

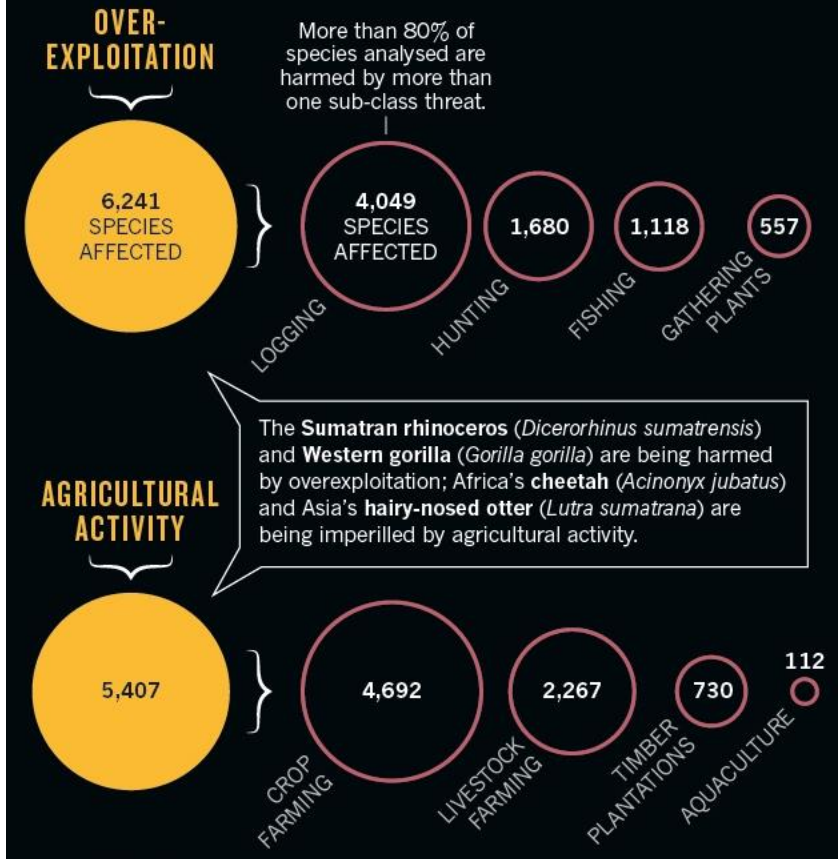


Agricultural ecosystem restoration through sustainable use

Dr Julie Ewald & Prof Mari Ivask

BIG KILLERS

Overexploitation and agriculture are the most prevalent threats facing the 8,688 threatened or near-threatened species from comprehensively assessed species groups on the IUCN Red List.



Why Agriculture?

Why Europe?

- Agricultural activity
 - Driver of biodiversity decline
- EU Common Agriculture Policy
 - Pillar 2
 - Agri-environmental schemes
 - Variation between countries
 - “Natural experiment”
- Other European countries
 - Switzerland
- Sustainable use research
 - Soil
 - Water
 - Ecosystem services

Overview of examples covered here

- Large estate level restoration of grey partridges
 - Sustainable shooting
- Perdixnet
 - Spreading the word across countries
- PARTRIDGE project
 - Demonstration of restoration across Northern Europe
- Farmer Clusters
 - UK farmer collaboration
- Soil Conservation and Sustainable Use
 - Future possibilities

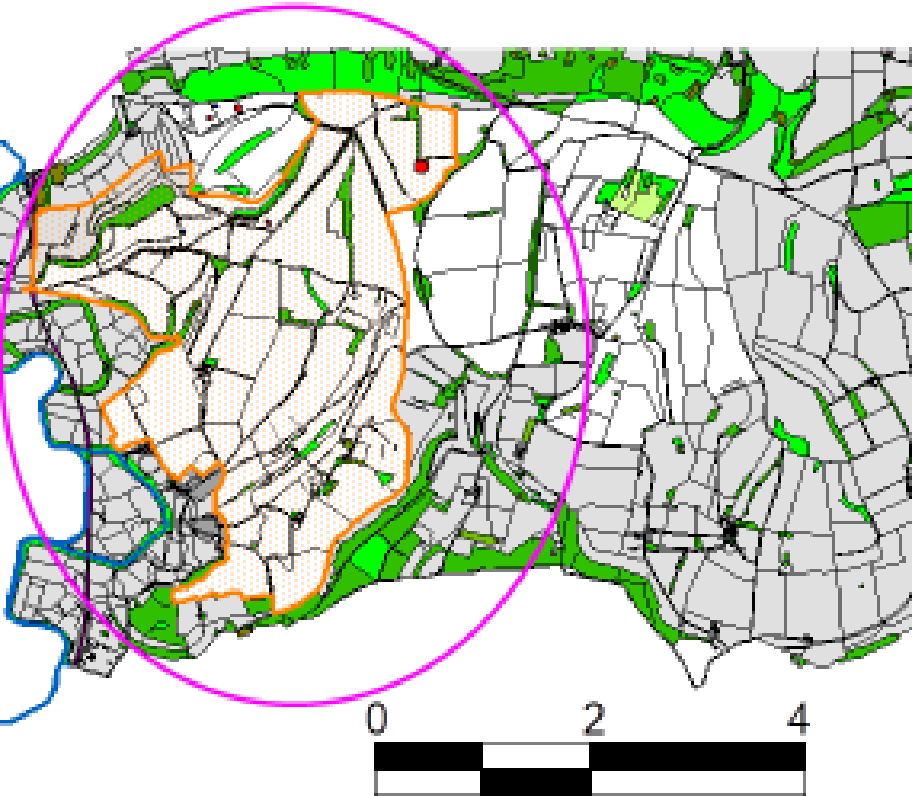
Grey partridges

- Associated with arable farming
- Widespread across northern Europe
- Declining species across Europe
 - More than 90% since the 1970s
- Reasons for decline well understood
 - Loss of nesting habitat
 - Loss of chick-food
 - Predation on nest
 - Overwinter resources
- Ecosystem service – food / shooting
- Management - flora & fauna

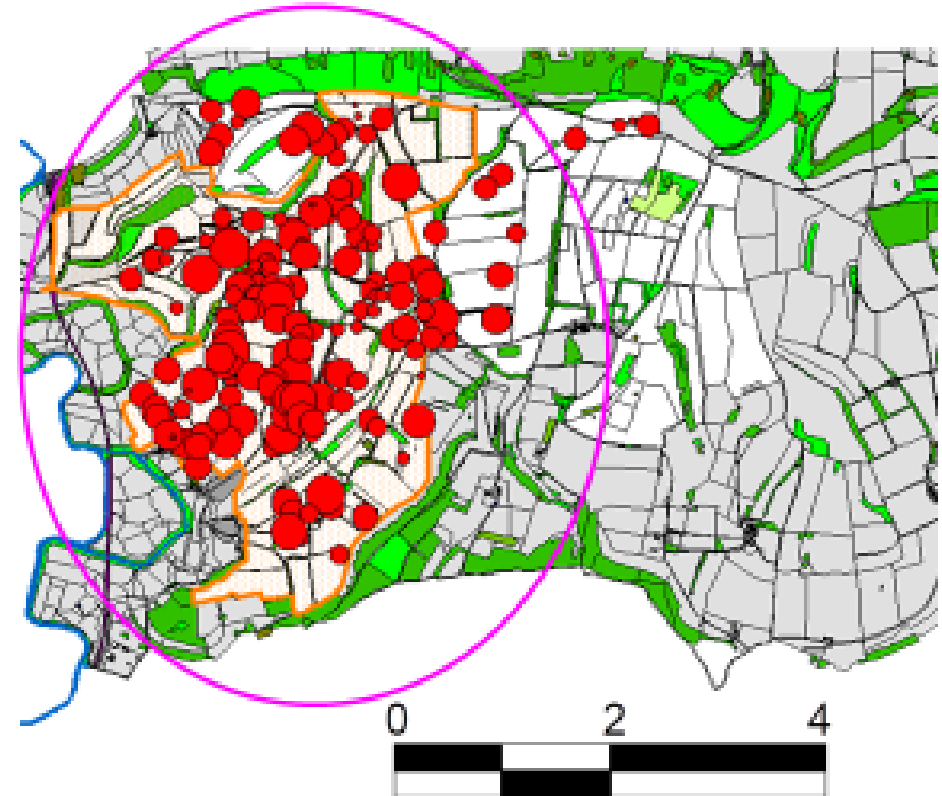


GWCT Sussex Study & Partridges

2003



2011



 Managed area

GWCT: What makes this a success story?

- Landowner commitment to project
 - “I do not want the grey partridge to go extinct on my watch.” Edward Duke of Norfolk, 21 Nov., 2001
- Habitat management
 - Agri-environment + additional measures
- Predator control
- Sustainable harvest
 - Offset additional costs of gamekeeper/extra habitat
- Although directed at one species, many species benefit
 - Farmland birds, raptors, arable flora


PerdixNet: Goals & Challenges

- Knowledge transfer
 - Scientist to manager
 - Country to country
 - **Manager to scientist – Count Scheme**
- Tools for adaptive management at local level
 - Mapping tools
 - **Counting information - Methods**
- International collation of success
 - **Updates on projects**



www.perdixnet.org – The Perdix Portal

The Perdix Portal

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Restoring and Enriching Nature

[Please click here to see what is happening in your country \(English\)](#)

The Aim

We would like this network to inspire you to restore nature and to inform you how to do it. To achieve this aim, we will work with governments that want you to enhance nature and not merely to leave it alone. We will help land-using business that seeks to conserve as well as to control nature. We will encourage volunteer effort and nature-based livelihoods to benefit wild resources. Our ethos is based in charters from the Bern Convention, for activities that support the riches of nature. We favour enjoying nature in as many ways as possible, because "what pays, stays".

Our Approach

The loss of nature has crept up on us gradually. With government payments to support food production, hedges were removed to make bigger fields for more efficient machinery. Rough land around farm buildings was lost as these became offices. Biocides cleaned wild plants and insects from farmland, with road verges sprayed to sanitise these too or mowed to aid visibility for increasing traffic.

We seek to guide the start of projects to restore wildflowers and the animals that they support. Many of these animals are a pleasure to watch and photograph, or are useful for making honey or ridding crops of pests. Our



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Perdixnet: German site



Perdix-DE

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Förderung für Rebhuhnschutz



Um einen Link zu öffnen, klicken Sie mit der linken Maustaste darauf. Es öffnet sich ein neues Fenster. Ein Mausklick auf den oberen linken Rückpfeil (<--> in Ihrem Browserfenster führt Sie wieder zurück auf diese Seite.

Eine geeignete förderungsfähige Maßnahme zum Rebhuhnschutz sind die Blühstreifen oder Blühflächen, die im Rahmen der Agrarumweltmaßnahmen (AUM) in vielen Bundesländern angeboten werden. Jedes Bundesland setzt die AUM individuell um, so dass sich die Bewirtschaftungs- und Rahmenbedingungen zum Teil erheblich unterscheiden können. Zum Teil sind die Auflagen nicht optimal an die Bedürfnisse des Rebhuhns angepasst. Es ist dann zu klären, ob rebhuhngerechte Modifikationen vorgenommen werden können (Beispiel für [rebhuhngerechte Bewirtschaftung von Blühstreifen](#) in Niedersachsen).

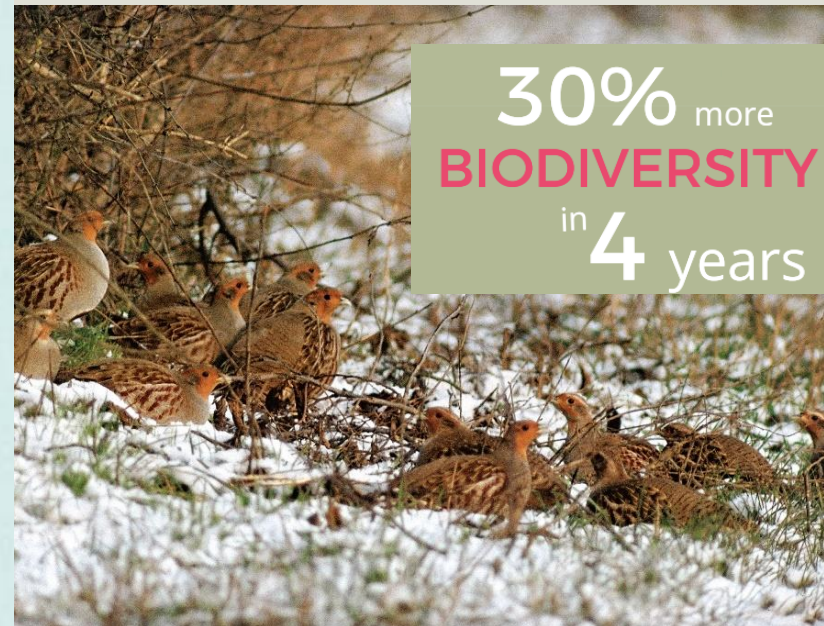
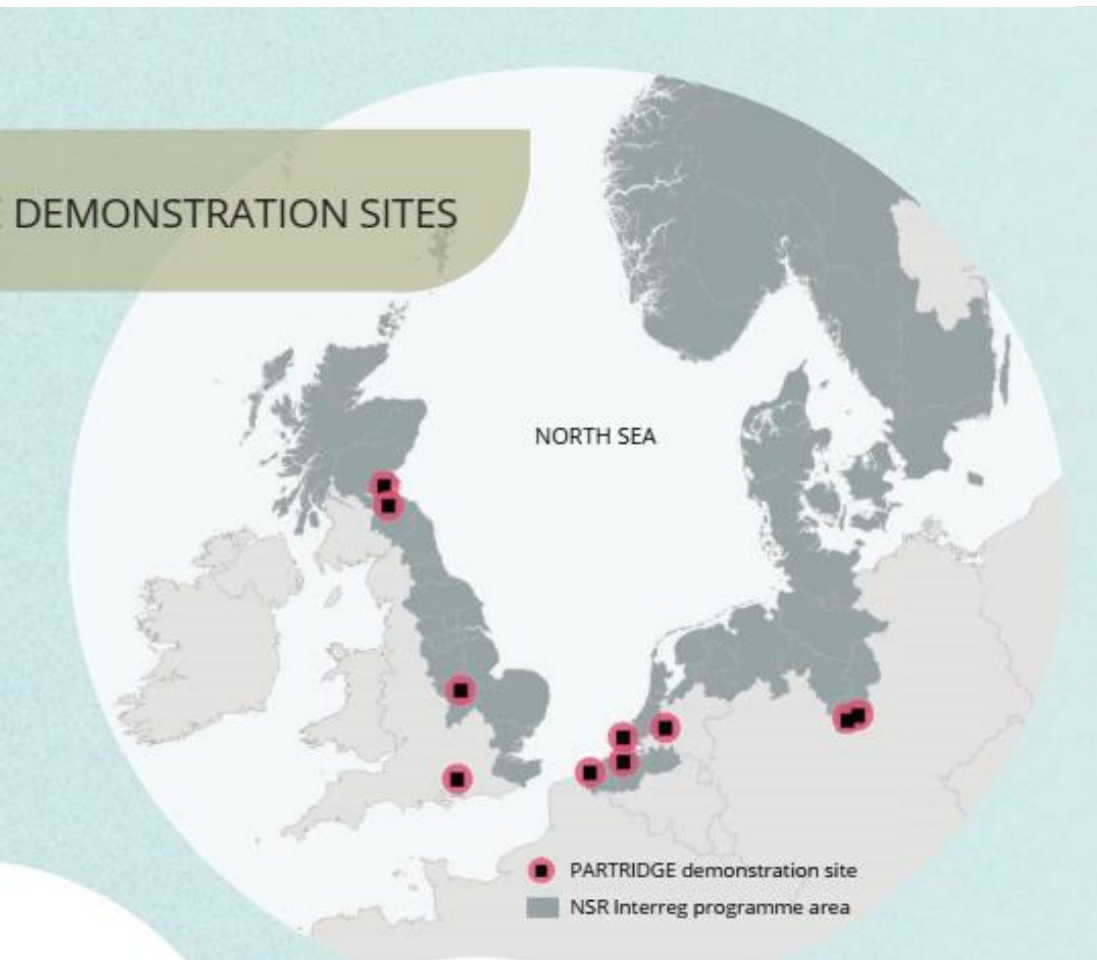
Förderprogramme ELER 2014-2020

[AUM-, KULAP und Vertragsnaturschutzprogramme der Länder](#) (Zusammenstellung vom Netzwerk Ländlicher Raum)

Förderung in Nordrhein-Westfalen

[Hilfe für das Rebhuhn \(LANUV-Info 36\)](#)

PARTRIDGE North Sea Region Interreg



Minimum 7% high-quality habitat on 500 ha

<https://northsearegion.eu/partridge/>

PARTRIDGE Interreg



Interreg
North Sea Region
PARTRIDGE
European Regional Development Fund



EUROPEAN UNION



- 68 farmers, 39 hunters, 21 scientists and more than 300 volunteers involved across 10 demo sites
- 7% high-quality habitat established at 10 demo sites
- New PARTRIDGE wild-bird mixes introduced at all sites
- Beetle banks introduced to the NL and Belgium
- 102 farm walks held in two years
- 1300 people informed directly
- 3-4 Million people reached via media campaign
- Monitoring of 3 indicators (partridges, hares, songbirds) and 3 ecosystem services (habitat for pollinators, soil health, game bags) ongoing at 10 demo and 10 ref sites
- In-depth interviews with 15 key stakeholders in each country to help improve future AES's across Europe

Farmer Clusters: Landscape scale conservation

- Lead farmer
 - Well connected socially or professionally
 - Good 'green' credentials – example
- First gathering
- Decide aims
 - Species, issues (H₂O, soil), communities
- Choose facilitator
 - Natural England Countryside Stewardship Facilitation Fund



Working with

AGRICOLGY
SUSTAINABLE PRACTICAL FARMING



Bumblebee
Conservation
Trust



British Hedgehog
Preservation Society

Living Record
Online environmental recording

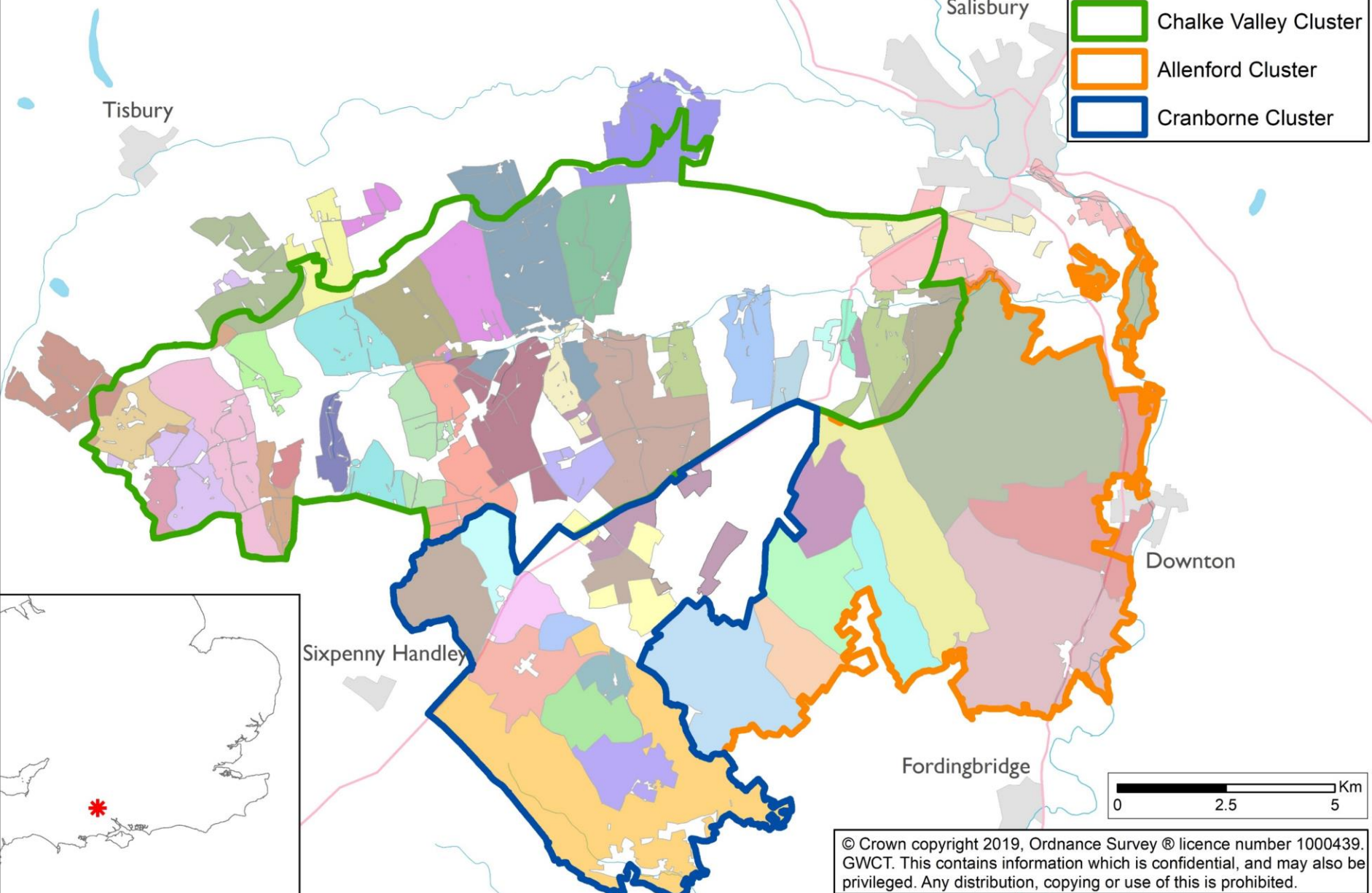
people's
trust for
endangered
species

South Downs
National Park Authority

Martin Down Supercluster

Cluster Farms

-  Chalke Valley Cluster
-  Allenford Cluster
-  Cranborne Cluster



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SOILS

- Soils are an essential and non-renewable natural resource hosting goods and services vital to ecosystems and human life (FAO, 2017).
- Sustainable management must to support the preservation of soil functions:
 - Primary productivity
 - Water purification and regulation
 - Carbon sequestration and regulation
 - Provision of functional and intrinsic biodiversity
 - Provision and cycling of nutrients



CONSERVATION OF SOIL



- Biodiversity loss and climate change are two of pressing challenges of our time.
- Agricultural systems and agro-ecological practices such as organic farming, zero-tillage, crop rotations and conservation agriculture, can sustainably increase farm productivity without degrading the soil and water resources.
- Climate change have an impact on soil. However, the interrelations between climate change and changes in soil quality are complex and still under study.
- The understanding and management of our soils are essential in reducing the climate changes.
- The Soil Framework Directive was proposed 2006 and rejected 2014, the soil is not subject to a comprehensive and coherent set of rules in the EU

Projects: Where does ESUG fit in?

- Perdixnet
 - IAF funding
- PARTRIDGE
 - INTERREG funding
- Farmer Clusters
 - UK NE funding
- Soil
 - Possible H2020 funding