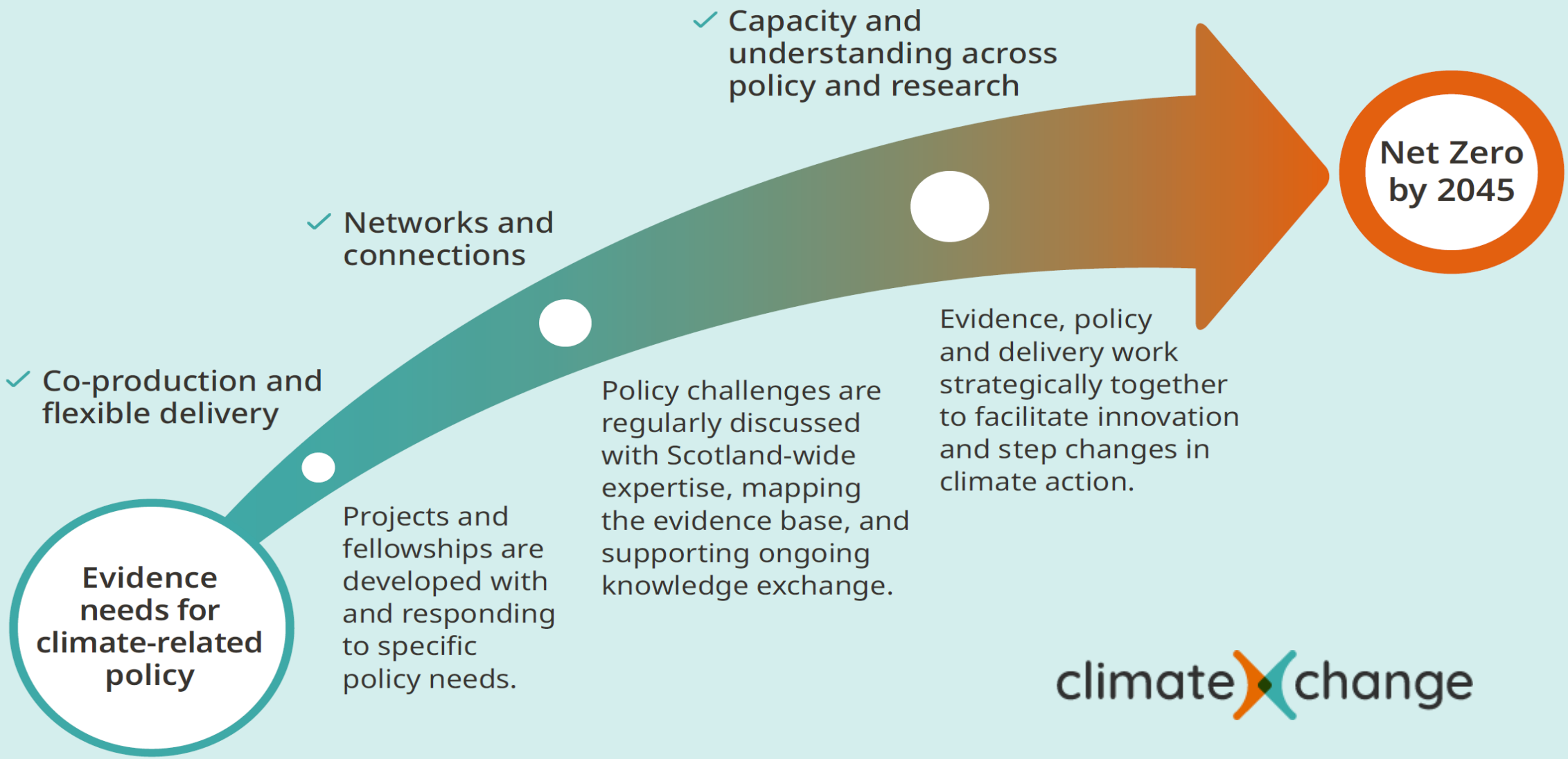




crew.ac.uk

2016-2022

How our work supports a net zero Scotland

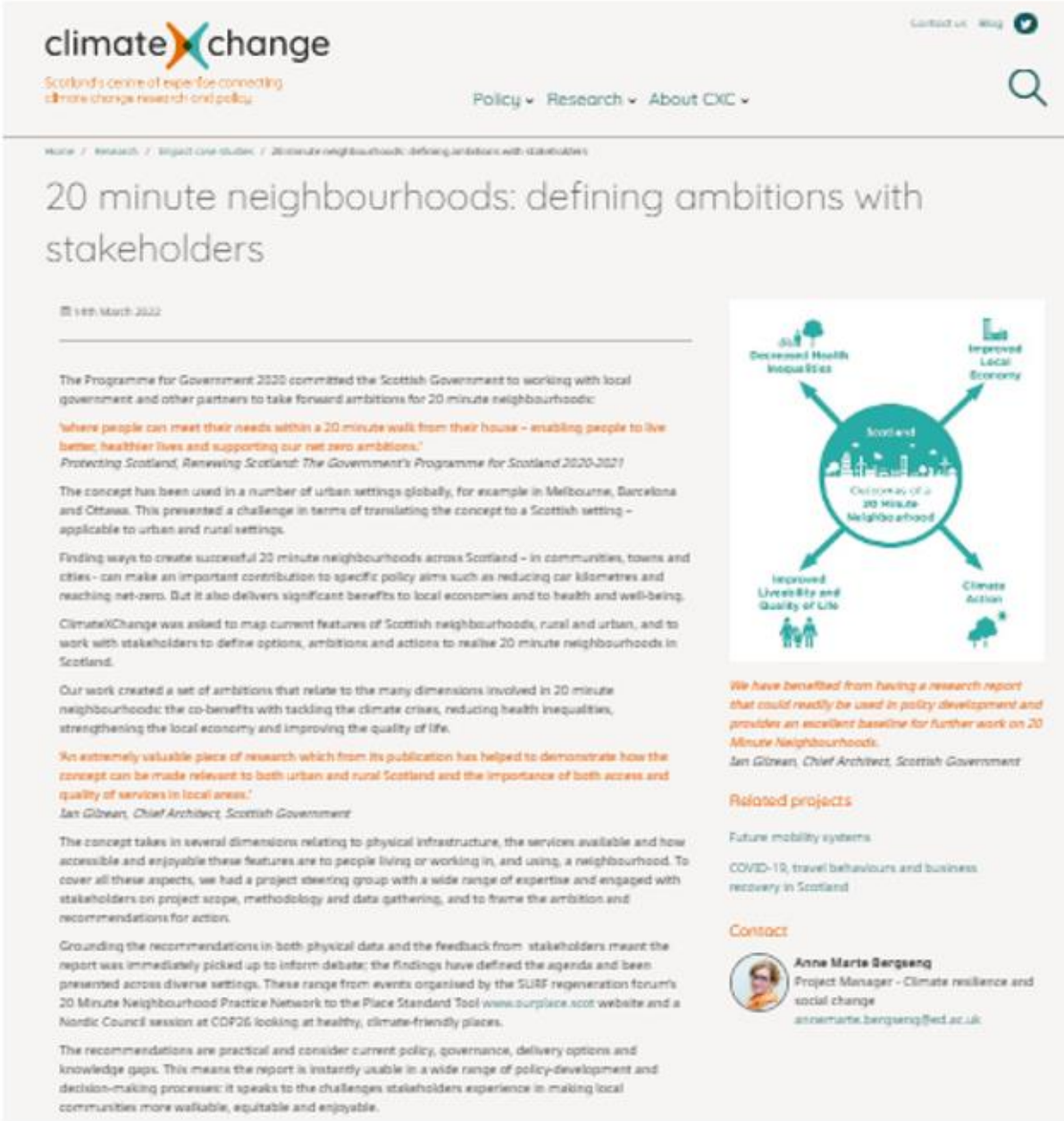


climate change

20 min neighbourhoods
Impact case study

"An extremely valuable piece of research which from its publication has helped to demonstrate how the concept can be made relevant to both urban and rural Scotland and the importance of both access and quality of services in local areas.
We have benefited from having a research report that could readily be used in policy development and provides an excellent baseline for further work on 20 Minute Neighbourhoods."
Ian Gilzean, Chief Architect, Scottish Government

climate change


climate change
Scotland's centre of expertise connecting climate change research and policy
Policy Research About CXC
20 minute neighbourhoods: defining ambitions with stakeholders
The Programme for Government 2020 committed the Scottish Government to working with local government and other partners to take forward ambitions for 20 minute neighbourhoods:
'where people can meet their needs within a 20 minute walk from their house – enabling people to live better, healthier lives and supporting our net zero ambitions.'
Protecting Scotland, Renewing Scotland: The Government's Programme for Scotland 2020-2021
The concept has been used in a number of urban settings globally, for example in Melbourne, Barcelona and Ottawa. This presented a challenge in terms of translating the concept to a Scottish setting – applicable to urban and rural settings.
Finding ways to create successful 20 minute neighbourhoods across Scotland – in communities, towns and cities - can make an important contribution to specific policy aims such as reducing car kilometres and reaching net-zero. But it also delivers significant benefits to local economies and to health and well-being.
ClimateXChange was asked to map current features of Scottish neighbourhoods, rural and urban, and to work with stakeholders to define options, ambitions and actions to realise 20 minute neighbourhoods in Scotland.
Our work created a set of ambitions that relate to the many dimensions involved in 20 minute neighbourhoods: the co-benefits with tackling the climate crises, reducing health inequalities, strengthening the local economy and improving the quality of life.
'An extremely valuable piece of research which from its publication has helped to demonstrate how the concept can be made relevant to both urban and rural Scotland and the importance of both access and quality of services in local areas.'
Ian Gilzean, Chief Architect, Scottish Government
The concept takes in several dimensions relating to physical infrastructure, the services available and how accessible and enjoyable these features are to people living or working in, and using, a neighbourhood. To cover all these aspects, we had a project steering group with a wide range of expertise and engaged with stakeholders on project scope, methodology and data gathering, and to frame the ambition and recommendations for action.
Grounding the recommendations in both physical data and the feedback from stakeholders meant the report was immediately picked up to inform debate: the findings have defined the agenda and been presented across diverse settings. These range from events organised by the SURF regeneration forum's 20 Minute Neighbourhood Practice Network to the Place Standard Tool www.ourplace.scot website and a Nordic Council session at COP26 looking at healthy, climate-friendly places.
The recommendations are practical and consider current policy, governance, delivery options and knowledge gaps. This means the report is instantly usable in a wide range of policy-development and decision-making processes: it speaks to the challenges stakeholders experience in making local communities more walkable, equitable and enjoyable.
Decreased Health Inequalities
Improved Local Economy
Scotland
Improved Liveability and Quality of Life
Climate Action
We have benefited from having a research report that could readily be used in policy development and provides an excellent baseline for further work on 20 Minute Neighbourhoods.
Ian Gilzean, Chief Architect, Scottish Government
Related projects
Future mobility systems
COVID-19, travel behaviours and business recovery in Scotland
Contact
Anne Marte Bergaeng
Project Manager - Climate resilience and social change
annemarte.bergaeng@hw.ac.uk

EPIC is the Scottish Government's Centre of Expertise on Animal Disease Outbreaks. Academic experts work closely with policy-makers to provide rapid access to emergency advice and analyses during disease events such as the current Avian Influenza outbreak.

Department for Environment Food & Rural Affairs

Policy paper

Mitigation strategy for avian influenza in wild birds in England and Wales

Updated 30 March 2023

epic Centre of Expertise on Animal Disease Outbreaks

EPIC Epidemiology, Population health and Infectious disease Control

Examples of impact

- **EPIC's work supporting the industry-led eradication of an endemic disease affecting cattle, Bovine Viral Diarrhoea (BVD) in Scotland has had significant impact. In collaboration with the RESAS SRP, EPIC scientists have conducted farm level analysis of BVD spread.**

- **Phylodynamic sequence analysis (the study of genetic variation in pathogens, and the effect of such variation on their transmission) has proved an effective tool in the eradication and control of exotic disease outbreaks in the UK, including Foot-and-Mouth Disease (FMD) and Avian Influenza (AI).**

- **EPIC has been developing veterinary risk assessments (VRAs) to support policy response and decisions on control of exotic notifiable diseases.**

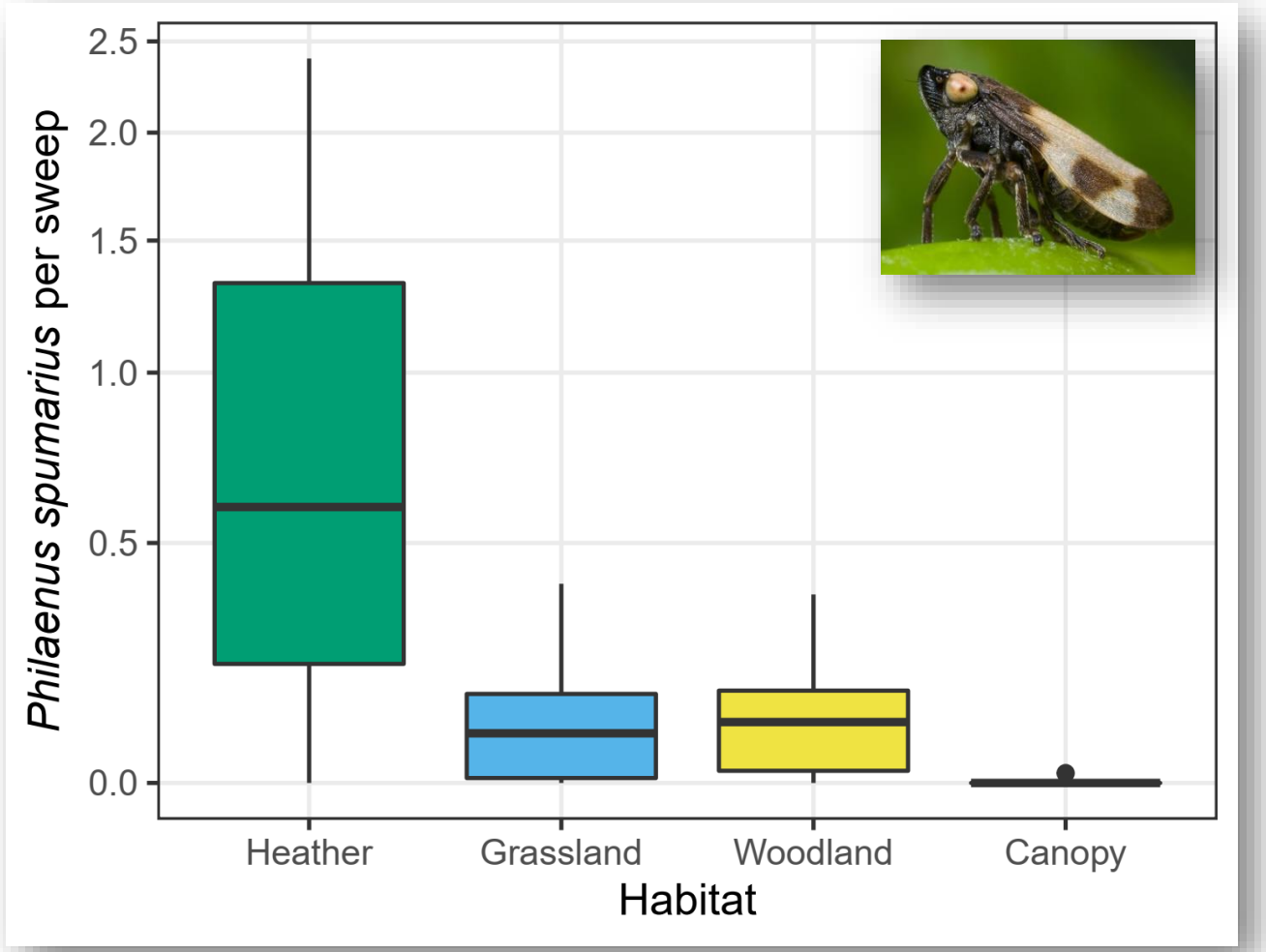
epic Centre of Expertise on Animal Disease Outbreaks

Improving Knowledge of *Xylella fastidiosa* vector ecology

Plant Health Centre
Scotland's Centre of Expertise

Scottish Government
Riaghaltas na h-Alba
gov.scot

- Distribution of spittlebugs vectors



Plant Health in the Natural Environment

Scottish Government
Riaghaltas na h-Alba
gov.scot

Plant Health Centre
Scotland's Centre of Expertise

NatureScot
Scotland's Nature Agency
Buidheann Nàdair na h-Alba

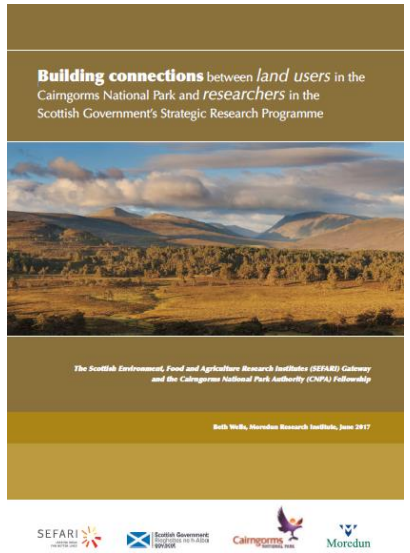
The James Hutton Institute

- Assessed stakeholders' awareness of plant health risks
- Identified those risks
- Developed framework to increase resilience (using Key Principles)
- Reviewed SG's contingency plans and their applicability to Nat Env

Funded Programmes - Fellowship Scheme

Cairngorms NATIONAL PARK
Pàirc Nàiseanta a' Mhonaidh Ruaidh

SEFARI



SEFARI Gateway

Game & Wildlife CONSERVATION TRUST

Moredun

Game keepers
Prescribing Vets

Provision of evidence and advice

- ❖ New & sustained dialogue on moorland use
- ❖ Creating practical change on medicated grit for grouse management
- ❖ Informing practice on Louping ill virus
- ❖ Informing policy perspective
- ❖ Integrated with Gateway Flexible Funding to support practice change in veterinary practitioners and game-keepers

Werritty Review

Scottish Government response to the report from the Grouse Moor Management Group

Scottish Government
Riaghaltas na h-Alba
gov.scot

SEFARI

Funded Programmes - Specialist Advisory Groups

Conserving Plant Genetic Diversity

Royal Botanic Garden Edinburgh

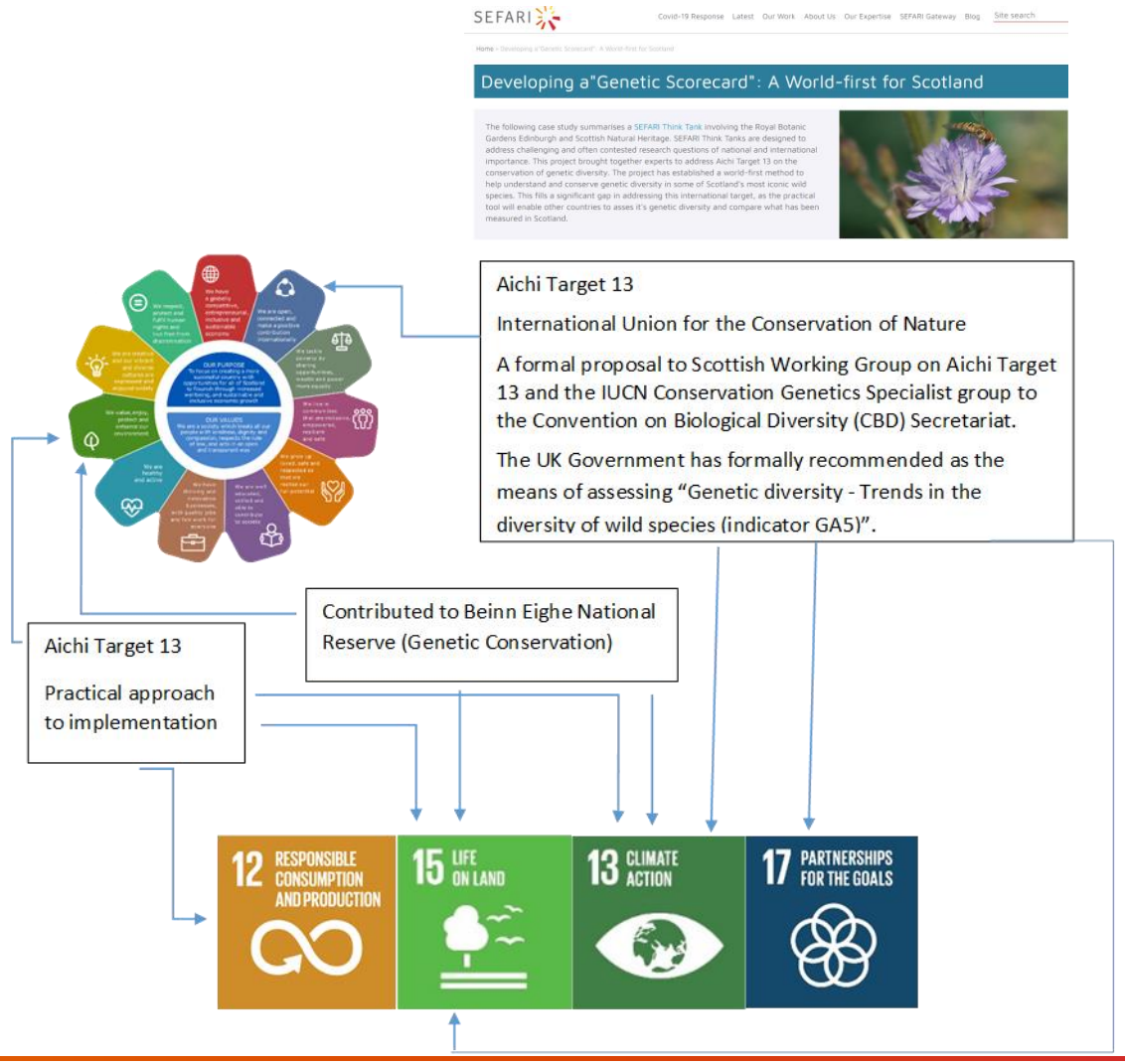
The James Hutton Institute

BioSS

SRUC

Moredun

Delivery partnership: with NatureScot, University of Edinburgh, Science and Advice for Scottish Agriculture, Centre for Ecology and Hydrology, Royal Botanic Garden Kew, Forest Research and Forestry Commission



Scottish Government
Riaghaltas na h-Alba
gov.scot

SEFARI

Funded Programmes - Innovative KE Projects

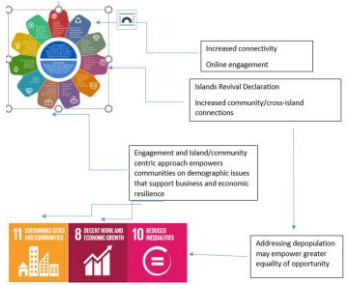
- Engaged communities own voice
- Helping to address demographic challenge in sparsely populated areas
- Questions population predictions
- Evidence of community-island action for resilience
- Built international connections with SPA populations
- Informing strategic research
- Further evidence“Research on the Edge”

The James Hutton Institute

SRUC

COMMUNITY* LAND SCOTLAND

CoDEL Community Development Lens



Scottish Government
Riaghaltas na h-Alba
gov.scot

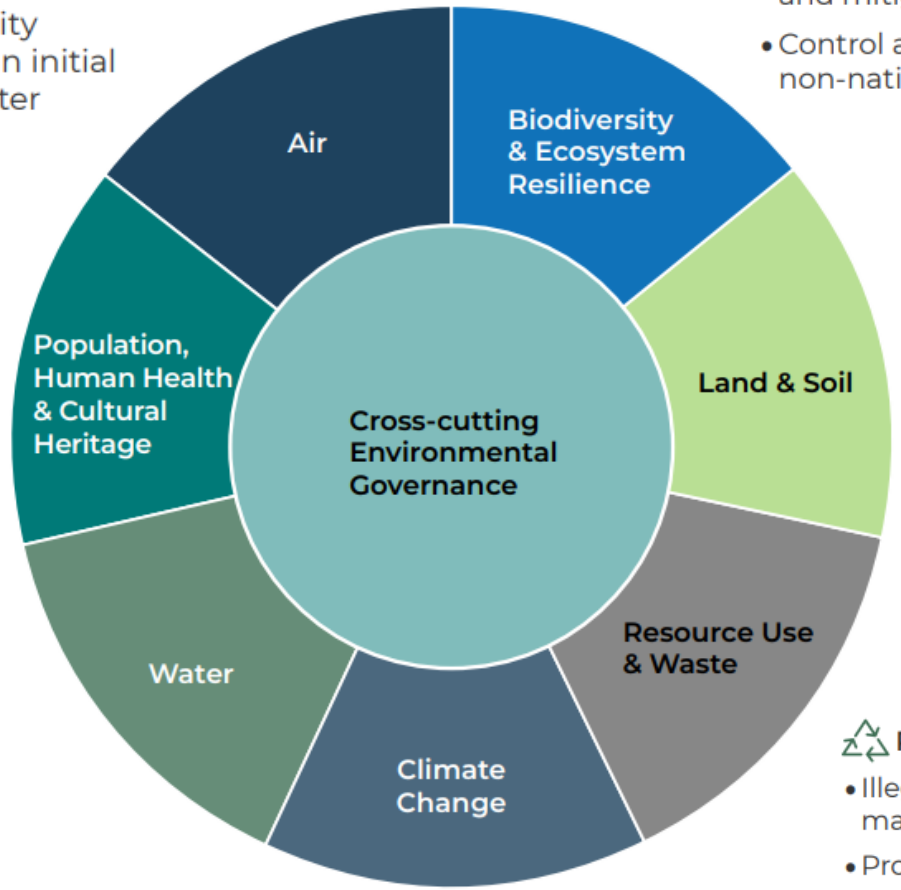
SEFARI

Environmental Standards Scotland Fellowship

- Environmental Standards Scotland (ESS) is an independent body established to ensure the effectiveness of environmental law, and prevent enforcement gaps arising from the UK leaving the European Union
- SEFARI Gateway fellowship was funded in July 2021 to help support:
  - ESS in developing their environmental priorities
  - To scope out the skills and roles needed to deliver the analytical side of their work

- Initial analysis on environmental priorities discussed with ESS Board September 2021
- Following publication of the analysis carried out by the fellow, ESS undertook a series of baseline reviews guided in part by the fellowship
- In early 2022, ESS published their Strategic Plan 2022-25
- Their environmental priorities reflected the groundwork undertaken by SEFARI Gateway

ESS Environmental Priorities



Air

- Progress against air quality targets/standards, with an initial focus on particulate matter

Biodiversity & Ecosystem Resilience

- Biodiversity decline, with a particular focus on pressures and mitigation strategies
- Control and impact of invasive non-native species

Population, Human Health and Cultural Heritage

- Developing a better understanding of antimicrobial resistance, controls and impacts
- Developing a better understanding of current noise levels, controls and the impact on human health

Land & Soil

- Developing a better understanding of the current status of soil health, controls and monitoring

Water

- Sewage discharge into the aquatic environment
- Developing a better understanding of threats to the marine environment
- Understanding water quality issues, with an initial focus on progress against River Basin Management Plan objectives

Climate Change

- Progress against greenhouse gas emission targets
- Progress on climate change adaptation, including planning for extreme weather events

Resource Use and Waste

- Illegal disposal and management of waste
- Progress against waste and recycling targets and the development of the circular economy

Research delivering to policy together with Agencies & Industry

"Science / evidence has to be translated for policy / regulatory people – so that it can be understood and thus ensure that it is used appropriately.

It has to be "operationalised" – which I think needs science and policy folk to work together so that they understand better each other's needs."

SEPA

Looking ahead to Nature-based Solutions

Sources: NatureScot, Rewilding Europe, Rewilding Britain, The Big Picture, Des Thompson

Environmental Protection Scotland

Environmental Protection Scotland is a Scottish Charitable Incorporated Organisation SCIO Scottish Charity No. SC 043410

RESEARCH SUPPORTING POLICY: AIR QUALITY

A detailed and credible evidence base is critical to our understanding of air pollution, its sources and impacts on human health and the environment. Research has always been essential to inform the design of effective policy. A selection of examples include:

Impact-Based Research

→

- Air Quality Guideline Values – WHO
- Revision to EU Directives
- National Ambient AQ Standards

Measurements-Based Research

→

- Local Air Quality Management
- Lead Free Petrol
- Dieselgate – Real World Vehicle Emissions
- Bus retrofit emissions performance
- New Priority Pollutants

Emissions & Modelling Research

→

- Design and Implementation of Clean Air Zones/ LEZs
- National and Local Air Quality Action Plans and Strategies
- Traffic Management for Environmental Improvement

Cultivating Collaboration Network is the platform through which SAOS builds broad, industry wide collaborative partnerships to bring new thinking to prioritised agricultural challenges

SAOS and C2Network delivery addresses the journey that agri co-ops are taking to achieve climate and nature goals


Food, Farming
& Countryside
Commission
Spotlight on Agroecology

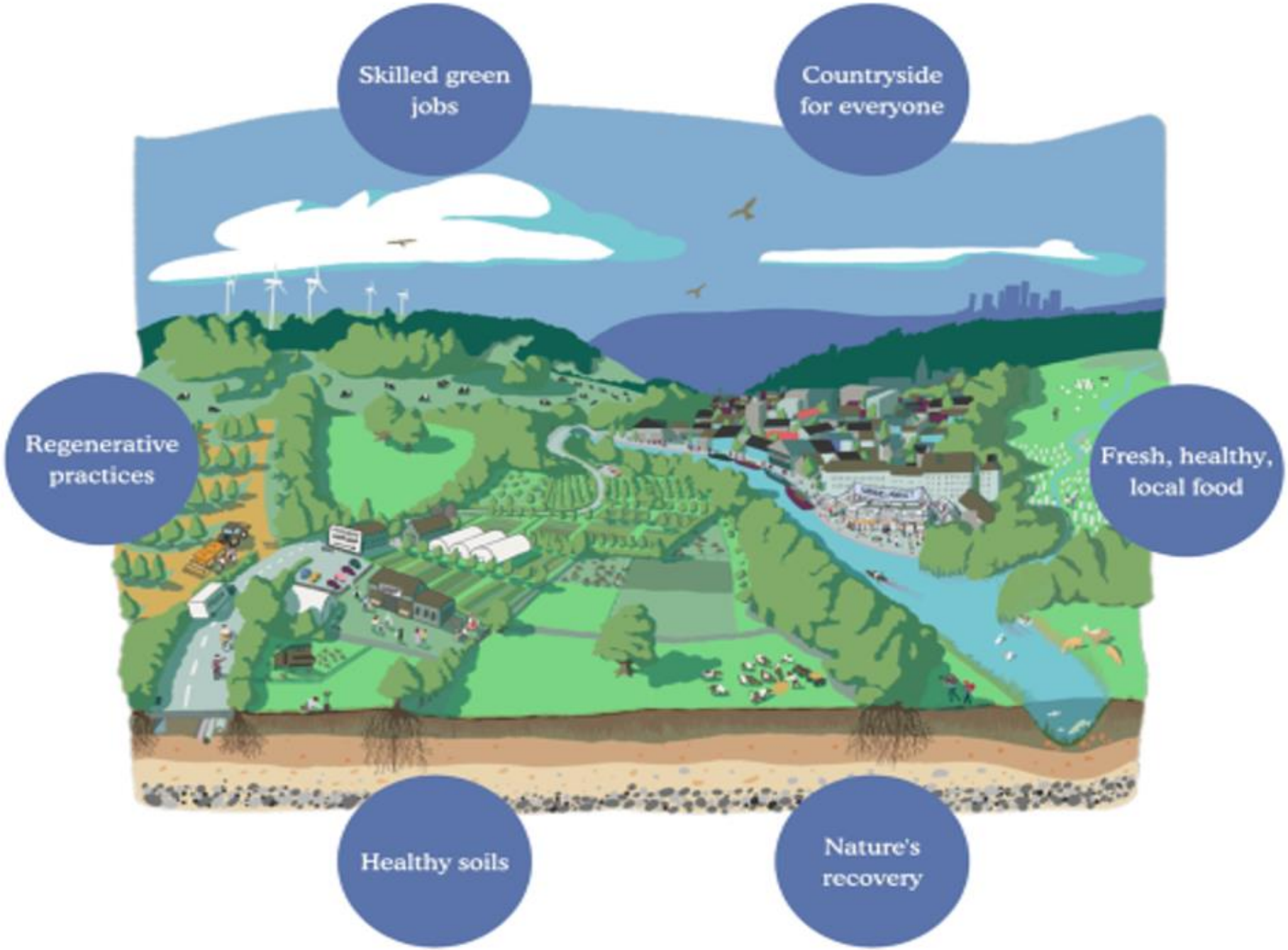
SEFARI Fellowship

Agroecological Principles in Scottish Agriculture

FFCC funded research project through SEFARI Gateway in collaboration with Soil Association Scotland and SAOS by researchers based at the James Hutton Institute.

- How applying agroecological principles in Scotland can provide long term benefits
  - Improving land productivity, more resilient farming systems and valuing farming as a force for change.
- Agroecology being practiced by many Scottish farmers and crofters, largely without financial subsidies
- Agroecological approaches are knowledge-intensive – widespread availability of training and advice could support further adoption
- Need to enable those already practicing agroecology to flourish, and support newcomers to develop and apply these skills at different holding scales

Lozada, LM., Karley, A., *et al*., 2022
SEFARI-FFCC Agroecology in Scotland March 2022.pdf



Food, Farming & Countryside Commission

Bridging the gap
with collaboration & good communication through excellent science, integrating aspects of physical sciences, social science and economics

Food, Farming & Countryside Commission

Thank you

#RESASConf23
#leadingideas

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