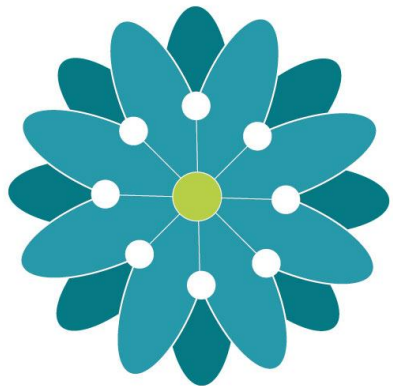


A new countryside : Restoring biodiversity in the UK by creating the Restoration Economy

Prof David Hill CBE
Chairman, Environment Bank

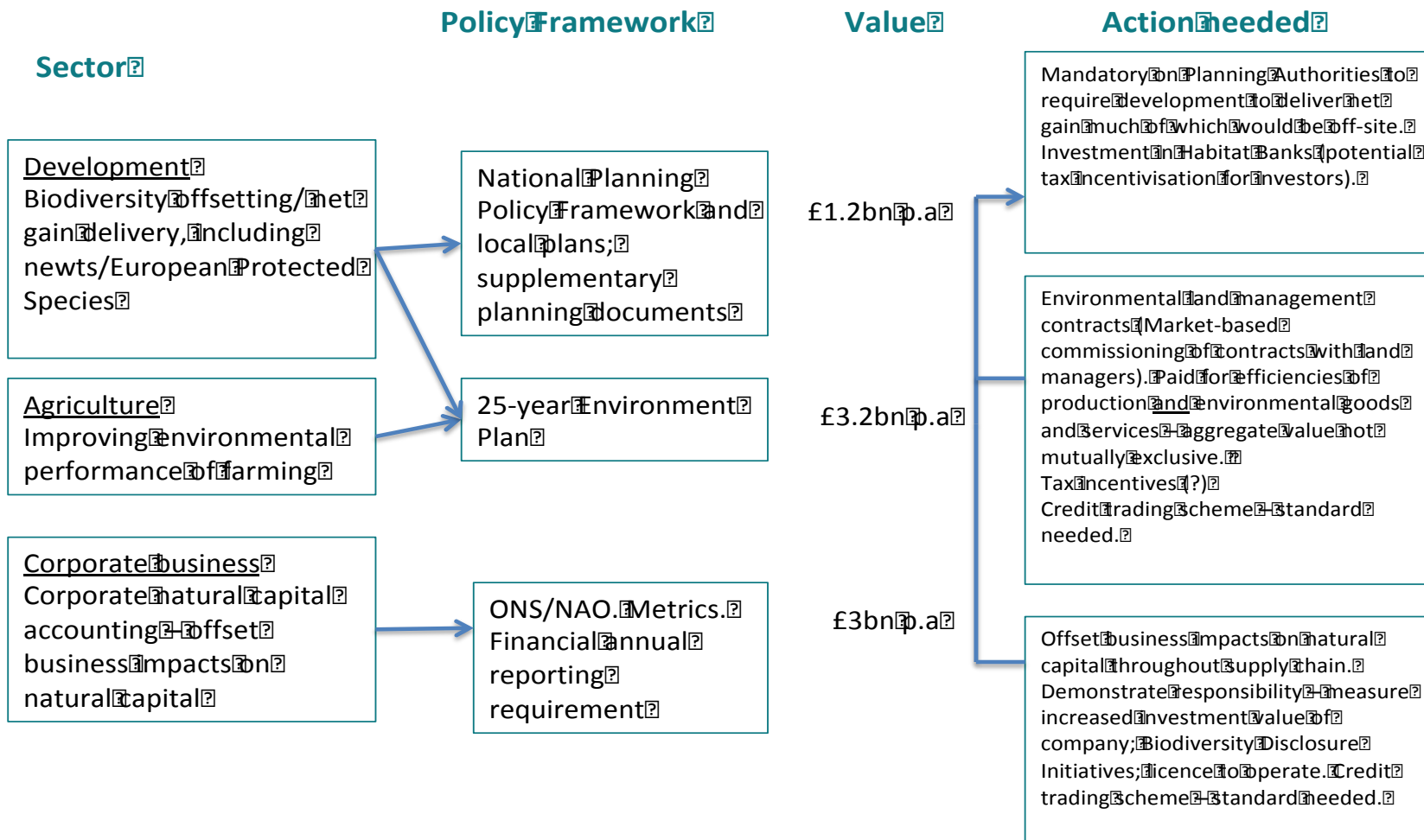


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- 25-year Environment Plan
- Restore 500,000ha of land for ecosystem benefits
- Nature Recovery Network
- New approaches to funding needed - both public and private sector
- 75% of land in the UK is farmed and farming intensification has inflicted greatest impacts on wider-countryside biodiversity
- Target funding at interventions in the farmed environment that can deliver large-scale significant improvements within as relatively a short a time period as possible



The Restoration Economy



State of Nature

There is a need for a transformational change in the way we use land if we are to make a serious impact on restoring biodiversity in the UK

Causes of losses :

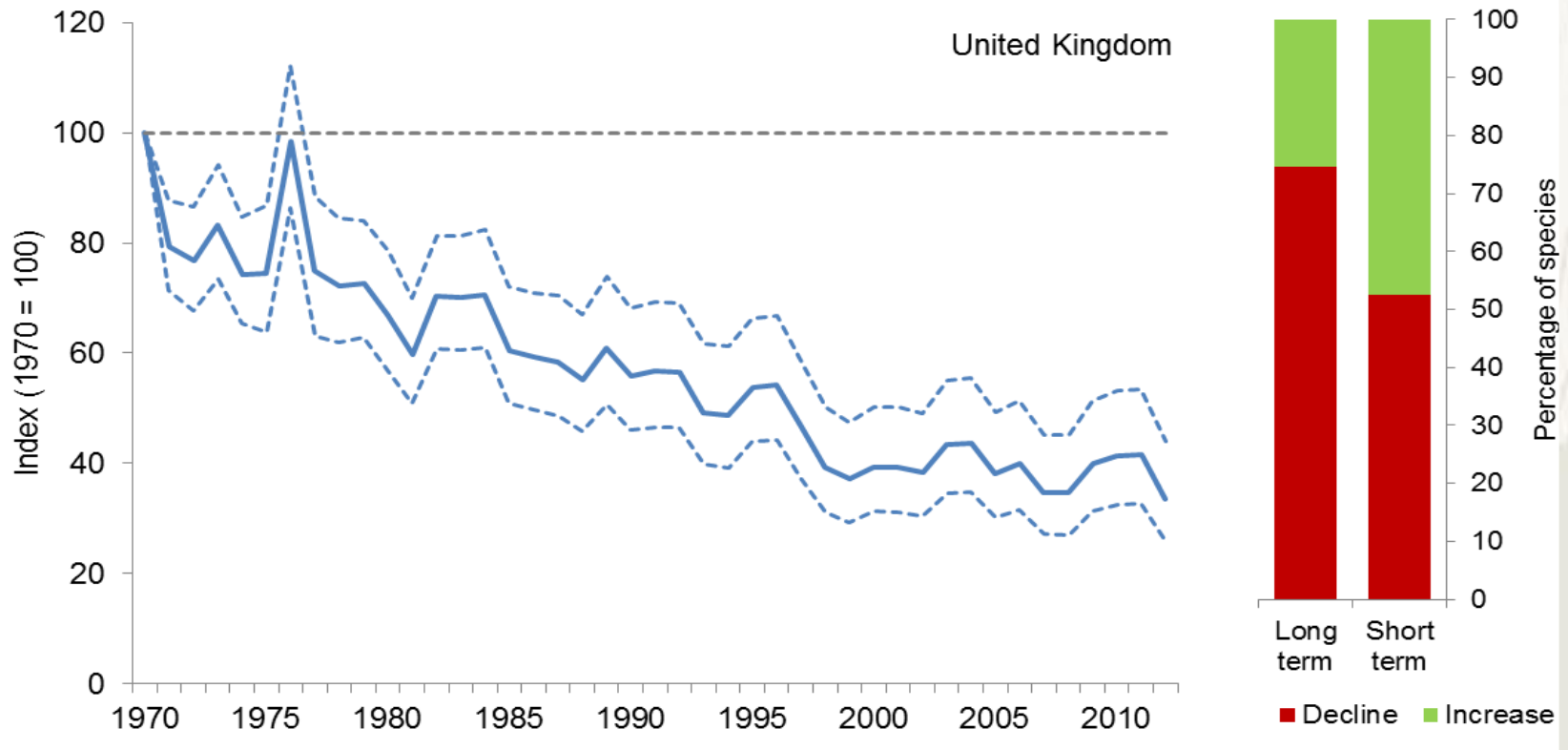
- Industrialization and intensification of farming since WW2
- Built development inclusive of infrastructure such as roads, rail, sea ports, residential and commercial property



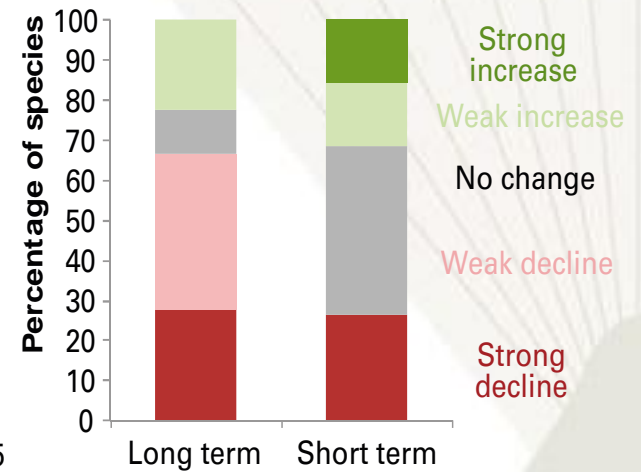
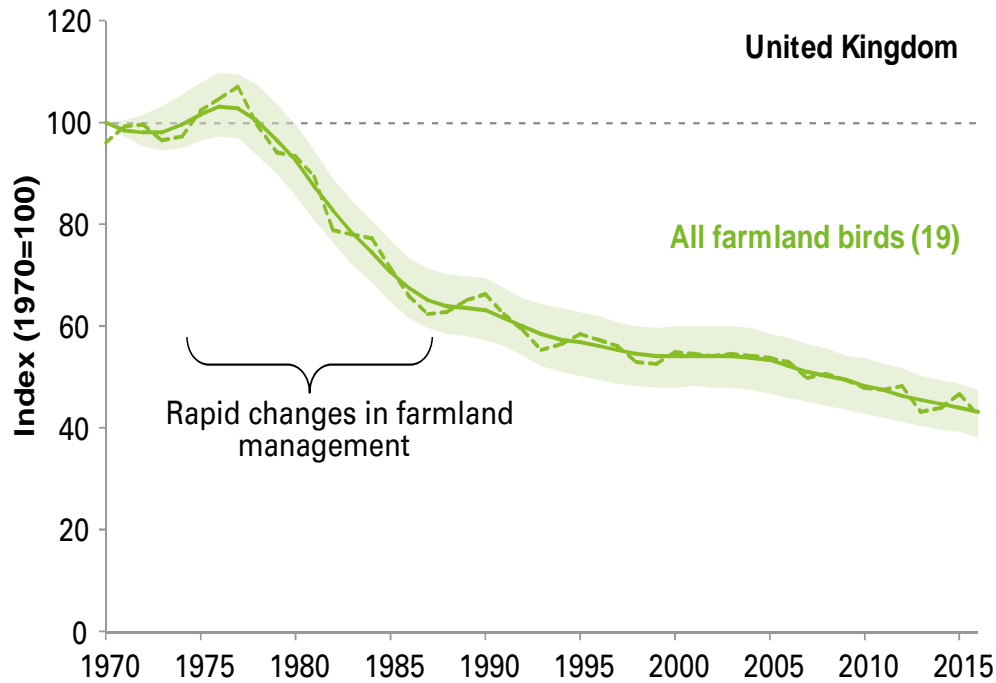
the **Environment Bank**

Priority species

Change in the relative abundance of priority species in the UK, 1970 to 2012



Breeding farmland birds in the UK, 1970 to 2016.



Traditional funding

Aggregate membership 17 conservation bodies	7.3 million	Latest reports 2015-2017
NGO income	£979m	Latest reports 2015-2017
NGO staff numbers	14,800	Latest reports 2015-2017
NGO spending on biodiversity in England	£372m	Latest reports 2015-2017
Govt. spending on biodiversity in England	£384m	2013/14

- Ethics and intrinsic value alone will not protect existing nor restore lost biodiversity in the future. Our 'love' of wildlife to date has not succeeded in averting massive biodiversity loss in the countryside.
- We need a robust mechanism for generating financial models that will provide the investment necessary to maximize opportunities from **net gain** (development), **agricultural innovation** (land sparing and sharing), **corporate natural capital accounts**.



Net gain

- The most significant conservation policy development for the wider terrestrial environment in the past decade. Included in NPPF and 25-year Environment Plan
- LPAs have duty to protect biodiversity in planning system – NPPF
- Most are not delivering on their legal responsibility
- Only under a mandatory system would sufficient investment be made available to facilitate scale-up and create, enhance and manage large areas of habitat for biodiversity conservation
- – MHCLG Garden Towns and Villages prospectus

How to make net gain work?

- LPA requires application of biodiversity impact accounting metric on ALL development to deliver **net gain**
- Impact of development assessed – 80% of gain should be off-site; 20% on-site. Net gain is not about ‘prettifying’ development
- Developer purchases **conservation credits** from broker of strategically located ‘**habitat bank**’ (or bespoke offset site) which yields the credits based on a Biodiversity Management Plan
- Environment Bank brokers deal - signs legal agreements to purchase the credits with developer, and to manage receptor site with land manager
- Money paid by EB under a contract with land manager against specific conservation management delivery
- Monitoring and reporting to LPAs

Benefits of habitat banking

- **Developers** : Clarity and certainty, increased net developable area, no long-term on-site liabilities
- **Planning Authorities** : transparent, consistent, auditable, net gains delivered, new secured wildlife habitat, easy
- **Biodiversity Conservation** : proper funding of gains for nature, financial disincentives for habitat destruction, enables long-term and large-scale habitat conservation, biodiversity is a material benefit in planning
- **Landowners** : Restoration economy, realistic income, long-term funding, land status not affected

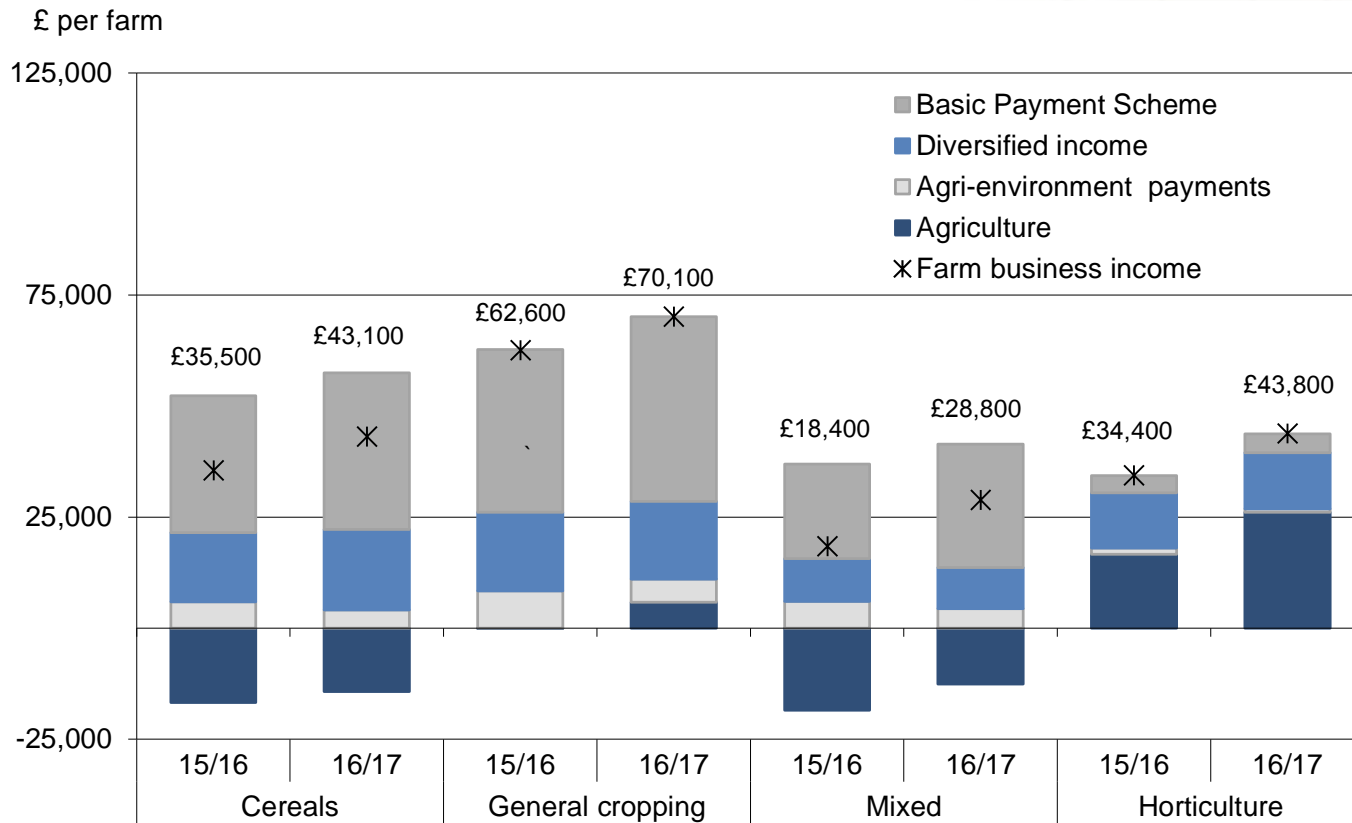


Recent & forthcoming sales

Location	Development	Credits required	Compensation	
			Type	Location
Coventry	Business development	4	0.5ha grassland restoration	Within 2km
York, NorthYorkshire	Large residential	1152	On-site grassland/birds	On-site/adjacent
Medway, Kent	Large residential	~ 850	Bird compensation	Within County
NE Lincolnshire	Industrial zone regeneration	711	Wet grassland - indirect impacts to SPA	On-site/adjacent
Rochford, Essex	c. 600 houses + school	14	3 ha lake restoration + woodland creation	Within 2 km
Cambridge, Cambridgeshire	Large residential	211	32 ha arable margins and grassland restoration	Within 1 km
Rugby, Warwickshire	c.100 houses	19	5 ha grassland restoration	Within 4 km
Rugby, Warwickshire	c. 860 houses + school	13	3 ha grassland restoration	Within 1 km
Thundersley, Essex	c. 7 houses	30	6 ha woodland restoration	Within 2 km
Wheatley, Oxfordshire	c. 50 houses	8	1 ha Grassland creation	Within 7 km
Warwick, Warwickshire	c. 60 houses	5	1 ha grassland restoration	Within 3 km
Southam, Warwickshire	c. 240 houses + sports facilities	11	2 ha grassland restoration	Within 6 km

Environmental Land Management contracts

To improve the environmental performance of farming



Source: Farm Business Survey, England

Agricultural innovation should lead to land sparing and land sharing

- Whether we like it or not, agricultural innovation will continue eg. smaller robotic machinery, satellite guided, precision drilling, precision treatments with reduced chemical inputs, genetic modification, gene editing etc.
- We must maximise these opportunities to spare land for the restoration of biodiversity at scale in the UK
- Whilst also better integrating sustainable food systems and biodiversity 'within-field'



Interventions funded by ELM contracts

- Lowlands : within-field, whole field and landscape-scale benefits relatively close to human habitation
- Uplands : larger landscape-scale; conversion of whole areas to environmental delivery using livestock as the tools

Unsprayed margins, conservation headlands, wildflower margins, beetle banks	Wood meadows, woodlands and meadows
Skylark, lapwing plots	Water level management
Pond creation, wetlands	Arable reversions, scrub
Pollinator strips, wild bird seed mixes, water course buffer strips	High Nature Value farming; sustainable cropping systems
Overwinter stubbles, reduced tillage	Peatland restoration



Corporate natural capital accounting

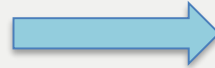
- 40% of global GDP intrinsically relies on natural capital - yet we don't value it and we treat the environment as a charity case
- Natural capital accounting should be required of corporates on basis of benefits derived from non-renewables to increase stock of renewables
- Financial reporting mechanism (metrics being developed – NAO/ONS) – makes corporate a more investable entity
- Development of environmental markets to establish natural capital assets and asset classes – contribute via environmental credit purchasing for eg. ecosystem service delivery

Government to:

- Require natural capital accounting by corporates
- Incentivize corporates – taxation
- Implement accreditation – standards
- Provide guidance



Corporates purchase 'natural capital' credits for assets – woodland, peatland, wetland, grassland and ecosystem services they provide



Market developed. Land brought forward under conservation covenants. Ecological networks-resilience
Long-term management income



- Better corporate reporting
- De-risk business
- Better investment value



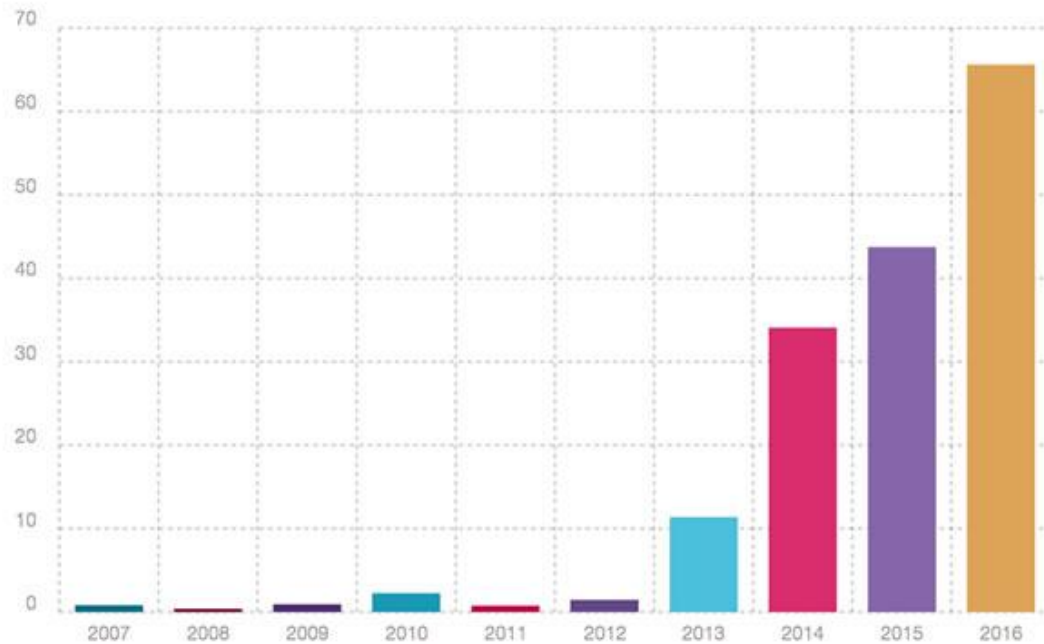
Natural Capital Investment Opportunities

- Woodland planting – 250k ha. Net benefits £500m p.a
- Peatland restoration – 140k ha uplands. Net benefits £570m over 40 years
- Wetland creation/ES – 100k ha. Benefit-cost ratios 3:1 to 9:1
- Restoring commercial fish stocks. Benefit-cost ratios >6:1
- Urban greenspace – health treatment savings £2.1bn p.a
- Environmental performance of farming - ELMs

Investment vehicle – Green Bonds

Market value by year

Total market value in \$Bn per year



Bloomberg Barclays MSCI Global Green Bond Index; 2017 c.£200bn

Investment vehicle : Impact investments and environmental credits

- £117bn of impact investments globally
- Address worlds most challenging problems eg conservation and biodiversity loss
- Who? High net worth and Foundations
- ?In UK - impact to be addressed is deterioration of biodiversity and natural capital as a result of intensive farming
- eg restore biodiversity through land sparing – capitalise schemes with returns paid by Government ELM funds – farmer clusters and Community Interest Society structure

Creating the Nature Recovery Network

Cost of 40ha high quality mosaic grassland habitat bank – creation and 25yr management	£1.585m
Value of fund from Environmental Land Management contracts	£3.6bn
Value of fund from net gain/offsetting (NG)	£1.2bn
Value of fund from corporate natural capital accounting (CNCA)	£3.0bn
Area of land restored through habitat banking (exc. CNCA and NG)	90,850 ha/yr
Time to deliver Nature Recovery Network (exc. CNCA and NG)	5.5 years
Area of land restored through habitat banking (inc. CNCA and NG)	196,845 ha/yr
Time to deliver Nature Recovery Network (inc. CNCA and NG)	2.5 years

Summary

Mechanism	Investment vehicle	Action
Net gain/habitat offsetting	Habitat banks – conservation credits	Mandate net gain; accredit brokers and offset sites. Tax incentives for investors
Environmental land management contracts	Government post-Brexit funds; impact investing – environmental credits	Convert Pillar 1 and 2 funds into contracts. Tax incentives for investors
Corporate natural capital accounting	Biodiversity bonds, green bonds, natural capital bonds, environmental credits	Metric roll out; financial reporting requirement; biodiversity disclosure. Create and market bonds. Create standard and accredit environmental credits. Tax incentives for investors

**We don't inherit the Earth from our
ancestors, we borrow it from our
children**



Thank you

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