Natural England Commissioned Report NECR266

Evaluation of EU LIFE Fund in the UK

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Foreword

Natural England commission a range of reports from external contractors to provide evidence and advice to assist us in delivering our duties. The views in this report are those of the authors and do not necessarily represent those of Natural England.

Background

The LIFE Programme is the EU's funding instrument for the environment, nature conservation and climate action.

LIFE funds are widely used in the UK to support complex or innovative environmental projects. Natural England has estimated that the UK may receive over £200m of LIFE funds from the 2014 – 2020 Funding Period. The Commission recently revealed that the UK is the most successful member state at claiming awarded funds. Both public bodies, such as Natural England, and environmental NGOs have enjoyed a high success rate over the past years, making strong contributions to delivery of government priorities for the natural environment.

This research project develops an evidence base relevant to determining the need for a LIFE type fund in the UK. The research consists of two distinct elements: the first, an evaluation of the historic and current use of LIFE in the UK; the second, a forward look to post EU exit and how a LIFE type fund could effectively deliver better environmental outcomes. Whilst the project has been led by Natural England, the consultants have worked closely with Defra group bodies and with nature conservation bodies in the other UK countries

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Further information

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Final Report

17 May 2019

Submitted to:

Natural England & Department for Environment, Food and Rural Affairs

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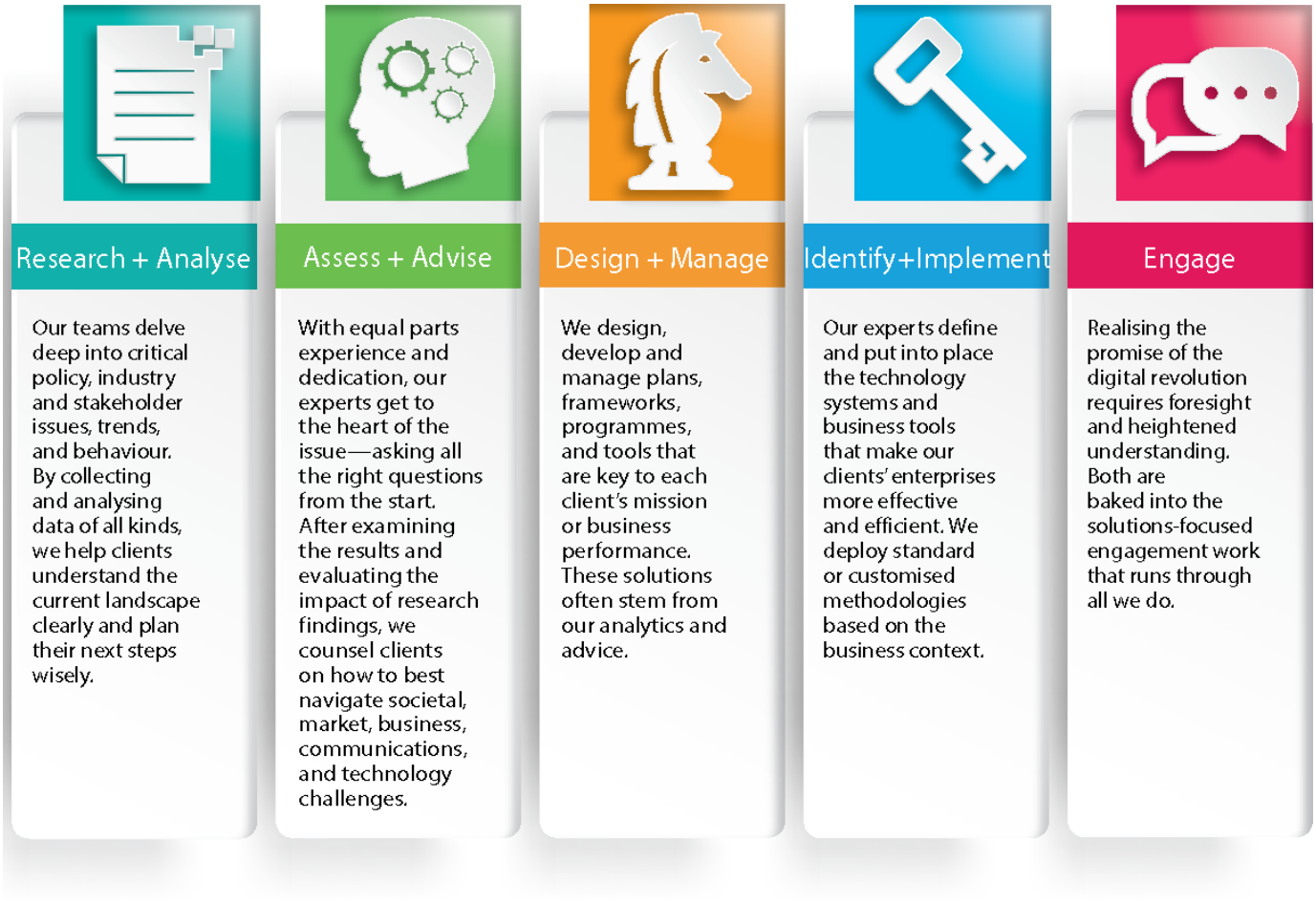

Evaluation of EU LIFE Fund in the UK

Final Report

A report submitted by ICF Consulting Services Limited

Date: 17 May 2019

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Abstract

The LIFE programme provides EU finance to increase protection for the environment and support action to address climate change. Since 2007, LIFE has provided €180m (£154m) to UK organisations to deliver projects. LIFE projects have contributed to the restoration of habitats, the recovery of species, the management of waste and the water environment, and the testing and demonstration of new techniques for managing the environment and climate. They have helped to develop new tools, plans and strategies, and to engage people and communities in environmental management.

Many LIFE projects have helped to implement environmental policy by developing evidence, knowledge, tools and methods. Some projects have been particularly innovative - using new technologies or techniques, improving the use of new technology and improving water governance.

The programme can fund major projects that focus on environmental priorities that would be hard to fund by other means. It has rigorous monitoring and reporting procedures that help to ensure the delivery of value for money. Alternative funding sources tend to fund smaller projects and/ or have a limited focus on environmental challenges. LIFE has encouraged and enabled the UK to work with other Member States to address common challenges, share expertise and raise awareness of issues more widely.

The LIFE programme aligns well with the Government's goals for the UK environment. Stakeholders would like to see continued funding for similar types of projects after the UK leaves the EU. Any future funding arrangements could involve consideration about how to increase the range of organisations benefiting, how to focus funding on the UK's specific environmental priorities, how to simplify application and administration procedures, and how to measure the performance of projects.

Executive Summary

LIFE is the EU's funding instrument for the environment and climate action. It aims to: help Europe move towards a resource-efficient, low carbon and climate resilient economy and reverse biodiversity loss; improve the development, implementation and enforcement of EU environmental and climate policy and legislation; support better environmental and climate governance at all levels; and, in the case of the current LIFE Programme, support the implementation of the 7th Environment Action Programme.

ICF was commissioned by Natural England to conduct an evaluation of LIFE projects in the UK. The findings will be used to inform decisions on post-EU exit funding arrangements for the environment. The evaluation involved the triangulation of evidence from stakeholder consultations, a document review and analysis of project data.

The programme

The LIFE Regulation emphasises the importance of halting and reversing the loss of biodiversity, improving resource efficiency, as well as improving governance through awareness raising and stakeholder involvement. The LIFE programme is currently divided into two sub-programmes – Environment and Climate Action.

What has LIFE funded in the UK?

Since 1992, 320 LIFE projects have involved a UK organisation; the UK was the lead beneficiary for 243 of these projects. A total of 99 UK projects have been funded through the EU LIFE programme since 2007. Nature and Biodiversity projects now make up the largest portion of the portfolio, exceeding the number of Environment and Resource Efficiency projects.

Approximately €180m (£154m) has been disbursed through LIFE funding to projects operating in the UK since 2007. More than three quarters of this funding has gone to Environment and Resource Efficiency and Nature and Biodiversity projects.

Project objectives vary depending on the theme and related aims. Nature and Biodiversity projects aimed to support 'species recovery and conservation'. For Environment and Resource Efficiency and Climate Action projects, 'supporting policy implementation' is the most common objective. This is in line with the key aims of this theme.

More than half of UK LIFE projects were only implemented in the UK; mainly just in England. Nature and Biodiversity projects are more likely to be UK only while Climate Action projects are more likely to be multi-country.

According to the European Commission, the UK has had the highest application success rate across all Member States in the current work programme. The UK's high application success rate stems from pursuit of quality rather than quantity, and an understanding of what works.

What has been the impact of LIFE in the UK?

LIFE has delivered a wide variety of environmental outcomes in the UK. The largest set of outcomes in the current 2014-2020 programme period relate to habitat restoration, with nine current projects funding restoration and conservation activities over a total area of more than 20,000 hectares. LIFE projects are also progressing towards significant outcomes with respect to species recovery, control of invasive alien species, climate change mitigation, waste reduction, and engagement, information and governance.

The results of projects in the 2007-13 programme period include demonstrating and testing new techniques and technologies, engaging local communities in waste management, developing environmental management tools and information, promoting stakeholder engagement and collaboration, developing strategic approaches to nature conservation and supporting the recovery of species.

The full impact of many projects is difficult to assess as available data mostly relates to their outputs rather than their longer-term outcomes or legacy. For example, there is a lack of evidence regarding the wider uptake of technologies and environmental management tools. However, there is a consensus among stakeholders that LIFE projects have contributed substantially to environmental outcomes in the UK, and that most have achieved their targeted results.

The primary objectives of the LIFE programme are environmental, and there is no requirement to contribute to social or economic objectives. The environmental focus of LIFE is seen as a strength by stakeholders, enabling the fund to target environmental priorities and to finance actions that cannot be funded by broader based programmes. However, while social and economic objectives are secondary to environmental ones, LIFE projects have delivered a range of social and economic benefits in the UK. These include job creation, contribution to training and workforce development, engagement with volunteers and local communities, enhanced local living environments, increased tourism activity, cost-saving technologies, reduced costs of dealing with invasive alien species, and enhanced delivery of ecosystem services that benefit people and the economy.

Many LIFE projects have contributed to the implementation of environmental policy through developing evidence, knowledge, tools and methods. Fewer projects have contributed directly to policy development, though there are some examples where LIFE projects have directly influenced changes in policy – such as the inclusion of bog restoration in the Welsh agri-environment programme and revisions to the EU Emissions Trading System.

Many LIFE projects have developed and demonstrated innovative approaches in environmental management such as using new technologies or techniques, improving uptake of new technology and improving water governance.

Does the LIFE programme provide good value for money in the UK?

Value for money is difficult to quantify through standardised metrics, given the diversity of outcomes, though unit costs are estimated for habitat restoration projects. LIFE is regarded by most stakeholders as having delivered good value for money in the UK. It is seen as supporting substantial environmental outcomes at reasonable cost, through projects which may have been ineligible for other funding streams or initiatives. Views are mixed about whether LIFE administrative processes contribute to this. Some stakeholders consider the rigorous monitoring and reporting obligations to have contributed to value for money, but others as generating unnecessarily large administrative burdens.

What role has LIFE played in the UK funding landscape and what added value does it provide?

LIFE is distinct from other funding schemes; its ability to fund comparatively large scale, wide-ranging and multi-annual projects make LIFE unique in the funding landscape. As such, it fills an important gap, with alternative funding sources typically available for smaller projects and/ or projects with a more limited focus on specific environmental challenges.

LIFE is seen to be particularly beneficial in building collaboration, encouraging civic engagement and fostering innovation compared to other funding streams. The EU-wide scope

of the LIFE programme is seen to add value by offering the ability to pool resources and capabilities, share expertise and identify best practices, co-ordinate and promote joined up approaches to common challenges and raise awareness of issues among wider groups.

What lessons can be learned from the LIFE delivery process?

LIFE applications require the submission of detailed information and are therefore often time consuming and resource intensive to prepare. There is a general consensus among beneficiaries that this is an acceptable burden in the context of the anticipated benefits from the size and scale of the grant received.

The process of grant management and reporting is seen to be time consuming and often onerous. Beneficiaries recognise the need for a rigorous approach to grant management, but express varying views about whether the burdens are reasonable.

The JNCC – in its role as national contact point – has been helpful and proactive in championing LIFE in the UK. They are considered particularly knowledgeable and helpful in building networks and partnerships.

Beneficiaries identified the appointment of a dedicated and professional project manager, as well as a dedicated finance officer, as important in satisfying requirements for project monitoring, reporting and auditing.

There would be benefits from further clarification of performance indicators and how these can be adapted for different types of projects.

Applying for LIFE funding is considered cost-effective by most, but not all, beneficiaries; it is recognised as an intensive process but with larger grants than other domestic funding streams.

Implications for the future

There is a broad alignment of priority areas of LIFE to the 25 Year Environment Plan (25 YEP), although some 25 YEP goals are perhaps less prominent within the LIFE programme, such as engaging people with the natural environment and taking action for the environment outside the EU.

There is a strong appetite among stakeholders to ensure post-EU exit arrangements continue to provide support for projects similar to those funded by LIFE that can address issues of relevance to the UK. Refinements that could be made to improve on the current arrangements include: engaging types of organisations currently making little use of LIFE, refining the priority areas to improve alignment with the 25 YEP and devolved priorities, increased clarity on performance metrics and a simplified grant management process.

Acronyms

25YEP	25 Year Environment Plan
AES	Agri-environment schemes
BEIS	Department of Business, Energy and Industrial Strategy
CAP	Common Agricultural Policy
DEFRA	Department for Environment, Food and Rural Affairs
EASME	Executive Agency for Small and Medium-sized Enterprises
EC	European Commission
ERDF	European Regional Development Fund
ha	Hectare
IAS	Invasive alien species
ISCF	Industrial Strategy Challenge Fund
JNCC	Joint Nature Conservation Committee
LIFE	L'Instrument Financier pour l'Environnement
MAWP	Multi-Annual Work Programme
MS	Member State
NCFF	Natural Capital Financing Facility
NLHF	National Lottery Heritage Fund
PF4EE	Private Finance for Energy Efficiency
SAC	Special Areas of Conservation
SPA	Special Protection Areas
UKRI	UK Research and Innovation

1 Background and introduction

1.1 EU LIFE Fund

1.1.1 Origins of the LIFE Programme

In the early 1980s, EU financial assistance was provided through nature conservation initiatives on account of increasing public concern regarding environmental issues such as global warming, pollution and waste management. Assistance enabled the funding of nature conservation, habitat restoration and species preservation. These began as small scale, preparatory projects, which sought to address specific environmental issues.

The scope of EU financial assistance was then broadened in the mid-1980s with the establishment of a financial instrument (ACE - Action Communautaire pour l'Environnement). This instrument provided financial support for nature protection projects (i.e. the protection of habitats of endangered species) and the development of cleaner technologies. Between 1984 and 1991, the EU disbursed €41 million across 108 projects via ACE[1].

In parallel to ACE, the EU also financed maritime and marine life projects in Northern Europe and the Mediterranean. These programmes (NORSPA and MEDSPA) addressed issues of water resources, water pollution and the conservation of habitats and endangered species. The EU disbursed €54m across 236 marine projects[2].

Following these initiatives, the LIFE programme *(*L'Instrument Financier pour l'Environnement) was established in 1992. Initially, LIFE was set up as a €400m fund to promote sustainable development, habitat protection, knowledge sharing and capacity building across countries in and outside the EU. It has continued to the present day but has evolved over successive funding periods (see Figure 1.1). Its focus has shifted to include the implementation of EU policy, climate change adaptation and mitigation, transnational collaboration and communication and awareness raising. During its lifetime, LIFE has financed over 4,600 projects.

Figure 1.1 LIFE Programme (1992-2020)

ECU 400m	ECU 450m	EUR 640m	EUR 2.14bn	EUR 3.4bn
Sustainable development; habitat protection; admin/ env. services; education/ training	*Conservation actions; environmental policy/ legislation; mediterranean/ baltic seas*	*Multi-national projects/ networking*	*Nature/ biodiversity; environment policy/ governance; information/ communication*	*Environment; Climate Action*

[1] History of LIFE https://ec.europa.eu/easme/en/section/life/life-history-life

[2] History of LIFE https://ec.europa.eu/easme/en/section/life/life-history-life

1.1.2 Role of LIFE Programme

The LIFE programme is the EU's funding instrument for the environment and climate action. It is managed by the Executive Agency for SMEs (EASME). By co-financing projects in the Member States, LIFE contributes to the development and implementation of EU environmental and climate policy and legislation. LIFE finances time-limited projects that are innovative, demonstrative, support the delivery of EU environmental policy, and which cannot be financed through other means.

LIFE is not intended to solve all environmental and climate problems, but instead to act as a catalyst for changes in policy development and implementation, by providing and disseminating solutions and best practices to achieve environmental and climate goals, and by promoting innovative environmental and climate change technologies.

The programme has a budget of €3.4 billion in the current funding period (2014-2020). This is expected to rise to €5.45 billion for 2020-2027[3]. UK organisations have benefited from LIFE funding by responding to calls for proposals based on the LIFE multi-annual work programme (MAWP); both as project leads and as partners in projects led by organisations in other Member States.

The Joint Nature Conservation Committee (JNCC) is the UK LIFE National Contact Point. It provides support and advice to LIFE applicants on behalf of Defra (Department for Environment, Food and Rural Affairs) and the devolved administrations.

1.1.3 Objectives of LIFE

The LIFE programme in the current period (2014-20) has four overarching aims, which are to:

1. Help the EU move towards a resource-efficient, low carbon and climate resilient economy and reverse biodiversity loss.
2. Improve the development, implementation and enforcement of EU environmental and climate policy and legislation.
3. Support better environmental and climate governance at all levels.
4. Support the implementation of the 7th Environment Action Plan (which guides EU action on the environment and climate change).

The LIFE Regulation (the legislation underpinning the programme), emphasises the importance of halting and reversing the loss of biodiversity, improving resource efficiency, as well as improving governance through awareness raising and stakeholder involvement. These are reflected in the three themes in the current sub-programme for the environment (Environment and Resource Efficiency, Nature and Biodiversity, and Environmental Governance and Information).

In response to the Commission's Roadmap for moving to a low carbon economy in 2050[4], the climate-sub programme also tests new approaches to climate change mitigation and adaptation, improving governance and raising awareness.

[3] History of LIFE https://ec.europa.eu/easme/en/section/life/life-history-life

[4] EC (2011) Commission Communication of 15 December 2011 entitled "A Roadmap for moving to a competitive low carbon economy in 2050" (the "Roadmap 2050")

1.1.4 Sub-programmes and themes

The LIFE programme is currently divided into two sub-programmes – **Environment** and **Climate Change.** The Environment sub-programme has received 75% of the overall funding, with the remainder going to the Climate Change sub-programme.

The Environment sub-programme has three themes:

- **Nature and Biodiversity:** nature conversation in biodiversity, habitats and species, including the Natura 2000 network.
- **Environment and Resource Efficiency:** air, chemicals, green and circular economy, industrial accidents, marine and coastal management, noise, soil, waste, water, and the urban environment.
- **Environmental Governance and Information:** awareness raising and dissemination activities on environmental matters.

The Climate sub-programme also has three themes:

- **Climate Change Mitigation:** renewable energies, energy efficiency, farming, land use, and peatland management.
- **Climate Change Adaptation:** resilience to water scarcity, droughts, forest fires or floods, adaptive technologies for economic sectors, and safeguarding natural resources.
- **Climate Governance and Information:** awareness raising and dissemination activities on climate matters.

Specific priorities for LIFE funding are specified in Multi-Annual Work Programmes (MAWPs). The 2014-17 MAWP specifies the following types of projects as priorities for LIFE funding:

- **Nature and Biodiversity:** conservation of habitat types and species in Natura 2000 sites, marine site inventories, marine management and restoration, marine user conflicts, targeting invasive alien species and restoring degraded ecosystems, targeting threatened species, innovative financing methods, green infrastructure.
- **Environment and Resource Efficiency:** water, floods and drought, marine and coastal management, drinking water technology and water treatment, green and circular economy, soil management, forest management, reducing chemical impact and improved monitoring, noise reduction schemes, industrial risk mapping, air quality and urban planning.
- **Environmental Governance and Information:** awareness information, communication and awareness raising campaigns on water, waste, resource efficiency, air quality and emissions, environment and health, nature and biodiversity and governance and enforcement, control processes to promote compliance and sharing best practice.
- **Climate Change Mitigation:** reduce greenhouse gas emissions, develop greenhouse gas accounting and climate change mitigation in land use, land management practices, the emissions trading system, carbon capture and storage, renewable energy and energy efficiency.
- **Climate Change Adaptation:** adaptation measures to improve resilience to climate change.

- **Climate Governance and Information:** development of cooperation platforms and the sharing of best practices on climate matters.

1.1.5 Types of projects

The LIFE Regulation (Regulation (EU) No. 293/2013) for the current MAWP identifies nine types of projects that may be financed[5]. These can be categorised as 'traditional' projects of the kind that LIFE has historically supported, and 'non-traditional' project types introduced for LIFE 2014-2020.

Traditional projects

1. **Pilot projects:** apply a technique or method that has not been applied or tested before.
2. **Demonstration projects:** apply, test, evaluate or disseminate actions, methodologies or approaches that are new or unknown in the context of the project.
3. **Best practice projects:** apply appropriate, cost-effective and state of the art techniques, methods or approaches.
4. **Information, awareness and dissemination projects:** support communication, dissemination of information and awareness raising.

Non-traditional projects

5. **Capacity-building projects:** support capacity building activities of Member States including national contact points.
6. **Integrated projects:** large territorial scale projects (i.e. multi-regional, national or trans-national) or that implement policy legislation (i.e. Natura 2000).
7. **Technical assistance projects:** help applicants prepare for integrated projects.
8. **Preparatory projects:** support specific needs identified by the Commission for the development and implementation of EU policy and legislation.
9. **Operating grants:** grants support operational and administrative costs for non-profit making entities to promote and strengthen the implementation of environmental and climate objectives as well as build their capacity to act as effective and efficient partners. Grants cover normal operating expenses such as personnel costs related to the project, subsistence allowances, travel and expenses and infrastructure costs[6].

Most LIFE funding is allocated to traditional projects. These can be co-ordinated by any legal entity registered in the EU, including public institutions, businesses and non-governmental organisations. The UK has been involved in a total of 99 projects since

[5] REGULATION (EU) No 1293/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 on the establishment of a Programme for the Environment and Climate Action (LIFE) and repealing Regulation (EC) No 614/2007 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1293&from=EN

[6] LIFE 2019 Call for proposals for operating grants to support Non-Governmental Organisations (NGOs): Invitation for Proposals https://ec.europa.eu/easme/en/2019-life-call-proposals-ngos

2007 (as either a lead or partner organisation). Of these, only seven are non-traditional (4 preparatory, 1 integrated and 2 operating grants).

1.2 This evaluation

1.2.1 Purpose and scope

The UK's departure from the EU raises the question of what gap would be left if UK organisations were no longer to have access to the LIFE programme.

This evaluation was commissioned to provide an evidence base that can be used by Defra, Natural England and others to inform decisions on post-EU exit funding arrangements for environment projects in the UK.

The evaluation focuses on the following five areas:

- The strategic function and added value of LIFE in the UK.
- The impact of LIFE funding on environmental, social and economic outcomes in the UK.
- The role of LIFE in the wider environmental funding landscape.
- Lessons learned from the implementation and delivery of the programme.
- Post-EU exit arrangements in relation to the priorities expressed in the 25 Year Environment Plan (25YEP) (in England).

The specific evaluation questions addressed in this study are outlined in the box below.

Box 1.1 Evaluation questions

LIFE Funding in the UK

- What has been the value of LIFE funding in the UK since its inception? And since 2007? How does this funding break down between different themes?
- How does the scale and type of funding break down between?
  - UK countries (England, Northern Ireland, Scotland, Wales, cross border)?
  - UK only and multinational projects (led by UK, led by other countries)?
- How does the level and breakdown of LIFE funding compare between the UK and the rest of the EU?
- Why does the UK have one of the highest application success rates?
- Does the UK extract the maximum monetary value from LIFE?
- Why have some themes (e.g. nature and biodiversity) received more funding than others?

Impact of LIFE Funding

- What environmental outcomes has LIFE funding aimed to deliver in the UK (and EU)? Have the target outcomes changed over time?
- What environmental outcomes have been delivered to date, and how do they compare with those anticipated at the application stage?
- How, if at all, has LIFE contributed to social and economic objectives in the UK and the four countries (and the EU)?
- To what extent has LIFE contributed to the development and implementation of environmental policy in the UK and/ or the devolved administrations (and the EU)?

- To what extent has LIFE helped to develop/demonstrate innovative approaches that have influenced wider practice in the UK?
- How effective have LIFE integrated projects, preparatory projects and financial instruments (PF4EE, NCFF) been in the UK (and EU) so far?
- What unexpected or unintended outcomes has LIFE funding delivered in the UK? Either positive or negative?
- Which LIFE projects in the UK have been particularly effective/ had high impact? Why?
- Has LIFE delivered value for money in the UK (and EU)?

Role of LIFE in the Funding Landscape

- What does LIFE fund that cannot be funded through other means (in terms of different types of environmental priorities, projects, activities and beneficiaries)?
- How large and significant are the funding gaps that LIFE has helped to fill?

EU Added Value

- As well as receiving project funding, has the UK received any added benefit from being part of an EU wide LIFE programme, for example through:
  - Added value of transboundary projects compared to UK only projects;
  - Transboundary networking/ collaboration/ access to expertise in other EU Member States;
  - Learning from innovative/ demonstration projects in other EU MS;
  - Improved understanding of transboundary environmental issues?

Lessons learned from LIFE delivery process

- What have we learned from the process of administering the LIFE programme, in relation to:
  - Applications, assessment and project selection procedures;
  - The grant management process;
  - The role of the national contact point;
  - Financing arrangements, including match funding and auditing;
  - Partnership working;
  - Monitoring and evaluation arrangements?
- Has the process of administering applications and managing grants been cost effective for beneficiaries and the authorities? What factors affect cost effectiveness? Does the size of grant affect this?
- Have some organisations engaged more with LIFE than others? What factors have encouraged or discouraged engagement and applications?
- What, if anything, has the UK learned from LIFE integrated projects and preparatory projects and/ or financial instruments (PF4EE, NCFF)?

Implications for the future

- How well does LIFE correspond to government priorities as set out in the 25YEP and other relevant documents?
- Which aspects of the design and operation of LIFE does the research suggest might be changed to enhance environmental outcomes in the UK?

1.2.2 Tasks

The tasks completed were:

- **Desk based research**
  - **Project database analysis:** a descriptive analysis of the funding portfolio in the UK.

  - **Document review:** a review of documents, reports and evaluations of the implementation of LIFE funding in England, the UK and Europe.
- **Consultations:** interviews with LIFE programme stakeholders, beneficiaries and 25YEP stakeholders.
- **Synthesis and Reporting:** triangulation of evidence gathered in earlier tasks in a final report.

More detail on the activities involved in these tasks is described in Annex 3.

1.2.2.1 Interpretation of findings and context of the analysis

The evaluation is based on data collection activity undertaken between December 2018 and February 2019. Qualitative evidence is drawn from a purposive sample of stakeholders across a variety of audience groups. The sample was not intended to be representative of the views across all stakeholder groups but to identify common themes and viewpoints.

The European Commission's LIFE database is currently undergoing some changes, including the addition of data on project performance metrics. Such data are currently only available within the project descriptions and the provision of information is at the discretion of the project. There were therefore limits on the scope, within the evaluation, to assess project performance and the extent to which projects have met expectations. The analysis focuses on projects for which data are available in relation to results achieved (prior to 2014) or expected results (after 2014), using project descriptions in the LIFE database. Consultations with beneficiaries have helped to expand on the analysis.

The programme themes and the types of projects funded have changed over time in the transitions between the different LIFE funding periods. Projects funded before 2013 may not, therefore, align exactly with the themes or project types used in the typology. There has been one integrated project and four preparatory projects since 2014, when these project types were introduced. The remaining projects are categorised as traditional projects.

The evaluation questions where the evidence is more limited than previously anticipated are outlined in Box 1.2.

Box 1.2 Assessment of evaluation questions

How effective have LIFE integrated projects, preparatory projects and financial instruments (PF4EE, NCFF) been in the UK (and EU) so far?

The UK has predominantly been involved in traditional projects. This is most likely due to the more recent introduction to LIFE of integrated, technical assistance and preparatory projects. Therefore, it was not possible to ascertain the effectiveness of alternative project models in the UK through either the project database or relevant documents.

What unexpected or unintended outcomes has LIFE funding delivered in the UK? Either positive or negative?

The requirements of the LIFE fund mean that projects will only report on achieved results versus planned results. There is, therefore, limited evidence of additional outcomes achieved in the project descriptions and case study reports.

The limitations of the project database are explored in more detail throughout this report as part of the analysis.

1.3 Structure of this report

In the remainder of this report:

- **Section 2: LIFE funding in the UK** provides a descriptive profile of LIFE funded projects in the UK and how this compares with the rest of the EU.
- **Section 3: Impact of LIFE funding** examines the environmental, social and economic impacts of LIFE funded projects as well as their influence on policy and perceived value for money.
- **Section 4: Role of LIFE in the funding landscape** assesses the role of LIFE in comparison to other funding streams in the UK and the UK's current needs and priorities (as set out in the 25 Year Environment Plan for England, and other documents).
- **Section 5: EU added value** considers the benefits of the UK's participation in a wider EU wide LIFE programme, including through transboundary projects, innovative and demonstration projects, and transnational networking and collaboration.
- **Section 6: Lessons learned from the LIFE delivery process** identifies learning from administration of the programme, and areas for potential improvement.
- **Section 7: Conclusions and implications for the future** explores the extent to which the LIFE programme aligns to UK priorities and the requirements for continued access to LIFE-like support in the UK in the future.

2 LIFE funding in the UK

2.1 Profile of UK LIFE Projects

This section outlines the profile of EU LIFE projects in the UK between 2007 and 2017. The analysis describes the scope and value of LIFE funding across different thematic areas, and how this compares with the rest of the EU. Data are derived from the LIFE project database and descriptions of projects involving a UK entity (either as a lead or partner organisation)[7] as well as findings from interviews and documentary evidence (a full list of projects and their objectives can be found in Annex 1).

Note on the analysis:

The thematic areas considered are 'Environment and Resource Efficiency', 'Nature and Biodiversity', 'Environmental Governance and Information', and 'Climate Mitigation', 'Climate Adaptation' and 'Climate Governance and Information'[8]. The first three themes belong to the 'Environment' sub-programme and each has been analysed separately. Given the small number of projects under the 'Climate' sub-programme, its component themes have been analysed in aggregate under the heading 'Climate Action'[9]. Projects may fall under more than one theme. For this analysis, a primary theme has been assigned to each project based on the 'headline theme' mentioned in the project's description (many projects present additional secondary themes).

Project objectives have been defined for each project based on the objectives initially identified from project descriptions. Projects were then categorised according to common types of objectives.

The figure overleaf provides a visual profile of the key characteristics of LIFE funding in the UK, which are explored in greater detail in the remainder of this section.

[7] This only includes projects which involved a UK organisation (as either a lead or partner) and operated within the UK

[8] This is based on the themes outlined in the current LIFE programme (2014-2020)

[9] For reference, see: Regulation (EU) No 1293/2013 of the European Parliament and of the Council of 11 December 2013 on the establishment of a Programme for the Environment and Climate Action (LIFE) and repealing Regulation (EC) No 614/2007 Text with EEA relevance. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2013.347.01.0185.01.ENG

Figure 2.1 LIFE funding in the UK (2007-17): a profile

Source: UK LIFE projects database analysis, data from the JNCC (bottom right chart). Notes: Data includes all traditional and non-traditional projects (2007-17). Data on EU contribution only includes the current funding period (2014-17) for traditional projects only. Definitions of beneficiary type aligns to the categorisation This chart follows the categorisation used in the EU LIFE database.

2.1.2 What has been the scope of LIFE funding in the UK?

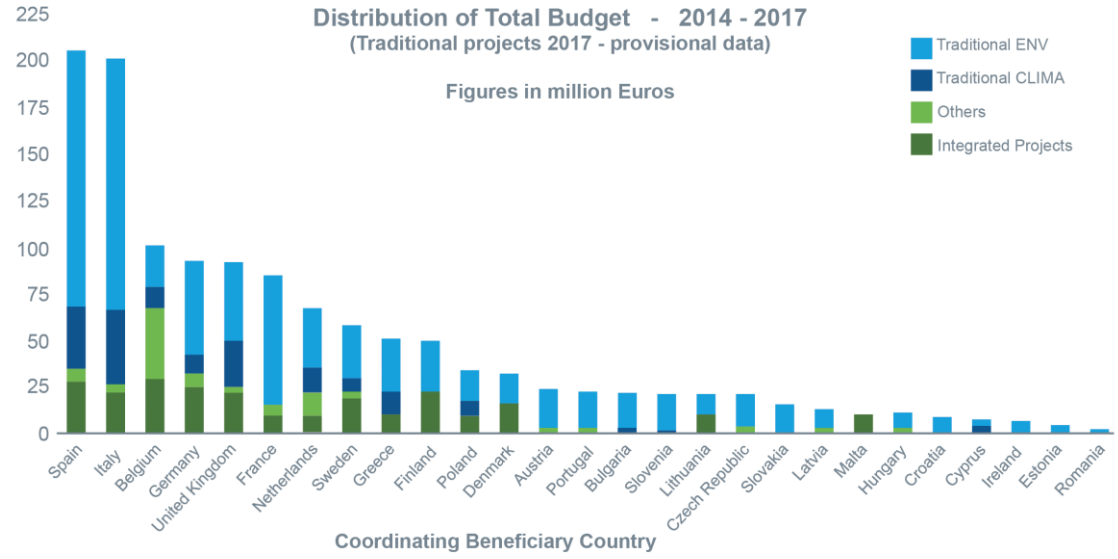
2.1.2.1 Scale of LIFE funding across thematic areas

The UK has benefited from 99 LIFE projects between 2007 and 2017. These have almost all been traditional projects, with the largest number in the thematic areas 'Environment and Resource Efficiency' and 'Nature and Biodiversity'. There has been a pronounced shift towards the latter during the current programme. The UK is reported to have drawn down 94% of its national allocation under the environment sub-programme in the 2014-17 period.

Since 1992, 320 LIFE projects have involved a UK organisation; the UK entity was the lead beneficiary for 243 of these projects. A total of 99 UK projects have been funded through the EU LIFE programme since 2007.

The majority of projects (86) fall under the Environment sub-programme; just 13 under the Climate Action sub-programme. This is consistent with the pattern seen across other Member States, which reflects the greater proportion of the LIFE budget (75%) that is allocated to the Environment sub-programme. Nearly all Member States have received more funding for traditional Environment projects than any other project type in the current work programme (see Figure 2.2). Belgium is the exception; projects led by a Belgium entity are more likely to be NGO operating grants than any other type of project, reflecting the concentration of EU environment NGOs in Brussels.

Figure 2.2 Distribution of LIFE funding by Member State (2014-2017)

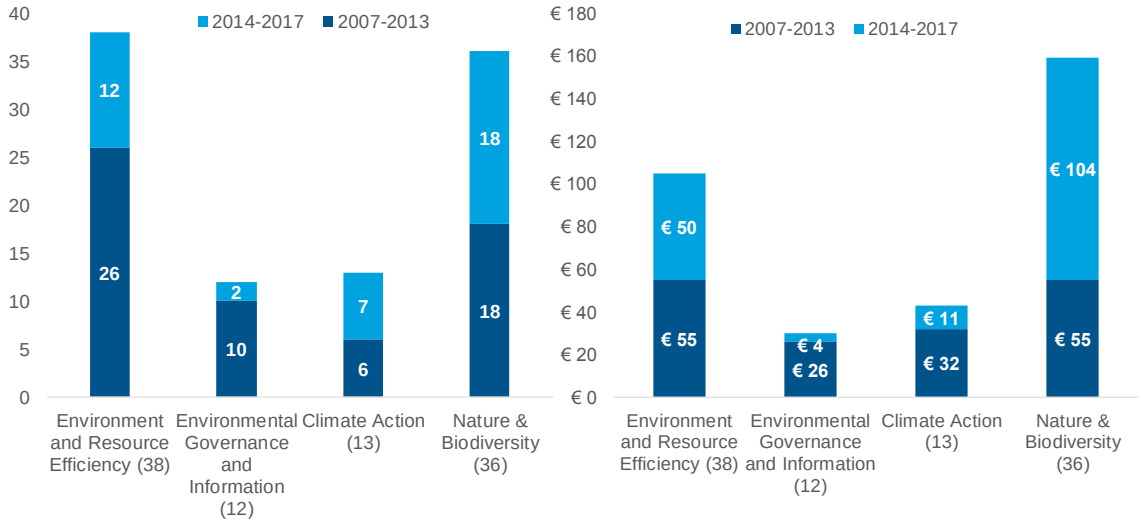


Source: JNCC

Within the Environment sub-programme, many (38) projects involving a UK organisation fall under the Environment and Resource Efficiency theme. The Environmental Governance and Information theme has the fewest projects (12). Nearly half (42) of the UK projects also address a second theme, 12 projects address three themes, and four projects address four themes. For instance, LIFE projects belonging to the Climate Action sub-programme tend to also relate to Environment and Resource Efficiency.

Figure 2.3 shows the number and total value of projects funded by LIFE between 2007 and 2017 in the UK (UK-only and multi-national projects) by primary theme.

Figure 2.3 Number and value (€m) of LIFE projects per theme, 2007-2017



Source: LIFE projects database. Note: the figures in brackets on the horizontal axis indicate the total number of projects for each theme.

During the current funding period the UK has, to-date, been involved in 39 LIFE projects; about two thirds of these (25) projects involved a UK entity as the lead organisation. Nature and Biodiversity projects now make up the largest portion of the portfolio. Interviewees highlighted the increasingly important role of LIFE as a funding source for biodiversity conservation (particularly in financing major habitat restoration projects), the continuing strong demand for funding from the UK biodiversity sector, and the lack of alternative funding sources for biodiversity projects in the UK.

Projects funded under the Environment and Resource Efficiency theme have in the 2014-17 period already matched the value of projects in the previous 2007-13 programme. The 'Climate' sub-programme has remained a small proportion of the portfolio, whilst Environmental Governance and Information projects are the most limited in number and value.

During 2014-2017, the UK is reported to have drawn down 94% of the national allocation[10]. The largest level of funding has been for 'Nature and Biodiversity' projects (€61.5m) and 'Environment and Resource efficiency' projects (€17.2m)[11]. One explanation for the UK's relative success is the relatively small number of bids that have been submitted.

"The UK has been very good at writing successful proposals…but if you look at what they've been focused on in the last few years, they've been very much Nature and Biodiversity, the environmental side of things so they're not very broad and not necessarily delivering as much as the LIFE programme can do…and we haven't drawn down our national allocation over the past four years as well." – Stakeholder interview, Defra family

[10] This was reported by the EC at the 2018 NCP training. Data was provided to ICF by the JNCC.

[11] The calculation of total EU contribution is based on UK led projects derived from the LIFE project database.

2.1.2.2 Beneficiaries receiving funding

More UK projects have been led by NGOs than by any other type of organisation. Other common types of lead entity are nature conservation agencies and research institutions. NGO-led projects have also received the largest contribution of LIFE funding.

NGOs have been the most frequent beneficiaries of LIFE funding in the UK (Figure 2.4). 'Regional authorities'[12] have also been successful in securing LIFE support. Training centres, intergovernmental bodies and development agencies have received the least LIFE funding (just one project each). Stakeholders report that LIFE applicants tend to be the 'usual suspects' such as RSPB, Natural England and Natural Resources Wales. Projects led by UK NGOs received around €52m between 2007 and 2017. Those led by regional authorities secured approximately €43m.

Figure 2.4 Number of and EU contribution (€m) to LIFE projects 2007-2017, per type of beneficiary[13]

Source: LIFE projects database

2.1.2.3 Project objectives

LIFE projects normally specify a variety of objectives. The most frequently cited objectives reflect the aims of the specific theme. Under the 'Nature and Biodiversity theme, species recovery and conservation is the most frequently mentioned objective. For 'Environment and Resource Efficiency' and Climate Action projects, 'supporting policy implementation' is the most frequently specified objective. Nearly half of all projects involve awareness raising. This is consistent with mandatory LIFE objectives to raise public awareness and disseminate results.

Over the period 2007-2017 LIFE project applicants were required to specify project objectives. The LIFE project database does not provide a systematic list of objectives defined for each project. A set of 30 project objectives have been identified from project descriptions and analysed in terms of themes and beneficiaries.

The application guidelines indicate that projects must provide a description of how they intend to raise public awareness and disseminate results. In that context it is not surprising that the most common objective is 'raising awareness' (cited for 45 out of

[12] The UK's country environmental protection and nature conservation agencies are categorised as regional agencies in the database

[13] This chart follows the categorisation used in the EU LIFE database.

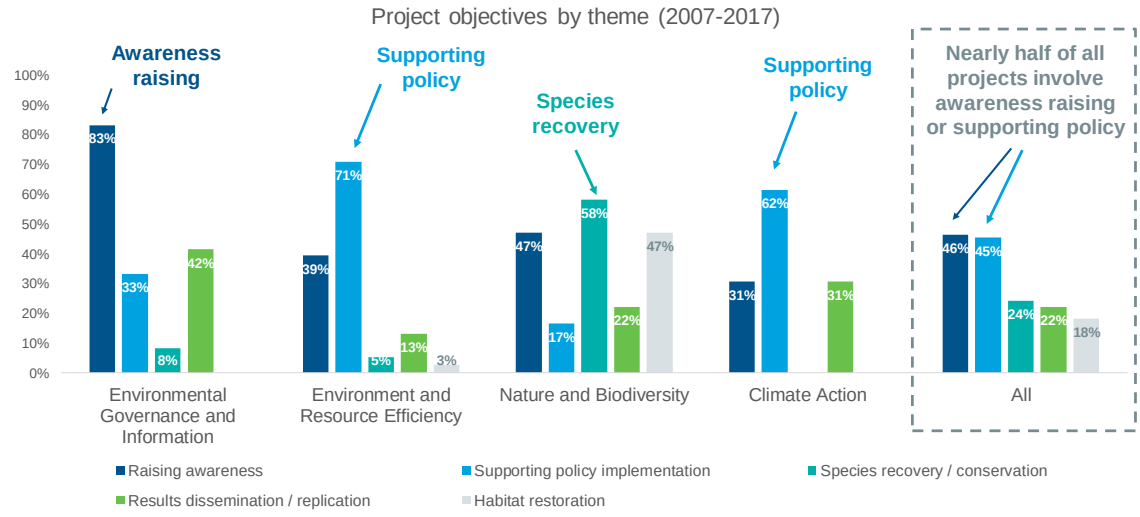
99 projects), followed by 'supporting policy implementation', 'species recovery/conservation', and 'results dissemination/replication'. The least common objectives are 'business model application', 'developing financial plans', 'developing climate change adaptation / mitigation solutions' and 'monitoring and evaluating'. This reflects the limited number of pilot, concept testing or business management projects (noted in interview by some stakeholders[14]), as well as the low uptake of projects under the Climate Action sub-programme.

Project objectives vary depending on the theme and related aims. The majority of Nature and Biodiversity projects aimed to support "species recovery and conservation"; 58% (21) projects reference this as an objective. For Environment and Resource Efficiency, 'supporting policy implementation' is the most common objective (referenced by 71% of these projects). This focus on policy implementation is in line with the key aims of this theme as stated in the application guidance "*contributing to the implementation, updating and development of the European Union environmental policy and legislation*"[15]. The most commonly cited policies are the 7th Environment Action Programme and the EU Nature Directives (including the Natura 2000 network), the REACH Regulation and the Marine Strategy Framework Directive.

Climate action projects follow a similar pattern, tending to focus on supporting policy implementation (62% of projects). Specific policies referenced are the Paris Agreement and the EU Regulation on fluorinated greenhouse gases. Again, this is in line with one of its main objectives to *"improve the development, implementation and enforcement of EU climate change policy and legislation"*[16].

The figure below shows the top five project objectives mentioned in project descriptions and their frequency in UK LIFE projects between 2007 and 2017.

Figure 2.5 LIFE Projects objectives, 2007-2017 per project theme



Source: LIFE projects database

[14] This is explored in more detail in section 6

[15] Guidelines for applicants 2018 – LIFE Environment and Resource Efficiency https://ec.europa.eu/easme/sites/easme-site/files/life_2018_environment_and_resourse_efficiency_application_guide.pdf

[16] https://ec.europa.eu/clima/policies/budget/life_en

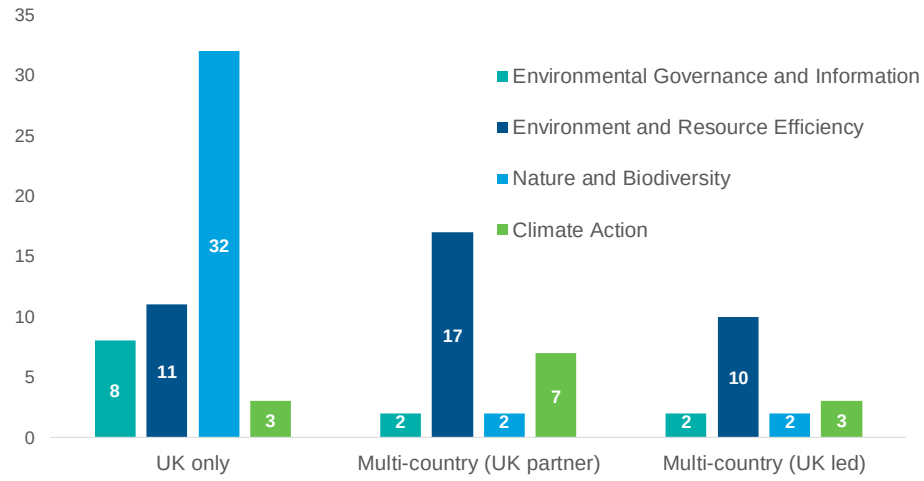
2.1.2.4 UK-only versus multi-country projects

About half of LIFE projects in the 2007-2017 period were implemented in the UK only, while the others were undertaken in partnership with organisations in other Member States. The largest number of projects focused only on England. There were fewer UK-wide, Scotland-only and Wales-only projects.

Most projects involving the UK have been implemented in the UK only (54 out of 99 projects in 2007-2017). Of the remaining 45 multi-country projects in which the UK has been involved, 17 have been led by a UK partner, while 28 have been led by a partner in another Member State.

Figure 2.6 shows projects implemented in the UK only versus multi-country projects across the different themes[17]. Most 'Nature and Biodiversity' projects were active in the UK only (32 UK projects vs. 4 multi-country projects), while for projects under the 'Environment and Resource Efficiency' theme there is a more even distribution between UK-only and multi-country projects. A small number of projects under the 'Climate Action' theme have been implemented in the UK only, but most have been multi-country (2 UK projects vs. 10 multi-country projects). While many 'Nature and Biodiversity' projects focus on habitat restoration or species recovery within the UK, a larger proportion of projects focus on common policy implementation challenges.

Figure 2.6 Multi-country versus UK only projects 2007-2017, per theme

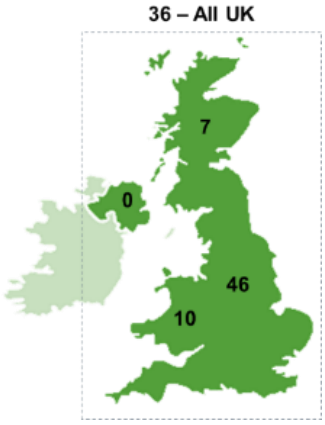


Source: LIFE projects database

Many (46 out of 99) LIFE projects involving the UK (as either the only country involved, or as the location of the lead or partner organisation) have been implemented in England only. Where projects involved more than one UK country, these tended to span the whole of the UK (36 projects). Partners in Northern Ireland have only been involved in projects led by partners in other UK countries, with no projects having been led or carried out in Northern Ireland only. One interviewee argued that this reflects the limited capacity and financial resources in that country. Figure 2.7 shows the number of LIFE projects implemented within each devolved nation and across countries.

[17] UK only indicates projects that are only operating in the UK. Multi-country projects involve either multinational projects led by the UK or multinational projects led by a different member state (with the UK as a partner).

Figure 2.7 Number of LIFE projects 2007-2017, per UK country lead



Source: LIFE projects database

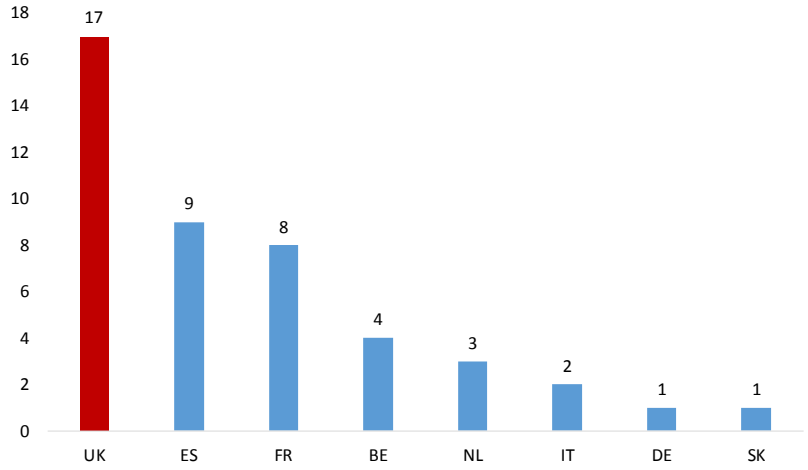
The proportion of projects operating in Scotland has declined slightly since the previous funding period while the number of projects in Wales has increased. Between 2014 and 2017, only two projects were operating in Scotland compared to eight in the previous period. There are now four projects operating in Wales compared to three in the 2007/13 period.

2.1.2.5 UK led versus partner-led

17 multi-country projects have been led by a UK organisation. The UK has partnered in 28 projects led by organisations in other Member States, with Spain and France most frequently in the lead.

A UK entity has been the lead organisation for 17 multi-country LIFE projects. Among multi-country projects where a UK organisation is a partner, the largest number of these have been led by a partner in Spain (9), followed by France (8), while Germany and Slovakia have each led one. Figure 2.8 shows the number of multi-country projects for which a UK partner has been the lead, compared to those led in other Member States (with a UK partner).

Figure 2.8 LIFE project lead (Member States) 2007-2017, for UK led and UK-partner multi-country projects



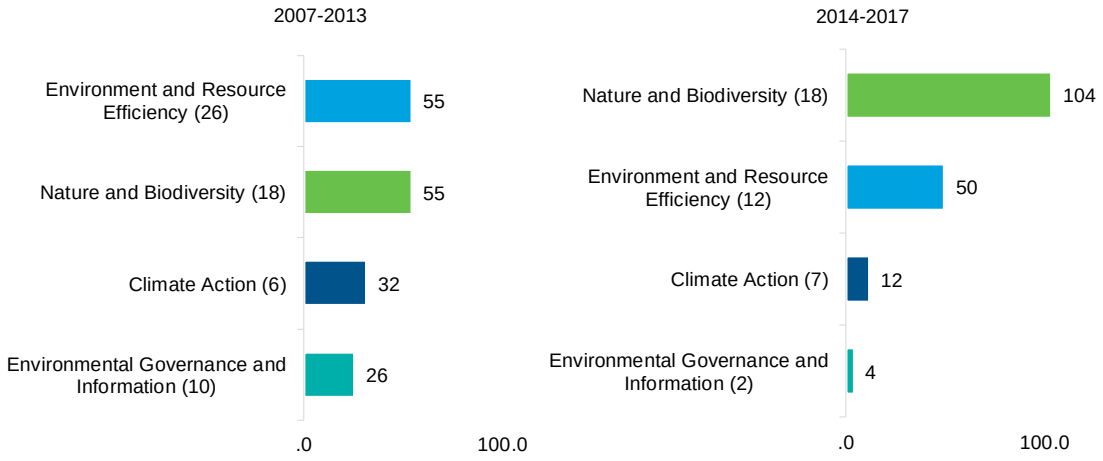
Source: LIFE projects database

2.1.3 What has been the total value of funding for UK LIFE projects?

The total value of UK projects, inclusive of EU LIFE contributions, since 2007 is more than €300m. The largest share is for Nature and Biodiversity projects, which have grown in value during the current programme period. The value of Climate Action and Environmental Governance and Information projects has declined in the current programme. The average project size is increasing, particularly as a result of an increase in large habitat restoration projects.

Since 2007, the total value of projects operating in the UK is more than €300m (inclusive of LIFE funding). The 'Nature and Biodiversity' theme has the highest total value in the current funding period (€104m). Funding for this theme has almost doubled since the previous programme period, reflecting the increasing demand and appetite for Nature and Biodiversity projects comparative to other themes. Conversely, the funding for Climate Action and Environmental Governance and Information projects is lower (to-date) during the current period (Figure 2.9).

Figure 2.9 Total value of projects inclusive of LIFE funding, per theme and funding period (€m)



Source: LIFE projects database

The median value of projects operating in the UK has increased in value from €2.1m per project to €5.2m per project (Table 2.1). This reflects a general focus on larger LIFE bids, as well as the success of some large-scale habitat restoration projects in the current funding period.

Table 2.1 Total value of projects operating in the UK only, inclusive of LIFE funding (€1m)

Funding value	Funding period 2007-2013	Funding period 2014-2017	Both funding periods 2007-2017
€1-€1m	2	1	3
€1-€2m	14	2	16
€2-€3m	8	2	10
€3-€4m	4	2	6
€4-€5m	3	1	4
€5-€6m	3	3	6
€6-€7m	2	1	3
€7m+	0	6	6

Funding value	Funding period 2007-2013	Funding period 2014-2017	Both funding periods 2007-2017
Total number of projects	**36**	**18**	**54**
Total value[18]	**€97.4m**	**€126.6**	**€224**
Median[19]	**€2.1m**	**€5.2**	**€2.8**

Source: LIFE projects database

2.1.4 What has been the EU contribution to UK LIFE projects?

EU funding accounts for 40-60% of the value of most projects, reflecting a ceiling of 60% for EU funding for most of the programme over the period of analysis (although post-2018 this ceiling has changed).

The EU LIFE maximum contribution to project value varies by theme and across LIFE funding periods, and within that, multiannual work programmes. During the first multiannual programme of the current LIFE funding period (2014-17 of the 2014-20 period), all types of projects could receive up to 60% EU co-financing. Some variation has been introduced for the second multiannual programme (2018-20) - Nature and Biodiversity theme projects receive 60% increasing to 75% if the majority of costs are focused on conservation of priority species or habitats, whilst for traditional projects under the other environment themes, the climate change sub-programme, and technical assistance projects, EU co-funding is reduced to a ceiling of 55%[20].

More than €180m has been disbursed through LIFE funding to projects involving the UK. In the current programme, the Environment sub-programme has received a contribution of more than €90m. This is 60% of the total match funding. The Climate Action sub-programme has received €7.1m and 59% of the total match funding.

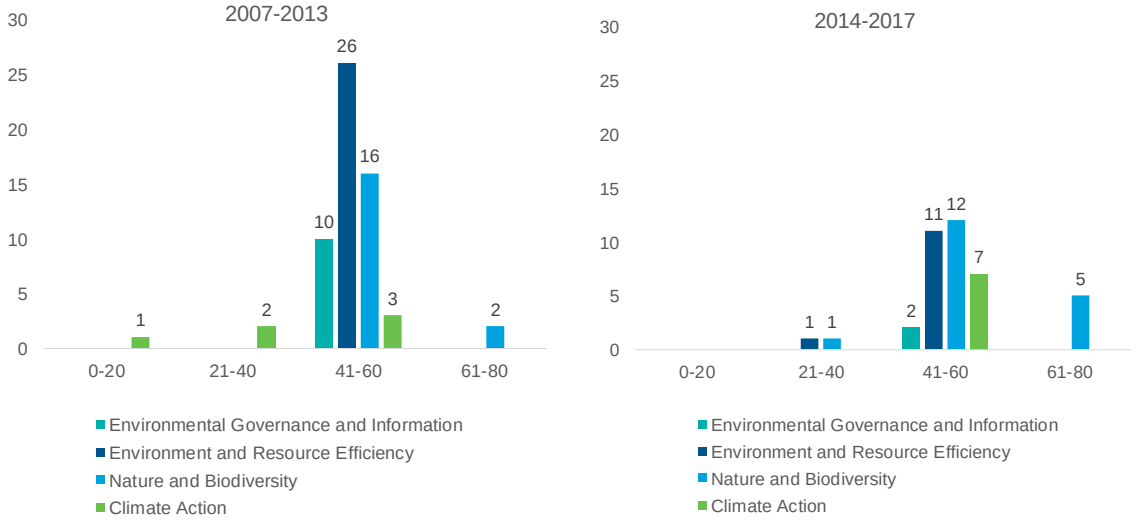
The vast majority of projects (87) have received a contribution between 41% and 60% which is in line with LIFE guidelines. Some Nature and Biodiversity projects have received EU funding of more than 60%, in line with EU rules. Figure 2.10 outlines the funding breakdown among different themes across the two funding periods.

[18] Total value refers to the full project value inclusive of EU contribution to LIFE projects and co-financing through other funding sources.

[19] The median is calculated on total value, i.e. on EU contribution to LIFE projects together with co-financing by projects beneficiaries.

[20] Latest rates available at: https://ec.europa.eu/easme/en/section/life/life-environment-sub-programme and https://ec.europa.eu/easme/en/section/life/life-climate-action-sub-programme

Figure 2.10 EU % contribution to LIFE projects, per theme[21]



Source: LIFE projects database

2.2 Comparison with the rest of the EU

This section compares LIFE funding in the current funding period across EU Member States in relation to land area, population and GDP.

2.2.1 UK LIFE funding in context

The UK is the third largest recipient of EU LIFE funding, after Spain and Italy. The UK receives more funding than both France and Germany, both in overall terms and relative to its population, land area and economy.

The five Member States receiving the most LIFE funding for traditional LIFE projects within the current funding period are France, Germany, Italy, Spain and the United Kingdom. Spain has received the highest EU contribution (€165m), closely followed by Italy (€162m). The UK has received the third highest contribution (€70m). France and Germany are positioned fourth and fifth respectively (€68m and €60m)[22].

If EU LIFE funding is calibrated to national land area, population and national income, the UK is positioned in the middle. The UK has received €288 of LIFE funding per km^2, while at the lower end, France has received just €124 per km^2. The UK's rate of funding per km^2 is surpassed by Italy and Spain, which have received €551 and €330 per km^2 respectively. A similar pattern can be seen in terms of population and economic wealth. The EU LIFE contribution per person is €1.07 and 0.004% GDP in the UK, positioning the UK third out of the top five countries receiving funding.

[21] Note that the maximum value of each band is included in the lower band. For instance, projects that received 60% of EU contribution for their total budget are included in the 40-60% band.

[22] This is based on data received from the JNCC regarding the current funding period and concerning traditional environmental projects only.

Table 2.2 EU contribution to LIFE projects compared to land area, population, and scale of economy[23]

Member State	By land mass		By population		By national income	
	Per km²	Ranked	Per person	Ranked	% contribution by GDP	Ranked
Italy	€551[24]	1	€2.67[25]	2	0.009%[26]	2
Spain	€330[27]	2	€3.55[28]	1	0.013%[29]	1
UK	**€288**	**3**	**€1.07**	**3**	**0.004%**	**3**
Germany	€172[30]	4	€0.73[31]	4	0.002%[32]	5
France	€124[33]	5	€1.02[34]	5	0.003%[35]	4

Source: JNCC data and web sources (see footnotes)

2.2.2 UK success rate versus that of other Member States

Data are lacking on the overall success rate of the UK between 2007 and 2013 but the UK is perceived to have a relatively high success rate for LIFE applications as compared to other countries.

In the current programme, EASME reported that the *"UK is by far the most successful country for the last four years from 2014-2017"* with an overall success rate of 36.2%[36]. The second highest is Denmark with 31.3% success rate followed by Germany with 28.9%. The UK Government has an in-house LIFE unit in Defra. In 2016 Defra contracted the JNCC to run the UK LIFE National Contact Point service (which was previously operated by a private firm) and conduct training, events and

[23] 2016 data has been used per country population and GDP.

[24] Italy - Land area (sq. km) (2019). Trading Economics. Available at: https://tradingeconomics.com/italy/land-area-sq-km-wb-data.html. Accessed on: 22 February 2019.

[25] Italy (2019). The World Bank. Available at: https://data.worldbank.org/country/italy. Accessed on: 22 February 2019.

[26] Italy (2019). The World Bank. Available at: https://data.worldbank.org/country/italy. Accessed on: 22 February 2019.

[27] Spain - Land area (sq. km) (2019). Trading Economics. Available at: https://tradingeconomics.com/spain/land-area-sq-km-wb-data.html. Accessed on: 22 February 2019.

[28] Spain (2019). The World Bank. Available at: https://data.worldbank.org/country/spain. Accessed on: 22 February 2019.

[29] Spain (2019). The World Bank. Available at: https://data.worldbank.org/country/spain. Accessed on: 22 February 2019.

[30] Germany - Land area (sq. km) (2019). Trading Economics. Available at: https://tradingeconomics.com/germany/land-area-sq-km-wb-data.html. Accessed on: 22 February 2019.

[31] Germany (2019). The World Bank. Available at: https://data.worldbank.org/country/germany?view=chart. Accessed on: 22 February 2019.

[32] Germany (2019). The World Bank. Available at: https://data.worldbank.org/country/germany?view=chart. Accessed on: 22 February 2019.

[33] France - Land area (sq. km) (2019). Trading Economics. Available at: https://tradingeconomics.com/france/land-area-sq-km-wb-data.html. Accessed on: 22 February 2019.

[34] France (2019). The World Bank. Available at: https://data.worldbank.org/country/france?view=chart. Accessed on: 22 February 2019.

[35] France (2019). The World Bank. Available at: https://data.worldbank.org/country/france?view=chart. Accessed on: 22 February 2019.

[36] EU NCP Training, March 2018 (provided by JNCC)

capacity building activities. This is thought to have resulted in larger project applications to the LIFE programme.

Some stakeholders expressed the view that the number of bids submitted by the UK is relatively small when compared to other Member States. Specifically, about half of the stakeholders (predominantly among the Defra family and devolved administrations) agreed that the UK had been successful in receiving LIFE funding. Stakeholders suggested that the UK may be more discriminating in its bidding behaviour; submitting bids that are smaller in number but higher in quality than those of other Member States.

"We have been quite successful in obtaining LIFE funding, particularly in the last four years where the UK has either been the most successful or the second most successful country…we tend to put in a smaller amount of applications…so we put in high quality bids whereas other countries like Spain and Italy put in huge amounts of projects…and then they have a success rate of I don't know, 10%" – Stakeholder interview, Defra family

Moreover, bids tend to be successful where there are already high levels of experience and knowledge regarding the programme within the bidding organisation. LIFE requirements are often very technical, and the capacity required is high. Some larger organisations have developed groups of experts in their fundraising teams who have experience on how to write successful LIFE proposals. As a result, organisations with dedicated fundraising officers have an advantage over smaller organisations, which may have only one person involved in bid writing. The delivery process including the application and bidding stage is explored in more detail in section 6.

3 Impact of LIFE funding

This section examines the impact of the LIFE programme in the UK. It examines the environmental objectives of the programme and the environmental outcomes that have been delivered or are in the process of being delivered, in the UK. The section also explores the economic and social impacts of LIFE projects, their contribution to policy development and implementation, and their role in demonstrating innovative approaches. In addition, the role of different types of LIFE projects is examined, and evidence of unintended impacts is reviewed. The final part of this section examines whether LIFE has delivered value for money in the UK.

3.1 Environmental outcomes

3.1.1.1 LIFE performance indicators

Progress towards the programme objectives is measured through performance indicators. Most of these relate to the activities supported and their outputs, though outcome indicators are specified in relation to biodiversity. While some headline targets for outcomes have been specified at EU level, these capture only a proportion of the programme's overall impact. One of the strengths of the LIFE programme is the breadth and diversity of environmental actions that it funds. Because of the diversity of the actions it funds, as well as the innovative and catalytic nature of many projects, the target outcomes of the LIFE programme are difficult to summarise in a standardised way.

The Multi-Annual Work Programme (MAWP) for 2014-17 sets out a number of EU indicators and targets relating to specific themes (see section 7.1 for more detail).

Many of the targets relate to the number of projects in each theme. For example, there is a target that 80% of projects across the EU related to water (under the Environment and Resource Efficiency theme) implement replicable or transferable actions and progress towards good ecological status. Other targets relate to the extent of the environmental problem being addressed. For example, there is a target that 100 water bodies across the EU with poor ecological status are targeted through ongoing or finalised projects by 2017. Some targets relate to the targeted groups or beneficiary populations being addressed by LIFE projects. Examples are given in Table 3.1.

Table 3.1 Examples of target objectives for EU projects in the current MAWP

Examples of targets	Target (2014-2017, EU)
No. of additional municipalities or regions with inadequate waste management targeted by ongoing or finalised projects.	20
Ha of land targeted by ongoing or finalised projects to maintain and improve soil function.	20,000
No. of persons targeted by ongoing or finalised projects aiming at reducing chemicals.	50,000
No. of persons targeted by ongoing or finalised noise projects.	10,000
No. of persons targeted by ongoing or finalised air quality projects.	1,000,000
No. of stakeholders and citizens targeted by ongoing or finalised information/ awareness projects.	>500,000

The mid-term evaluation of the current LIFE programme identified the following headline target outcomes over the 2014-2020 programme period[37]:

- Improve conservation status of 59 habitats, 114 species and 85 Natura 2000 sites;
- Reduce adverse effects of chemicals on health for 1.6m people;
- Reduce energy consumption by 600,000 MWh pa;
- Increase renewables by 500,000 MWh pa; and
- Support climate adaptation measures over 35m ha.

These headline targets capture only a few of the major outcomes of the LIFE programme. Because of the diversity of the actions it funds, as well as the innovative and catalytic nature of many projects, the target outcomes of the LIFE programme are difficult to summarise in a standardised way.

3.1.1.2 Projected environmental outcomes in the UK

The diversity of projects and the range of activities and expected results of each UK project means that projected outcomes are difficult to summarise concisely. Each UK project is required to define a range of target results. Many projects, especially those engaged in a wide range of activities, have defined a variety of outputs and outcomes, which further adds to the challenge of summarising outcomes across projects.

The largest set of outcomes in the current 2014-2020 programme period relate to habitat restoration, with nine current projects funding restoration and conservation activities over a total area of more than 20,000 hectares. LIFE projects are also progressing towards significant outcomes with respect to species recovery, control of invasive alien species, climate change mitigation, waste reduction, and engagement, information and governance. Examples of projected outcomes with respect to each type of outcome are explored in turn within this section.

An indication of the extent and range of outcomes being targeted by LIFE projects in the UK can be gained by examining target results from UK projects listed on the EU LIFE database. According to the database, 25 projects for which the submitting partner is based in the UK have been approved in the current programme period (since 2014).

Example of a project with a varied set of expected results

The Biosecurity for LIFE project aims to protect seabirds from invasive predators by producing biosecurity plans for all 41 Special Protection Areas (SPAs) in the UK and establishing 'rapid response hubs' to deal with any predator incursions. Other actions include raising awareness about the need for improved biosecurity, promoting knowledge sharing, and encouraging the replication of the project throughout the EU. The project involves expenditure of EUR 1.35 million, with an EU contribution of EUR 0.81 million.

The project anticipates a wide range of outputs and outcomes that are linked to plans, activities, equipment, materials, target audiences and capacity. For example:

- Comprehensive, up-to-date biosecurity plans in place for all 41 island SPAs in the UK, and managers of the SPAs provided with the skills and support needed to develop biosecurity plans.

[37] European Commission, 2017. MID-TERM EVALUATION. Accompanying the document. Report on the Mid-term Evaluation of the Programme for Environment and Climate Action (LIFE).

- Residents on 12 inhabited island SPAs equipped with the knowledge and skills they need to help ensure biosecurity. Training course on biosecurity developed for businesses, 400 sets of materials produced, eight trainers trained, and trial courses run for 20 fish farm operators, 15 boat operators, two fishing cooperatives and 10 harbour masters.
- Eight 'rapid response hubs' established, and 160 volunteers trained.
- Activities implemented though the installation of detection devices on 25 SPAs, self-resetting traps trialled in one SPA, and one biosecurity trained dog in action.
- Awareness of invasive alien species and their impact on seabirds raised in at least 10,000 people. Demonstration sites established in two SPAs visited by 150 schoolchildren, 30 teachers trained, reaching 1,500 children. Project displayed at 15 events visited by 1,500 people. Four articles published in national press, talks attended by 300 people, an event run for policy- and decision-makers, and liaison between UK officials and counterparts in New Zealand.
- Establishment of an online forum and European Advisory Group for 25 island restoration professionals from across the EU, dissemination of project lessons to relevant teams in other Member States (France, Portugal, Spain, Italy, Malta, Greece, and potentially Germany, Netherlands, Scandinavia), one other team actively supported to develop a similar national level project.

Source: LIFE project database

Habitat restoration and conservation

The largest group of environmental outcomes in the current LIFE programme period relate to **habitat restoration and conservation** (Table 3.2). The target results of these restoration projects are defined and measured in a variety of ways, reflecting the variety of habitats and range of restoration challenges involved. The precise area over which restoration is taking place is also difficult to ascertain, given likely overlaps in the different results identified. However, together these nine UK LIFE projects are funding habitat restoration and conservation activities over a total area of more than 20,000 hectares.

Table 3.2 Target results for UK habitat restoration projects initiated since 2014

Project	Target results
LIFE Celtic Rainforests	Control of rhododendron in SACs (970 ha) and buffer areas (7000 ha), reduction in abundance of other IAS (5600 ha), implementation of grazing management (227 ha) and active woodland management (130 ha), woodland restoration in 33 locations (73 ha) and a further 50 buffer area locations (110 ha).
SoLIFE	Restoration of 1,465 ha of 'grey dunes', 12 ha of 'white dunes', 1 ha of 'embryonic shifting dunes', and 37 ha of 'dunes with *Salix repens*' and 'humid dune slacks'.
DuneLIFE	Over 4,400 ha of eight Natura 2000 sites (SACs) move toward or retain favourable conservation status; creation of 74 ha of bare sand, restoration of 72 ha of wetland habitats, and improved water quality on 22 ha of oligotrophic waters habitat; removal of invasive alien species across 470 ha; new grazing regimes instigated on 337 ha, with potential to extend by 200 ha.

Project	Target results
New LIFE for Welsh Raised Bogs	Purchase of 30 ha at Cors Fochno Natura 2000 site and restoration of 6 ha of active and 14 ha of degraded raised bogs; favourable hydrology restored for 650 ha of active and 180 ha of degraded raised bogs within 7 Natura 2000 sites; restoration of 483.9 ha of poor condition raised bogs; and 13,000 m of fencing to enable better grazing regimes for 100 ha of raised bogs.
Pennine PeatLIFE	1,353 ha of blanket bog re-activated; 32 km of eroding gullies blocked with sediment-trapping dams; 33 ha of bare peat, 30 km (15 ha) of re-profiled, un-vegetated hags/gullies, and 78 ha of peat in dendritic erosion areas are re-vegetated with bryophyte-rich brash, cotton grass plugs and a dwarf shrub/grass/cotton grass seed mix; reduction in surface water flow across 33 ha of bare peat; 1 km of gullies/hags are re-profiled; hydrological restoration of an 118 ha area of dendritic erosion; 17.7 ha of bare peat, 9.2 km (4.6 ha) of re-profiled, un-vegetated hags/gullies and 39.8 ha of bare peat in dendritic erosion recolonised with Sphagnum-rich brash; 3.4 ha of bare peat, 7.7 ha of bare peat in dendritic erosion recolonised with Sphagnum clumps and plugs.
LIFE Blackwit UK	At least 1,100 ha of habitat enhanced for black-tailed godwits, either directly (e.g. through pool creation and ditch re-profiling) or through improvements to water control infrastructure.
Marches Mosses BogLIFE	Restoration of 665 ha of raised bog, including through removal of 107 ha conifer plantations and woodland, improved water management, restored bog processes, removal of IAS including rhododendron.
BureLIFE	Removal of around 59,600m^3 of sediment from the eastern end and 37 900m^3 from western area of Hoveton Great Broad (HGB); removal of 75% of target fish species (roach and bream) through isolation of the lakes from the River Bure and Hoveton Marshes; dyke network with six fish-proof barriers and a three-year fish removal programme; increase in calcareous fen habitat area by re-using removed sediment to create 4.3 ha of species-rich fen in HGB and 1.7 ha of tall herb fen at Wroxham Island.
MoorLIFE 2020	2,040 ha of damaged ground improved (43 ha of bare and eroding peat) within a mosaic of 10,453 ha of active blanket bog; installation of 8,226 gully blocks along 57,582 m of gullies; installation of 7,172 grip blocks along 50,204 m of grips; Sphagnum applied to 970 ha of cut Calluna, Molinia and Eriophorum dominated blanket bog; 1.36 ha of established rhododendron plants removed; 1,800 ha of invasive woody seedlings cleared.

Source: LIFE project database

The current LIFE programme is also making a substantial contribution to other environmental outcomes in the UK, including species recovery, control of invasive alien species, climate change mitigation and waste reduction. This is described below.

Species recovery and conservation

LIFE projects targeting **species recovery** are aiming to increase populations of rare species such as twaite shad, black-tailed godwit and roseate tern. Targets have been established for the populations of each, as well as for other indicators such as range, habitat quality and breeding success (Table 3.3).

Table 3.3 Projected outcomes for species conservation, UK projects initiated since 2014

Project	Projected species conservation related results
Unlocking the Severn LIFE	Fish access provided for twaite shad across seven artificial structures on rivers Severn and Teme, opening 253 km of historic spawning and nursery habitat; by 2021, twaite shad is present and protected, above Lincomb Weir on the Severn and Knightsford Weir on the Teme; number of individuals in mid-reaches increases from nil in 2015 to 50 in 2021 and 200 by 2025; number of spawning locations on the mid-Severn and lower Teme increase from nil to five by 2021 and 20 by 2025 .
LIFE Blackwit UK	Species' productivity at project sites increases to >0.4 fledglings/pair (mean over five years of the project) and >0.6 fledglings/pair (mean over 2022-26). Species population at these sites increases to target of 55 - 65 pairs in the Nene/Ouse metapopulation by 2021; number of sites supporting successful breeding in Cambridgeshire and Norfolk Fens increases by 2021, including successful breeding on at least one additional site adjacent to the Ouse Washes.
LIFE14 Roseate Tern	Breeding population increased from 73 to at least 100 breeding pairs in UK and 1,413 to 1,710 pairs in Ireland; habitat for roseate terns enhanced and threats from disturbance and predation reduced at the three main existing colonies and five other UK and Irish roseate tern SPAs; benefits also for other tern species.

Source: LIFE project database

Control of invasive alien species (IAS)

Table 3.4 summarises target outcomes for **control of invasive alien species (IAS)** in four projects in the current programme. These include clearance of invasive plant species from woodland and aquatic habitats and control and eradication of stoats and grey squirrels from parts of their introduced range.

Table 3.4 Projected outcomes for control of IAS, UK projects initiated since 2014

Project	Projected IAS related results
Orkney Native WildLIFE	Removal of stoats from their entire introduced range across the Orkney Mainland and connected islands of Burray and South Ronaldsay.
LIFE Celtic Rainforests	Control of rhododendron in Celtic rainforest SACs (970 ha) and buffer areas (7000 ha); reduction in abundance of other IAS (5600 ha).
RAPIDLIFE	Measures to reduce IAS across aquatic environments in England resulting in 12.5% increase in white-clawed crayfish in the south west, 58.5% reduction in Himalayan balsam and 55% reduction in Japanese knotweed in Bristol Avon and River Wensum catchments, and 75% reduction of signal crayfish in the south west.
Sciurious LIFE	Control of grey squirrels including eradication from 1500 ha of woodland in Gwynedd and a site in Northern Ireland; prevention of recolonization of Anglesey and Gwynedd and colonisation of parts of English mainland, including through early warning systems.

Source: LIFE project database

Waste reduction

Target outcomes for **waste reduction** in three UK LIFE projects in the current programme are summarised in Table 3.5. The TRiFOCAL London project has established ambitious targets for reducing food waste in London; LIFE ECAP aims to divert 90,000 tonnes of clothing waste from landfill; while targets for recovery of critical raw materials have been set by the LIFE 2014 CMR Recovery project.

Table 3.5 Projected outcomes for waste reduction, UK projects initiated since 2014

Project	Projected results – waste reduction
TRiFOCAL London	20% reduction in per capita avoidable food waste by Londoners (63 kg to 49 kg per resident pa), £330 million savings in annual living costs (£37 per resident), savings of 70m m^3 water, 5% increase in unavoidable food waste recycled.
LIFE ECAP:	90 000t of clothing waste diverted from landfill and water savings of 588m m^3 by 2018.
LIFE 2014 CMR Recovery	Increased recovery of target critical raw materials by 5% by weight by 2020 and by 20% by 2030.

Source: LIFE project database

Climate change mitigation

Table 3.6 summarises projected results for **climate change mitigation** for four projects in the current programme. Reductions in greenhouse gas emissions are anticipated as a result of reductions in food waste (TRiFOCAL London), measures to reduce the environmental impacts of clothing (LIFE ECAP), and reduced carbon losses from peatlands (Pennine PeatLIFE and MoorLIFE 2020).

Table 3.6 Projected outcomes for climate change mitigation, UK projects initiated since 2014

Project	Projected climate related results
Pennine PeatLIFE	Avoided losses of 26,000 t/$C0_2$, plus 1 327.5 t/$C0_2$ sequestered by five years after the end of the project.
TRiFOCAL London	Reduced CO_2e emissions of 430,000 tpa.
LIFE ECAP	1.6 m tonnes CO_2e reduction by 2018 (15% reduction in carbon footprint of participating businesses).
MoorLIFE 2020	Will provide evidence of carbon budget in project delivery and carbon benefits of the capital works programme.

Source: LIFE project database

Engagement, information and governance

A wide variety of other outcomes are also projected by LIFE projects in the current programme period. Examples are engagement of volunteers, provision of training, development and implementation of plans (including action plans, site and species management plans, biosecurity plans, and monitoring plans), awareness raising measures (for professionals and many thousands of members of the public), technology demonstration, knowledge development, exchange of best practice, partnership development and capacity building, and provision of visitor facilities.

A summary of selected results relating to **engagement, information and governance** projected by LIFE projects in the current programme period is given in Table 3.7.

Table 3.7 Projected outcomes for engagement, information and governance, UK projects initiated since 2014

Project	Projected results – engagement, information and governance
Training and volunteering	▪ Biosecurity for LIFE: Training of 160 volunteers, 20 fish farm operators, 15 boat operators, two fishing cooperatives and 10 harbour masters. ▪ REAL Alternatives 4 LIFE: Nine e-learning modules covering diverse aspects of refrigeration and air conditioning systems using alternative refrigerants, available in 13 languages so as to be accessible to around 85% of the technicians working in the sector across the EU. ▪ LIFE Celtic Rainforests: 100 volunteers engaged in Celtic rainforests.
Planning	▪ Biosecurity for LIFE: Biosecurity plans for 41 SPAs; biosecurity strategy for Orkney archipelago and community led biosecurity plans for 10 islands. ▪ DuneLIFE: site improvement plans for eight dune Natura 2000 sites. ▪ Pennine PeatLIFE: 10 UK Peatland Code sites established with management plans. ▪ LIFE ECAP: Implementation of Sustainable Clothing Action Plan by participating businesses. ▪ Bure LIFE: Development and implementation of monitoring plan to capture the habitat response to the management actions. ▪ LIFE 14 Roseate Tern: Action plans for the conservation of roseate tern in the UK and Ireland; management plans updated for all 8 SPAs; first long-term conservation strategy covering the whole northwest Europe metapopulation; ▪ EuroSAP: 6 most urgent action plan reviews and updates completed; New species action plans for two threatened seabirds following improved methodology; participatory methodology for group species action plans developed and agreed; pilot European Flyways Group Action Plan for Eurasian lowland wet meadow breeding waders developed and submitted for adoption at EU and international level.
Awareness raising	▪ Biosecurity for LIFE: IAS and impacts on seabirds (10,000 people). ▪ LIFE Celtic Rainforests: value of Celtic rainforests (2,000 people). ▪ TRiFOCAL London: Food waste (1 000 hospitality and food service outlets, 10,000 customers and staff, 20 community groups and 24 schools, 20% increase in Londoners aware of key actions to eat more healthily and sustainably). ▪ Unlocking the Severn LIFE: Engaging more than 8 million people in events and dissemination actions to raise awareness of the biological and potential social and economic value of twaite shad, the Severn and the Natura 2000 site. ▪ Bure LIFE: Anthropogenic impacts on and appreciation of the biodiversity of the Natura 2000 sites (website, social media, press releases, videos, webcam of the tern raft, project leaflet) and events engaging at least 25 000 locals and visitors and technical events for at least 300 professionals.
Technology demonstration	▪ LIFE Laser Fence: Demonstrate that the Laser Fence technology allows for the use rodenticide to be eliminated in the two participating areas.
Knowledge development	▪ LIFE14 Roseate Tern: Report on long-term opportunities for tern colony management and/or creation in northwest Europe; demographic study on importance of factors at breeding and non-breeding grounds and relationships between colonies in France, Ireland and UK; improved understanding of ecology of prey species; improved understanding of impacts in West Africa; best practice manual for management of roseate tern breeding sites.

Project	Projected results – engagement, information and governance
Best practice exchange	▪ Unlocking the Severn LIFE: Effective transnational exchange of best practice across twaite shad range in Europe, leading to transfer of actions to similar projects across the Atlantic, Mediterranean, Continental and Boreal bioregions. ▪ TRiFOCAL London: Five EU replication cities signed up at the start of the project and at least a further five sign up by the end of the project.
Partnerships and Capacity building	▪ LIFE Celtic Rainforests: 4 local community partnerships to control IAS in Celtic rainforests; ▪ Sciurious LIFE: new urban IAS management communities in north Merseyside, new grey squirrel management by 50 private landowners across Northern Ireland, seven existing Northern Irish squirrel community groups supported to increase their membership by 10% from a January 2016 baseline, creation of three new grey squirrel management groups in Northern Ireland. ▪ LIFE ENPE: Building a self-sustaining network of environmental prosecutors (minimum of 25 countries represented); at least ten instances of transnational cooperation lead to the successful prosecution of environmental crime; information sharing through reports, working groups, conferences, website and common online resources; best practice and training materials; at least 10 agencies will adopt ENPE best practice in their environmental crime work.

Source: LIFE project database

3.1.2 What environmental outcomes has LIFE funding aimed to deliver and how do they compare with those anticipated at the application stage?

Evidence of environmental outcomes of UK LIFE projects can be examined for a sample of completed projects. The reported results of projects initiated in the 2010-2013 period include demonstrating and testing new techniques and technologies, engaging local communities in waste management, developing environmental management tools and information, promoting stakeholder engagement and collaboration, developing strategic approaches to nature conservation and supporting the recovery of the stone-curlew in England.

The full impact of many projects is difficult to assess as available data mostly relates to their outputs rather than their longer-term outcomes or legacy. For example, there is a lack of evidence regarding the wider uptake of technologies and environmental management tools. However, there is a consensus among stakeholders that LIFE projects have contributed substantially to environmental outcomes in the UK, and that most have achieved their targeted results.

3.1.2.1 Environmental outcomes delivered to date

No data have been available to the evaluation team to inform a systematic analysis of the environmental outcomes achieved in the UK to date.

Most projects in the current (2014 to 2020) programme period are not yet complete and so have not reported their final results. The EU LIFE database includes details of the actual results of many (but not all) of the LIFE projects funded in the UK in the 2007 to 2013 period. These results are as diverse and difficult to summarise as those specified by projects funded in the current programme period (discussed in Section 3.1.1.2 above).

The European Commission summarised the environmental outcomes of LIFE at EU level over the period between 1992 and 2013 as including[38]:

- Improved conservation and restoration of 4.7 million hectares of land.
- Improved water quality over an area of approximately 3 million hectares.
- More healthy air quality for some 12 million people.
- Waste prevention of some 300,000 tonnes and recycling of a further 1 million tonnes.
- 1.13 million tonnes reductions of CO^2 emissions per year.

An evaluation of the LIFE Programme in the UK for the funding period 1996-2006[39] found that it was difficult to summarise the overall impacts of the programme, particularly for LIFE Environment. However, it found that LIFE Nature and Biodiversity projects had directly and indirectly contributed to the implementation of the Habitats and Birds Directives in the UK, and that the LIFE Nature and Biodiversity strand had been "pivotal" in developing management capacity in the UK conservation sector. The evaluation found that LIFE Nature funding had been decisive in the scope and degree of nature conservation and management achieved, commenting that "without funding, the outcomes would only have been achievable on a much smaller scale".

The evaluation found that, in total, LIFE Nature and Biodiversity projects helped to restore and/or conserve a total area exceeding 26,000 ha of habitats over the 1996-2006 period, with conservation actions restoring 12 woodland priority sites and 12 lowland raised bog sites into favourable condition, and delivering conservation strategies for rivers qualified as candidate Special Areas of Conservation (SAC). LIFE Nature and Biodiversity projects delivered further benefits by establishing partnerships between local and regional stakeholders and raising awareness.

In the current evaluation, both beneficiaries and policy stakeholders were asked what they consider to be the most significant outcomes that LIFE has achieved for the environment in the UK. The most commonly mentioned were:

- The delivery of major landscape scale nature restoration projects.
- The role of LIFE in sharing knowledge to inform better approaches to environmental management.
- The ability of LIFE to fund larger scale projects than could otherwise be financed.

Additional outcomes mentioned were contributing to species conservation, promoting innovative approaches to environmental management, bringing together stakeholders and encouraging collaboration, controlling non-native species, developing conservation strategies to guide future action, raising public awareness (including on value of habitats), improving the urban environment at local level and reducing greenhouse gas emissions.

Some examples of the results delivered by selected LIFE projects initiated between 2010 and 2013 are outlined in the remainder of this section. These are:

- Testing and demonstrating new technologies and techniques.
- Engaging local communities.

[38] European Commission, 2013. Final evaluation of Regulation (EC) No 614/2007 concerning the Financial Instrument for the Environment (LIFE+).

[39] COWI, 2009. Ex-Post Evaluation of Projects and Activities Financed under the LIFE Programme Country-by-country analysis United Kingdom.

- Developing tools and information for environmental management.
- Stakeholder engagement and collaboration.
- Strategic approaches to nature conservation.

Testing and demonstrating new technologies and techniques

LIFE projects have successfully demonstrated the application of **new techniques and technologies** to enhance the environment (Table 3.8). These projects have been able to demonstrate reductions in environmental impact at project level, as well as actions to disseminate these findings. It is not possible from the project reports to gauge the extent to which these projects have changed wider practice.

Table 3.8 Results achieved by selected LIFE projects in the UK, 2010 to 2013 - Testing and demonstrating new technologies and techniques

Project	Results achieved
Quarterback for LIFE	First full-scale demonstration of the use of crude glycerine water to produce biogas, resulting in significant energy and water savings and enhancing the sustainability and profitability of oleochemical facilities. Results included a reduction in emissions of 10,852 tonnes CO_2/year in 2017, 10% reduction in feedwater to the boiler and 56% reduction in noise and odour complaints.
LIFE Housing Landscapes - Climate-proofing Social Housing Landscapes	Demonstrating an integrated approach to climate adaptation in urban areas by undertaking a package of measures to retrofit blue/green infrastructure in three social housing areas in London Borough of Hammersmith and Fulham. Measures demonstrated reduced surface water run-off and local flooding (e.g. absorption of 89% of rainfall by green roofs; diversion of 100% of rainfall from storm drain systems), improved water quality, mitigation of the urban heat island effect and improved biodiversity. Findings were outlined in the LIFE Housing Landscapes Implementation Guide and a range of national and regional guidance documents.
ACUMEN - Assessing, Capturing & Utilising Methane from Expired and Non-operational landfill	Demonstrated the technical and economic viability of a range of techniques for monitoring, utilising and mitigating methane emissions from closed landfill sites. Converted 1,339 tonnes of methane during project life, producing 595 MWh of electricity and 230 MWh of useable heat and avoiding 340 tonnes of CO_2 emissions. Findings were collated in a technical report providing advice to site owners and operators and disseminated through webinars, workshops, seminars, site visits and international conference presentations. In its report, the project claimed that it was already showing signs of stimulating a new market for private sector equipment suppliers and investment funds.

Source: LIFE project database

Engaging local communities

LIFE funded two **local community waste management** projects, in London and Greater Manchester, in the 2010-2013 period. These projects demonstrated local approaches to engagement among local communities, and some results in diverting waste from landfill at local level, though the extent to which they catalysed wider or sustained changes in approaches to waste management is unclear from the project reports (Table 3.9).

Table 3.9 Results achieved by selected LIFE projects in the UK, 2010 to 2013 - Community waste management

Project	Results achieved
REPURPOSE LIFE	Creation of five viable reuse hubs (social enterprises) on housing estates in London, diverting 99 tonnes of waste from landfill, training 349 residents, and reducing fly-tipping.
LIFE UP & FORWARD COMS	Delivery of 42 targeted community-led communication campaigns to promote recycling to over 63 000 residents in areas of Greater Manchester with low recycling performance. The degree of wider uptake of the approach is unclear.

Source: LIFE project database

Developing tools and information for environmental management

Other projects initiated between 2010 and 2013 have developed tools and information designed to enhance **environmental management** (Table 3.10). The reported results refer mainly to the tools developed and their intended purpose and audience, rather than their ongoing usage or impact on environmental management practice.

Table 3.10 Results achieved by selected LIFE projects in the UK, 2010 to 2013 - Developing environmental management tools and information

Project	Results achieved
LIFE+ CEMS	Design and development of web-based tools that enable European industries to measure the effectiveness of their move towards a circular economy, through use of renewable energy, reduced use of raw materials, and elimination of waste. No details of the uptake of these tools are given.
LiveWell for LIFE	The project developed demonstration diets - LiveWell Plates - for France, Spain and Sweden, complying with national nutritional guidance and with the potential to decrease GHG emissions by 25% compared to current average diets. It also established a Network of European Food Stakeholders to facilitate a coordinated approach to sustainable diets, and developed guidance materials.
EQual	Three key deliverables: a Quality Protocol checker web tool for the UK's Quality Protocols; a web tool providing a step-by-step approach to enable businesses to determine whether end of waste has been achieved or not (Is It Waste? tool); and field trials to assess the impact of four waste types on the environment.
SEWeb - Scotland's environmental web	Development of a website bringing together data and information about Scotland's environment in a single regional gateway, as part of the European SEIS (Shared Environmental Information System). Partnerships with 15 data-providing organisations provided over 300 datasets that can be accessed through the project website (www.environment.scotland.gov.uk), using mapping and data visualisation applications.

Source: LIFE project database

Stakeholder engagement and collaboration

The Celtic Seas Partnership, a LIFE funded project led by WWF-UK, reported that its greatest achievement had been to create a unique opportunity for transboundary, **cross-sector collaboration amongst stakeholders, as well as increasing knowledge and awareness** of marine policy and MSFD across the Celtic Seas (Table 3.11). However, an interviewee indicated that the forums created within the project have not been sustained following project completion.

Table 3.11 Results achieved by selected LIFE projects in the UK, 2010 to 2013 - Promoting stakeholder engagement and collaboration

Project	Results achieved
Celtic Seas Partnership (CSP)	Bringing together governments, sea-users and scientists across national boundaries and sectors to find new ways of managing the marine environment. Three multi-national conferences and over 30 national workshops and meetings, engaging over 1 500 stakeholders from 14 different sectors. Task Groups were set up to address key challenges such as marine litter, invasive species and sea-users collecting data. Pilot projects established to test mediation approach for fisheries and the environment in Scotland and France. Best practice guidance, educational materials and future scenarios study issued. The project described its biggest achievement as creating a unique opportunity for transboundary, cross-sector collaboration amongst stakeholders, as well as increasing knowledge and awareness of marine policy and MSFD across the Celtic Seas.

Source: LIFE project database

Strategic approaches to nature conservation

Three major LIFE projects initiated between 2010 and 2013 have helped to inform **nature conservation strategies** in the UK (Table 3.12). Stakeholders report that these projects each played a vital role in guiding subsequent actions and prioritising resources for Natura 2000 (IPENS and LIFE N2K Wales) and wider landscape scale conservation (Futurescapes).

Table 3.12 Results achieved by selected LIFE projects in the UK, 2010 to 2013 - Developing strategic approaches to nature conservation

Project	Results achieved
IPENS	The project developed a programme for the management of terrestrial and marine Natura 2000 network sites in England. Outputs were 267 Site Improvement Plans (SIPs) covering all 338 Natura 2000 sites in England, 11 Theme Plans covering generic issues, 54 evidence projects, and updated Natura 2000 information in the Natural England CMSi Protected Sites Database. The end result is much greater awareness of Natura 2000 requirements. This has informed strategic funding bids to contribute to the estimated €1.6bn cost of programme delivery, along with an Implementation Plan and Steering Group.
LIFE N2K Wales	The project delivered a strategic plan for the management and restoration of all SPAs and SACs in Wales. It determined the required conservation management actions for the 2014-20 period, identified costs and priorities and provided a basis for obtaining increased levels of funding from all possible sources.
Futurescapes	Catalysed development and implementation of landscape-scale conservation initiatives in 38 Futurescapes areas across the UK spanning a range of habitat types. Project exceeded expected outcomes, by contributing to establishment of 144 partnerships, developing 198 projects, engaging 310 000 members of the public and conducting practical conservation work on 108 500 ha of land. Conservation actions spanned 134 Natura 2000 sites (>2m ha), with interventions helping to buffer Natura 2000 sites and improve the connectivity between them.

Source: LIFE project database

3.1.2.2 Comparison of target and achieved outcomes

It is not possible to compare actual results of individual UK LIFE projects with targets set at the application stage due to a lack of matching data.

Interviewees were asked whether LIFE projects they were aware of or involved with had met expectations in terms of target outcomes. A majority indicated that, in their experience, LIFE projects had broadly met expectations and achieved their target results. Stakeholders cited the rigorous LIFE programme monitoring and reporting system, as well as good project management and knowledge built from previous LIFE projects as key success factors.

Some examples were given of projects exceeding expectations:

- The Active Blanket Bog Wales project surpassed all of its core targets, in some cases by a large margin. Habitat restoration results included blocking 485km of drains, removal of 35ha of plantation forests and removal of non-native species from almost 500ha.
- ObservaTREE, a citizen science project targeting tree health, set an initial target to train 100 Tree Health Champions, but, following a strong public response, eventually trained 600 people, while also coming in below budget.
- The MoorLIFE 2020 project is on course to exceed its target outcomes, having benefited from the rise in the value of the Euro against sterling, as well as economies of scale in delivery. The project is expecting to seek an extension beyond 2021 and to increase its performance targets.

Some interviewees noted that LIFE projects face a number of barriers and risks to delivery of target outcomes. These include the innovative nature of most projects, uncertainties regarding the interest and engagement of partners and stakeholders, climatic and environmental factors, and changes in the policy environment. As a result, while most projects are seen as having been successful overall, not all have delivered against all of their target results.

Projects identified as having fallen short of expectations are:

- MR Mo ToWFO – Managed Realignment Moving Towards Water Framework Objectives – a project initiated in 2006, was terminated by the Commission having failed to meet its objectives, due to failures in partnership and project management.
- The Celtic Seas Partnership broadly met its targets and objectives for project delivery, but was unsuccessful in sustaining ongoing activity in the absence of LIFE funding. It was hoped that a formal ongoing platform would be established at regional scale, but this was not possible because of a lack of funding.

The ability of projects to meet targets for nature conservation outcomes is influenced by uncertainties regarding the responses of species and habitats to conservation actions. For this reason, the outputs of a project may be more predictable than its outcomes. An example is given in the box below.

Case study: Securing the stone-curlew in the UK

Summary: Securing the stone-curlew was one of the major species conservation projects completed in the 2007-2013 period. This project provides an interesting case study in the **transition from species recovery to sustainable species conservation**. The project exceeded its targets for provision of safe nesting habitat for the species, but fell short of targets for the numbers of birds nesting on this “safe” habitat, demonstrating that successful delivery of conservation outcomes often depends on wider variables which are beyond the direct control of LIFE projects.

Context: The population of the stone-curlew has increased in the UK in recent years in response to intensive conservation efforts by the RSPB and others. However, as a ground nesting bird, which relies heavily on arable farmland as a breeding habitat, the species is highly sensitive to agricultural operations, and increased breeding success has been reliant on nest protection work by conservation fieldworkers and volunteers.

Project: The securing the stone-curlew project, led by the RSPB, aimed to secure the future of the species in the UK by making it much less dependent on conservation work than at present, and therefore, much more self-sustaining. It involved a comprehensive, integrated programme of advisory, communications and awareness-raising actions, designed primarily to increase the amount of safe nesting habitat available to stone-curlews and thus to reduce (and ultimately eliminate) the need for nest protection work. This included use of agri-environment schemes to provide semi-natural habitat on farms, reserves and other land as safe nesting sites for the species. The project had a budget of EUR 1.65 million, 50% of which was funded by the EU.

Targets: The project addressed 100% of the UK population of the stone-curlew and managed to maintain it at around 400 breeding pairs as expected. Targets for creating semi-natural habitat and fallow plots in farmland were exceeded. Overall, the proportion of nesting attempts on 'safe' habitat (fallow plots in farmland, plots and scrapes in semi-natural habitat and extensive areas of short turf grass/ heath habitat) increased from 54% to 57%, less than the target of more than 75%. It was expected that the success of newly created semi-natural grassland would increase in future years.

Achievements: The project enabled the RSPB to reduce the resources devoted to stone-curlew conservation (though more slowly than originally planned) while maintaining the population of the species. It was particularly successful in recruiting volunteers to help with future nest monitoring and intervention work through the Saving Nature Scheme, in helping farmers have confidence to carry out their own monitoring work and in bringing this iconic species to the attention of the wider community. The project provides a case study of interest to NGOs in similar positions where there is a need to reduce resources so that the needs of other at-risk species can be addressed.

One of the projects main outcomes was the development of the RSPB Stone-curlew Transition Strategy 2016-2020 which sets out its vision for "a viable population of stone-curlews in the UK which is not reliant on intervention from RSPB fieldworkers". It also created a UK Stone-curlew Steering Group, charged with developing an Action Plan for the species.

Conclusion: While the project serves as a model in moving from species recovery to sustainable species conservation, it also highlights that species responses to conservation action are not always predictable. While the project exceeded its targets for habitat provision, the percentage of birds nesting on cropped farmland remained high on project completion.

3.1.3 What unexpected or unintended outcomes has LIFE funding delivered in the UK?

Interviewees did not identify significant cases of unexpected or unintended outcomes of LIFE projects, either positive or negative, and no relevant data was identified.

Various examples were given of unexpected challenges or positive circumstances which affected projects, for example as a result of bad weather, biological processes, the success of the techniques applied or changes in exchange rates. In some instances, these affected the project timetable, the activities undertaken and/or the use of resources, thereby potentially influencing the overall results of the projects, rather than resulting in wholly unexpected outcomes.

3.2 Social and economic contributions

3.2.1 How, if at all, has LIFE contributed to social and economic objectives in the UK?

LIFE is primarily an environmental fund, and social and economic objectives are secondary to environmental ones. This strong environmental focus is seen by stakeholders as a strength of the programme. However, LIFE projects are increasingly encouraged to report their social and economic impacts and project outcomes indicate that both direct and indirect social and economic benefits can arise.

UK projects have demonstrated that they have created jobs, contributed to training and workforce development, engaged volunteers and local communities, enhanced the local living environment, enhanced the tourism industry, demonstrated cost-saving technologies, reduced the costs of dealing with invasive alien species, and enhanced the delivery of ecosystem services that benefit people and the economy. However, previous evidence suggests that job creation and employment opportunities tend to be short-lived and directly related to the project delivery timeframe.

The primary objectives of the LIFE programme are environmental, and there is no mention in the EU LIFE Regulation of a requirement to contribute to social or economic objectives. The environmental focus of LIFE is seen as a strength by stakeholders, enabling the fund to target environmental priorities and to finance actions that cannot be funded by broader based programmes. However, while social and economic objectives are secondary to environmental ones, LIFE projects have delivered a range of social and economic benefits in the UK.

Previous studies indicate that LIFE has contributed to social and economic objectives in both the EU and the UK, particularly in regard to employment and job creation. The ex-post evaluation[40] found that LIFE has resulted in a range of economic and social benefits (including local employment opportunities) in the UK but did not quantify them.

[40] COWI, 2009. Ex-Post Evaluation /of Projects and Activities Financed under the LIFE Programme Country-by-country analysis United Kingdom.

At EU level, a study by Neemo and Ernst & Young[41] showed that a sample of 1,464 LIFE projects over the period 1999-2006 supported an average of 31 person years of employment per project[42], including both direct and indirect effects.

The LIFE mid-term evaluation conducted for the 2014-2020 funding period found that a total of 139 projects, out of 280, have created jobs, with average employment increasing from 2.5 FTE jobs at the beginning of the project, 13.5 FTEs at the end of the project and 17.8 FTEs after the end of LIFE funding. However, the employment generated tends to be temporary and directly related to the implementation of the projects. It consists mainly of researchers and technicians but also project managers, assistants, public relations experts, webmasters and accountants. While a large number of projects often do not lead to the direct creation of permanent jobs, there can be indirect positive impacts on employment[43].

Direct social and economic benefits resulting from the LIFE project activities and expenditures are:

- Social benefits where projects **engage with people and communities** to deliver their environmental objectives, for example through training, public engagement and supporting volunteering.
- Economic benefits where **LIFE expenditures support employment** and provide income for contractors and other local businesses.

Indirect social and economic benefits tend to occur where LIFE enhances the environment and the delivery of ecosystem services:

- Social benefits may arise where **LIFE reduces the social costs of environmental damage**, for example, enhancing air quality and reducing the impact of climate change enhances the living environment and/or supports socially beneficial activities (such as outdoor recreation).
- Economic benefits arise where LIFE **helps to deliver valuable ecosystem services**, for example by enhancing water quality (and reducing treatment costs) or by promoting tourism.
- Economic benefits may also arise from demonstration and wider uptake of innovative new techniques and technologies, capable of **delivering cost savings** by reducing waste and pollution.

Most stakeholders interviewed also reinforce these findings; expressing the belief that LIFE projects have delivered social and economic benefits in the UK, while recognising that these are generally secondary to environmental benefits, and often difficult to quantify and summarise. Examples of social and economic benefits identified by interviewees are:

- The LIFE Housing Landscapes has **enhanced the urban living environment** by providing green and blue (water related) infrastructure in areas of social housing in London. The project hired and provided accredited training to 22 local, long-term unemployed people as "Green Team" horticultural apprentices. Eleven apprentices have already found full-time employment. Access to green space has

[41] Neemo and Ernst & Young, 2016. LIFE: contributing to employment and economic growth.

[42] One person-year corresponds to a full-time individual's working time for a year. For example, 2 person-years correspond to either two individuals working full-time for a year, or one individual working full-time for two years

[43] European Commission, 2017. MID-TERM EVALUATION. Accompanying the document. Report on the Mid-term Evaluation of the Programme for Environment and Climate Action (LIFE).

been improved, and a social return on investment value of £4.39 for every £1 invested has been estimated.

- The Pearls in Peril LIFE project **employed 6-7 project staff**, at least three of whom are still in their posts following completion of the project.
- The Repurpose project has **increased skills and income for community groups** on deprived housing estates, enhanced social inclusion and community engagement through events and volunteering including among vulnerable groups, created jobs and reduced demand on housing association resources and hardship funds. Reduced fly-tipping has **enhanced the local living environment**. An overall estimate of almost £700,000 in social value has been made on benefits accrued to date.
- Peatland restoration projects such as Pennine PeatLIFE and MoorLIFE 2020 have benefited the local economy by **employing staff and contractors**, as well as enhancing ecosystem services, improving water quality, reducing flooding and mitigating climate change. Pennine PeatLIFE is spending £3 million on restoration works, with most of this going directly to local contractors. There is a growing green industry around peatland restoration and one business has grown from a single worker to a team of 15.
- The Alde-Ore project is estimated to have **enhanced local visitor numbers** by 10,000 annually.
- The Futurescapes project has established or developed 144 partnerships, engaged 310,000 members of the public, enhanced ecosystem service delivery through land management and **leveraged £5 of funding per £1 project spend**.
- RAPIDLIFE has helped to **tackle the economic costs of invasive alien species**, estimated at £2 billion annually in the UK.

Stakeholders also identified potential future social and economic outcomes of their projects:

- The LIFE-IP RBMP-NWRBD UK project is expected to deliver social and economic benefits by integrating environmental, social and economic objectives for water management, including through urban green infrastructure.
- Technology demonstration projects such as ACUMEN and Quarterback for LIFE have helped to demonstrate innovative techniques and technologies which, if adopted more widely, could result in significant savings in economic and environmental costs (through reduced waste and energy use).
- Peatland restoration projects such as MoorLIFE 2020 and Pennine PeatLIFE are expected to enhance the delivery of ecosystem services, including by capturing and storing carbon, enhancing water quality, and reducing the risk of floods and wild fires. This is expected to deliver valuable services and cost savings to society and the economy.

3.3 Policy influence and innovation

3.3.1 To what extent has LIFE contributed to the development and implementation of environmental policy in the UK?

There are a few examples where LIFE projects have directly influenced the development of policy at EU, UK or country level, though these relate mainly to projects initiated before 2006. This may reflect time lags in the delivery of

environmental outcomes, and subsequent influence on policy development. There are many more examples of projects which have informed policy implementation, by developing evidence, knowledge, tools and methods. Influential projects have developed strategies for implementation of the Natura 2000 network in England and Wales, furthered the implementation of the Water Framework Directive by demonstrating approaches at River Basin District level, informed the IUCN peatland programme and facilitated implementation of the EU F-Gas Regulation.

3.3.1.1 Influencing policy development

Many interviewees indicated that LIFE projects have helped to develop evidence, information and tools that have influenced policy thinking in the UK. Some of the specific examples given relate to pre-2007 projects:

- The Active Blanket Bog Wales project (initiated in 2006) successfully overcame initial scepticism to demonstrate the feasibility and benefits of bog restoration, helping to influence policy at Wales level and leading to its inclusion in the Wales agri-environment programme.
- The Restoring active blanket bog of European importance in North Scotland project (initiated in 2000) was seen as instrumental in informing the development of the Peatlands of Caithness & Sutherland Management Strategy 2005-2015. Government policy had previously contributed to the degradation of peatlands.
- The LETS update project, led by the Environment Agency and initiated in 2005, assessed the implementation and operation of the first phase of the EU Emissions Trading System and its update. The project was seen as having an influence on ETS policy and a number of its findings were reflected in the 2006 Commission communication that set out the agenda for the revision of the ETS.
- The Pearls in Peril project developed proposals for an action fund for species that included the pearl mussel. These proposals were taken forward by the Scottish Government but were not implemented because of concerns about financial audit risk.

It is perhaps not surprising that these examples relate to older LIFE projects, given the significant timescales required by many projects to deliver outcomes and therefore influence policy development.

More recently, the Futurescapes project, which ran between 2011 and 2015, is seen as having influenced policy thinking with regard to landscape scale conservation in the UK, as well as directly guiding the RSPB's own approach to landscape-scale conservation.

3.3.1.2 Influencing policy implementation

Examples of LIFE contributing to policy implementation are more numerous. Many projects have contributed evidence, tools and methods to support implementation. Specific examples cited by interviewees are:

- Projects initiated by government agencies designed to develop strategies for policy implementation. Examples include the IPENS project in England and Wales LIFE N2K project, both of which developed strategies for implementation of Natura 2000 at country level, and are widely regarded by stakeholders as playing a vital role in informing subsequent actions, resourcing and prioritisation.

- The NWRBD LIFE IP project aims to further implementation of the Water Framework Directive by increasing capacity in the North West England River Basin District. It intends to demonstrate improvements in delivery, address management challenges and barriers, increase stakeholder engagement, mobilise funding, increase delivery activity in integrated water management, improve data and knowledge, and provide mechanisms to upscale integrated project (IP) successes to national and Member State levels.
- Pennine PeatLIFE is helping to inform the IUCN peatland programme across the four countries of the UK and the EU. It is helping to develop and trial the application of the Peatland Code – a voluntary standard for UK peatland projects wishing to market the climate benefit of peatland restoration.
- The REAL Alternatives 4 LIFE project is helping implementation of the EU F-Gas Regulation[44]. The Regulation is changing chemicals used in refrigeration to reduce climate impacts. This requires different practices and use of alternative chemicals that have lower climate impacts. Existing chemicals are being phased out but there remain uncertainties regarding the efficacy of alternatives and the available skills to apply them. The LIFE project involves training, awareness raising, and certification designed to aid this implementation.

3.3.2 To what extent has LIFE helped to develop and demonstrate innovative approaches?

Many LIFE projects have developed and demonstrated innovative approaches, either as their main focus or as part of their broader activities. The impact of these activities is difficult to assess, because of a lack of information about wider adoption of the approaches demonstrated. Innovation is generally less prominent in Nature and Biodiversity projects (for which application of best practice is normally sufficient) than in Environment and Resource Efficiency and Climate Action projects (which are more often required to involve some degree of innovation).

Most LIFE projects claim to involve some degree of innovation in their approaches to environmental management, and the majority of stakeholders interviewed expressed the view that LIFE has helped to develop and demonstrate innovative approaches in environmental management.

Examples of innovative approaches are:

- Projects focusing on the **demonstration of new technologies and techniques**, such as Quarterback for LIFE, LIFE Housing Landscapes and ACUMEN and LIFE Laser Fence.
- Projects aiming to **enhance the uptake of new technology**, such as the REAL Alternatives 4 LIFE project.
- The NWRBD LIFE IP project, which is aiming to achieve **innovation in water governance**.

A distinction needs to be made between the different themes. Nature and Biodiversity projects may include innovative elements but are not required to; implementing best practice is normally sufficient. Environment and Resource Efficiency and Climate Action projects are more often required to involve some degree of innovation.

[44] Fluorinated gases, or F-gases, are greenhouse gases used in refrigeration and air-conditioning. The F-Gas Regulation (Regulation (EU) No 517/2014) of 16 April 2014 is an EU legislative instrument designed to phase them out in favour of climate-friendly refrigerants.

There are some examples of Nature and Biodiversity projects developing and demonstrating innovative approaches. For example:

- Pennine PeatLIFE is **using drones for peatland monitoring** and trialling the application of the Peatland Code to develop new finance for peatlands.
- RapidLIFE is **trialling biological control techniques** for Himalayan balsam and Japanese knotweed in the UK.
- MoorLIFE is demonstrating **new approaches to natural flood management** and water quality management through bog restoration
- BureLIFE demonstrated new **approaches to lake restoration** through sediment removal.
- Pearls in Peril demonstrated new **methods for reintroduction of the fresh water pearl mussel** (perfecting a technique initially developed on continental Europe which has been applied more widely in subsequent reintroduction schemes).

While LIFE has certainly helped to develop and demonstrate innovative approaches to environmental management in the UK, and this is encouraged within the programme, the overall impact of this innovation is less clear. The interviews provided many examples of the application of new approaches, but few evidenced how these have impacted environmental management on a wider scale. One example of an innovative project that has influenced wider approaches to environmental management is the Futurescapes project (see Section 3.3.1.1).

The evaluation of LIFE in the UK over the period 1996-2006[45] found examples of LIFE Environment projects attempting to integrate environmental techniques and methods through demonstration, thereby building a bridge between environmental technology research and commercialisation. Examples included projects developing environmental technologies in sewage, volatile organic compounds (VOCs) emission reduction, and effective use of water. The study confirmed through interviews that projects have often been technically viable, but found that impacts were difficult to assess due to a lack of monitoring of technical or policy-related targets. Other projects had sought to achieve innovation in stakeholder engagement and development of decision-making tools (e.g. on value of urban green space). A project focusing on sustainable urban planning was found to have achieved wider impacts by integrating biodiversity into the local policy agenda of London boroughs.

3.4 Effectiveness of project types

3.4.1 Effectiveness of different types of LIFE projects

In view of the early stage and limited implementation of LIFE integrated projects, preparatory projects and financial instruments in the UK, no assessment of their effectiveness can be made at this stage.

[45] COWI, 2009. Ex-Post Evaluation of Projects and Activities Financed under the LIFE Programme Country-by-country analysis United Kingdom

Most LIFE projects in the UK are categorised as **traditional projects**. These can be coordinated by any legal entity registered in the EU, including public institutions, businesses and non-governmental organisations. They may be best-practice, demonstration, pilot or information, awareness and dissemination projects, depending on the theme.

The current LIFE programme period (2014-2020) has seen the introduction of three new types of LIFE projects:

- **LIFE integrated projects** aim to improve the implementation of environmental and climate policy and its integration into other policies. They focus primarily on the implementation of the EU Biodiversity Strategy, Natura 2000 network, Water Framework Directive, waste and air legislation and climate change mitigation and adaptation, working at a large territorial (regional, multi-regional, national or trans-national scale), using LIFE funding to engage stakeholders and coordinate with and mobilise at least one other EU, national or private funding source.
- **LIFE preparatory projects** are primarily identified by the Commission in cooperation with Member States and aim to support specific needs for the development and implementation of Union environmental or climate policy and legislation.
- **LIFE financial instruments** aim to address market barriers to secure private finance for environmental projects. There are currently two LIFE financial instruments, Private Finance for Energy Efficiency (PF4EE) and the Natural Capital Financing Facility (NCFF). They are managed by the European Investment Bank (EIB), working in partnership with the Commission.

To date, only one integrated project has been initiated in the UK – the LIFE-IP RBMP-NWRBD UK, a 2014 project to implement an integrated water management approach to deliver the North-West England River basin management plan. While stakeholders were generally positive about the potential of this project, it is still ongoing, and its outcomes have therefore yet to be reported.

The LIFE database lists four preparatory projects in which the UK is involved. Three of these (LIFE Living Streets, 2015; LIFE IAP - RISK - Mitigating the threat of invasive alien plants in the EU through pest risk analysis to support the EU Regulation, 2015; and LIFE Euro Bird Portal - Combining and improving online bird portals data to display near-real-time spatiotemporal patterns of bird distribution across Europe, 2015) are led by partners in France or Spain. EuroSAP - Coordinated Efforts for International Species Recovery (2014) is led by BirdLife International and focuses on the delivery of new or revised species action plans for European bird species having conservation priority. No details of the results of these projects are yet available.

3.4.2 Which LIFE projects in the UK have been particularly effective?

A number of UK projects have been recognised at EU level due to their quality and impact. These projects are categorised under the ‘Best LIFE Projects’, based on criteria relating to impact, innovation, policy relevance and cost effectiveness.

At the end of each project, the European Commission and the LIFE national contact points assess the project’s impact based on a set of criteria. These criteria measure:

- the project’s contribution to immediate and long-term environmental, economic and social improvements.
- its degree of innovation and transferability.

- its relevance to policy.
- its cost-effectiveness.

The most successful LIFE projects become "Best LIFE projects". From among the "Best LIFE projects", the European Commission selects the "Best of the Best LIFE projects" that have achieved the greatest benefits for the environment and climate. They are the winners of the LIFE awards that are celebrated in Brussels every year. Details of winners are given on the LIFE web pages[46].

UK Projects which have received awards as the "Best of the Best LIFE projects" include:

- Scotland's Environment Web (SEWeb) – which developed a Shared Environmental Information System for Scotland, providing a comprehensive view of the nation's environment and helping to identify priorities. The project also developed mapping and data visualisation applications that increase public understanding of environmental issues and participation in citizen science.
- The ACUMEN project – which demonstrated how methane from closed landfill sites can be managed to produce less harmful gases or captured and used in the generation of electricity.
- RESTORE – which held 66 events, enabling knowledge of river restoration to be shared with more than 10 000 river management practitioners across Europe. The RiverWiki the project developed contains around 1 000 restoration case studies from 31 countries.

The longer list of "Best LIFE projects" includes:

- The Electronic Duty of Care (edoc) project, which developed an online system to record and manage movements of non-hazardous waste. In so doing, it ended the inefficient practice of dealing with waste using a paper system.
- The Futurescapes project, which promoted landscape-scale conservation initiatives and green infrastructure. Its practical conservation work and advice helped to support protected sites across the UK and conserve biodiversity.
- The PISCES project, which brought together a range of stakeholders to develop an ecosystem approach to the marine management of the Celtic Sea. A key outcome was the production of guidelines for the political implementation of this approach.
- The LIFE Eco-Animation project, which created a cartoon "My Friend Boo" to bring simple environmental messages to millions of children, parents and teachers across the EU. At the end of the project broadcasting deals were secured in 19 countries, in 17 languages.

Two projects – the Anglesey and Lleyn Fens project (which commenced in 2007) and the Active Blanket Bogs in Wales project (initiated in 2006) were mentioned by interviewees as being particularly successful projects, achieving results exceeding expectations.

[46] https://ec.europa.eu/easme/en/section/life/life-best-projects

LIFE projects exceeding expectations

The Anglesey and Lleyn Fens LIFE project[47] aimed to bring some 750 ha of fen into favourable or unfavourable-recovering condition by tackling the causes for their degradation (e.g. changes in land use and management). The project initially planned to focus on the 84 ha of alkaline fen and 104 ha of calcareous fen found within the overall mosaic of wetland habitats. It also planned to address the need to increase the resilience of the habitats to climate change, for example, through creating and expanding 'stepping stones' and ecological corridors among fragmented sites and reducing scrub and tall vegetation.

According to the project report, the project was a "major success" as it "met or exceeded" its targets in spite of the overrunning of costs and time. By removing biomass and reinstating extensive grazing across the sites, 134 ha of alkaline fen and 121 ha of calcareous fen were brought into favourable or recovering condition. Overall, long-term sustainable grazing management was established on 502 ha. Overall, hydrological monitoring has shown some "spectacular improvements in the hydrological condition of sites", with an increasing influence of groundwater and raised and stabilised water levels. The improvements in ecosystem services, including the provision of good quality drinking water, the slow release of flood waters and the halting the breakdown of peat/carbon loss, improved the quality of the downstream public water supply. This led both Welsh Water and Environment Agency Wales to support the project. It also helped change local attitudes especially with farmers who understood the benefits of the project for them and calm down years of mistrust between farmers and the community (Natural Resources Wales, 2015).

The Active Blanket Bog Wales (ABBW) project[48] describes itself as a very well managed project that achieved outstanding results. All of the core targets were surpassed, in some cases by quite a distance. In terms of habitat restoration, 485km of drains were blocked, almost 35ha of plantation forests removed, and non-native species removed from almost 500ha. The project won recognition at the IUCN UK Peatland Programme's competition 2010 and was awarded the 'Learning Outside the Classroom Quality Badge "Outstanding" award'. It was also nominated as one of the "Best LIFE projects", through its active engagement with the local community which helped it to exceed its targets for improving the condition of blanket bog and provided valuable lessons for the management of this important habitat elsewhere in Europe[49].

3.5 Value for money

3.5.1 Has LIFE delivered value for money in the UK?

The diversity of LIFE projects produces challenges in calculating a quantitative value for money. Habitat restoration is an area most amenable to unit cost metrics. However, in spite of limited metrics, LIFE is regarded by most stakeholders as having delivered good value for money in the UK. It is seen as supporting substantial environmental outcomes at reasonable cost, via projects which may not have been eligible for funding via other funding streams or initiatives.

47 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.createPage&s_ref=LIFE07%20NAT/UK/000948

48 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3152

49 https://ec.europa.eu/easme/sites/easme-site/files/documents/bestnat11.pdf

Views are mixed about whether LIFE administrative processes contribute to this. Some stakeholders consider the rigorous monitoring and reporting obligations to have contributed to value for money, but others as generating unnecessarily large administrative burdens.

The value for money of the LIFE programme is difficult to measure. The diversity and unevenness of outcomes delivered by the programme make it difficult to construct metrics relating outcomes to resources used. Furthermore, many of the activities supported by the programme and the outcomes they deliver cannot be standardised, as they are strategic or innovative rather than involving routine delivery.

Habitat restoration is one area of activity which is more amenable to unit cost metrics. Table 3.13 provides estimates of the unit cost of restoration outcomes, by dividing overall project costs by the numbers of hectares restored or conserved. Some caution is needed in interpreting these figures, since most projects do not involve restoration actions only but also include other actions such as public awareness raising. A few projects have joint targets for restoration and conservation of habitats, while others focus on restoration of degraded habitat. Projects face a range of challenges and require different restoration techniques, which are reflected in differences in unit costs.

The figures suggest a wide variation in the unit costs of habitat restoration through LIFE, from £1500 per hectare for some bog projects up to £120,000 per hectare for restoration of 35 hectares of eutrophic lake habitat at Hoveton Broad (the latter required the removal of substantial quantities of sediment). Aside from this, most habitats are projected to cost between £1,500 and £11,000 per hectare to restore. These figures generally fall within the wide ranges of habitat restoration costs found by other studies. For example, Tucker et al (2013)[50] found estimates of capital costs for restoration of sand dunes of between €275 and €4,500 per hectare (£240-3,950/ha), and for bogs and mires at between €500 and €19,500 per hectare (£440-17,000/ha).

Broader indications of value for money were picked up in interviews. The majority of interviewees expressing a view on this subject believe that the LIFE programme has delivered value for money in the UK, citing:

- The substantial environmental outcomes that it has delivered.
- Its ability to fund projects that would not otherwise take place.
- Its role in catalysing wider action and leveraging additional resources.
- The ability of the programme to capture, share and replicate best practice from across the EU.

By requiring co-funding for environmental projects, LIFE has helped to leverage additional funding for environmental protection. The total value of projects funded between 2007 and 2017 was EUR 337m, of which EU LIFE funding amounted to EUR 180m, suggesting that each £1 of LIFE funding attracted a further £0.88 of match funding. Match funding has come from a variety of sources, including budgets of Defra and the devolved administrations, Heritage Lottery Fund, local authorities, NGOs and private companies (including the water sector).

[50] Tucker G, Underwood E, Farmer A, Scalera R, Dickie I, McConville A and van Vliet, W (2013) Estimation of the financing needs to implement Target 2 of the EU Biodiversity Strategy. Report to the European Commission. Institute for European Environmental Policy, London.

Three respondents argued that rigorous application of monitoring and control procedures at programme level contributes to value for money and provides evidence that the system is working hard to achieve the best results. However, five others suggested that these procedures involve excessive administrative burdens and weaken value for money, especially for smaller projects (this is discussed in greater detail in section 6).

Three interviewees cited wider evidence of the high benefit-cost ratios of environmental projects, including evidence collected by the Natural Capital Committee on ecosystem restoration[51] and studies of the benefits and costs of the Natura 2000 network[52].

[51] Natural Capital Committee (2015) Third Report on The State of Natural Capital - Protecting and Improving Natural Capital for Prosperity and Wellbeing found benefit cost ratios of 2 or 3:1 for saltmarsh restoration, 4:1 for peatland restoration, 5:1 for woodland planting and up to 9:1 for restoration of inland wetlands.

[52] Summarised in Milieu, IEEP and ICF (2016) Evaluation Study to support the Fitness Check of the Birds and Habitats Directives. Final Report, March 2016

Table 3.13 Projected unit costs of habitat restoration targets

Start year	Project	Habitat	Actions[1]	Project budget[2]	LIFE funding	Hectares restored/ conserved[2]	£/ha[3]
2017	SoLIFE	Sand dunes	Restoration	€4,729,029	€ 3,456,771	1515	2,738
2017	DuneLIFE	Sand dunes	Restoration and conservation	€8,522,712	€ 5,113,627	4400	1,699
2016	LIFE Welsh Raised Bogs	Raised bog	Restoration	€5,484,422	€ 4,106,623	830	5,796
2016	Pennine PeatLIFE	Blanket bog	Restoration	€6,502,762	€ 3,849,735	1353	4,216
2015	Marches Mosses BogLIFE	Raise bog	Restoration	€7,141,352	€ 5,356,014	665	9,420
2015	BureLIFE	Eutrophic lake	Restoration	€5,004,346	€ 3,002,608	36.5	120,268
2015	MoorLIFE2020	Blanket bog	Restoration and conservation	€15,996,416	€ 11,984,887	9500	1,477
2013	Cumbrian BogLIFE+	Raised bog	Restoration	€6,582,236	€ 3,292,618	507	11,388
2013	THAT'S-LIFE	Raised bog	Raised bog	€5,592,243	€ 2,638,276	3273	1,499
2008	MoorLIFE	Blanket bog	Restoration	€6,690,856	€ 5,018,142	893	6,572

Notes: Caution is needed in interpreting the results as projects involved varying challenges and techniques, and most included actions other than restoration, such as public awareness raising. 1. Most projects focused on restoration of degraded habitats but some involved maintenance actions; 2. Restoration projects may require additional expenditures from other public budgets, e.g. the agri-environment programme. 3. These are estimated overall restoration targets; some projects involved different targets for smaller areas, e.g. for hydrological restoration, clearance of trees/scrub/IAS; 4. Using current (Feb 19) exchange rate of £1 = EUR 1.14.

4 Role of LIFE in the funding landscape

4.1 LIFE compared with other funds

LIFE co-exists with other UK and EU programmes and schemes that offer funding to address environmental issues. Examples are the National Lottery Heritage Fund (NLHF), agri-environment schemes (AES) and INTERREG. LIFE is distinct from these funding streams in supporting multi-million pound projects that have a primary focus on the environment. With the exception of the NLHF, other funding sources tend to offer smaller scale funding with only a limited focus on specific environmental challenges. As other funding sources are also partially EU-based (e.g. INTERREG 5A, AES), there is uncertainty over whether UK organisations will be able to access them, or equivalents, beyond EU exit. Other funding sources (such as AES) may also be less versatile than LIFE in addressing environmental priorities.

This section provides a brief overview of the principal UK and EU funding streams mentioned by beneficiaries that are relevant to environment and climate. It primarily focuses on nature and environmental funding schemes. Funds referenced are the National Lottery Heritage Fund, agri-environment schemes, INTERREG, the Esmée Fairbairn Foundation, ERDF Axis 6 and the Conservation and Enhancement Scheme (administered by Natural England).

National Lottery Heritage Fund

Key characteristics:

Grant size available: £3,000 to £10,000,000

Funding source: National Lottery (UK)

Types of projects funded: Heritage (including nature and landscapes)

Types of beneficiaries: Non-profit organisations (including NGOs, community groups and local authorities), private owners of heritage

UK countries eligible: All

Average project duration: Multi-year

The National Lottery Heritage Fund (NLHF), formerly known as the Heritage Lottery Fund, was highlighted by LIFE beneficiaries interviewed as LIFE's nearest alternative funding stream in the UK. However, the fund is not limited to environmental projects but funds all types of heritage (e.g. historic buildings, museums). This leads to greater competition among beneficiaries seeking support for their environmental projects as they are competing for the same pot of funding. In addition, the NLHF's annual budget has been affected by a decline in National Lottery income while it is currently experiencing increased demand.

The NLHF was established under the National Lottery Act 1986 and is the largest dedicated funder of heritage in the UK. The NLHF is a non-departmental public body[53]. It supports non-profit organisations and partnerships led by non-profit organisations. Individual grants range in scale from £3,000 to £10 million. As well as supporting heritage (e.g. art, buildings), the NLHF disburse grants and loans for the

[53] DDCMS, 2018. Heritage Lottery Fund Policy Directions. Available at : https://www.gov.uk/government/consultations/heritage-lottery-fund-policy-directions-consultation

purpose of acquiring, maintaining or preserving land, which is of "outstanding scenic, historic, aesthetic, archaeological, architectural or scientific interest"[54]. However, funding for specific environmental issues beyond land maintenance and preservation appears to be much more limited.

"There is a need for a nature specific fund, nature is declining and is continuing to decline…the LIFE fund is about nature and the Heritage fund is about people…[we've] got to have something but there's got to be ways to improve it and make it more accessible" - Stakeholder interview, NEFG member

Since 1994, the NLHF has invested a total of £7.1bn in 40,000 heritage projects.[55] Between 1994 and 2017, around 10% of NLHF total grants were allocated to landscape and nature projects (3,605) for a total value of £765m. This was divided between biodiversity projects (£548m) and Landscape Partnerships (£227m). Activities ranged from direct conservation work to engaging audiences, training, learning about nature, citizen science, volunteering, recording biodiversity and other participatory activities.[56]

The NLHF's Heritage Lottery fund is estimated to have spent £775 million on nature projects between 1994 and 2017[57], with current annual expenditure estimated at £47.5 million[5859]. This exceeds LIFE's budget for UK Nature and Biodiversity projects; approximately €31m annually (c.£26.5m).[60]

The NHLF has provided funding to conservation organisations such as National Trust, Woodland Trust and The Wildlife Trusts. The Wildlife Trusts, for example, have delivered 600 projects across the UK exclusively through NLHF funding. These have enabled the transformation of natural areas ranging from city roadside verges to large areas of land and coast.[61] Nevertheless, nature projects receive a minority of the total funding pot[62]. Conservation organisations across the UK highlighted the challenges of accessing NLHF funding in competition with a wide range of other priority areas such as cultural traditions, heritage of language and community archaeology.

[54] HLF, 2018. Heritage Lottery Fund. National Heritage Memorial Fund Lottery Distribution. Annual Report and Accounts for the year ended 31 March 2018. Available at : https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/731175/Heritage_Lottery_Fund_ARA_2017-18.pdf

[55] HF, 2019. What we do. Available at: https://www.heritagefund.org.uk/about/what-we-do

[56] Harding, 2017. What has Heritage Lottery Fund done for nature? Available at : https://www.heritagefund.org.uk/sites/default/files/media/publications/what_has_heritage_lottery_fund_done_for_nature.pdf

[57] Harding, 2017, Op. Cit.

[58] RSPB, 2018. Ask the Heritage Lottery Fund to continue funding nature. Available at: https://community.rspb.org.uk/getinvolved/naturesheroes/b/weblog/posts/ask-the-heritage-lottery-fund-to-continue-funding-nature [last consulted on 1 February 2019]

[59] Harding, 2017, Op. Cit.

[60] This is based on the current work programme (2014-207) and is calculated based on indicative allocations for projects per country against the total Environment budget. 2014/203/EU: Commission Implementing Decision of 19 March 2014 on the adoption of the LIFE multiannual work programme for 2014-17 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014D0203&from=EN

[61] The Wildlife Trusts, 2019. The National Lottery Heritage Fund. Available at: https://www.wildlifetrusts.org/partnerships/thenationallotteryheritagefund

[62] RSPB, 2018. Ask the Heritage Lottery Fund to continue funding nature. Available at: https://community.rspb.org.uk/getinvolved/naturesheroes/b/weblog/posts/ask-the-heritage-lottery-fund-to-continue-funding-nature [last consulted on 1 February 2019]

"I think a LIFE-like fund is needed, with the Heritage Lottery Fund, we are competing against all other types of heritage - storytelling, language, historic buildings, museums." - Stakeholder interview, DEFRA family

NLHF funding is currently under pressure. While the number of applications increased by 10% in 2016, the funding pot was expected to decline from £300m in 2017/2018 to £190m in 2018/19.[63] This is estimated to represent a reduction in support for natural environment projects of £27.5m (from £75m to £47.5m) according to the RSPB[64].

In spite of increasing demand, the release of the NLHF's Strategic Funding Framework for 2019–2024 highlights landscapes and nature as a priority area of focus for the years to come[65]. Although an increase in the share of funding allocated to landscapes and nature is not explicitly stated in the report, NLHF's commitment to prioritise projects based on their environmental impacts indicates an increase in appetite to fund nature conservation and restoration projects.

Agri-environment schemes

Key characteristics:

Grant size available: Varies, depending on chosen options. Agreements can include annual management payments and capital grants

Funding source: EU Common Agricultural Policy (CAP) Pillar 2 budget and UK Government

Types of projects funded: Environmental land management, conservation and restoration

Types of beneficiaries: Farmers, foresters and landowners

UK countries eligible: All

Average project duration: 5 to 10 years

Agri-environment schemes (AES) offer a significant source of funding for environmental land management. However, AES funding, while much larger in scale than LIFE, is less focused on specific environmental priorities (such as Natura 2000 and species recovery). Eligibility rules also make it less versatile than LIFE in delivering the range of actions needed to meet environmental priorities.

Evaluation studies of AES in the UK have highlighted that AES have only been partially successful in delivering solutions to specific issues at the site and local level.[66] In Wales, AES are reported to have been only partly successful in achieving their aim of "maintaining and enhancing species abundance".[67]

While AES provide the largest source of funding for environmental land management in the UK, they are unable to fund the same type of activities that can be financed through LIFE, and which are often necessary for the successful conservation of a habitat or species. For example, LIFE funded habitat restoration projects have involved a wide range of actions such as surveys and monitoring, awareness raising, education, training, stakeholder engagement, testing and demonstration of

[63] HLF, 2018, Op. Cit., p.5

[64] RSPB, 2018, Op. Cit.

[65] The National Lottery Heritage Fund, 2019, Strategic Funding Framework 2019-2024 https://hlf-live.axis12.com/sites/default/files/media/attachments/Heritage%20Fund%20-%20Strategic%20Funding%20Framework%202019-2024.pdf

[66] Natural England, 2009, Op. Cit.

[67] MacDonald et al., 2019. Have Welsh agri-environment schemes delivered for focal species? Results from a comprehensive monitoring programme. Journal of Applied Ecology. https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2664.13329

management techniques, as well as land management actions, whereas the focus of AES is on the last of these.

Esmée Fairbairn Fund

Key characteristics:

Grant size available: c.£30,000

Funding source: Grant funding

Types of projects funded: Advocacy, conservation activities, research

Types of beneficiaries: National Park managers, NGOs

UK countries eligible: All

Average project duration: 0.5 to 5 years

The Esmée Fairbairn Fund is one of the largest independent grant making foundations in the UK, making grants to organisations which aim to improve the quality of life for people and communities in the UK, both now and in the future. In 2017, the Foundation provided grant funding totalling £40.5 million to a range of projects concerned with the arts, children and young people, the environment and social change. However, as with other funding streams, there is a limited focus on the environment. Of the £8 million allocated to environment projects, representing 45 grants, only £1.4 million targeted nature conservation on land and at sea[68].

Horizon 2020

Key characteristics:

Grant size available: Varies by topic, typically EUR 5-10 million (c.£4-£8.5m) in the current work programme for the Climate action, environment, resource efficiency and raw materials societal challenge

Funding source: Horizon 2020 is the major EU financial instrument implementing the EU Innovation Union

Types of projects funded: Research and development

Types of beneficiaries: All. Many calls require a team of at least three partners.

UK countries eligible: All

Average project duration: Varies, typically 2-5 years

Horizon 2020, is the EU's framework programme for research and innovation. The current programme runs between 2014 to 2020 with a €77 billion (c.£66bn) budget across the EU. Horizon 2020 has three mutually reinforcing priorities dedicated to: (a) excellent science – aiming to boost top level research in the EU; (b) industrial leadership – by supporting R&D in new technologies and SMEs; and (c) societal challenges – supporting research that addresses major social, environmental and economic issues and challenges. Environmental R&D projects can potentially be funded under all three priorities, though the main focus on the environment is through the societal challenges theme. This includes a "climate action, environment, resource efficiency and raw materials" challenge, which is allocated a budget of €3.1 billion (c.£2.6bn) over the 2014 to 2020 period, roughly 4% of the Horizon 2020 budget, and will address a range of challenges related to ecosystems, raw materials, eco-

[68] Esmeefairbairn, 2017. Annual Report & Accounts 2017. Available at: https://esmeefairbairn.org.uk/userfiles/Documents/Resources/2017-Annual%20Report%20and%20Accounts%20.pdf

innovation, global environmental observation and information systems as well as climate change. Horizon 2020 is therefore a major source of funding for environmental research and innovation.

Whereas LIFE is designed to support practical projects designed to contribute to and inform application of environmental policy, Horizon 2020 has more of a research focus. For example, topics currently being supported under the climate action and environment challenge[69] include integrated assessment modelling in support of climate policy, research into the human dynamics of climate change, research into the inter-relations between climate change, biodiversity and ecosystem services, and nature based solutions for forest fire risk reduction. It is possible that projects supported by Horizon 2020 could lead to proposals for practical demonstration projects that would then be funded by LIFE. While the future of EU research and innovation funding in the UK is uncertain, non-EU countries are able to participate in the programme.

European Regional Development Fund (ERDF)

Key characteristics:

Grant size available: Varies widely and includes € multi-million capital projects

Funding source: ERDF is a major European Structural and Investment Fund

Types of projects funded: Investments to enhance economic and social cohesion, including by addressing climate change and environmental priorities

Types of beneficiaries: Any legally constituted body, private, public or voluntary sector

UK countries eligible: All

Average project duration: Typically 1-5 years

The European Regional Development Fund (ERDF) is the largest EU Structural and Investment Fund and aims to strengthen economic and social cohesion in the European Union by correcting imbalances between its regions. The ERDF aims to support economic development and job creation, focusing its investments on several key priority areas. The ERDF has nine priority axes, of which Priority Axis Four focuses on the low carbon economy, Priority Axis Five on climate adaptation, and Priority Axis Six on the environment and resource efficiency.

ERDF has an EU budget of EUR 199 billion (c.£170bn) between 2014 and 2020. There are regional Operational Programmes in England, Scotland, Wales and Northern Ireland, with expenditure amounting to EUR 3.6 billion (c.£3bn) in England in the 2014-2020 programme period. This includes allocations of EU funding amounting to EUR 763 million (c.£652m) to Priority 4, EUR 87 million (c.£74m) to Priority Five and EUR 90 million (c.£77m) to Priority Six over the seven-year programme period. Under Priority Axis Six, the programme in England is able to fund environmentally friendly production processes and resource efficiency in SMEs, protection and enhancement of biodiversity, nature protection and green infrastructure, and rehabilitation of industrial sites and contaminated land. Under Priority Axis Four, ERDF is investing in renewables, energy efficiency, sustainable transport and research and innovation infrastructure.

ERDF could therefore provide substantial volumes of funding for the environment, including for large-scale projects such as those funded under LIFE. However, whilst such funding is potentially available for environment projects, it depends on the extent

[69] http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-climate_en.pdf

to which environment is prioritised in spending allocations. Interviewees commented that the economic development focus of ERDF can limit its application to environmental projects, unlike LIFE which focuses primarily on environmental priorities (although demonstration of ecosystem service benefits may aid demonstration of economic benefit). Notably, ERDF spending priorities are set by Local Enterprise Partnerships, a high number of which have not prioritised Axis Six, which clearly limits the extent to which ERDF can be used for environment projects. The UK will no longer receive ERDF funding if it exits the EU.

EU INTERREG

Key characteristics:

Grant size available: €1-€35million[70]

Funding source: European Regional Development Fund (ERDF)

Types of projects funded: cross-border co-operation, transnational and interregional programmes

Types of beneficiaries: varied e.g. enterprises, scientific organisations, NGOs, international organisations

UK countries eligible: All but opportunities depend on priorities defined in each programme

Average project duration: From 2 to 8 years

INTERREG is a European Union instrument that supports cooperation across borders through project funding. 2014-2020 is the fifth period of INTERREG (termed INTERREG 5). It has a total budget of €10.1 billion (£8.6bn) funded by the European Regional Development Fund (ERDF) divided among several cooperation programmes. Its goal is to jointly tackle common challenges and find shared solutions in fields such as health, environment (e.g. developing a bio-cultural heritage tourism[71]), research, education, transport and sustainable energy (e.g. tidal energy technology development[72]).

The ability of INTERREG to finance environmental projects depends on whether this is prioritised in regional programmes. For example, Northern Ireland, through the cross-border strand, INTERREG 5a[73], has a dedicated budget to fund environmental projects as one of its four core priorities.

Stakeholders based in Northern Ireland highlighted that INTERREG funding is tailored to regional environmental priorities[74] and specific calls focused on these priorities. Therefore, competition among applicants was perceived to be low and chances of success were high. In addition, the match funding rate was up to 85% and Irish and Northern Irish governments agreed to provide the remaining 15% if required. This may explain the limited use of LIFE during the current programme period in Northern Ireland compared to other devolved nations.

[70] Based on Interreg 5a funded projects.

[71] https://www.channelmanche.com/en/projects/approved-projects/bio-cultural-heritage-tourism/

[72] https://www.channelmanche.com/en/projects/targeted-projects/

[73] As part of INTERREG 5 for the 2014-2020 period and its cross-border strand (Interreg A). SEUPB, 2016. INTERREG 5a Programme Overview. Available at: https://www.seupb.eu/iva-overview

[74] The IVA programme was jointly designed and agreed between regional governments (Northern Ireland, Western Scotland and Irish Border counties) and the European Commission

Other UK funding schemes:

The Conservation and Enhancement Scheme (CES) is a nationally funded scheme managed by devolved administrations which aims to achieve favourable condition on the 6% of Sites of Special Scientific Interest[75] (SSSI) where Countryside Stewardship cannot be used. In England, CES is managed by Natural England and is directed at owners and occupiers of SSSI, and occasionally on adjacent land. Therefore, limiting the number of potential beneficiaries. Although it may fill in some of the gaps of the LIFE programme, the CES is a small fund in comparison (£500,000 is allocated annually).

The majority of stakeholders interviewed were involved with the Environment sub-programme of LIFE and had limited experience of alternatives to the LIFE Climate sub-programme. However, it is clear that relatively large-scale funding is available to address the challenge of climate change. Following the Clean Growth Strategy published in 2017, the government committed to invest over £2.5 billion in research, development and demonstration of low carbon energy, transport, agriculture, and waste technologies. This includes, among others, £505 million from the BEIS Energy Innovation Programme for the 2015-2021 period dedicated to projects aiming at accelerating the commercialisation of innovative clean energy technologies and processes[76] (BEIS, 2016).

The Industrial Strategy Challenge Fund (ISCF) is part of government's Industrial Strategy, the long-term plan to raise productivity and earning power in the UK. The fund is a core pillar in the government's commitment to increase funding in research and development by £4.7 billion over 4 years to strengthen UK science and business. It will invest in the world-leading research base and highly-innovative businesses to address the biggest industrial and societal challenges today. Under the Energy Revolution challenge, the government will invest up to £102.5 million in industry and researchers to develop smart systems that can support the global move to renewable energy. Under the Transforming Food Production challenge, up to £90 million of funding is available to help businesses, researchers and industry to transform food production and meet the growing demand, including by enhancing sustainability. Under the Transforming Construction challenge, the government will invest up to £170 million, matched by £250 million from industry, to create new construction processes and techniques, such as the development of standardised modular components from which buildings can be manufactured, helping to enhance the energy efficiency of buildings.

4.2 Funding needs and priorities

Compared to other available funds and programmes, LIFE is well suited to financing large scale and capital-intensive environmental projects. Its focus on environmental protection, the relatively large size of projects funded, its role in funding innovative and demonstration projects and the long project timescales make LIFE unique. It is seen to be particularly valuable in financing major habitat restoration projects. Stakeholders comment that LIFE offers the stability and scale needed to get "ideas off the ground" and "projects up and running".

[75] Conservation designation denoting a protected area in the United Kingdom and including national nature reserves, Ramsar sites, Special Protection Areas, and Special Areas of Conservation.

[76] Projects cover five different themes including smart systems, built environment, industrial decarbonisation and carbon capture, use, and storage (CCUS), nuclear innovation, and cross-cutting technologies.

LIFE fills gaps in funding through building collaboration, encouraging civic engagement, fostering innovation and implementing policy. There is a general concern among stakeholders that the losing access to LIFE would leave a significant gap in the funding landscape, particularly in relation to species recovery and habitat restoration.

The majority of stakeholders interviewed acknowledged that LIFE is one of the most important funding streams for the environment in the UK. It provides dedicated environment funding whereas other funding streams prioritise economic and social issues or other focus areas (e.g. the historic environment). The LIFE programme has a strong focus on Natura 2000 and nature conservation. It supports relatively large-scale projects while providing opportunities for smaller organisations who may have limited options elsewhere (e.g. Horizon 2020 focuses on research and development and typically requires a consortium[77]).

Unique attributes of LIFE that were highlighted during interviews are:

- LIFE allows to build **collaboration** which brings sectors (outside public organisations) in a collaborative process.
- LIFE 'encourages civil society **engagement**.
- LIFE has greater focus on **policy implementation** than other funding sources.
- LIFE fosters **innovation** and supports demonstration projects.

In 2018, the RSPB stressed that LIFE has a "vital role in holding back destruction of the environment and loss of endangered species" and highlighted the risk of losing endangered species if no replacement mechanism is found after Brexit (McKie, 2018). Nature conservation and species recovery are also highlighted as key priorities for the 25 Year Environment Plan as part of the Government's commitment to protect and recover nature.

LIFE's central role in driving improvements in the protection of species and habitats across the UK has also been stressed by independent academic reviews and publications. For example, a review exploring the potential effects of an EU exit on the environment cited EU LIFE's Bittern project as having enabled the recovery of this bird species in the UK. The number of breeding males increased from just 11 to almost 150 between 1997 and 2015 following restoration projects funded by the EU LIFE fund[78].

Many stakeholders noted that there is currently no alternative fund that targets species and habitats specifically. Interviewees acknowledged that LIFE's disappearance would create a "significant gap" in the UK funding landscape, leaving Natura 2000 sites specifically in a "very perilous position". Other funding streams which support wider landscape conservation, such as INTERREG, may also disappear following EU exit.

Most interviewees were unsure about the precise value of funding that would need to be made available to compensate for the loss of access to LIFE, but suggested that funding of a similar magnitude to present levels would be justified given national environmental ambitions and policy challenges.

"The level of the previous national allocation would at the least need to be maintained...Bearing in mind the commitment in the Government 25-year plan which

[77] LIFE Orientation document 2014

[78] Jennings, 2017. Brexit and nature conservation: an opportunity or a threat?

offers a good baseline of what still needs to be done. We would need to factor in some more money if we were to address the environment plan ambition in the marine sector, which is costly too." - Stakeholder interview, project beneficiary

The specific gaps created by the absence of LIFE funding are discussed in more detail in section 7.1 which explores the alignment of the LIFE programme to UK priorities.

5 EU Added Value

The ability to participate in transboundary (i.e. cross-border) projects is a perceived added benefit of being part of an EU wide LIFE programme, enabling the UK to share expertise and experience with other countries and to collaborate on common challenges. This section explores the transboundary projects involving UK organisations, either as project leads or partners, and the perceived benefits to the UK and other Member States.

5.1 Transboundary projects

Between 2007 and 2017 UK organisations were involved in 45 transboundary projects, either as lead or partner organisations[79]. Transboundary projects address common challenges that face multiple Member States. Most transboundary projects involved the exchange of knowledge and expertise. Examples of these are intelligence sharing to improve waste reduction (SWEAP) and network building to reduce large-scale pollution (ENPE). A small number of transboundary projects sought to restore habitats and conserve endangered species across Member States.

Between 2007 and 2017, nearly half (45) of the 99 projects in which a UK organisation has been a LIFE funding recipient involved cooperation with at least one other organisation outside the UK. A UK-based organisation led 17 of these projects and was a supporting partner in the other 28.

Table 5.1 provides an overview of the various issues tackled by transboundary projects that had UK involvement during the 2007-2017 period (for a full list of transboundary projects, see Annex 1). The majority of transboundary projects involved partnerships between industrial companies and scientific organisations focusing on technological developments, improvements in production processes to reduce waste and hazardous substances, and environmental management and tool development.

Due to the UK's island status, only a limited number of projects involved cross-border cooperation to address challenges linked to common habitats (an example being marine habitats with the Celtic Sea Partnership projects) or species (such as the Roseate tern project).

Table 5.1 Transboundary projects involving the UK as main project coordinator or beneficiary (2007-2017)

Category	Project examples
Waste	
Waste recycling or reduction	*EQual SynSpirit*
Waste crime	*Smart Waste, ENPE, SWEAP*
Municipal waste	*EWWR*
Industry	
Industry production and waste	*RECYMAGNET, Eucalyptus Energy, REFRESHMENT*
Industrial production and hazardous substances	*REACH for Polymers, AETHER, SIRENA, REACHnano, ClosedLoopCarpet, APEX*

[79] These were derived from analysis of the LIFE project database

Category	Project examples
Environmental management and tool development	*Rebus, CISDP, TACKLE, Fresh Box, LIFE-BRIO*
Energy efficiency industry	*HEO, BEVERAGE*
Industry processes to reduce GHG emissions	*REAL Alternatives 4 LIFE, SOLID, SF6-FREE*
Renewable energy	*BLUETEC*
Conservation/restoration	
River restoration	*RESTORE*
Biodiversity	
Biodiversity – invasive species	*IAP*
Risk management and biodiversity	*Laser Fence*
Endangered species	*EuroSAP*
Birds	*Euro Bird Portal, Roseate Tern*
Food and agriculture	
Agriculture	*ADVICLIM*
Food	*SU-EATABLE*
Water and air quality	
Air quality	*AIRUSE, LIFE Living Streets, CLINSH*
Water quality	*DEMINE, SmartWater*
Governance	
Data sharing and information systems with the public sector	*CLEAR Info*
Environmental accounting within the finance sector	*PACTA*
Marine	
Marine governance	*PISCES, CSP*

Source: LIFE project database

5.2 Perceived benefits of transboundary networking and collaboration

Transboundary projects identified by UK beneficiaries and NGOs have enabled projects to pool resources and capabilities, share expertise and identify best practices, co-ordinate and promote joined up approaches to common challenges and raise awareness of issues among wider groups. Many of the project examples identified are still in the delivery phase and so there is uncertainty about whether these benefits have materialised.

While transboundary projects are perceived to provide opportunities for the UK to share knowledge and expertise with actors in other Member States, there are examples of two-way knowledge sharing between UK organisations and those from other Member States, such as in relation to peatland restoration.

The main benefits of taking part in transboundary projects identified in consultations are:

- **Providing opportunities to combine resources to tackle common challenges** that Member States cannot address on their own (e.g. the effects of climate change on migratory routes[80]).

Example: PISCES project (Partnerships Involving Stakeholders in the Celtic sea Eco-System)[81]

Countries involved: UK, Ireland, Spain, France

Description: The project worked closely with stakeholders across four Member States to test collaborative methodologies to jointly explore ways of governing and managing activities in the Celtic Sea more sustainably.

Outcomes: PISCES was considered to be a success. It resulted in increased trust and understanding among stakeholders and helped give them the confidence to communicate and endorse the ecosystem approach. The project was also reported to be innovative in its transboundary nature as it brought together stakeholders not just from different sectors but from different countries, cultures and languages[82].

- **Sharing expertise and identifying best practices** on how to tackle shared problems. One beneficiary mentioned being "*always surprised by how the same conversations are happening in different countries*". Another beneficiary reported that there are significant gains from collaboration for smaller countries like Wales. For example, when managing Natura 2000-designated sites: "*you can learn a lot from what's happening elsewhere in the EU*".

Example: Laser Fence project[83]

Countries involved: UK, Netherlands, Spain

Description: The LIFE Laser Fence project is being led by a UK university. Its aim is to develop a virtual fence to keep animals away from farmland, using innovative laser technology as an alternative to chemicals or harmful barriers. The technology was developed by a partner in the Netherlands and will be trialled in Scotland, the Netherlands and Spain.

Example: CLINSH[84]

Countries involved: UK, Belgium, Germany and the Netherlands

Description: CLINSH is a consortium involving Dutch, Belgian, German and English public and private organizations working together. The objective of LIFE CLINSH is to improve air quality in urban areas situated close to ports and inland waterways by accelerating inland waterway navigation (IWT) emission reductions. Thirty ships have been selected and adjusted with various emission reduction techniques to test whether this improves air quality.

- **Co-ordinating and promoting standardised guidance and approaches** to shared European challenges (e.g. waste and species conservation).

[80] Environment and biodiversity issues do not take into account boundaries or frontiers i.e. air pollution, marine habitats, migratory species

[81] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3281

[82] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.showFile&rep=file&fil=LIFE07_ENV_UK_000943_LAYMAN.pdf

[83] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5789

[84] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5782

Example: SWEAP - Shipments of Waste Enforcement Actions Project[85]

Countries involved: All Member States

Description: The project aims to better detect, disrupt and prevent illegal waste trafficking. Its target is to increase the membership base taking part in enforcement actions through the 'European Union Network for the Implementation and Enforcement of Environmental Law' (IMPEL). The project is seeking a more uniform application of the Waste Shipment Regulation to address illegal waste trafficking. Activities include the development of a new inspection app, the organisation of webinars, an online training toolkit and inspection exchange programmes for officers.

Example: LIFE14 Roseate Tern[86]**:**

Countries involved: UK and Ireland

Description: The overall goal of this project is to improve the conservation prospects of the roseate tern (*Sterna dougallii*) in the UK and Ireland. Both countries are collaborating to enhance habitat management, improve the understanding of key issues affecting roseate terns, and develop joint guidance and plans. These activities are expected to contribute to a broader strategy and implementation of a longer-term goal to improve the conservation status of the northwest European metapopulation of roseate tern.

- **Raising awareness** about pan-European issues (e.g. pollution) among policy makers, practitioners and experts.

Example: RESTORE project[87]

Countries involved: UK, Finland, Italy and the Netherlands

Partnership members: Austria, Belgium, Bulgaria, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Northern Ireland, Norway, Poland, Portugal, Romania, Scotland, Slovenia, Spain, Sweden, Wales

Description: The RESTORE project brought together best practice in river restoration from across Europe, building additional network capacity, and raising awareness of good practice river restoration in Europe. It provided a network and platform for policymakers, river basin planners, practitioners and experts to share information and good practice on river restoration activities. The RESTORE partnership developed a website, produced a monthly bulletin and set-up a RiverWiki: an interactive database of case studies. The partnership took part in and hosted over 30 seminars and conferences.

Results: Through these activities the project helped to raise the profile of river restoration work with policy makers in Europe and, through reviews of policy drivers and case studies, to demonstrate the benefits of river restoration[88]. Since the end of the project, the wiki has been managed by the River Restoration Centre and the network and website is hosted by the European Centre for River Restoration.

UK LIFE beneficiaries tend to perceive the benefits of transboundary projects to be one-sided. When asked about the benefits of transboundary projects, interviewees often reported the benefits that other partner countries have received. The assumption is that the UK sometimes has more to offer than to learn from others.

[85] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6842

[86] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5346

[87] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3780

[88] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.showFile&rep=file&fil=LIFE09_INF_UK_000032_LAYMAN.pdf

"The UK is ahead […] on a lot of issues so has perhaps not learnt as much as from other countries, […] but exchange of ideas and experience has been interesting" - Stakeholder interview, beneficiary.

However, when probed, there are cases where LIFE projects have involved opportunities for the UK to learn from others; even where the UK is already a lead expert (e.g. peatland conservation and restoration). Examples given were:

- **The Futurescapes** project: involved development and implementation of landscape-scale conservation initiatives through contributions from 144 partnerships across Member States.
- **Unlocking the Severn** project: involved knowledge sharing and re-connecting people to nature by establishing a transnational exchange of best practice to protect twaite shad populations across Europe.
- The **Network of Prosecutors for the Environment**: built a self-sustaining network of environmental prosecutors across 25 countries to apply ENPE best practice in environmental crime work.

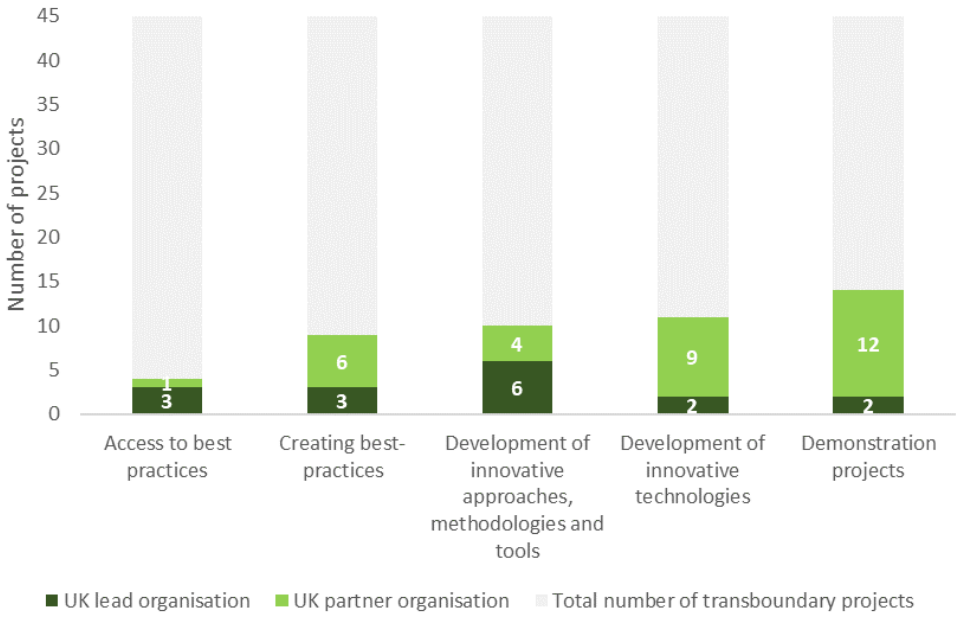
"The UK is seen as a leader with respect to peatlands so maybe has more to offer than to learn from others, but there are definitely common issues and [we] can learn from other Member States" - Stakeholder interview, project beneficiary.

5.3 Benefits of innovative and demonstration projects in other countries

The research identified a few examples of cases where the UK organisations have learned from innovative and demonstration projects funded by LIFE in other Member States. Most interviewees acknowledged that projects enabled them to gain "new ideas" and "responses to shared problems". However, there is limited evidence of the application of innovative and demonstrative project learning.

UK organisations are more likely to be partners than project leads when involved in innovative and demonstration projects that operate across countries (see Figure 5.1). Around 17 UK-led projects have involved the use or development of innovative approaches, methodologies and tools. On the other hand, 28 projects where a UK-organisation was a partner involved demonstration projects. This is perhaps unsurprising, given that many projects have partners in several countries.

Figure 5.1 Types of innovative and demonstration projects across countries (where a UK organisation was a lead or partner)[89]



Source: LIFE project database

Overall, innovative and demonstration transboundary projects, reported by beneficiaries, focus on the development of new ideas. Where there is evidence of the application of learning from these types of projects, it relates to technological improvements and new approaches to tackle shared problems. One example is the LIFE SynSpirit project[90], the aim of which is to demonstrate a new anaerobic fermentation process. This connected a biological anaerobic digestion process for crude glycerine with the sustainable thermochemical production of bio-methanol, based on high quality glycerine.

One LIFE beneficiary mentioned that they had gained valuable experience from research led by a German LIFE project to develop trials for growing sphagnum. They noted that LIFE allowed them "to apply the science while trying new things, testing them and sharing knowledge". Another mentioned having been inspired by the approach used by Spanish nature organisations to convert railway tunnels into routes for bats.

Other examples of the application of demonstrative projects include the demonstration of a full-scale one mega-watt tidal energy installation (BLUETEC[91]) and the creation, at industrial scale, of a new type of cement that has significantly lower CO_2 emissions than conventional cement (AETHER[92]).

[89] Figures are based on key words mentioned in project descriptions such as "best-practices", "innovation", "demonstration". Figures do not sum to 45 as projects can involve more than one type of innovation or demonstrative activity.

[90] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4930

[91] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3640

[92] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3718

6 Lessons learned from LIFE delivery process

6.1 Process of administering the programme

This section describes the evaluation's findings regarding the delivery and administration of the LIFE programme. The evidence used is primarily supplied by consultations with stakeholders supplemented by documentary evidence. It considers the following stages of the project lifecycle:

1. Application, assessment and project selection procedures.
2. The grant management process.
3. The role of the national contact point.
4. Financing arrangements, including match funding and auditing.
5. Partnership working.
6. Monitoring and evaluation arrangements.

6.2 Application, assessment and project selection procedures

The application process involves the submission of project administrative and financial information, a project description and a technical description of the proposed activities and expected results. The submission deadline is approximately nine months after the publication of the call for projects. For the LIFE Environment sub-programme, as of 2018, there is a two-stage application process in which the applicant must submit a concept note and then, if successful, submit a full proposal. Awards and grant agreements are finalised approximately six months after submission.

There is a general consensus among beneficiaries that the process is time consuming and resource intensive, although this is typically accepted in the context of the anticipated benefits from the size and scale of the grant received.

LIFE applications require the submission of detailed information and are therefore often time consuming and resource intensive to prepare. There is a general consensus among beneficiaries that the process is burdensome and challenging, though these costs are typically accepted in the context of the anticipated benefits from the size and scale of the grant received.

Some stakeholders argued that the process is in line with expectations for EU funded projects and can be justified for a large scale programme disbursing large amounts of funding. One stakeholder noted that the detailed nature of the application process and level of planning required at an early stage had helped to facilitate the high success rate of LIFE projects in the UK.

The introduction of a two-stage application process under the Environment programme was intended to reduce some of the resource burden to applicants. Beneficiaries, NGOs and DEFRA stakeholders expect this change to be helpful in reducing risk and resource burden and attracting smaller partners. It is too early to say whether it has had the desired impact.

Beneficiaries reported some challenges in interacting with the Commission during the process. The online interface used by the Commission is somewhat antiquated.

Beneficiaries had experienced challenges contacting individuals prior to submission and long wait times before finding out whether they had been awarded funding.

"The online system is onerous and antiquated…it's been by far the most cumbersome grant application process [I've] been involved in. It is hard to get in touch with people in the Commission." - Stakeholder interview, Beneficiary

JNCC reported that the average length of a full stage application is between 70-100 pages, though beneficiaries report having to submit much larger documents. For the Environment Sub-Programme, an initial 10-page concept note must be submitted prior to a full stage application. While the level of detail required of applications is generally accepted by beneficiaries, the representatives of Defra and devolved nations interviewed for this evaluation noted that this can be particularly challenging for small organisations who have limited resource and capacity, and for those with less experience of the EU bid process. This is a challenge that is also observed within other parts of the delivery process such as the monitoring requirements and commitment to match funding.

6.3 The grant management process

The grant management process includes financial and monitoring arrangements, partnership activities and liaising with the national contact point and European Commission. The process of grant management is seen to be time consuming and often onerous, particularly the requirements to provide financial data and monitoring information to the EC. Beneficiaries recognise the need for a rigorous approach to grant management, but express varying views about whether the burdens are reasonable.

Beneficiaries generally reported positive experiences of the grant process from the disbursement of funding through to the monitoring and reporting requirements. However, they noted that information required is often very prescriptive and detailed and sometimes confusing. One NGO noted that situations 'on the ground' can change significantly between project inception and delivery and LIFE programme management processes are not always adaptive. However, the level of detail was consistent with what would typically be expected when dealing with applications for large grants.

Both beneficiaries and stakeholders within the Defra family raised some concerns about receiving conflicting advice from those at the Commission and their monitoring officers. Guidance and forms are not always clear or written in plain English. Guidance was reported to have changed more than once, creating challenges for organisations in interpreting the requirements.

"There have been changes in guidance and forms that are not always well communicated – this has led to time being wasted… [I have] some concerns that guidance changes may be interpreted differently – this creates some uncertainty as to what is expected from the project" - Stakeholder interview, Beneficiary

Having a named contact at NEEMO (the LIFE external monitoring organisation) has been particularly helpful for some beneficiaries to mitigate some of these challenges and to identify constraints and risks at an early stage. This is a view reiterated by stakeholders within the Defra family. This is reinforced in the mid-term evaluation of LIFE, which notes the ability of monitoring officers to closely follow the project progress from the earliest stages[93].

"The monitors [NEEMO] have been invaluable – employed by the Commission as a critical friend – helping with delivery and administration and ensuring that grant management works. [We] have benefited from invaluable advice and guidance." - Stakeholder interview, Defra family

As with the application stage, smaller organisations and those less familiar with the LIFE programme are more likely to struggle. Organisations need to ensure that they have the right skills and capabilities in place in order to effectively manage the grant process; one lead beneficiary noted the importance of having existing knowledge of LIFE *"you almost need to have experience of a LIFE project to be able to do it"*.

6.3.1 The role of the national contact point

In 2016 the Joint Nature Conservation Committee (JNCC) was appointed as the UK LIFE National Contact Point, a function previously performed by a private consultancy. In this capacity the JNCC offers training, expertise and support that focuses in particular on the bidding and application stage of the process.

The majority of stakeholders who had engaged with the JNCC reported that the JNCC was helpful and proactive in championing LIFE in the UK. Compared to the previous national contact point, the JNCC is perceived by beneficiaries as having more knowledge and to be more helpful in building networks and partnerships.

"The JNCC's role as national contact point is very positive – it's useful to have this dedicated and focused resource and expertise – they are very proactive and able to champion LIFE at UK level" - Stakeholder Interview, Devolved Administration

The JNCC did not need to play a large role in helping organisations that already had extensive experience in bidding for LIFE funding. A minority of project beneficiaries (predominantly charitable organisations and small agencies) felt that the JNCC had not played a significant role in their grant process. One beneficiary was concerned that JNCC had limited awareness of the project and another stated that it was unhelpful when asked specific questions about LIFE.

JNCC appears to have had a more limited role in relation to the Climate sub-programme than for the Environment sub-programme. The JNCC reported that they have been involved in fewer applications under the Climate Action programme, partly as it is a new programme.

6.3.2 Financing arrangements, including match funding and auditing

Limited match funding opportunities in the UK and LIFE's audit requirements, which are perceived to be burdensome, appear to cause significant challenges for applicants. This is particularly the case for smaller organisations and authorities with

[93] European Commission, 2017. MID-TERM EVALUATION. Report on the Mid-term Evaluation of the Programme for Environment and Climate Action (LIFE).

limited capacity and resources. The ability to recruit a dedicated financial officer under LIFE funding has helped some projects to mitigate some of these challenges.

Limited match funding opportunities in the UK and LIFE's audit requirements, which are perceived to be burdensome, appear to cause significant challenges for applicants. This is particularly the case for smaller organisations and authorities with limited capacity and resources. The ability to recruit a dedicated financial officer under LIFE funding has helped some projects to mitigate some of these challenges.

During the first multiannual programme (2014-17) of the current LIFE funding period (2014-20), all types of projects could receive up to 60% EU co-financing. Some variation has been introduced for the second multiannual programme (2018-20), with a range from 55% to 75%[94].

The co-funding that applicants need to find for LIFE projects is higher than that of some other EU and UK funding mechanisms. For example, INTERREG offers between 75% and 85% co-financing for public bodies and not-for-profit organisations. The National Heritage Lottery Fund (formerly Heritage Lottery Fund) is also able to offer funding of up to 90% - 95%, depending on the project value. One beneficiary stated that it is increasing difficult to find match funding in the UK, and that there is increased demand and competition for existing funding sources such as the National Heritage Lottery Fund.

LIFE's financial arrangement also allows for 30% of the EU's contribution to be paid upfront, and the remaining grant disbursed in tranches. The prepayment component has been received positively by the majority of beneficiaries and considered to be particularly helpful for smaller organisations which may struggle with cash flow. However, one stakeholder noted that this initial funding is still too small for some organisations who need to manage possible gaps in funding and put in some financing themselves.

Some find the financial monitoring, reporting and auditing requirements to be burdensome and inflexible. For example, there is a need to keep hard copies of documents instead of scanned or electronic copies, to adhere to strict procedures for recording time, and to adhere to specific rules for detailing expenses. Some beneficiaries identified the appointment of a dedicated and professional project manager, as well as a dedicated finance officer, as important in satisfying requirements for project monitoring, reporting and auditing

Despite the perceived burden of the financing arrangements, these requirements are recognised as an important aspect of applying for a large grant. Several beneficiaries noted that LIFE's financial procedures, like those for other EU funds, are designed to address concerns about fraud and financial mismanagement across the EU, rather than being targeted at the specific needs and priorities within the UK.

6.3.3 Partnership working

The flexibility of the LIFE programme design means that, while partnering is promoted, organisations can choose whether to run a project alone or with partners.

Beneficiaries working with partners tend to perceive the partnerships as working well (partly facilitated by the JNCC's networking activities). More often than not, these partnerships have involved local or national partners rather than organisations in other

[94] Nature and Biodiversity theme projects receive 60% increasing to 75% if the majority of costs are focused on conservation of priority species or habitats, whilst for traditional projects under the other environment themes, the climate change sub-programme, and technical assistance projects, EU co-funding is reduced to a ceiling of 55%.

Member States. The data show that 58% of UK projects operated solely within the UK between 2007 and 2017, which may explain the lack of non-UK partners. Fourteen UK-led projects have involved partnerships with other Member States.

Several beneficiaries noted that, as well as formally engaging different organisations as project partners, LIFE projects can also bring together wider stakeholder groups to address common interests and challenges. For example, habitat restoration projects have successfully worked with landowners, land managers, water companies and delivery partners to identify and address shared objectives.

Case Study: MoorLIFE 2020 – Moors for the Future Partnership, led by the Peak District National Park Authority (PDNPA)

This project aims to conserve and protect the blanket bog habitat in the Natura 2000 site within the South Pennine Moors through revegetation, raising water tables, diversification of vegetation, reintroducing sphagnum, blocking peat pipes and promoting land management best practices. The project is monitoring many aspects of the progress and success of the work and engaging with the public to encourage people to value and protect the blanket bog habitat.

Partnership working has been an essential part of the project, given the variety of landowners, land managers and delivery partners involved. The project is co-funded by three water companies. Delivery partners include the National Trust, The Southern Pennines Rural Regeneration Company Pennine Prospects, the Royal Society for the Protection of Birds as well as PDNPA.

"PDNPA doesn't own any land on the project work area, we've got to work in partnership…if we even have a chance of going to work on a piece of land. For any particular moor, you've got the owners of the land, which might be the water company, it might be the grouse moor owners, it might be the farmer…you've potentially got the National Trust. All of these different people all having a say as to whether we can work on these moors. Stakeholder management side of it is a fundamental part of this project. And the project is delivering successfully, we're on time, in budget and to scope, it's phenomenal really." Project lead

Working in partnership can also make the process longer as there are more individuals that need to be consulted. Administrative and financial procedures are often more onerous for projects which formally engage several partners.

6.3.4 Monitoring and evaluation arrangements

All projects are expected to provide and report against performance indicators. Project results are submitted through a KPI webtool with the first (progress) and final reports. These are then verified and evaluated by the Commission. NEEMO EEIG is retained under contract by the Commission to monitor LIFE projects; each project is assigned a named NEEMO monitoring officer[95].

Progress and final reports must contain information on the state of implementation of the project including the work plan, financial situation and whether project objectives have been achieved or are still achievable. This includes an executive summary, administration and financial information, progress to date and anticipated progress and overall impact achieved so far[96].

The role of both the external monitoring officers, NEEMO, and internal monitoring and finance officers are reported to be key to adhere to monitoring requirements.

[95] https://ec.europa.eu/easme/en/life-reporting

[96] Idem

However, they note further clarification of performance indicators and how these can be adapted for different types of projects would be beneficial.

The table below outlines Key Performance Indicators (KPIs) monitored and example indicators[97].

Table 6.1 Example KPIs by theme

Theme	Example indicator	Unit
Environment and climate action outputs and outcomes for each sub-theme		
Nature and Biodiversity		
Natura 2000 sites	Population of threatened species secured	population unit
Ecosystems	Natural ecosystems targeted	hectares
Environment and Resource Efficiency		
Water quality and flood resilience	Improved resilience to flooding among inhabitants	number
Energy consumption	Energy savings	kwh/year
Air quality and emissions	Air pollutants	Ppm
Environmental Governance and Information		
Waste	Waste management improvement	tonnes waste/year
Chemicals with health impact	Reduced impact of chemicals	kg/year released
Climate change Mitigation		
Greenhouse gas emissions	CO_2 emissions reduction	tonnes/year
Renewable energy	RE consumption	kwh/year
Climate change Adaptation		
Potentially affected areas	Area covered by adaptation measures	km^2
Societal outputs and outcomes		
Governance	Supervisory/ enforcement bodies involved	number
Information and awareness raising	Individuals reached	number
Capacity building	Training activities conducted	number trained
Economic outputs and outcomes		
Contribution to economic growth	Jobs created	FTE
Future funding	Availability of future funding	Value
Continuation/ replicability/ transferability	Potential for technical and commercial application	New sectors/ geographies/ entities

The KPIs required by the Commission highlight the lack of a common set of monitoring indicators. Indicators are dependent on the project theme (e.g. air quality versus

[97] These are derived from the LIFE reporting website and video tutorials https://ec.europa.eu/easme/en/life-reporting as well as the KPI guidance template

resource efficiency) and therefore there is no way to assess the performance of projects in aggregate.

There is also a risk that a project will not achieve its expected results, particularly for nature projects where external factors such as climate and weather conditions could have an impact[98]. One beneficiary noted that the requirements are quite arbitrary and not always easy to measure. Their project involved the development of a strategy to tackle a specific environmental issue through action plans, guidance documents and conducting awareness raising activities. However, the KPIs were related to tangible improvements in the environmental issue, which were longer term goals.

"We have required quantitative indicators – they are not always very easy to measure or capture impact adequately and does not always capture the heart of the issue" - Stakeholder interview, Beneficiary

Changes in guidance on monitoring create an additional challenge. One beneficiary noted that even the NEEMO monitoring officer struggled to keep up to date with changes. However, as with other requirements of the administrative process, this was seen to be justifiable given the grant size.

Another beneficiary stated that they have recruited a full-time monitoring and evaluation officer to take responsibility for their monitoring and evaluation as they had not previously been aware of how much was involved in a LIFE project.

As noted previously, the role of dedicated monitoring officers employed as part of the project has been viewed positively across stakeholder groups. They are considered a particularly valuable asset to the monitoring and management process, such as by conducting site visits and providing advice and support. They have enabled projects to identify challenges early on in the implementation stage and take mitigating action.

6.4 Cost-effectiveness of administering the programme

"There is no other way of getting funding on this scale – it was an effort but worth it. The effort may be more of a burden if the grant was smaller. Definitely worthwhile in this instance" – Beneficiary

The LIFE programme is perceived as overall, cost-effective. It is recognised to be an intensive process, but this is considered proportionate to the benefits received (i.e. large-scale grants).

Four agents incur administrative costs through the delivery of the LIFE programme: (1) the Commission; (2) the national authority, Defra; (3) the national contact point, the JNCC; and (4) the project beneficiaries. A large proportion of the costs to administrative authorities (1-3) are incurred by the Commission, which administers the programme, and others by Defra and the JNCC in providing national level co-ordination and communication. It is not possible to provide a systematic account of the cost-effectiveness of administering the programme due to a lack of data.

This rest of this section focuses primarily on the costs incurred by project beneficiaries. Stakeholder perceptions are that the LIFE programme is, overall, cost-effective, particularly for larger organisations. Use of LIFE funding is recognised to be an intensive process but one with larger grants and potential payback than other

[98] European Commission, 2017. MID-TERM EVALUATION. Report on the Mid-term Evaluation of the Programme for Environment and Climate Action (LIFE).

domestic funding streams. If the grant was a smaller value, beneficiaries acknowledge that the delivery process may be less cost-effective.

For smaller organisations, the overall cost of the process of applying and delivering a project does not appear to be proportionate to the benefits given the administrative burden, requirement for match funding and resource capacity needed.

The introduction of a two-stage application process within the Environment programme is generally regarded as a positive step towards reducing the application burden. Applicants provide a concept note prior to submitting a full application. Applicants with the best ranked concept notes are invited to the second stage: submission of their full proposal. Nevertheless, the first stage of the two-stage process still requires an intensive preparation period, which, again, is typically more burdensome for organisations with limited capacity. The cost benefit ratio of applying for funding is not proportionate to the project cost. For example, applying for a €500,000 project requires the same input as a €5m project.

"Because they are big projects you've either got to be an agency to do it or a big NGO or a big partnership…to get the application together and be able to run the project…I know a few Wildlife Trusts that would love to be able to access funds but they can't find the match funding because that's a big issue…and sometimes they can't give enough time to the application…which could be three months off their actual day job to write applications…supposed to be addressed slightly by the two-stage application…the concept note was quite quick but…in order to get any sort of realistic costs you had to get quite a lot of background stuff." - Stakeholder interview, NGO & Beneficiary

6.5 Organisation engagement

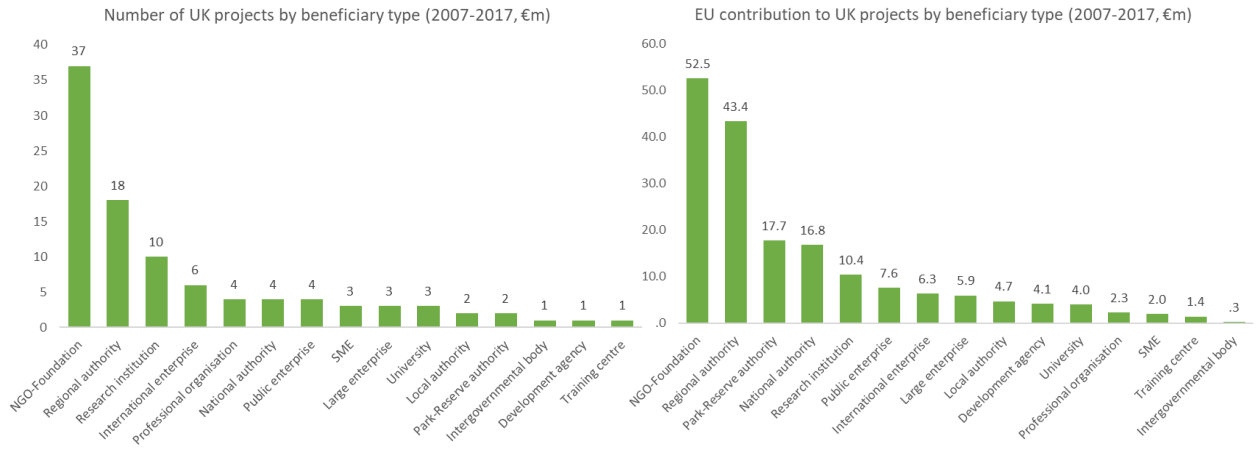
"There are always a handful of very experienced organisations who put in application every year…there are the 'usual suspects'" – Defra family

Organisations most likely to engage with the LIFE programme are large NGOs and regional authorities (i.e. nature conservation agencies of national or devolved governments). This is predominantly due to the size of the grants and resource requirements involved in bidding. Smaller organisations can be deterred due to the lengthy application requirements and capacity needs.

Analysis of UK projects funded within the last two work programmes indicate NGOs are the most likely beneficiaries to engage with the LIFE programme followed by regional authorities and research institutions.

The narrow portfolio of project beneficiaries highlights the challenges that smaller organisations face in applying for LIFE funding. As noted previously, obstacles include match funding requirements and resources and capacity during both the application and management processes.

Figure 6.1 Organisations engaging with the LIFE programme



Source: LIFE project database

6.6 Lessons learned from projects

Evidence from stakeholders and project data suggests a number of lessons from the LIFE delivery process that could help to inform any future arrangements both at a project level and from a funder level.

Project considerations:

- **Resource planning:** Planning for resource (i.e. staff time) needs ahead of bidding may alleviate some of the resource burden during the application and delivery stages.
- **A dedicated finance officer:** Projects benefit from recruitment of a dedicated staff member within the organisation with responsibility for project monitoring, reporting and engagement with auditors.

Funder considerations:

- **Clear, systematic monitoring requirements:** There would be benefits from further clarification of performance indicators and how these should vary for different project types. Any future scheme needs to be clear about what the programme is delivering and how performance measures link to policy objectives (including 25 YEP goals and objectives of the devolved administrations). For example, there is an opportunity for a greater focus on social and economic objectives, which are currently perceived as 'very opaque'.
- **Simplified process:** Grant management processes could be streamlined (and more focused on priorities and risks relevant in a UK content) and guidelines provided to help reduce the barriers to participation experienced by smaller organisations (e.g. a staged application approach).
- **Accelerated timeframes:** The time lag between application and grant approval could be reduced and communication improved regarding any delays to aid project planning and mitigation.

7 Conclusions and implications for the future

This section outlines the extent to which the existing LIFE programme aligns with UK environmental priorities as well as considerations for future arrangements post-EU exit.

7.1 Alignment of LIFE to UK priorities

"There would be a major gap without LIFE and it would be hard to fund projects on this scale" – Beneficiary

There is a broad alignment of priority areas of LIFE to the 25 YEP. However, 25 YEP goals which have less focus in the LIFE programme include heritage and engagement with the natural environment, biosecurity, protecting and improving global environment, marine funding, multi-themed projects (i.e. integrated themes) and pilot and preliminary stage projects. In some instances, other sources of funding outside of the LIFE programme are available, although grant sizes are often smaller.

The broad nature of LIFE means that there is a strong alignment between the priorities of LIFE and the priorities set out in the 25 Year Environment Plan (YEP).

The main pillars of the "25 Year Plan to Improve the Environment"[99] are congruent with the objectives pursued by the LIFE Programme, notably:

- **Natural resource protection and environmental recovery:** creating a healthier and richer natural environment by supporting nature recovery and restoring losses through activities such as biodiversity and the sustainable supply of water.
- **Sustainable communities:** integrating the delivery of social, health, economic and environmental goals by delivering health and wellbeing through green spaces, or maximising resource efficiency and minimising environmental impacts at end of life.
- **Climate change and energy:** continuously reducing carbon dioxide emissions by at least 80 percent by 2050.

The table below provides a more detailed analysis of the alignment of LIFE to the 25 YEP. Some aspects of the Plan apply to the UK as a whole but where the relevant policy is devolved (and so responsibility rests with the Scottish Government, Welsh Government and Northern Ireland Executive) the plan only applies to England.

[99] HM Government, 2018. A Green Future: Our 25 Year Plan to Improve the Environment. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

Table 7.1 Mapping thematic priorities of LIFE with 25 YEP goals

UK 25 YEP goals[100]	LIFE alignment[101]
Clean air: • Reduce emissions of five damaging air pollutants. • End sale of new conventional petrol and diesel cars/ vans. • Maintain continuous improvement in industrial emissions	✓ **Environment and Resource Efficiency:** • Air quality and emissions: best practice in urban environments. • Air quality and emissions: contribution to Industrial Emissions Directive. • Environment and health: impact of chemicals on environment and human health.
Clean and plentiful water: • Improve at least three quarters of waters close to their natural state.	✓ **Environment and Resource Efficiency:** • Water: Safe and efficient use of water resources.
Thriving plants and wildlife: • Achieve a growing and resilient network of land, water and sea richer in plants and wildlife.	✓ **Nature & Biodiversity:** • Nature: Conservation and restoration of protected sites, habitats and species in line with EU Birds and Habitats Directives. • Biodiversity: maintain and restore ecosystems in line with EU Biodiversity Strategy.
Reduced risk of harm from environmental hazards (e.g. flooding and drought): • Access to information to assess risks to lives, health and prosperity from flooding and coastal erosion. • Work with communities and individuals to reduce the risk of harm. • Ensure interruptions to water supplies are minimised. • Boost long-term resilience of homes, businesses and infrastructure.	✓ **Environment and Resource Efficiency:** • Water: implementation of EU Floods Directive. ✓ **Climate change Adaptation:** • Resilience to droughts, fire or floods. ✓ **Nature & Biodiversity:** • Biodiversity: implementing green infrastructure to the benefit of human health. ✓ **Environmental Governance and Information:** • Information, communication and awareness raising campaigns to safeguard citizens. from environment-related pressures and risks to health and wellbeing.
Using resources from nature more sustainably and efficiently: • Maximise value and benefits from resources. • Improve approach to soil management. • Increase timber supplies. • Ensure fish stocks are recovered and maintained at sustainable levels. • Ensure food is produced sustainably and profitably.	✓ **Environment and Resource Efficiency:** • Water: Safe and efficient use of water resources. • Resource efficiency: soil protection and management and improved land use. ✓ **Nature & Biodiversity:** • Biodiversity: supporting sustainable forest management and agriculture. • Biodiversity: sustainable fisheries.

[100] Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

[101] Annex III to Regulation (EU) No 1293/2013: thematic priorities for LIFE programme

UK 25 YEP goals[100]	LIFE alignment[101]
Enhanced beauty, heritage and engagement with the natural environment: • Safeguard and enhance natural scenery and improve environmental value. • Ensure there are high quality, accessible, natural spaces close to where people live and work to benefit health and wellbeing. • Focus on improving environment from all sectors of society.	✓ **Environmental Governance and Information:** Information, communication and awareness raising campaigns to safeguard citizens from environment-related pressures and risks to health and wellbeing. ✗ *Limited focus on heritage and engagement with the natural environment.*
Mitigating and adapting to climate change: • Cut greenhouse gas emissions. • Ensure policies, programmes and investment decisions take into account climate change. • Implement a second climate adaptation programme.	✓ **Climate Change Mitigation:** • Reduce greenhouse gas emissions. • Land use and peatland management. ✓ **Climate Change Adaptation:** • Urban adaptation and land use planning. ✓ **Climate Governance and Information:** • Development and implementation of climate and energy strategies.
Minimising waste: • Zero avoidable waste. • Eliminate avoidable plastic waste. • Meet existing waste targets. • Eliminate waste crime and illegal waste sites. • Reduce and prevent marine plastic pollution.	✓ **Environment and Resource Efficiency:** • Waste: prevention, reuse and recycling. • Water: implementation of marine environmental policy (Marine Strategy Directive). ✓ **Environmental Governance and Information:** • Raising awareness on environmental problems, policies, tools and/or legislation.
Managing exposure to chemicals: • Eliminate the use of Polychlorinated Biphenyls. • Reduce land-based emissions of mercury to air and water. • Increase amount of Persistent Organic Pollutants (POPs) material destroyed or irreversibly transformed. • Fulfil commitments to protect human health and environment from persistent organic pollutants (POPs)[102] .	✓ **Environment and Resource Efficiency:** • Environment and health: impact of chemicals on environment and human health.
Enhancing biosecurity: • Manage and reduce impact of existing plant and animal diseases.	✓ **Nature & Biodiversity:** • Nature: Conservation and restoration of protected sites, habitats and species in line with EU Habitats Directive.

[102] Under the Stockholm Convention

UK 25 YEP goals[100]	LIFE alignment[101]
• Protect tree population from pest and disease threats (in line with tree health resilience strategy 2018). • Ensure strong biosecurity protection at borders. • Work with industry to reduce the impact of endemic disease.	• Nature: activities in support of the Natura 2000 network. • Biodiversity: contribution to Biodiversity Strategy, including on invasive alien species and tree resilience.

Despite the broad alignment of priority areas of LIFE to the 25 YEP, document analysis and stakeholder consultations identified some areas where the 25 YEP goals and not currently supported by LIFE priorities.

- **Heritage and engagement with the natural environment**
  Safeguarding and enhancing the natural landscape is a key aim for the 25 YEP. The goal is to ensure that all people can improve their health and wellbeing from high quality, accessible, natural spaces. This is not a primary area of focus within the LIFE priority areas as defined in the MAWP. Priorities include awareness raising and generating public support but do not go as far as to improve engagement and accessibility to the natural environment. However, there are alternative funding sources available within the UK, which have a strong focus on engagement with nature; specifically, the National Lottery Heritage Fund (discussed in detail in Section 4.1).

- **Tree resilience**
  The UK intends to increase resilience through improving the extent, connectivity, diversity and condition of our treescape[103]. Such goals are not explicitly reflected in the stated priorities for LIFE, but such projects may be funded where action is also supporting Natura 2000 or green infrastructure. Additional funding programmes are available in the UK, which explore resilience among trees. For example, the Rural Development Programme for England (RDPE) supports resilience in the forestry sector.

- **Protecting and improving global environment**
  The 25 YEP also sets out the UK's ambition to be international leaders on the global environment stage. This tends to be addressed through separate international programmes at both UK and EU level and goes beyond the geographical remit of the current EU LIFE funding, which prioritises collaboration within Member States.

- **Marine funding**
  Both beneficiaries and policy experts state that it is difficult to procure LIFE funding for marine projects. The expense and practicalities of implementing projects below sea level as well as the challenges of working in the open sea and difficulties of developing robust metrics create specific barriers. Furthermore, threats to the marine environment are not always related to naturally occurring events (i.e. climate change, flooding) but can be related to how people or organisations interact with each other (for instance, conflict between fisherman and offshore wind farms) projects for which may not necessarily lead to tangible environmental outcomes. While LIFE has funded a small number of stakeholder focused projects (e.g. the Celtic Seas partnership, which aimed to build understanding and influence marine spatial management practices to aid achievement of Good Environmental Status), these types of projects can present challenges in demonstrating conservation benefits and evidencing environmental impact.

While it is clear that there are some disparities between LIFE and UK priorities, overall, there is a general consensus among stakeholders that no other funding stream or initiative is currently aligned as closely to the 25 YEP.

[103] Defra (2018), Tree Health Resilience Strategy

A small number of stakeholders also noted ways in which additional types of projects, not currently offered by the LIFE programme, could help to achieve the 25 YEP goals (i.e. through increased collaboration and earlier stage projects):

- **Integrated themes**
  A minority of stakeholders noted the importance of exploring the connection between multiple themes such as water management and carbon capture or water quality and wildlife conservation. Integrated themes would facilitate knowledge sharing and demonstration of best practice across different types of beneficiaries.

- **Preliminary stage projects**
  A small number of beneficiaries interviewed wished to fund pilot phase and pre-set-up phase projects, which they felt was under-prioritised within the current LIFE programme. These types of preliminary stage projects are particularly advantageous for testing new technological approaches which may have low technology maturity but, with an injection of funding, could be developed further. However, this does not account for other existing funding programmes; such as the EU Horizon 2020 and the UKRI Industrial Strategy Challenge Funds. Both of these programmes provide funding for research and innovation projects in the energy and environment sectors at the earlier stage of development (i.e. pre-commercialisation). These could be considered as viable alternatives to LIFE funding.

7.2 Requirements for post-EU exit arrangements

"There is definitely a role [for a LIFE-like fund] in the future, some other grants can be more challenging…due to less focus on nature and more competition with other things. LIFE is able to fund things other programmes can't and fund things at scale." – Defra family

There is a strong appetite among stakeholders for continuation of the type of support LIFE provides in the UK. Refinements suggested, based on the existing LIFE programme, include: engaging types of organisations currently making little use of LIFE, refining the priority areas to improve alignment with the 25 YEP, increased clarity on performance metrics and a simplified grant management process.

The lack of alternative funding sources of a similar scale and scope, particularly within the environment strand, indicates that continued support for projects similar to those funded by LIFE would be positively received.

Existing funding schemes currently do not appear to provide viable alternative sources of funding for all of the priorities currently being addressed by LIFE. Other schemes face a variety of limitations relating to eligibility criteria, the types of projects that can be financed, the degree to which they focus on environmental priorities, and/or the size of individual projects that can be funded. This is particularly true for particular types of projects such as those focusing on habitat restoration at landscape scale, and on species recovery.

The UK funding landscape is evolving, such as via the next round of environmental land management schemes, and will offer ongoing and new opportunities. Table 7.2 maps the existing funding schemes available in the UK which may provide alternatives to LIFE funding post-EU exit.

Table 7.2 Mapping existing funding streams to 25 YEP goals

UK 25 YEP goals[104]	UK funding streams[105]
Clean air: • Reduce emissions of five damaging air pollutants. • End sale of new conventional petrol and diesel cars/ vans. • Maintain continuous improvement in industrial emissions.	• Transforming Food Production (£90m, ISCF). • Transforming Construction (£170m, ICSF). • Clean Air: Analysis and Solutions (£19.6m, NERC and Met Office).
Clean and plentiful water • Improve at least three quarters of waters close to their natural state.	• Countryside Stewardship (£900m, Natural England).
Thriving plants and wildlife • Achieve a growing and resilient network of land, water and sea richer in plants and wildlife.	• Esmée Fairbairn Foundation Environment Grants (c.£8m per annum). • Heritage Fund (£1.2bn). • Peatland Restoration Fund (£10m, Defra). • Countryside Stewardship (£900m, Natural England).
Reduced risk of harm from environmental hazards (e.g. flooding and drought) • Access to information to assess risks to lives, health and prosperity from flooding and coastal erosion. • Work with communities and individuals to reduce the risk of harm. • Ensure interruptions to water supplies are minimised. • Boost long-term resilience of homes, businesses and infrastructure.	• Countryside Stewardship (£900m, Natural England). • Flood and coastal erosion programme (£2.6bn, Defra). • Flood and coastal erosion programme (£56m, Wales). • Flood defence grant in aid (for risk management authorities only) (c.£745m, Defra). • Peatland Restoration Fund (£10m, Defra). • Constructing a Digital Environment (£10.4m, NERC and ESPRC).
Using resources from nature more sustainably and efficiently. • Maximise value and benefits from resources. • Improve approach to soil management. • Increase timber supplies. • Ensure fish stocks are recovered and maintained at sustainable levels. • Ensure food is produced sustainably and profitably.	• Forestry grant scheme (£252m, Forestry Commission Scotland). • Countryside Stewardship £900m, Natural England). • Constructing a Digital Environment (£10.4m, NERC and ESPRC).
Enhanced beauty, heritage and engagement with the natural environment. • Safeguard and enhance natural scenery and improve environmental value. • Ensure there are high quality, accessible, natural spaces close to where people live and work to benefit health and wellbeing.	• Esmée Fairbairn Foundation Environment Grants (c.£8m per annum). • Heritage Fund (£1.2bn). • Landscape Decisions (£10.5m, NERC and AHRC).

[104] Source : https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

[105] Total available fund values provided, an unknown proportion of which may be awarded to projects addressing 25 YEP priorities.

UK 25 YEP goals[104]	UK funding streams[105]
• Focus on improving environment from all sectors of society.	
Mitigating and adapting to climate change. • Cut greenhouse gas emissions. • Ensure policies, programmes and investment decisions take into account climate change. • Implement a second climate adaptation programme.	• UK Climate Resilience (£18.7m, NERC and Met Office). • Clean Air: Analysis and Solutions (£19.6m, NERC and Met Office). • Countryside Stewardship £900m, Natural England). • Environmental Land Management System (tbc, Defra). • Low Carbon Fund (£15m, GMCA).
Minimising waste • Zero avoidable waste. • Eliminate avoidable plastic waste. • Meet existing waste targets. • Eliminate waste crime and illegal waste sites. • Reduce and prevent marine plastic pollution.	• Plastics and Research Innovation Fund (£4m, UKRI).
Managing exposure to chemicals • Eliminate the use of Polychlorinated Biphenyls. • Reduce land-based emissions of mercury to air and water. • Increase amount of Persistent Organic Pollutants (POPs) material destroyed or irreversibly transformed. • Fulfil commitments to protect human health and environment from persistent organic pollutants (POPs)[106] .	• Hazardous chemicals on UK ecosystems (£6m, NERC). • Plastics and Research Innovation Fund (£4m, UKRI). • Landscape Decisions (£10.5m, NERC and AHRC).
Enhancing biosecurity • Manage and reduce impact of existing plant and animal diseases. • Protect tree population from pest and disease threats (in line with tree health resilience strategy 2018). • Ensure strong biosecurity protection at borders. • Work with industry to reduce the impact of endemic disease.	• Countryside Stewardship £900m, Natural England).

LIFE is distinctive from other UK funding streams as it offers funding for time-limited long-term projects. This provides beneficiaries with an element of reassurance and stability when seeking funding.

In addition, bid assessors tend to have very specialised and technical expertise and therefore have a good understanding of the technology, mechanism or challenge being addressed. This helps ensure there are funding opportunities for innovation and demonstration projects. For example, MoorLIFE 2020 is producing evidence of the effects of Sphagnum growth in blanket bogs to demonstrate that restoration reduces

[106] Under the Stockholm Convention

run-off and is a viable and cost-effective solution to moderate water flows and can reduce peak flood events.

A funding programme that enables collaboration with organisations in other European countries would allow UK actors to continue to tap into the research and knowledge within other Member States. Stakeholders point to the significance of issues that are transboundary such as migratory species, air pollution and marine life. These types of challenges can be addressed through international co-operation, which is currently facilitated by the LIFE programme.

"There is room for a LIFE like programme in the future…. [we] need a fund that spans different European countries…issues are so transboundary they can't just work in isolation" Stakeholder interview, NGO/ Beneficiary

There are various components of the existing LIFE programme design that could be refined:

- **Engaging organisations beyond the 'usual suspects':** Accessibility for smaller organisations could be improved through measures such as providing grants of different size, and considering the level of match funding required to improve access to funding for smaller organisations which currently struggle to lead bids due to limited resources and capacity. More frequent payments would also be beneficial for smaller beneficiaries. At the same time, it is important to note that the scale of LIFE funding is considered to provide added value to the programme.

Perceptions among stakeholders: restrictions for smaller organisations

"Overall, lead organisations are large ones, but in a lot of projects there is often a long list of much smaller organisations. For example, Wildlife Trusts: each trust is small and would struggle on its own to access LIFE funding due to the heavy administrative process and costs." – NGO & Beneficiary

"The Environment Agency is better placed than smaller bodies like Universities and NGOs. Complexity and obligation and commitment around value is limited by capacity and cash flow – match funding is required and the ability to commit into the future is dependent on the size of the organisation." - Defra family

- **Refining the priority areas:** There is opportunity for projects to focus on areas not currently prioritised by the LIFE programme but that are priorities for the UK such as 'securing clean, healthy, productive and biologically diverse seas and oceans'. Stakeholders with particular alignment to the Nature and Biodiversity strand have suggested developing separate schemes for environmental issues and addressing funding gaps for themes with the most limited alternative funding options, for example, having a separate biodiversity funding scheme. This could include establishing challenge calls[107] to focus on specific priority areas where there are current gaps (e.g. reducing the prevalence of certain alien species on arable farmland).

Perceptions among stakeholders: refinements to priority areas

"Could be some sort of mapping exercise and cross-reference with other existing domestic funding schemes…analysis carried out about what the scope would look like and if it needs to be just narrowed down or if there are alternative areas [of focus]". – Defra family

[107] Challenge calls are funding calls that seek to address a specific issue or challenge

"There is a need for a nature specific fund, nature is declining and is continuing to decline…the scope shouldn't expand to become a fund that is too wide and doesn't produce the nature output which is a justification of the fund itself." – NEFG

"Agri-food calls could support specific issues in UK agricultural [industry]…deal with a fairly dedicated issue not in the rest of Europe such as tuberculosis in cattle. The Government could come up with a UK specific funding mechanism" – Beneficiary

- **Clarity on performance metrics:** There would merit in refreshing and refining performance metrics to ensure they are suitable for the diversity of projects. A future fund needs to be clear about what is being delivered and how this links to the policy priorities across the UK, particularly to ensure expenditure is targeted to the most important areas of impact.

Perceptions among stakeholders: performance metrics

"If we have a future scheme we have to be very clear about what it's delivering and there's a link back to the 25 YEP metrics…having performance measures…reporting what impact you've had on the condition of protected areas, how much habitat have you expanded or restored and which species have you addressed and how have you changed their conservation status…that kind of reporting back would be enormously helpful in…making sure we are subsequently targeting expenditure at the most important areas of impact." – Defra family

- **Simplified grant management process:** A streamlined, less bureaucratic application process and reporting requirements coupled with clear communication and guidance from UK government to applicants could reduce burdens, shorten timeframes between application and award notification and ensure that requirements are tailored to the type of project.

Perceptions among stakeholders: tailored grant process

"Could streamline the reporting to reduce its burden, and ensure that it is tailored to the projects…some generic requirements are not always appropriate e.g. each project must have its own website. A UK focused fund could reduce admin burden" – Beneficiary

In summary, the loss of access to the LIFE fund is expected to leave a significant gap in the UK environment funding landscape. LIFE is currently considered to play a unique role in addressing transboundary issues, demonstrating new approaches to environmental management, and financing large scale projects that address specific environmental priorities (such as habitat restoration and species recovery).

The analysis suggests learning points for the design of the delivery mechanism and areas in which objectives might be adjusted to align more accurately with UK policy priorities. LIFE priority areas that could be expanded upon include engagement with the natural environment, leading on the international environment stage, and an increased focus on marine funding. Opportunities for funding within integrated themes and preliminary (pilot or set-up) stage projects could also be supported.

Potential refinements to the existing LIFE programme design could include redeveloping the current stakeholder engagement strategy to increase accessibility among smaller organisations (as measured by the number and diversity of project beneficiaries), clarity on performance metrics, simplifying and streamlining the application and grant management process and considering alternative and flexible financial instruments.

Annex 1 Project details

A1.1 Project list (operating in the UK only)

Projects coordinated by a UK organisation between 2007 and 2017[108]:

- **ACUMEN**[109]: The objective of the ACUMEN project was to demonstrate how methane from expired and non-operational (closed) landfill sites can be captured and utilised.
- **Alde-Ore**[110]**:** The project aimed to develop the management and infrastructure of two Natura 2000 wildlife sites, Orford Ness and Havergate Island, in the Alde-Ore estuary to sustain and enhance the habitats and species of European significance.
- **Anglesey and Lleyn Fens**[111]**:** The objective of the project was to bring c.750 ha of fen into favourable or unfavourable-recovering condition through a series of measures aimed at tackling the factors that currently affect the condition of the Natura 2000 sites.
- **Biosecurity for LIFE** *(ongoing)*[112]**:** The project aims to protect seabirds from invasive predators by producing biosecurity plans for all 41 SPAs in the UK, as well as establishing 'rapid response hubs' to deal with any incursions. Other actions include raising awareness about the need for improved biosecurity, promoting knowledge sharing, and encouraging the replication of the project throughout the EU.
- **Birds Directive**[113]**:** The main objectives of the project were to engage with farmers annually through promotional and media activities and media; and to engage with more than 3 million members of the general public annually through targeted media work highlighting the importance of protecting both rare and widespread farmland birds in accordance with the Birds Directive.
- **Blackwit UK** *(ongoing)*[114]**:** The overall purpose of the project is to improve the conservation status of the black-tailed godwit (Limosa limosa) in the United Kingdom, specifically by recovering the UK breeding population of L. l. limosa. This project is focused on the two main breeding sites for this species in the UK, the Nene and Ouse Washes.
- **Bure LIFE** *(ongoing)* [115]**:** The main aim is to restore the naturally eutrophic lake habitat to a species-rich, clear-water state through minimal carbon footprint project actions. The restoration work will also benefit EU priority habitats, such as calcareous fens with Cladium mariscus (7210*), and Annex II-listed Habitats Directive species such as otter as well as water fowl including wigeon, gadwall and shoveler.
- **Celtic Rainforests LIFE** *(ongoing)*[116]**:** The Celtic Rainforests LIFE project aims to improve the conservation status of two woodland habitats listed in Annex 1 of the Habitats Directive in five Natura 2000 network sites (SACs) in north- and mid-Wales.

[108] This is based on analysis of the LIFE database to identify projects which were operating in the UK only
[109] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4246
[110] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3537
[111] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3226
[112] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6667
[113] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3504
[114] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5938
[115] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5347
[116] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6690

- **Cumbrian BogsLIFE+[117]:** The project focused on two target habitat types - 'Degraded raised bog capable of natural regeneration' and 'Active raised bog' – and aimed to demonstrate a variety of techniques for the complete restoration of lowland raised bog habitats; including the restoration of natural hydrological systems and biodiversity.
- **DuneLIFE** *(ongoing)*[118]**:** The DuneLIFE project aims to improve the conservation status of habitats and species in eight coastal Natura 2000 network sites in England.
- **E3G:** There is no further information about this project is available on the LIFE database.
- **ECAP[119]:** the overall objective of the LIFE ECAP project was to adopt a circular approach to divert over 90 000 tonnes/year of clothing waste from landfill and incineration across Europe by March 2018, and to deliver a more resource efficient clothing sector. ECAP will set targets aiming to scale up these savings by 2020 to over 540 000 tonnes/year (€111 million), and by 2030 to over 700 000 tonnes/year (€144 million).
- **EcoCo LIFE Scotland[120]:** The objective was to deliver habitat management in the most beneficial places within the CSGN area to improve ecological coherence. It aimed to implement a suite of concrete conservation activities to better connect habitats and increase their biodiversity, with improvements in quality and functionality across landscapes.
- **The Electronic Duty of Care (EDOC) project[121]:** The project planned to develop a national, internet-based interface to record the collection, transportation, treatment and disposal of waste materials. The interface would enable monitoring and mapping of waste management without creating a mountainous paper trail.
- **EPOW[122]:** The project aimed to demonstrate how EU regions can develop and introduce successful programmes that lead to zero waste to landfill in their region. It planned to develop a recycling society with a high level of resource efficiency in the South East of England, while also ensuring, through working with other Member State regions, that project outcomes were relevant and replicable to other EU regions.
- **GRACC[123]:** The project aimed to address climate change by increasing the quality of green roofs.
- **Hen harriers[124]:** The project focused on the protection of hen harriers from illegal persecution. The aim was to provide the conditions in which hen harrier range and population recovery can occur. Within the timeframe of the project, the key priorities were to prevent the extinction of the hen harrier as a breeding species in northern England, and to arrest its decline in southern and eastern Scotland, as vital first steps towards a recovery that may take at least 10 years.
- **Housing Landscapes[125]:** The project aimed to develop climate change adaption solutions for existing social housing landscapes. It planned to carry out a holistic package of measures based around the retrofitting of blue and green infrastructure, and increased

[117] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4948
[118] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6812
[119] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5307
[120] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4942
[121] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3762
[122] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3456
[123] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3240
[124] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4935
[125] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4752

local stakeholder engagement. The overall objective was to demonstrate an integrated approach to addressing climate-related and socio-economic challenges in vulnerable urban environments.

- **iGREEN[126]:** The iGreen project aimed to demonstrate how environmental guidance for SMEs can be taken to the next level by developing joined-up service provision through NetRegs (www.netregs.gov.uk) – a website that had been cited as European best practice for its innovative approach to delivering practical, sector-specific, environmental guidance to businesses across the UK.
- **IPENS[127]:** The objective of the IPENS project was to develop a programmed approach for approach of the Priority Action Frameworks (PAFs), concrete and operational measures for the Natura 2000 network sites in England, by working with key stakeholders at national and regional levels in the public, private and voluntary sectors, to help them adopt and implement this strategic approach.
- **ISAC 08[128]:** The project built on the work of previous river restoration projects to address the restoration of the Irfon catchment in mid-Wales. The project's main objectives included the restoration of the hydrology of the upper catchment and the implementation of conservation measures for Atlantic salmon and several Annex II Habitats Directive species.
- **LIFE+ CEMs[129]:** The objective of the project was to demonstrate that the concept of a circular economy offers a practical alternative to the traditional waste-generating and resource-inefficient linear approach. Specifically, it sought to design and develop web-based tools to enable European businesses to measure their effectiveness in moving towards the circular economy.
- **Little Terns** *(ongoing)*[130]**:** The overall aim of the project is to lay the foundations for the long-term recovery of the little tern (Sterna albifrons) in the UK, by securing robust breeding populations at key sites throughout the country.
- **LiveWell for LIFE[131]:** The main objective was to reduce GHG emissions from the EU food supply chain. The project aimed to demonstrate sustainable diets for EU Member States, promote a supportive policy environment, develop tangible pathways for the implementation of sustainable diets, and disseminate this knowledge widely across the EU.
- **Marches Mosses BogLIFE** *(ongoing)*[132]**:** The specific project objective is to restore 665 ha of habitat to achieve a more sustainable, resilient and better functioning active raised bog, including restoration of the lagg zone. This includes the restoration of 575 ha of raised bogs and 67 ha of degraded bogs in the site and an additional 23 ha of important, undesignated land adjacent to the site.
- **MoorLIFE[133]:** The main objective was to protect the 1 600 ha of active blanket bog in the South Pennine Moors by reducing the erosion on adjacent degraded peatland. To achieve this, the project aimed to restore 862 ha of active blanket bog through stabilisation, diversification and gully blocking. To ensure the future sustainability of the blanket bog, the

[126] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3767
[127] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4328
[128] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3538
[129] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4758
[130] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4755
[131] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3936
[132] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5865
[133] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3539

project also aimed to carry out wildfire mitigation actions while also raising public awareness of wildfire risk and restoration.

- **MoorLIFE2020** *(ongoing)*[134]**:** The aim is to conserve and protect the priority active blanket bog habitat within the South Pennine Moors' Natura 2000 site and the ecosystem services it provides.
- **NaturEtrade**[135]**:** The project aimed to bridge the gap between academic research and policy on ecosystem service provision by creating a novel suite of easy-to-use tools and mechanisms to identify, map and create a marketplace for ecosystem services in Europe. It thus hoped to demonstrate a successful approach for enabling EU landowners to quickly assess the ecological potential of their land - in terms of the ecosystem services that it provides - and then to trade the associated ecosystem services.
- **NWRBD** *(ongoing)*[136]**:** The objectives are to increase the capacity to deliver improvement in water body status in the North West (England) River Basin District; demonstrate improvements in delivery, demonstrate reduction of technically infeasible measures, increase engagement and formalise the role of stakeholders, improve understanding of the reasons for failure to meet good status, reduce the barriers to adoption of an integrated approach and provide mechanisms to upscale integrated project (IP) successes to national and Member State levels.
- **ObservaTREE**[137]**:** The project aimed to demonstrate an effective Tree Health Early Warning System (THEWS), based on public engagement. It sought to mobilise the expertise and resources of landowners, industry, academia and governments to identify any significant impacts from new introductions of plants or trees.
- **Orkney Native WildLIFE** *(ongoing)*[138]**:** It aims to eradicate the introduced non-native stoat Mustela erminea from the Orkney Islands by 2023. This will benefit the archipelago's native wildlife, and protect its considerable cultural and socio-economic value. Project actions will safeguard biodiversity in Orkney's Natura 2000 sites (13 SPAs and 6 SACs).
- **Pennine PeatLIFE** *(ongoing)*[139]**:** The aim of the Pennine PeatLIFE project is to demonstrate and evaluate geographically appropriate restoration techniques for the Annex I Habitats Directive priority habitat, blanket bogs (7130*), which are suited to the harsher climatic environment of northern England. The project will also develop and showcase a financial payment for ecosystem services (PES) mechanism under the UK Peatland Code. Pennine PeatLIFE will directly target the restoration of 1 353 ha of badly eroded blanket bogs habitat, both within Natura 2000 sites and in undesignated upland sites.
- **PIP GB – Pearls in Peril**[140]**:** This overall objective was to safeguard the future of the most important pearl mussel populations (M. margaritifera), in Great Britain (i.e., in 21 Natura 2000 sites across England, Scotland and Wales) by tackling the main threats to this and by implementing best practice conservation methods.
- **Prioritised Action Framework (PAF) LIFE N2K Wales**[141]**:** The aim was to prepare, on the basis of the approach of the priority action frameworks (PAFs), concrete and

134 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5345
135 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4753
136 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5439
137 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4754
138 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6688
139 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6339
140 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4311
141 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4337

operational measures for the Natura 2000 network. The overall objective was to develop a programme for the management and restoration of Natura 2000 in Wales.

- **RAPID (Reducing and Preventing IAS Dispersal) LIFE** *(ongoing)*[142]**:** This project aims to deliver a package of measures to reduce the impact and spread of IAS in freshwater aquatic, riparian and coastal environments across England. It aims to help conserve species protected under the Birds and Habitats directives whilst assisting in compliance with the EU Regulation on IAS, Marine Strategy Framework Directive and the Water Framework Directive.
- **Reintroducing Otis tarda**[143]**:** The project aimed to increase the population of great bustards on Salisbury Plain by extending the reintroduction programme to support the establishment of a long-term, self-sustaining population.
- **RENEW - Regional Environmental Networks for Energy & Water**[144]**:** The project aimed to combine water saving advice for households with an existing sustainable energy campaign in order to test a 'one-stop-shop' approach that would allow consumers to access expert advice on a range of sustainability issues. Advice on water consumption would be provided that also had positive energy-saving benefits, and vice versa.
- **REPURPOSE LIFE**[145]**:** The project aimed to support community groups who wished to create their own social enterprises for turning redundant spaces into re-use hubs for the collection, storage and repair of bulky re-use items, which provide an alternative to illegal dumping. This was expected to be complemented by an in-depth engagement and behaviour-change programme to tackle the root causes of illegal dumping and encourage positive environmental action.
- **Seabird Recovery LIFE Project: Scilly Isles**[146]**:** The overall purpose of the project was to maintain and enhance the conservation value of the Isles of Scilly Natura 2000 network site by removing brown rats from two key islands within this SPA. The main target species, the storm petrel and the Manx shearwater, are a key component of the internationally important seabird assemblage.
- **SciuriousLIFE**[147]**:** The project aimed to develop mechanisms to prevent the unintentional introduction of grey squirrels; develop early warning/rapid response mechanisms; develop more efficient strategic mechanisms to evolve community-based grey squirrel management, quantify the financial and community-based resources needed to achieve regional eradication; share knowledge gained across the EU; test the impact of measures to increase public awareness and community capacity; and inform the development of a long-term management framework in the UK.
- **Scottish machair**[148]**:** The project had a single beneficiary, the RSPB, but drew upon a broad partnership, including local government, national government and local interest groups. The purpose of the project was to demonstrate that agriculture could combine production with environmental sensitivity to protect the incredible biodiversity associated with the machair habitat on the Hebridean Islands of Scotland.

[142] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6300
[143] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3863
[144] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3312
[145] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4945
[146] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4320
[147] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5344
[148] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3540

- **Securing the stone**[149]**:** The project planned to deliver a comprehensive, integrated suite of communications actions, aimed primarily at farmers and other land managers, to encourage the adoption of management practices beneficial to the stone-curlew. The overall objective of the project was to secure the future of the species in the UK by making it much less dependent on conservation work than at present and therefore much more self-sustaining.
- **SEWeb**[150]**:** The SEWeb project aimed to present a wide view of Scotland's environment, through a website that brought together data and information as well as expertise from a number of organisations into a single centralised "gateway to everything you want to know about Scotland's Environment"
- **Shad Severn** *(ongoing)*[151]**:** The objective of this is to undertake work on two major rivers to secure a development towards favourable conservation status of the population of twaite shad in the Severn Estuary SAC by significantly improving access for the population of twaite shad to quality spawning and nursery habitat and re-establishing access to 253 km of the former natural range of the species in the rivers Severn and Teme will be a step towards "favourable" conservation status.
- **Shiants**[152]**:** The main objectives of the project were to remove invasive rats from the Shiant Isles Natura 2000 network site, promote the colonisation of the Shiant Isles by European storm petrel and Manx shearwater, protect the Shiants through improved biosecurity and build expertise within the UK (and elsewhere in the EU) in island restoration.
- **SoLIFE** *(ongoing)*[153]**:** The project aims to restore dynamic processes in Welsh sand dunes, so enabling the free movement of sand necessary to improve the conservation status of all Habitat Directive Annex I sand dune habitats, especially the priority 'grey dune' habitat.
- **SSCM4ECAP**[154]**:** The project aimed to develop an innovative 'bottom-up' approach to Green Public Procurement. It would demonstrate the use of supply-chain strategies to improve environmental performance of local SMEs and achieve local authority sustainability target. The beneficiary would monitor and evaluate the effectiveness of current implementation of environmental policy and legislation. It would then prepare an Environmental Compliance Assistance Programme (ECAP) for SMEs in the local authority supply chain to encourage them to implement sustainable business practices.
- **TaCTICS - Tackling Climate Change-Related Threats to an Important Coastal SPA in Eastern England**[155]**:** Project objectives focused on: protecting freshwater habitats from coastal erosion destruction; and mitigating/compensating for the inevitable loss of important brackish marsh. The project would implement a 'managed realignment' scheme at Titchwell Marsh in response to climate change.
- **THATS-LIFE - Restoring Humberhead Peatlands**[156]**:** The main objectives were to carry out conservation actions to restore lowland raised bog habitats and to establish a stable water table; link up areas of good quality habitat; create large areas of bog habitat in favourable condition, increase the European nightjar population by 15% and monitor bog

[149] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4351
[150] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3990
[151] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5866
[152] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5018
[153] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6689
[154] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3757
[155] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3321
[156] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5075

recovery by water-level, data-logging and recording the re-establishment of peat-forming vegetation.

- **TRiFOCAL London**[157]**:** The project aimed to pilot a holistic communications campaign to encourage sustainable food systems in cities. It specifically aimed to support the implementation of the EU Roadmap for Resource-Efficiency which calls for "incentives for healthier...consumption of food and to halve the disposal of edible food waste in the EU by 2020."
- **UP&FORWARD COMS**[158]**:** The objective was to demonstrate how waste policy can be more effectively implemented by municipalities, using targeted communications in low-performing areas, as identified by waste collection data and local demographic statistics, to change behaviour. The project aimed to help the EU understand how to evaluate, monitor and develop policies that can be delivered with the active participation of the public.
- **WADERS FOR REAL**[159]**:** The objective of the project was to increase the breeding density of key bird species through a combination of habitat restoration in collaboration with farmers, and innovative actions that target seasonal exclusion, monitoring and tracking of predators.
- **WaterLIFE**[160]**:** The long-term goal of the project was to contribute to the delivery of the WFD across the EU, by helping to restore rivers to good ecological status. Its aim was to move all surface water bodies within demonstration catchments to GES faster than predicted by the 2009 RBMP
- **Welsh Raised Bogs** *(ongoing)*[161]**:** The aim of the project is to improve the conservation status of almost 700 ha of active raised bogs, about 270 ha of degraded raised bogs and associated habitats (depressions on peat substrates, and transition mires and quaking bogs), within the seven raised bog Natura 2000 network sites located wholly in Wales, by implementing favourable management.

A1.2 Project list (transboundary projects)

Transboundary projects coordinated by a UK organisation between 2007 and 2017[162]:

- **Celtic Sea Partnership (CSP) project**[163]: developed guidelines against conflict resolution with case studies from all different types of EU countries i.e. offshore wind farms and fisherman (UK), RE turbines and marine protected areas (FR). If it had been UK only, WWF wouldn't have had the credibility to draw up best practice across Europe.
- **CLEAR Info**[164]**:** the CLEAR Info project aimed to demonstrate a system for integrating and analysing the site level data EA collects as an environmental regulator, providing information to drive improvements in parent company performance. The project aimed to allow European regulators to share data across regulatory boundaries and build an understanding of corporate performance.

[157] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5832

[158] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4244

[159] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4893

[160] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5009

[161] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6340

[162] This is based on analysis of the LIFE database to identify projects which were led by a UK organisation and operated in both the UK and other EU countries.

[163] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4218

[164] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3989

- **CRMR Recovery[165]:** the LIFE 2014 Critical Raw Materials Recovery (CRMR) project aimed to demonstrate viable approaches to increase the recovery of target CRMs by 5% within the project lifetime. The target product categories were: display, consumer electronics, ICT and small household appliances; and the target materials were graphite, cobalt, antimony, tantalum, rare earths, silver, gold and platinum group metals (PGMs), but the project was not limited to these materials.
- **E3G[166]:** A project led by E3G provided an assessment of the Commission's sectoral proposals for the next 2021-2027 European Multi-Annual Financial Framework (MFF) as part of a Framework Partnership Agreement.
- **EQual LIFE[167]**: the EQual LIFE project planned to build on the WWP methodology and increase the range and volume of materials that are recycled in Europe. The aim was to develop and promote protocols to increase industry's ability to produce, and raise consumer confidence in the use of, quality waste-derived products. EQual will therefore help deliver the EU's Waste Thematic Strategy.
- **ENPE** *(ongoing)*[168]**:** build a self-sustaining network of environmental prosecutors;
- **EuroSap[169]:** the EuroSAP project focused on the delivery of new or revised SAPs for European bird species having conservation priority. The overall objective was to halt the population decline of threatened bird species listed in Annexes I and II of the Birds Directive, and to achieve a significant and measurable improvement in their conservation status. It also aimed to produce state-of-the-art tools for European stakeholders, ready-to-use and for use well beyond the project's duration.
- **Hydro4LIFE[170]:** The main aim of this project was to demonstrate the effectiveness of the HSAP in the EU and consolidate knowledge on hydropower sustainability performance in the EU. The project also aimed to raise awareness and build capacity (primarily via an electronic outreach campaign) about the HSAP and hydropower sustainability performance in the EU among all relevant stakeholders, including Member State/EU regulators and policy-makers.
- **Laser Fence project**[171]: the LIFE Laser Fence project aimed to develop an innovative technology, Agrilaser, to keep animals away from agricultural fields. It will be demonstrated in Scotland and Spain. The technology involved using a laser fence as an alternative to chemicals or harmful barriers – the technology was needed from Spanish partner.
- **PISCES project (Partnerships Involving Stakeholders in the Celtic sea Eco-System)**[172]: the project worked closely with stakeholders from several EU Member States to test collaborative methodologies for implementing the ecosystem approach in the Celtic Sea. It could not have achieved the outcomes if not EU funded.
- **'REACH for Polymers'**[173]: the LIFE 'REACH for Polymers' project aimed to increase the knowledge base of the European polymer industry, in particular of small and medium-sized

[165] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5317

[166] https://www.e3g.org/docs/E3G_Report_Just_Transition_and_EU_Budget.pdf Note: no information is available on the LIFE database regarding the project objectives

[167] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3981

[168] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5353

[169] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5184

[170] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3665

[171] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5789

[172] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3281

[173] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3411

enterprises, by applying new techniques, technologies, instruments and methods that offer environmental as well as economic advantages to the industry when complying with the REACH regulation.

- **REAL Alternatives for LIFE** *(ongoing)*[174]**:** the overall aim of the REAL Alternatives 4 LIFE project is to facilitate the refrigeration and air conditioning sector's transition towards the use of low global warming potential (GWP) refrigerants in order to reduce its CO2 emissions.
- **Rebus**[175]: The LIFE REBus project aimed to demonstrate how businesses and their supply chains can implement resource efficient business models (REBMs). It focused on four key markets: electrical and electronic products; clothing; furniture; and construction products.
- **RESTORE project**[176]: brought together best practice in river restoration from across Europe, building additional river restoration network capacity, and promoted effective river restoration knowledge transfer. Created a network that linked policymakers, river basin planners, practitioners and experts, to share information and good practice on river restoration activities.
- **Roseate Tern** *(ongoing)*[177]**:** the overall goal of the LIFE14 Roseate Tern project is to improve the conservation prospects of roseate tern (Sterna dougallii) in the UK and Ireland. This aim would contribute to a long term goal of improving the conservation status of roseate tern across Europe.
- **Smart Waste**[178]**:** the overarching goal of the LIFE SMART Waste project goal was to demonstrate innovative ways of understanding, tackling and reducing waste-related crime. The project aimed to develop, test and apply new and modern ways of working, and demonstrate direct interventions to assess and target illegality in waste streams.
- **SynSpirit**[179]: the LIFE SynSpirit project aimed at demonstrating a new anaerobic fermentation process through which organic waste streams and low quality crude glycerine are efficiently converted into high value bio-methanol. For the first time, the project connected a biological anaerobic digestion process for crude glycerine with the sustainable thermochemical production of bio-methanol, based on high quality glycerine.

Transboundary projects where the UK has been a beneficiary organisation between 2007 and 2017[180]:

- **ADVICLIM**[181]: LIFE ADVICLIM aimed to improve local management of vineyards in the face of climate change. It developed tools to measure and model both contributions to climate change and the impact of climate change. It built on these to help identify the best responses to mitigate and adapt to the impact of climate change in vineyards.
- **AETHER**[182]: the objective of the AETHER project was to demonstrate the feasibility of producing a new cement at industrial scale with significantly lower CO2 emissions

[174] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6240

[175] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4751

[176] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3780

[177] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5346

[178] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4960

[179] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4930

[180] This is based on analysis of the LIFE database to identify projects where a UK organisation was a partner and the project operated in both the UK and other EU countries.

[181] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4998

[182] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3718

compared with conventional Portland cement, within existing industrial installations, using a new and patented type of clinker shown to be successful in lab trials. The project aimed to validate the environmental, technical and economic properties of the cement produced, which in the longer-term may contribute to a cement-producing process that achieves the EU's CO2 reduction targets.

- **AIRUSE**[183]: the overall goal of the AIRUSE project was to develop and demonstrate cost-effective measures for ensuring better air quality in urban areas.
- **APEX** *(ongoing)*[184]: the LIFE APEX project aims to enable regulators of chemicals to make more systematic use of monitoring data from apex predators and prey. This would reduce exposure to harmful substances and protect human health and the environment.
- **BEVERAGE**[185]: the LIFE BEVERAGE project aimed to reduce the emission of greenhouse gases caused by beverage production through a new process that will be piloted at breweries in Belgium and the UK.
- **BLUETEC**[186]: the BLUETEC project aimed to demonstrate the technical feasibility and cost effectiveness of a full-scale 1 MW tidal-energy installation. It thus hoped to demonstrate the technology's potential to significantly reduce CO2 emissions and improve Europe's competitiveness in exporting innovative and renewable technologies.
- **BRIO**[187]: the main objective of LIFE-BRIO project was to demonstrate from a life cycle perspective an innovative and sustainable methodology for end-of-life WT blades management and recycling.
- **CISDP - Cleaning Industry Sustainable Development Programme**[188]: the main objective of the Cleaning Industry Sustainable Development Programme (CISDP) LIFE project was to help implement FEP (French Federation of Cleaning Industries)'s Sustainable Development Programme, thereby conserving natural resources, optimizing energy consumption, reducing water consumption and pollution, and improving the recycling of waste.
- **CLINSH** *(ongoing)*[189]: the objective of LIFE CLINSH is to improve air quality in urban areas situated close to ports and inland waterways, by accelerating IWT emission reductions.
- **ClosedLoopCarpet**[190]: the project would demonstrate the technical and economic feasibility of a separation line based on innovative shredding and cryogenic separation technology, capable of separating discarded carpet material into its primary resources, which can directly be used in the production of new carpets or for depolymerisation.
- **DEMINE** *(ongoing)*[191]: LIFE DEMINE aims to demonstrate and disseminate the technical and economic feasibility of decreasing the overall environmental impact caused by abandoned mine drainage in water bodies.

183 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4253
184 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6747
185 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5680
186 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3640
187 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5139
188 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3406
189 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5782
190 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4735
191 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6180

- **Eucalyptus Energy**[192]: the project aimed to increase the efficiency of the valorisation of eucalyptus biomass. By adding value to leaves and branches that would otherwise be treated as waste, it hoped to improve the sustainability of eucalyptus forests/plantations.
- **Euro Bird Portal** *(ongoing)*[193]: the aim of this project is to develop the existing EuroBirdPortal (EBP) demo viewer into a full-fledged web portal displaying reliable Europe-wide patterns of bird distribution in near real time.
- **EWWR - European Week for Waste Reduction**[194]: the main objective of the European Week of Waste Reduction (EWWR) project was to contribute to reduce the amount of municipal waste generated in Europe.
- **Fresh Box**[195]: the LIFE Fresh Box project aimed to improve the sustainability of the distribution of fresh products in order to improve the sector's ability to offer better products to the end consumer. This would help to improve the sector's overall competitiveness.
- **Highly Efficient Ovens (HEO)**[196]: the long-term objective of the HEO project was to address the issues of energy-efficiency, over-dependence on fossil fuels, greenhouse-gas emissions, the use of toxic chemicals, and the overall production of waste in the manufacture of domestic ovens.
- **IAP**[197]: the overall objective of the IAP-RISK project was to mitigate the threat of IAPs to the EU by producing high-quality PRAs that meet the requirements of the EU Regulation (No. 1143/2014) and the minimum standards set out in the horizon scanning exercise ENV. B./ETU/2013/0026.
- **Living Streets**: the Living Streets project aimed to implement a system that enables inhabitants to temporarily transform their street into a sustainable place. One of the main strategic questions of this experiment was how we can organise citizens' daily lives without using cars as much as we do today.
- **PACTA**[198]: LIFE PACTA aimed to develop and apply the Paris Agreement Capital Transition Assessment (PACTA) model to bulk-load, analyse and deliver results for thousands of portfolios that financial regulators may wish to assess on a continuous basis. The project used the tool to assess EU insurance companies and pension fund assets.
- **REACHnano**[199]: the 'REACHnano' project aimed to provide the industry and stakeholders with easy-to-use tools to support the risk assessment of nanomaterials along their lifecycle.
- **RECYMAGNET**[200]: the main objective of the LIFE RECYMAGNET project was to design and demonstrate a pilot plant with a treatment capacity of 75 HDD/h which will be able to recycle NdFeB magnets from discarded HDDs and recover up to 80% of their active magnetic materials.

192 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4645
193 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5538
194 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3317
195 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5007
196 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4222
197 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5518
198 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6230
199 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4249
200 http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4928

- **REFRESHMENT** *(ongoing)*[201]: the main objective of LIFE REFRESHMENT is to develop an innovative method for the re-use of spent grain as a raw material for the production of two types of non-alcoholic beverages.
- **SF6-FREE** *(ongoing)*[202]: LIFE_SF6-FREE aims to demonstrate, validate and roll-out climate-friendly alternatives for SF6 in particle accelerators. The project also aims to help demonstrate the suitability of SF6 alternatives in five particle accelerators.
- **SIRENA**[203]: the 'SIRENA' project aimed to improve understanding of risks associated with nanomaterials through the demonstration and testing of a methodology to simulate the unintended release of nanomaterials from consumer products.
- **SmartWater** *(ongoing)*[204]: LIFE SmartWater aims to demonstrate a system for advance leak control, based on the use of innovative valve actuators.
- **SOLID LIFE**[205]: the SOLID LIFE project aimed to demonstrate that it is feasible to produce low-emission cement and concrete products at industrial scale in existing industrial installations.
- **SWEAP** *(ongoing)*[206]: led by Belgium partner – about import/export of controlling wastes – TFS – informs enforcement personnel in UK and Belgium and helping to build intelligence sharing/devise IT systems to monitor/track alert each other.
- **TACKLE** *(ongoing)*[207]: LIFE TACKLE aims to show a red card to poor environmental management governance by national football associations (NFA) and both organisational and operational level.

[201] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5739
[202] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6718
[203] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4412
[204] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6178
[205] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5685
[206] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6842
[207] http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6662

Annex 2 Research tools

A2.1 Stakeholder Topic Guide

Interview Guide for EU LIFE Stakeholders

Final v1

Introduction (Ask all)

Thank you for agreeing to take part in this interview. Natural England has commissioned ICF to conduct an evaluation of the EU LIFE Funds in the UK. A key aim of this evaluation is to explore the role of LIFE, the effectiveness and efficiency of the fund, and how LIFE funding is contributing to environmental and social outcomes in the UK.

As a member of [organisation], we are keen to speak with you to discuss your views and insights regarding these themes. The interview should last about an hour, but may be a little longer or shorter, depending on your responses.

Your participation in this interview is voluntary and you can change your mind at any time. Please be assured that all comments made during the course of the interview will be treated in the strictest confidence. Your responses will not be attributed to you and will only be reported in aggregate. We will retain your contact details for quality purposes and this data is typically destroyed within three months of the end of the evaluation.

We appreciate that you may not be involved in all aspects of the delivery of the fund, but we would still be keen to hear your personal views.

[ASK PERMISSION TO RECORD]

INTERVIEWER – Ensure that you are familiar with the different themes and types of projects funded through the LIFE programme and that you are aware of the organisation's remit in relation to environmental policy and funding programmes.

MASTER VERSION

Role and responsibilities (Ask all – 5 mins)

1. We understand that you are [role] and are responsible for…, please could you explain your main responsibilities in relation to the LIFE fund?
   PROBE ON: fund/grant co-ordinator, beneficiary etc.

2. Which areas or themes of the LIFE fund are you involved in?
   PROBE ON: Environment & Resource Efficiency; Nature & Biodiversity; Environmental Governance & Information; Integrated for Environment Projects

3. How many LIFE projects have you been involved with? How many are you involved with currently?

4. What types of LIFE projects are these?
   a. What value/size of projects are these?

LIFE Funding in the UK (DO NOT ASK DEFRA GENERAL POLICY STAKEHOLDERS OR BENEFICIARIES – 5 mins)

5. Data shows that the UK has been particularly successful in securing funding from LIFE compared to other Member States. Do you have a view about the reasons for this?

6. In your view, is the UK managing to access as much LIFE funding as it could?
   PROBE ON: types of projects funded, technical assistance, number of projects funded etc.

6a. [ASK THOSE INVOLVED IN ENVIRONMENTAL SUB-PROGRAMME ONLY[208]] Data shows that the UK did not draw down its full national allocation between 2014 and 2017[209]. For what reasons do you think this is?

7. Data shows that the UK has gained more funding for some environmental priorities (e.g. Environment and Resource Efficiency) than others (e.g. Environmental Governance and Information). Do you have a view about the reasons for this?

Impact of LIFE Funding (15 mins)

8. What do you think have been the most significant outcomes that LIFE has achieved for the environment in the UK?
   PROMPT ONLY IF NECESSARY:
   a. Awareness of environmental or climate change issues
   b. Conservation and restoration
   c. Energy saving, GHG emission reduction
   d. Demonstrating innovative approaches/best practice
   e. Knowledge sharing/upskilling beneficiary groups
   f. Monitoring and evaluation

9. [DO NOT ASK DEFRA GENERAL POLICY STAKEHOLDERS] In your experience, have the outcomes of LIFE projects met expectations (i.e. the planned outcomes)?
   a. If yes, what do you think are the reasons for this?
   b. If no, please give examples. What do you think are the reasons for this?

[208] Includes all environment sub-themes

[209] i.e. spent less than €125m or 9.3% of overall indicative EU sub-programme environment budget (€1,347m)

10. [DO NOT ASK DEFRA GENERAL POLICY STAKEHOLDERS] How, if at all, have LIFE projects contributed to social and economic objectives in the UK?

11. [DO NOT ASK DEFRA] Has your project(s) led to the development and implementation of environmental policy in the UK?
    a. PROBE ON: In what way do you think UK policy priorities have changed as a result of your project?
    b. If yes, please give examples.

12. Has LIFE contributed to the development and implementation of environmental policy in the UK?
    a. PROBE ON: Do you think UK policy priorities have changed as a result of LIFE funded projects?
    b. If yes, please give examples.

13. Has LIFE helped to develop or demonstrate innovative approaches that have influenced wider practice in the UK? Please give examples.

14. [DO NOT ASK DEFRA GENERAL POLICY STAKEHOLDERS] Do you have any views about the effectiveness of LIFE…
    a. Integrated projects (projects that are implemented on a large scale – multi-regional, transnational)?
    b. Preparatory projects (projects that address specific needs for the development and implementation of EU environmental or climate policy and legislation)?
    c. Financial instruments (e.g. PF4EE[210], NCFF[211])?

15. a) To what extent has LIFE resulted in any positive unexpected or unintended outcomes? Please give examples.
    b) And, what about negative unexpected or unintended outcomes? Please give examples.

16. [DO NOT ASK BENEFICIARIES] Have any specific LIFE projects in the UK been particularly effective or had high impact?
    a. If so, which projects and why?

17. [DO NOT ASK DEFRA GENERAL POLICY STAKEHOLDERS OR BENEFICIARIES] Do you think that LIFE funding has delivered value for money in the UK?
    a. Please explain why/ why not.
    b. PROMPT IF NEEDED: do you think LIFE funding is an efficient use of public money compared to alternative spending methods?

Role of LIFE in the Funding Landscape (2 mins)

18. In your experience, what role has LIFE played in the environmental funding landscape in the UK?

[210] Private Finance for Energy Efficiency provides loans for investments in energy efficiency projects prioritised under National Energy Efficiency Action Plans.

[211] Natural Capital Financing Facility provides financing opportunities in the form of loans or equity investments for revenue-generating or cost-saving projects promoting the preservation of natural capital, including climate change adaptation projects.

   a. Has it funded things that are difficult to finance through other means? In what way? Please give examples.
   b. PROMPT IF NECESSARY: Could the same outcomes have been achieved to the same scale/timeframe/quality?

19. [DO NOT ASK DEFRA GENERAL POLICY STAKEHOLDERS] What do you think would be the scale and nature of gaps in funding if LIFE ceased to exist in the UK?

EU Added Value [DO NOT ASK DEFRA GENERAL POLICY STAKEHOLDERS – 5 mins]

20. Do you have any experience of transboundary LIFE projects (e.g. development or implementation)?
    a. Have they delivered any benefits that could not have been achieved by UK funding alone? If so, which?

21. Do you think the UK gets any benefit from networking or collaborating with other EU Member States through LIFE? If so, please give examples.
    a. PROBE ON: knowledge-sharing, sharing of responsibilities across Member States, able to address environmental issues at pace

22. Are you aware of any examples of the UK learning from innovative/ demonstration projects funded by LIFE in other Member States?

23. Are you aware of any learning on transboundary environmental issues through LIFE that has benefited the UK? Please give examples

Lessons Learned from LIFE Delivery Process (DO NOT ASK DEFRA GENERAL POLICY STAKEHOLDERS – 15 mins)

24. What, if anything, has been learned from the process of administering the LIFE programme, in relation to:
    [INTERVIEW NOTE: not all stakeholders will have been involved in all aspects]
    a. Applications and project selection procedures;
    b. The grant management process;
    c. The role of the national contact point;
    d. Financing arrangements, including match funding and auditing;
    e. Partnership working;
    f. Monitoring and evaluation arrangements?

25. Is the process associated with applying for, receiving and administering LIFE funding cost effective?
    a. What factors affect cost effectiveness? Does the size of grant affect this?
    b. How does this compare to other sources of funding?

26. Are you aware of some organisations engaging more with LIFE than others? Please give examples.
    PROMPT IF NEEDED: Identifying partners, attending conferences/events, collaboration activity
    a. What factors have encouraged engagement and applications?
    b. What factors have discouraged engagement and applications?

27. What, if anything, has the UK learned from LIFE integrated projects?
    a. And, what about preparatory projects?

b. And, LIFE financial instruments (PF4EE, NCFF)?

Potential Future Role of a LIFE-like fund (5 mins)

28. [DO NOT ASK BENEFICIARIES] How well does LIFE match the UK government priorities for the environment, as set out in the 25YEP?
    a. What about other policies?

29. Do you think there would be a role for a LIFE-like programme in the UK in future?
    a. If so, please explain why?

30. [DO NOT ASK DEFRA GENERAL POLICY STAKEHOLDERS] If a programme like LIFE was to continue in some form in the UK in future, how could it be changed, refined or developed to make it more effective and/or efficient?

31. Do you have any other comments in relation to the fund that you would like to raise which we haven't covered?

THANK & CLOSE

Annex 3 Evaluation tasks

7.2.1.2 Desk based research: project database analysis

As outlined in the tender specifications, ICF has undertaken a review of UK LIFE projects from 2007 to the present. This included developing a typology, which categorised the projects by reference to the following criteria:

- Project name.
- Year funding awarded.
- Project duration.
- LIFE programme (i.e. Environment, Climate).
- Project theme.
- Type of organisation/beneficiary.
- Project aims/objectives
- UK led or MS-led.
- UK location(s).
- Lead partner country.
- Total value of project.
- LIFE contribution (as % of total funding and absolute values).

Analysis was based on quantitative and qualitative data structured around the evaluation questions. This summarised the types of results expected and achieved and whether expectations were met (where data are available). The analysis focuses on the period from 2007 onwards – in part as better project data is available post-2007, and in part as evaluation of overly historic performance provide little relevance for the role of LIFE today.

7.2.1.3 Desk based research: document review

ICF reviewed documents, reports and evaluations of the implementation of LIFE funding in England, the UK and Europe, to gather evidence regarding effectiveness, value for money and administrative arrangements and processes. These were:

- **EU wide evaluations of and impact assessments of LIFE**
  - Ecorys, 2017. Support for an external and independent LIFE Mid Term Evaluation Report.
  - European Commission, 2017. MID-TERM EVALUATION. Report on the Mid-term Evaluation of the Programme for Environment and Climate Action (LIFE).
  - COWI, 2009. Ex-Post Evaluation of Projects and Activities Financed under the LIFE Programme Country-by-country analysis United Kingdom.
  - European Commission, 2018a. COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT.
  - European Commission, 2018b. LIFE Country overview United Kingdom.
  - European Commission, 2013. Final evaluation of Regulation (EC) No 614/2007 concerning the Financial Instrument for the Environment (LIFE+).

- **EU reports and case studies**
  - European Commissions, 2019. LIFE in UK and Finland twinning to restore peatland.
  - Natural Resources Wales, 2015. Anglesey and Lleyn Fens LIFE Project
  - Neemo and Ernst & Young, 2016. LIFE: contributing to employment and economic growth.
  - SEUPB, 2016. INTERREG VA Programme Overview.
  - Seosamh Ó Laoi, n.a. An introduction to the LIFE Programme 2014-2020.
  - WWF-UK, 2013. Partnerships Involving Stakeholders in the Celtic Sea Ecosystem – PISCES. Final report.

- **UK policy and programme documents**
  - BEIS, 2016. Energy Innovation.
  - DCMS, 2018. Heritage Lottery Fund Policy Directions.
  - Esmee Fairbairn, 2017. Annual Report & Accounts 2017.
  - Defra , 2019. Countryside Stewardship: An overview.
  - Harding, 2017. What has Heritage Lottery Fund done for nature?
  - HF, 2019. What we do.
  - HLF, 2018. Heritage Lottery Fund. National Heritage Memorial Fund Lottery Distribution. Annual Report and Accounts for the year ended 31 March 2018.
  - HM Government, 2018. A Green Future: Our 25 Year Plan to Improve the Environment.
  - HM Government, 2005. The UK Government Sustainable Development Strategy
  - JNCC, 2017. UK Prioritised Action Framework
  - Thompson, 2016. LIFE overview: LIFE priorities and application process
  - Natural England, 2015. Improvement Programme for England's Natura 2000 Sites (IPENS).
  - Natural England, 2009. Agri-environment schemes in England 2009 (NE194).
  - Natural Resource Wales, 2016a. FINAL Report Covering the project activities from 01/09/2012 to 30/09/2015
  - Natural Resource Wales, 2016b. LIFE Natura 2000 Programme for Wales
  - NLHF, 2019. The National Lottery Heritage Fund Strategic Funding Framework 2019–2024.
  - Terrestrial Biodiversity Group, 2013. Barriers to external bid based funds and how we overcome them
  - RPA et al., 2012. Agreement holders' information: Environmental Stewardship

- **UK publications**
  - Jennings, 2017. Brexit and nature conservation: an opportunity or a threat?
  - MacDonald et al., 2019. Have Welsh agri-environment schemes delivered for focal species? Results from a comprehensive monitoring programme. *Journal of Applied Ecology*.
  - McKie, 2018. Bitterns, curlews and lapwings at risk as vital wildlife funds dry up.
  - RSPB, 2019. Agri-environment schemes.
  - RSPB, 2018. Ask the Heritage Lottery Fund to continue funding nature.
  - The Wildlife Trusts, 2019. The National Lottery Heritage Fund.

7.2.1.4 Stakeholder consultations

ICF, in collaboration with the Steering Group, developed a long list of 53 stakeholders who were invited to take part in the consultations. 27 interviews were successfully completed. In addition, ICF attended the Natural Environment Funders Group (NEFG) meeting on 31st January 2019 to capture views and perceptions of members of this group. A written response was also provided by one organisation.

The stakeholders interviewed comprised a variety of policy makers, interest groups and beneficiaries among government, agencies, local and national park authorities, NGOs and the private sector, from all four countries of the UK. The roles and responsibilities of the interviewees ranged from funding officers, project co-ordinators and policy advocates to policy advisors, strategic leads and LIFE committee members. They included representatives from the following organisations:

- Animal and Plant Health Agency.
- Department of Business, Energy and Industrial Strategy, UK.
- Department of Environment, Food and Rural Affairs, UK.
- Department of Agriculture, Environment and Rural Affairs, Northern Ireland.
- Durham County Council.
- Environment Agency.
- Groundwork.
- Institute of Refrigeration.
- Joint Nature Conservation Committee.
- Liverpool John Moores University.
- Natural England.
- Natural Resources Wales.
- National Trust.
- Peak District National Park Authority.
- Scottish Natural Heritage.
- Severn Rivers Trust.
- Snowdonia National Park Authority.
- RSPB.
- Third Generation Environmentalism.
- The Wildlife Trusts.
- WWF.

The majority of stakeholders had experience of the Nature & Biodiversity theme (21), followed by Climate (10), Environmental Governance & Information (9) and Environment & Resource Efficiency (5).

Table 7.3 Interviews by audience type

Audience Type	Number of interviews
Defra (and Defra family[212])	11
Beneficiaries and NGO policy leads	13
Devolved administrations	3
Total	**27**

The interviews covered the following topics (the topic guide is presented in Annex 2):

- The impact of LIFE funding.
- The role of LIFE in the funding landscape.
- EU added value.
- Lessons learned from LIFE delivery process.
- The potential post-EU exit arrangements to support project types currently funded through the LIFE Programme.

[212] Including BEIS, Environment Agency and JNCC, Natural England