

HEADING 2: Sustainable growth: natural resources

Programme for the Environment and Climate Action (LIFE)

Lead DG: ENV

Associated DGs: EAC, CLIMA

I. Overview

What the programme is about?

Launched in 1992, LIFE is the only EU programme exclusively dedicated to the environment, nature conservation and climate action, all areas of growing public concern. Because of its limited size (0.3 % of the EU budget), the LIFE programme is not meant to solve environmental and climate problems, but rather to act as a catalyst for developing and exchanging best practices and knowledge. The programme's role is to build up and improve capacity, speed up the implementation of EU legislation, and help private players, in particular businesses, to test small-scale technologies and solutions, and leverage other funds.

LIFE activities aim in particular to target resource efficiency, including circular economy, to protect nature and biodiversity, to improve the quality of waters and air and the use of chemicals, to prevent the negative effects of noise, to mitigate emissions and to adapt to climate change.

EU added value of the programme

Compared with action at national level, the LIFE programme ensures:

- More effective knowledge-sharing. LIFE is an EU platform that enables players across the EU to learn from each other's experience on the implementation of EU legislation and policies (e.g. by financing peer reviews, by coordinating cooperation between judges, by pooling resources and expertise, etc.).
- Strengthening of solidarity and responsibility sharing. Environmental assets are often of a public good nature and are unevenly distributed across the EU ⁽¹⁾. By assisting Member States that have the most valuable EU natural capital, LIFE allows for a better solidarity and for sharing responsibility in preserving the EU environmental common goods.
- Better response to transboundary or transnational environmental problems, which cannot be adequately addressed by Member States acting alone: LIFE has helped reaching important commitments at international level on the environment/climate (i.e. the Paris agreement), and avoiding coordination failures.
- Increased coherence of EU environmental and climate legislation and policies through the definition of common targets and the development of legislation and policies (e.g. A European Strategy for Plastics in a Circular Economy). LIFE also assists Member States in progressing towards these common targets through positive incentives (i.e. by financing peer reviews, helping to enforce environmental and climate legislation and policies in Member States, etc.) and negative incentives (fines imposed by legislation on e.g. such as CO₂ emissions from cars).

The EU added value of the LIFE programme has been also confirmed by the 2017 mid-term evaluation, where the overwhelming majority of the respondents of the public consultations confirmed that the programme has an important EU added value because it:

- responds to European and global environment and climate challenges, which are unlikely to be addressed by a Member State alone; and supports the coherent development, implementation and enforcement of EU environment and climate policy and legislation, (98 % of respondents);
- tackles environmental and climate problems more efficiently than it could be done at national level (98 % of respondents);
- preserves EU environmental resources which, even if unevenly distributed across the EU, benefit the EU as a whole (94 % of respondents);
- helps to leverage the funds for environmental protection and climate action (97 % of respondents);
- contributes to EU-wide sharing of 'best practices', knowledge transfer, demonstration, and awareness raising (99 % of respondents).

The high level of demand for projects combined with the relatively low level of co-financing ⁽²⁾ in comparison with other programmes, underlines the continued interest in LIFE and its capacity to address existing needs.

The wide range of beneficiaries of LIFE projects – public authorities, private companies, including small and medium enterprises, and no profit organisations – demonstrates that the programme is capable of addressing different demands and attracting a wide range of stakeholders of climate/environmental policies.

⁽¹⁾ Article 8 of the Habitats Directive explicitly links the delivery of conservation measures to the provision of EU co-financing.

⁽²⁾ LIFE finances a maximum of 60 % of eligible costs for all projects for the duration of the first multiannual work programme (MAWP 2014-2017). This rate will be reduced to 55 % during the second MAWP (2018-2020). Exceptions are foreseen for the nature and biodiversity projects related to priority habitats or species (up to 75 %) or capacity building projects (up to 100 %).

Moreover, the evidence gathered in the evaluation of the EU Birds and Habitats Directives (fitness-check) confirmed the strategic role that the LIFE programme plays in supporting their implementation.

Implementation mode

The Directorate-General for Environment (DG ENV) is the lead DG for the programme implementation, with DG CLIMA and DG EAC as associated DGs.

The Commission manages directly the procurement activities, direct grants and the prizes. The bulk of the LIFE grants is managed under direct management by the Executive Agency for Small and Medium Enterprises (EASME), in close collaboration with the relevant Commission services (ENV and CLIMA).

LIFE funds two pilot financial instruments (Private Finance for Energy Efficiency – PF4EE and Natural Capital Financing Facility – NCFE) which are being implemented by the EIB under indirect management.

II. Programme Implementation Update

Implementation status (2017-2019)

The implementation of the programme is on track.

Following the 24 calls for proposals for traditional projects launched from 2017 to 2019, more than 3100 proposals were received leading to the financing of 290 (grant) projects for the years 2017-2018. The call for proposals launched in still 2019 is ongoing.

On climate objectives, about 422 project applications for traditional projects focusing on climate action objectives have been received, mainly focused on climate adaptation (45 % of the total number of proposals for climate action) although the projects proposals for climate mitigation are increasing rapidly (from 30 % in 2017 to 38 % in 2019). About 67 projects were co-financed following the calls for proposals 2017 and 2018.

On environmental objectives, including circular economy, air, water, soil, chemicals, noise, resource efficiency and nature and biodiversity, about 2682 applications were received in 2017-2019 and 223 projects financed in the years 2017 and 2018. 2019 projects are being awarded. In particular, the number of applications for nature and biodiversity projects is in constant evolution and reached 328 in 2019.

For projects on environment and climate change mitigation, the large majority of beneficiaries are from the private sector (60 % and 50 % respectively). Under these priority areas, the LIFE programme seems to become more and more attractive to private businesses.

Organisations from the public sector are the main beneficiaries of climate adaptation (73 % of the total beneficiaries) and nature and biodiversity projects (61 % of the beneficiaries). For the last one, the presence of private non-commercial organisations is also noticeable (35 % of the total beneficiaries).

Since 2017, a total of 12 calls for proposals for integrated projects were launched. The demand is higher than expected: 22 integrated projects in 16 different Member States have been financed in 2017 and 2018 for implementing environment or climate specific plan or strategies. In 2019 33 concept notes have been submitted from 20 different Member States, thus confirming the success of this type of projects.

On the basis of the integrated projects financed in 2017 and 2018, the total LIFE financing of EUR 217 000 000 for the 22 integrated projects should facilitate the coordinated use of about EUR 10 000 000 000 complementary funding. On the basis of the proposals received, for each euro financed by the LIFE programme, further 45 euros of complementary funding are expected to be financed from other sources for the implementation of the targeted plans. Experience shows that the amount of additional funds mobilised by the integrated projects tend to increase during the implementation.

In addition to grants, two pilot financial instruments are being financed:

The Natural Capital Financing Facility (NCFE), which is conceived to demonstrate that projects which promote the preservation of natural capital, including adaptation to climate change, can be bankable. The financial structure represents an innovation which, if successful, could drive the architecture of natural capital financing across the world. Up to now, five operations have been financed.

The Private Finance for Energy Efficiency (PF4EE). It aims at developing the capacity of intermediary banks to establish credit lines addressing energy efficiency investments. At the end of 2019, 11 collateral agreements with intermediary banks were signed. The totality of the guarantee (EUR 72 M) under phase 1 and an additional EUR 1,5m being re-utilised is now allocated in 11 Member States supporting a targeted total investment of up to EUR 725,7 million, a leverage of 10 times the EU money invested for this phase. The instrument was scaled up after its pilot phase, with additional funding amounting to EUR 25 million for the 2018-2020 period. The updated delegation agreement was signed in November 2019 and the new call published immediately after.

Key achievements

The LIFE programme has a wide scope, encompassing (1) nature and biodiversity, (2) climate action, (3) environment and resource efficiency, (4) support to governance at all levels, (5) awareness raising and exchange of best practices and (6) support to the implementation of the environmental and climate legislation and policies. It focuses on co-financing projects (81 % of the budget)

and procurement activities. The average duration of a project is 5-7 years. At present only 49 projects have ended and the related results have been or are being validated.

Therefore, while expected results based on aggregated value of the estimated project impact are available, actual achievements can be provided on anecdotal basis only.

(1) LIFE projects on **nature and biodiversity** are:

- improving the conditions of over 186 **wildlife species**, by, among other, increasing their site area by about 7.4 million ha by project-end (this is approximately the area of Ireland).
- Improving the status or increasing the area of **natural or semi-natural habitats** by about 42 000 ha by project-end.

Two examples of projects on wildlife species showing the potential catalytic effect of the LIFE programme are LIFE EUROTURTLES and LIFE Medturtles which, although presented by different organisations, are working together to tackle a relevant number of threats at nesting and foraging sites in a wide number of countries (Croatia, Cyprus, Greece, Italy, Malta and Slovenia – the first project – and Spain, Albania, Tunisia, Turkey). This allows to really spread best practice for the conservation of the loggerhead turtle (*Caretta caretta*) and the green turtle (*Chelonia mydas*), both listed as priority species in Annex II of the Habitats Directive.

Another example is the LIFE WOLFALPS project that coordinated conservation actions in the Alpine regions of France, Italy and Slovenia, to minimise conflict with people and improve the prospects for the wolf (*Canis lupus*). This involved protecting livestock to stop wolves being poisoned or shot. It also worked to make hunters, shepherds and local communities more tolerant of wolves, and addressed the loss of breeding sites and interbreeding with dogs. As a result, the number of wolf packs doubled, the species increased its range by 2 000 km and the Apennine and Dinaric wolf populations were joined up for the first time in over 200 years.

(2) LIFE projects on **climate action** are contributing to cut greenhouse gas emissions and to adopt to climate adaptation measures to increase society's resilience to climate change and reduce the associated impacts and costs.

Several LIFE projects report reducing **greenhouse gas emissions** as one of the important objectives. Out of the projects for which validated results are available:

- No 107 LIFE projects aiming at carbon dioxide (CO₂) and have the potential to decrease emissions by about 10 million t/year;
- No 8 LIFE projects working on the reduction of methane (CH₄) emissions estimate to cut emissions by more than 1 500 t/year;
- No 9 LIFE projects affecting emissions of nitrous oxide (N₂O) are forecasting to reduce emissions by 400 t/year.

The LIFE Paint-it projects aims to demonstrate a new manufacturing process to produce safe and innovative anti-fouling paints for naval applications and to eliminate the use of biocides in favour of a physical anti-fouling mode of action. With its innovative technology, the project aims to reduce the annual CO₂ emissions due to maritime transport by more than 21 million tons within 5 years after the project-end, representing a reduction of more than 4 % within the context of the project.

The Life Green Gas Network project tested a way to cut gas leaks through improved pressure control. Gas leaks waste resources and contribute to greenhouse gas emissions. Losses of methane and carbon dioxide from natural gas are directly proportional to network operating pressure. This is often set too high using current methods. In Lombardy, this project tested a new management and control system for regulating pressure levels in gas distribution networks. This cut greenhouse gas emissions by 6 % without compromising service delivery. The project team calculated that applying the control system across low and medium-pressure areas of Italy's gas network would save 3.9 million tonnes per year of CO₂ equivalent. It could also save gas companies and consumers money.

The LIFE SMART Hospital showed that a smart hospital is healthy for the climate. The health sector is often known to be unhealthy for the climate. In the Spanish city of Valladolid, the LIFE programme showed how to make a hospital more resilient to climate change and how to contribute to emission reductions. The LIFE SMART Hospital project improved energy performance and reduced greenhouse gas emissions. It installed water-saving technologies and revamped the sorting, handling and tracing of medical waste. Energy, water and waste audits showed the positive impact of these actions on Hospital Universitario Rio Hortega. Benefits include 17 % less greenhouse gas emissions, 30 % less water consumed and 43 % less waste going to landfill. The project's actions are a blueprint for any hospital or health centre to follow.

To increase **resilience to climate change**, LIFE projects are working along two main lines of interventions:

- to reduce the area particularly vulnerable to climate change. An example is the project LIFE MASTER ADAPT. It aims to identify and test innovative tools of multi-level governance, to support regions and local authorities in defining and developing climate change adaptation (CCA) strategies and policies. LIFE MASTER ADAPT envisages reducing the extent of particularly vulnerable areas by 913 km² 5 years after the project ends.
- to increase the number of infrastructures targeted for climate resilience. Such infrastructures may include public, private and industrial buildings or services situated in urban or rural environments. These could range from large power generation plants, to water services, households or agricultural farms. An example is the project LIFE AGRI ADAPT that aims to increase the resilience of EU agriculture to climate change by demonstrating sustainable best-practice adaptation measures with an

ecosystem-based approach at farm level. The project aims to adapt 120 farms by its project-end. Another example is the project LIFE DERRIS that successfully tested an innovative model of public-private partnership between insurers, public administrations and SMEs to increase urban resilience to climate change, including through risk reduction tools for SMEs. Such tools included a Climate Risk Assessment and Management (CRAM) Tool to help enterprises to identify adaptation measures that they should implement to enhance resilience, as well as company adaptation action plans (CAAPs) that outlined numerous specific steps the participating companies could take to cope with floods, drought, high temperatures, high winds and other extreme weather events. During the project, 156 companies produced CAAPs and this number is expected to increase to 550 five years after the project-end.

(3) Environment and energy efficiency projects are:

- Working on **energy** (N. 103 LIFE projects):
 - by reducing energy consumption by about 118 million kWh/ year by project-end and by 1.2 billion kWh/year 3-5 years later (which represents the annual electricity energy consumption of ca. 340 000 homes).
 - by increasing renewable energy production by about 33 million kWh/year by project-end (this additional amount is about the average annual electricity consumption of 9 400 homes) and by 389 million kWh/year 3-5 years later (ca. 110 000 homes).

The LIFE METHAmorphosis project proposes to demonstrate, at industrial-scale, two innovative waste treatment systems, one in urban waste plants, and the other in agro-industrial and other organic waste treatment plants. In addition, the project tests the use of the bio-methane derived by the waste streams in the automotive sector. If successful, 5 years after the project the two prototypes could produce over 176 million kWh renewable energy annually (close to the annual electricity consumption of 50 000 homes).

- Improving **air quality** (N. 34 projects) by experimenting innovative methods and techniques to decrease emissions of carbon monoxide (CO), ammonia, nitrogen oxide (NOx), particulate matter emissions (PM) and sulphur oxide (SOx).

For example, the LIFE PSLOOP project envisages the construction of a demonstration plant able to recycle 3 000 tons of polystyrene waste per year. It foresees the establishment of a collection system able to supply the required polystyrene/expanded polystyrene (EPS/XPS) waste quantities to the demonstration plant; the production of 2 100 tons/year of PS gel and 43 tons/year of bromine; the avoidance of the emission of 210 tons/year of carbon monoxide, 25 tons/year of aromatic hydrocarbons and 10 tons/year of aliphatic hydrocarbons. It is also expected to reduce greenhouse gas emissions by 12 000 tons/year (78 %) compared to the baseline scenario; and saving of 150 000 GJ of energy.

- Improving **waste management**. N. 101 projects are expected to reduce non appropriately managed waste by a total of 4.7 million t/year 3-5 years after project end (about the total municipal waste of Belgium in 2017).

The LIFE ECORKWASTE project is demonstrating the possible uses of a cork waste valorisation system. The cork will be used as absorbent material in wetlands, for the elimination of organic compounds in winery wastewater treatment systems or as substrate for energy valorisation in a gasification process. Through this improved wastewater treatment, the project will alleviate the pressure on 930 km² of wetlands in the Llobregat Basin (a decrease of approximately 3 % within the context of the project). The reduction in pressure includes removal of 90 % of both phenol and hydrogen-sulphide from the winery wastewater within the project duration (estimated at 50 mg/year and 82 mg/year, respectively).

Moreover, to ensure more uniform application of the EU Waste Shipment Directive and to stop waste being trafficked and dumped illegally, LIFE is helping environmental inspectors to work jointly across the entire EU. At the same time, LIFE projects are promoting training for public authorities, environmental inspectors and other professionals.

For example, LIFE SWEAP promotes enforcement activities by providing training for inspectors and increasing the capacity of police, customs and the judiciary to tackle waste crime in all 36 member countries of IMPEL, the EU Network for the Implementation and Enforcement of Environmental Law. Information sharing and an improved tool for visualising the scale and routes of illegal shipments will help detect, disrupt and prevent illegal waste trafficking. Enforcing the EU Waste Shipment Regulation promotes the efficient use of resources, in line with circular economy policy. The project is expected to contribute to a uniform application of the EU Waste Shipment Regulation; to establish an EU-wide dataset for the development of intelligence products (new enforcement, tracking and e-reporting tools); to set up a network of 150 trained customs officers across five countries – first customs training held in Estonia in May 2019; to analyse data from 12 000 waste shipment inspections per year; to develop a tool to visualise waste shipments; and to organise inspector exchange programmes to compare structural differences in competent authorities, compare the way that physical inspections are carried out and gain best practice from these inspections.

- (4) to support **environmental and climate governance at all levels**. LIFE has empowered NGOs and citizens to take legal action when environmental laws, such as on air quality, are not being enforced by statutory bodies in Member States. Projects are giving ‘citizen enforcement’ a boost by sharing knowledge about rights of access to justice and bridging the gap between lawyers, judges, authorities and the public for better environmental governance. They are giving local authorities and regional administrations guidelines on air quality legislation and building capacity among NGOs to push for better enforcement of the EU Air Quality Directive.

For example, the LIFE-A2J-EARL project aims to improve the implementation and enforcement of EU environmental law by providing the public with effective access to justice, such as judicial review, administrative review and complaints to other appeal bodies. Access to justice is a fundamental means through which citizens and NGOs can support the implementation and enforcement of laws and policies to protect the environment. The project aims to increase awareness of existing rules and case-law on access to justice in environmental matters for specific target audiences – the judiciary, bodies responsible for the administration of justice, public interest lawyers and public administrations – and to increase knowledge and capacity for overcoming legal (both substantial and procedural) challenges and obstacles to effective access to justice in the environmental field.

Another project promoting citizens' empowerment is LIFE Legal Actions. It aims to empower NGOs and citizens to take part in public participation processes on the development or revision of air quality plans, to improve their access to justice by supporting their demand for air quality measures or as a last resort to initiate legal action. The project also aims to improve the relationship between citizens and government as well as government accountability, transparency and responsiveness. The project aims:

- To empower and motivate EU citizens and NGOs to campaign for effective air quality measures by providing information about the sources and effects of air pollution and potential solutions, and by providing advice on their right to participate in decision-making processes and to take legal action if necessary; and
- To motivate political decision-makers to improve air quality legislation and implementation by advising them on existing national and European funding schemes, promoting green public procurement (GPP) as part of a resource-efficient economy, and transferring examples of best practice.

Activities will be carried out in seven EU Member States with a particular focus on Germany and the Czech Republic. The project expects to reach an estimated 13 million citizens in at least seven EU countries through awareness-raising activities.

(5) Promoting awareness raising and information on climate and environment issues and the exchange of best practices.

The project LIFE_WZROST_PL 'Raising awareness of the need for climate action' led an information campaign to promote climate change and sustainable development policy. It raised public awareness in Poland about the need for action to boost renewables, improve energy efficiency and consume sustainably. More than 8 million people viewed 10 short films made by the project, shown on the Discovery Channel and associated networks. The project worked with bloggers to build substantial public interest in its 5-minute movies and award-winning documentary film. This approach contributed to increased support for climate action and renewable energy at regional and national level in Poland.

Another example is the LIFE 4 POLLINATORS project aimed at improving pollinator conservation by creating a virtuous circle leading to a progressive change in practices across the Mediterranean region. The specific objectives are to raise citizens and stakeholders awareness on the decline of wild pollinators and the importance of pollination services for the functioning and health of ecosystems and agroecosystems and to promote attitudes and behaviour favouring native wild pollinators (creation of an interactive database on wild pollinators, better information on interactions between pollinators and plants in the Mediterranean, promotion of pesticide-free agriculture and pollinator-friendly practices in rural and urban environments) and to enhance citizens participation in data collection and greening actions and promote better environmental governance, transferring data to the relevant authorities and stimulating the development of pollinator strategies or action plans in Member States where they are missing (Italy, Greece and Spain).

(6) In terms of support to the implementation and enforcement of environment and climate legislation and policies, the LIFE programme finances, for example,

- the development of guidance and tools for industrial sectors and individual enterprises, enabling compliance with legislation on chemicals, plastics, waste, air quality, greenhouse gas emissions and nature protection, among others. For example, the B.R.A.V.E. project reduced the environmental impacts of private companies. It helped to identify and develop effective measures for improving environmental legislation, by reducing financial and administrative burdens for companies registered with eco-management schemes. The project supported the full integration of EMAS, and other voluntary certification schemes such as the EU Ecolabel, into the environmental legislation of two EU Member States: Italy and Spain. Furthermore, it encouraged the adoption of the proposed measures in other areas of Italy and Spain. At least 23 measures developed by the B.R.A.V.E. project have been adopted within environmental legislation in the regions of Friuli-Venezia Giulia, Liguria, Lombardy and Tuscany in Italy, and in Andalusia and Valencia in Spain. In addition, Veneto, a region not originally involved, adopted one of the proposed measures as a result of the project's dissemination activities
- LIFE projects support the capacity of a European network of environmental prosecutors to share information and develop best practice to tackle environmental crime. LIFE has developed strategic partnerships with organisations representing inspectors (IMPEL), judges (EUFJE) and police and other enforcement agencies and shared information relating to environmental prosecutions throughout the EU and the rest of the world. To combat wildlife crime, LIFE has boosted the operational capacity of police, customs, prosecutors and other enforcement officials. Projects have provided training and handbooks, set up bird crime and poisoning databases and established networks of stakeholders to stop illegal killing of protected species.

LIFE non-grant activities play a unique role for the implementation, the development, the evaluation and the enforcement of environmental and climate legislation and policies. Studies and service contracts help complete all impact assessments and evaluations feeding into the Better Regulation, while scoping studies, technical assistance, stakeholder consultation activities and t

information, communication and awareness raising on EU environmental and climate legislation and policies financed by LIFE, support the Implementation of environmental and climate policies. The LIFE support takes various forms, such as:

- the analysis of Member States reports (e.g. the River Basin Management Plans prepared under the Water Framework Directive, the air quality reporting, the MS reports submitted for the implementation of the Nitrates Directive or the Seveso Directive) and the support to the EU and Member States reports to International fora (COPs, UN, OECD) such as on the implementation of the mandatory elements of the Nagoya Protocol (cd ABS Regulation).
- the EU emissions trading system (EU ETS), which is the main instrument to ensure a well-functioning EU carbon market. The Union registry serves to guarantee accurate accounting for all allowances issued under the EU ETS. The registry keeps track of the ownership of allowances held in electronic accounts, just as a bank has a record of all its customers and their money. LIFE is financing important measures positively affecting the confidentiality, integrity and/or availability of the system, thus protecting the financial interest of the Member States and the Union.
- the better and earlier identification of the intrinsic properties of chemical substances for the protection of human health and the environment. This is done by the four processes of REACH, namely the registration, evaluation, authorisation and restriction of chemicals. In this framework LIFE also supports on-going work to address the issue of endocrine disruptors, the action for the protection of animals used for scientific purposes, the support for restriction of the use of certain hazardous substances. In 2019 a pilot study on the options was financed for an EU early warning system for emerging chemical risks to the environment
- the European Green Capital and European Green Leaf to reward cities which are making efforts to improve the urban environment and move towards healthier and sustainable living areas and the implementation of the Green City Accord to mobilise cities that are ready to become environmental leaders in delivering EU environmental policy objectives in the areas of air quality, noise, water, waste management, nature and biodiversity

In terms of simplification, in 2019 two important steps were undertaken:

- The launch of an ad hoc call for proposals that moves from the concept of reimbursable costs to the adoption of simplified cost options, to make more straightforward the financial management of a project for the beneficiaries and the Commission. This is a pilot experience that could be further extended in the future (see below).

The introduction of a simplified reporting for the beneficiaries involving the contents – simplified format – and the timing – less frequent reporting.

Evaluations/studies conducted

The key findings of the latest evaluation ([COM\(2017\) 642 final](#) – [SWD\(2017\) 356 final](#)) have been presented in the Programme Statements 2018

The impact assessment accompanying the Commission Proposal for the LIFE programme 2021-2027 ([see SWD\(2018\) 292 final](#)), takes stock from the existing one to plan for further improvements.

Forthcoming implementation

In 2020, the implementation of commitments and payments will follow similar patterns of the previous years: It was decided to channel funds originally earmarked to strengthen the PF4EE financial instrument to action grants and/or procurement. The fund currently has sufficient reserves to continue implementation beyond 2020. No major differences are expected in this last year of the current MFF.

Beyond the annual routine management, the work will continue to incorporate the relevant priorities linked to the European Green Deal and, basing on the partial agreement reached in March 2019 with the European Parliament and the Council, to prepare the implementation of the programme 2021-2027.

On one side the experience acquired by LIFE is relevant for several measures that are expected to be adopted by the Commission in 2020 and in the coming years in the framework of the European Green Deal and their final formulation will have an impact in the definition of the LIFE future priorities on the other.

Extensive preparatory work is ongoing, among others, on the following measures:

- Proposal on a European ‘Climate Law’ enshrining the 2050 climate neutrality objective
- the European Climate Pact
- the extension of the ETS
- Legislation on batteries in support of the Strategic Action Plan on Batteries and the circular economy
- Waste reforms legislation
- EU Biodiversity Strategy for 2030
- New EU Forest Strategy and measures to support deforestation-free value chains
- Chemicals strategy for sustainability to guarantee a toxic-free environment
- The Proposal for an 8th Environmental Action Programme.

Outlook for the 2021-2027 period

The implementation of the commitments and payments for the years 2021-2027 could be delayed in case of delays in the negotiations and approval of the MFF, in the adoption of the legal basis or in case of change of the Executive Agency to which the bulk of the management of the LIFE programme will be delegated.

Beyond the usual implementation of grants and procurement, attention will be paid to the novelties introduced in the new programme following the ex-ante impact assessment.

They include in particular the following:

- The extension of the eligibility of the programme to the Overseas Countries and Territories.
- The need to address the low participation from some Member States which risks weakening the catalytic effect of the programme.
- The improvement of the project replication rate because the greater the replication of project results, the greater the catalytic effect of LIFE. The beneficiaries mention that the main barriers to replication are a lack of: financial means, decision-makers' interest and sense of urgency, specific information and communication of transferable solutions, and investment-planning capacity. To this end, the establishment of a technical assistance and/or a blending scheme, going beyond the current pilot experience of the 'Close to market' initiative, could be explored.
- The incorporation of the 'Clean Energy Transition sub-programme' which is at present financed under Horizon 2020. The systematic development of synergy mechanisms EU with other programmes in the framework of the opportunities offered by the Seal of Excellence and the cumulative funding.
- A more targeted steering of projects towards key priorities in case, for example, of new emerging priorities (such as have been in the current programming period the Circular Economy and the related sectors, for example plastics), or other priorities which are not adequately targeted by projects (selected following a calls for proposals on the basis of a bottom-up approach).
- The incorporation of the Voluntary Scheme for Biodiversity and Ecosystem Services in Territories of European Overseas (BEST initiative) and the need to improve the participation of the Outermost Regions.
- Roll-out of and support to implementation of the EU Climate Pact, a new initiative connecting with grass root level initiatives.

The programme is in the front line to contribute to the on-going and new challenges related to the European Green Deal and the upcoming 8th Environmental Action Plan.

Consultations activities have also started to assess the current programme features in view of possible improvement. They will be continued in 2020.

In particular, a technical workshop took place in Brussels, on 6 and 7 November 2019 in view to

- present to the stakeholders the LIFE programme post 2021 with the integration of the Clean Energy transition sub-programme
- collect their inputs on the programme's action in view to accelerate the ecological, climate and clean energy transition.

Some new interesting ideas have been collected – see the [conference report](#) – such as for example:

- an extended attention on species that are declining (e.g. Red-listed species and pollinators), beyond the scope of the EU nature directives,
- setting up advisory services at regional scale, using demonstration sites and identifying local champions amongst farmers who can exert peer pressure to promote appropriate measures for the protection of nature and biodiversity,
- a greater focus on smaller projects on nature and biodiversity with higher co-funding rates through a dedicated mechanism,
- support to the definition of labels on circular materials and products to use the potential of awareness, information and education for lifestyle changes,
- involve all circular-economy actors, from national and EU-level institutions to the production value chain, retailers, consumers and recyclers. This applies for both the circular economy and quality of life,
- Support the roll-out of innovative ideas which can then be scaled up under all the sub-programmes.

In line with the impact assessment that identified a potential for further improving efficiency through adjustments of certain programme management aspects, such as the monitoring of projects, a survey among all LIFE beneficiaries on the monitoring was undertaken to understand if and how the current structure can be improved.

The preparation of the programme 2021-2027 is also a multi-faceted activity that will impact on the performance of the programme:

- The elaboration of the Multiannual Work programme 2021-2024 – to be adopted by the end of 2020 – requires extensive consultations, both internal at the Commission – via an Inter-service Working Group –, and external, with an open survey aimed to identify possible gaps, to understand stakeholders support for the different types of interventions and to explore some key implementation issues, such as the project selection procedure. Open discussions with the Member States, that will have to provide an opinion on the final text, will take place as well.
- The externalisation process – leading to the definition of the Executive Agency that will manage the bulk of the grants – and the related staff is another crucial step. The lessons learned from the current experience – resulting in a severe understaffing of the LIFE programme in the Executive Agency and in the European Commission –, and the need for a strong involvement of

all the concerned services in case the management of the LIFE Programme will be transferred to a new Executive Agency will have to be addressed.

In parallel, some activities are being undertaken with a view to introduce simplification and to reinforce the assessment of the performance, with particular reference to:

- The continuation of the introduction and testing of simplified cost options, in line with the Financial Regulation, with particular reference to the operating grants.
- The improvement of the monitoring and evaluation framework of the programme, streamlining the database of the Key Performance Indicators, to embrace the different activities of the programme and to catch its ‘catalytic effect’ which is extremely challenging in terms of cost effectiveness.

III. Programme key facts and performance framework

1. Financial programming

Legal Basis	Period of application	Reference Amount (EUR million)
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	2014 – 2020	3 456,7

	Financial Programming (EUR million)							
	2014	2015	2016	2017	2018	2019	2020	Total Programme
Administrative support	18,2	5,0	4,9	4,9	4,9	5,1	5,0	47,9
Operational appropriations	381,7	424,5	453,4	483,6	514,0	548,9	578,7	3 384,8
Executive Agency	3,5	5,6	4,5	5,3	3,9	5,1	5,9	33,7
Total	403,4	435,1	462,8	493,7	522,8	559,1	589,6	3 466,4
<i>Of which contribution to European Solidarity Corps</i>					1,5	1,5	1,5	4,5

2. Implementation rates

	2019				2020			
	CA	Impl. Rate	PA	Impl. Rate	CA	Impl. Rate	PA	Impl. Rate
Voted appropriations	559,086	100,00 %	318,921	98,65 %	589,563	1,90 %	347,882	13,97 %
Authorised appropriations (*)	564,325	99,98 %	323,278	98,54 %	589,789	1,90 %	352,436	14,23 %

(*) Authorised appropriations include voted appropriations, appropriations originating from assigned revenues (internal and external) as well as carried-over and reconstituted appropriations; the execution rate is calculated on 15 April 2020

3. Performance information

Programme performance

The LIFE Programme should 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 catalytic effect of the programme being particularly difficult to catch, the current performance of the programme can be measured mainly in terms of expected results of the projects (grants), which represent more than 81 % of the overall budget.

Given the length of the award procedures and the time necessary for the project implementation (the projects are expected to last 5-7 years), first results can be provided only for the year 2018 while related values for the outputs indicators are available also for 2019.

To have the possibility to measure the expected results of the programme on annual basis, LIFE projects are required to report on their outcomes using a dedicated Key Performance Indicators webtool. The information provided by the LIFE projects is verified by the external monitors, who are experts in the field and in the country of the project. The data at project level are then aggregated to provide a proxy of the performance at programme level.

The 2018-2019 data continue the previous indicators trend and largely confirms the results of the Mid-Term evaluation as regards as the effectiveness and the EU added value of the programme.

In particular the LIFE activities are currently exceeding the 2020 milestones related to 14 out of 21 indicators.

In the [annual report of the Court of Auditors on the implementation of the budget concerning the financial year 2018](#) (2019/C 340/01), the lack of ambitions in the definition of the targets was identified as a weakness. However, in the same report, the Court

of Auditors also acknowledge to have been able to calculate progress from baseline for a large majority (77 %) of the LIFE indicators included in the programme statement.

The overachievements could be linked to

- an initial underestimation of the potential project results and/or
- the high quality of projects, which are selected following a strong competition.

For four indicators the programme is on track to achieve the 2020 milestones. For only one indicator the 2020 milestone will probably not be reached: the number of water bodies covered by ongoing projects which progress towards or finalised projects which achieved an improved ecological status.

Data on two indicators – the number of stakeholders and citizens participating in awareness raising activities in the framework of LIFE interventions and the percentage of increase in the participation of NGOs in consultations on EU environmental policy – are not available and their collection would not be cost-effective.

General objectives

General Objective 1: To contribute to the shift towards a resource-efficient, low-carbon and climate-resilient economy, to the protection and improvement of the quality of the environment and to halting and reversing biodiversity loss, including the support of the Natura 2000 network and tackling the degradation of ecosystems

Indicator 1: Attributable environmental and climate improvements								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target
2014	Milestones foreseen							2020
0 %				80 %			≥ 80 % of ongoing projects progress towards/of finalised projects achieved environmental and/or climate improvements	≥ 80 % of ongoing projects progress towards/of finalised projects achieved environmental and/or climate improvements
Actual results								
	98 %	88 %	92 %	95 %	96 %			

Source: Database of LIFE Key Performance Indicators (KPIs)

Indicator 2: Percentage of the Natura 2000 network targeted by LIFE projects restored or brought to adequate management								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				10 %			12 %	12 %
Actual results								
	26 %	28 %	34 %	37 %	37 %			

Narrative: Target: 12 % of the Nature 2000 targeted by ongoing projects progress towards/of finalised projects achieved environmental and/or climate improvements

Comment: Percentage of the Natura 2000 network targeted by ongoing projects and progressing towards restoration/ adequate management.

Cumulated figures.

Source: Database of LIFE Key Performance Indicators (KPIs)

Indicator 3: Percentage of surface and type of ecosystems targeted by LIFE projects restored								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0 %				10 %			≥ 10 % of ecosystem surfaces and type targeted by ongoing projects are progressing towards/of finalised projects achieved an improvement/restoration	≥ 10 % of ecosystem surfaces and type targeted by ongoing projects are progressing towards/of finalised projects achieved an improvement/restoration
Actual results								

	45 %	67 %	63 %	57 %	55 %			
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Comment: Percentage of ecosystem surfaces and type targeted by ongoing projects and progressing towards improvement. It is extremely difficult to identify the reasons of this overachievement. It could be linked to an initial underestimation of the potential project results and/or to the high quality of nature and biodiversity projects, which are selected following a strong competition.

Source: Database of LIFE Key Performance Indicators (KPIs)

Indicator 4: Percentage of types of habitats and of species targeted with improving conservation status								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
Habitats: 0 %				10 %			≥ 10 % of types of habitats and of species targeted by ongoing projects are progressing towards/ of finalised projects achieved an improved conservation status	≥ 10 % of types of habitats and of species targeted by ongoing projects are progressing towards/ of finalised projects achieved an improved conservation status
	Actual results							
	51 %	98 %	99 %	97 %	98 %			
	Milestones foreseen							2020
Species: 0 %				10 %			≥ 10 % of types of habitats and of species targeted by ongoing projects are progressing towards/ of finalised projects achieved an improved conservation status	≥ 10 % of types of habitats and of species targeted by ongoing projects are progressing towards/ of finalised projects achieved an improved conservation status
	Actual results							
	51 %	34 %	36 %	32 %	34 %			

Comment: Percentage of types of habitats and of species targeted by ongoing/ finalised projects are progressing towards an improved conservation status. It is extremely difficult to identify the reasons of this overachievement. It could be linked to an initial underestimation of the potential project results and/or to the high quality of nature and biodiversity projects, which are selected following a strong competition.

Source: Database of LIFE Key Performance Indicators (KPIs)

General Objective 2: To improve the development, implementation and enforcement of Union environmental and climate policy and legislation, and to act as a catalyst for, and promote, the integration and mainstreaming of environmental and climate objectives into other Union policies and public and private sector practice, including by increasing the public and private sector’s capacity

Indicator 1: Number of interventions developed or undertaken that implement plans, programmes or strategies pursuant to Union environmental or climate policy or legislation

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				27			70	70
	Actual results							
		15	23	37	47			

Comment: Although many LIFE interventions will implement plans, programmes or strategies pursuant to Union environmental or climate policy or legislation, integrated projects (IPs), which are new under the LIFE programme, are specifically designed for this and are therefore used as the reference de minimis indicator.

Source: Database of LIFE projects (Butler)

Unit of measure: IPs

Indicator 2: Number of LIFE interventions (projects, measures, approaches) suitable for being replicated or transferred

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0	0			360			≥ 900	≥ 900
	Actual results							
		280	310	392	470	657		

Comment: Projects within the meaning of Articles 2 and 18 (a), (b), (c) and (h) Regulation No 1293/2013 will be specifically assessed for their

potential replicability/transferability and are therefore used as the reference indicator. It is expected that 80 % of these projects implement replicable/transferable actions. Number of ongoing/finalised projects implementing replicable/transferable actions.

Source: Database of LIFE Key Performance Indicators (KPIs)

Unit of measure: Number of ongoing projects/of finalised projects implement replicable/transferable actions.

Indicator 3: Number of interventions achieving synergies with or mainstreamed into other Union funding programmes, or integrated into public or private sector practice

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				27			70	70
	Actual results							
		15	23	37	47			

Comment: Although all projects should to a certain degree promote synergies and integration into practice, integrated projects (IPs), which are new under the LIFE programme, are specifically designed for this and are therefore used as the reference indicator.

Source: Database of LIFE projects (Butler)

Unit of measure: IPs

General Objective 3: To support better environmental and climate governance at all levels, including better involvement of civil society, NGOs and local actors

Indicator 1: Number of interventions to ensure better governance, dissemination of information and awareness of environmental and climate aspects

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				420			800	800
	Actual results							
	122	252	324	496	648	731		

Comment: Although all interventions contain an information, dissemination and/or awareness raising component, the interventions financed to 'support better environmental and climate governance and information' (budget item 07 02 03 and 34 02 03), whether funded through grants or procurement, are specifically designed to address this objective and are therefore used as the reference indicator. They include the operating grants. The figures are cumulative and in 2017 include the European Solidarity Corps initiatives financed by LIFE.

Source: Database of LIFE projects (Butler)

Unit of measure: Interventions

General Objective 4: To support the implementation of the 7th Environment Action Programme

Indicator 1: Number of interventions to support the implementation of the 7th Environment Action Programme

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				1 300			1 700	1 700
	Actual results							
		970	1 305	1 625	2 089	2 507		

Comment: All LIFE interventions, whether funded through grants, procurement or financial instruments, support the implementation of at least one of the priority objectives of the 7th Environment Action Programme. Figures include interventions over 100.000 EUR and are cumulative.

Source: Database of LIFE projects (Butler) and database on the actions of the Annual Management Plan

Unit of measure: Interventions

Specific objectives

Specific Objective 1: Contribute to a greener and more resource-efficient economy and to the development and implementation of EU environmental policy and legislation (Environment and Resource Efficiency priority area)

Performance

The indicators related to the first specific objective – Contribute to a greener and more resource-efficient economy and to the development and implementation of EU environmental policy and legislation – in 2018-2019 are evolving in line with the last year assessment.

The results show the potential of the integrated projects with three integrated projects on Waste financed in Finland, France and Greece and ten integrated projects on water addressing the implementation of River Basin Management Plans.

Out of the five indicators related to this specific objective, the only indicator which 2020 milestone will probably not be reached is related to the water bodies covered by ongoing projects which progress towards or finalised projects, which achieved an improved ecological status.

One possible explanation is linked to the lower number of traditional projects on water that have been financed during 2014-2018 in comparison with the period 2007-2013. This is due to the lack of funding linked to the growing importance of a new priority – circular economy – which emerged during the current programme and which could not be addressed through additional funding. So far, more than 290 million EUR have been mobilized into over 180 LIFE projects contributing to Circular Economy.

For example the LIFE BIOPOL project (LIFE15 ENV/IT/000654) foresees the design and construction of an Industrial Prototype Plant able to produce green chemicals & leather making Biopolymers from biomass and industrial by-products. In accordance with the European Dangerous Substances Directive, almost 31 % of the volume of the chemicals used by the European leather industry are hazardous substances. The project is expected to reach the following results: 80-90 % increase of waste biomass re-used, 70-90 % reduction in the hazardous substances, reduction of discharged leather-process effluents e.g. 50-60 % of inorganic sulphates and chlorides salts and reduction of 70-80 % of the Product Environmental Footprint of the new Biopolymers related to the current tanning, retaining and fat liquoring agents.

Indicator 1: Number of water bodies covered by projects and thus progressing towards or having reached an improved ecological status

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				100			170	170
	Actual results							
	70	83	93	102	105			

Comment: LIFE contribution is calculated taking into account an estimated total of 138 000 water bodies and the fact that 43 % of water bodies already achieved good ecological status according to the Commission Communication, A Blueprint to Safeguard Europe’s Water Resources. COM(2012) 673 final of 14th November 2012. Number of water bodies covered by ongoing projects and progressing towards an improved ecological status.

Source: Database of LIFE Key Performance Indicators (KPIs)

Unit of measure: Water bodies are covered by ongoing projects which progress towards or finalised projects which achieved an improved ecological status

Indicator 2: Population benefiting from improved air quality

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				1 000 000			1 400 000	1 400 000
	Actual results							
	370 000	842 600	934 000	1 100 000	1 500 000			

Comment: Number of persons covered by ongoing/ finalised projects which progress towards improved air quality.

Source: Database of LIFE Key Performance Indicators (KPIs)

Unit of measure: Persons covered by ongoing projects which progress towards or finalised projects which achieved improved air quality.

Indicator 3: Percentage of regions covered by waste IPs and thus progressing towards or having reached adequate waste management

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0.0				2.0 %			3.0 %	3.0 %
	Actual results							
		1.8 %	2.5 %	2.5 %	3.9 %			

Comment: Three integrated projects (IPs) have been financed on Waste covering 11 regions, in which the project activities have started.

Source: Database of LIFE projects (Butler)

Unit of measure: % of regions are covered by waster IPs and progress towards or achieved adequate waste management.

Indicator 4: Percentage of River Basin Districts (RBD) covered by IPs and thus progressing towards or having reached adequate management

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				3 %			5 %	5 %
	Actual results							
		2 %	4 %	5 %	8 %			

Comment: Percentage of RBD covered by IPs and progressing towards adequate management. Eight integrated projects, out of ten integrated projects on water, are addressing the management of river basin districts and have started their activities.

Source: Database of LIFE projects (Butler)

Unit of measure: Percentage of RBD are covered by IPs and progress towards or achieved adequate management.

Indicator 5: Number of interventions to improve the knowledge base for Union environmental policy and legislation, and for assessing and monitoring factors, pressures and responses having an impact on the environment

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				300			680	680
	Actual results							
	120	285	382	462	588	681		

Comment: Estimated to be 100 % of the interventions financed by the 07 02 01. Cumulative figures.

Source: Database of LIFE projects (Butler) and database on the actions of the Annual Management Plan

Unit of measure: Interventions

Expenditure related outputs

Outputs	Budget line	Budget 2020	
		Number	EUR million
1. Action grants (projects)	07 02 01	56 ⁽¹⁾	130,3
2. Public Procurement (contracts)	07 02 01	42 ⁽¹⁾	24,9
Total		98	155,2

Outputs		Number of outputs foreseen (F) and produced (P)						
		2014	2015	2016	2017	2018	2019	2020
1. Action grants (projects)	F	0	50	57	60	65	69	74
	P	0	54	55	74 ⁽⁴⁾	77 ⁽⁴⁾	54 ⁽³⁾	56 ⁽¹⁾
2. Public Procurement (contracts) ⁽²⁾	F	47	49	49	51	58	60	42 ⁽¹⁾
	P	55	33 ⁽³⁾	69 ⁽⁴⁾	37 ⁽³⁾	49	40 ⁽³⁾	

⁽¹⁾ Adjusted because the number of contracts/grant agreements above than 100 000 EUR is lower

⁽²⁾ Above 100 000 EUR.

⁽³⁾ The average contract value was bigger than the one initially foreseen and this resulted in a number of contracts lower than initially planned. If the trend will continue, the number of outputs foreseen will be adjusted.

⁽⁴⁾ The average grant/contract value was lower than the one initially foreseen and this resulted in a bigger number of contracts/grant agreements than initially planned.

The number of contracts and grant agreements envisaged under the 07 02 01 has been reduced taking into account the experience and the reduction of the budget.

Specific Objective 2: Halting and reversing the biodiversity loss, including the support of the Natura 2000 network and tackling the degradation of ecosystems (Biodiversity priority area)

Performance

The indicators on nature and biodiversity are evolving in 2018-2019 in line with the previous year.

The results show a clear overachievement related to all the indicators of this specific objective. This overachievement could be linked to the following:

- An initial underestimation of the potential project results linked to the initial lack of estimate of these results and/or to the high quality of nature and biodiversity projects, which are selected following a strong competition.
- The increase in the budget devoted to the nature and biodiversity projects which has finally materialised in 2017 in the adoption of a delegated act improving the budget percentage, stated in point 3 of Art. 9 of the LIFE Regulation, from 55 % to 60.5 % for projects devoted to nature and biodiversity conservation out of the overall budgetary resources devoted to projects under the Environment sub-programme.

The Natural Capital Financing Facility provides loans, equity and guarantees to nature and climate adaptation measures that can generate revenues or save costs. It is intended to establish a pipeline of replicable, bankable operations that will serve as a ‘proof of concept’ to demonstrate to potential investors the attractiveness of operations directly addressing biodiversity and climate adaptation objectives.

It has initially registered a slow uptake because of the need to adapt banking practices for assessing the returns of such investments combined with the need to improve the quality of the project applications. Several adjustments have been made as a follow-up of the LIFE mid-term evaluation to increase the visibility of the instrument and to operationalise the technical assistance facility. The project pipeline has significantly improved as a result.

In 2019 the NCFE financed the first operation supporting a biodiversity off-setting scheme. The operation consists of a EUR 5 million loan to the French CDC Biodiversité, a subsidiary of the Caisse des Dépôts, who will use the loan for the rehabilitation and management of conservation sites around France. The rehabilitation and management of conservation sites will allow CDC Biodiversité to generate offset credits (Unités de Compensation) for clients which are required to offset their impacts on certain habitats and species as a condition of a planning permission. This loan will enable CDC Biodiversité to support investment in new sites, while keeping its existing sites, some of which have high ecological value, and make the necessary investments to register and market the credits of those sites to comply with regulatory requirements in France.

Indicator 1: Percentage of surface and type of ecosystems targeted by LIFE projects restored								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0 %				10 %			≥ 10 % of ecosystem surfaces and type targeted by ongoing projects are progressing towards/of finalised projects achieved an improvement/restoration	≥ 10 % of ecosystem surfaces and type targeted by ongoing projects are progressing towards/of finalised projects achieved an improvement/restoration
	Actual results							
	45 %	67 %	63 %	57 %	55 %			

Comment: Percentage of ecosystem surfaces and type targeted by ongoing projects and progressing towards improvement. It is extremely difficult to identify the reasons of this overachievement. It could be linked to an initial underestimation of the potential project results and/or to the high quality of nature and biodiversity projects, which are selected following a strong competition.

Source: Database of LIFE Key Performance Indicators (KPIs)

Indicator 2: Percentage of habitats targeted progressing towards or improving conservation status as a consequence of LIFE interventions								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0 %				10 %			≥ 10 %	≥ 10 %
	Actual results							
	46 %	98 %	99 %	97 %	98 %			

Comment: Percentage of habitats targeted by ongoing projects and progressing towards improved conservation status. It is extremely difficult to identify the reasons of this overachievement. It could be linked to an initial underestimation of the potential project results and/or to the high quality of nature and biodiversity projects, which are selected following a strong competition.

Source: Database of LIFE Key Performance Indicators (KPIs)

Unit of measure: Percentage of habitats targeted by ongoing projects progress towards/of finalised projects achieved improved conservation status.

Indicator 3: Percentage of species targeted progressing towards or improving conservation status as a consequence of LIFE

interventions								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0 %				10 %			≥ 10 %	≥ 10 %
	Actual results							
	66 %	34 %	36 %	32 %	34 %			

Comment: Percentage of species targeted by ongoing projects progressing towards improved conservation status.

Source: Database of LIFE Key Performance Indicators (KPIs)

Unit of measure: Percentage of species targeted by ongoing projects progress towards/of finalised projects achieved improved conservation status.

Indicator 4: Percentage of the Natura 2000 sites covered by nature IPs and thus progressing towards the implementation of prioritised actions frameworks

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0 %				4 %			6 %	6 %
	Actual results							
			12 %	20 %	23 %			

Comment: At present n.18 integrated projects (IPs) are supporting the implementation of Prioritized Action Frameworks developed in Belgium, Czech Republic, Finland, Hungary, Italy, Germany, Netherlands, Portugal, Slovenia, Spain, France, Lithuania, Sweden, Greece, Denmark, Estonia, Ireland and Cyprus pursuant to Article 8 of the Habitats Directive.

Source: Database of LIFE projects (Butler)

Unit of measure: Percentage of the Nature 2000 sites are targeted by nature IPs and progress towards or achieved the implementation of prioritised actions frameworks.

Indicator 5: Number of interventions to improve the knowledge base for Union nature and biodiversity policy and legislation and for assessing and monitoring factors, pressures and responses having an impact on nature and biodiversity

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				300			700	700
	Actual results							
	19	80	214	323	519	615		

Comment: Estimated to be 100 % of the interventions financed by the 07 02 02 plus the number of 'Nature' projects and 1/3 of the operating grants financed under 07 02 03. Cumulative figures.

Source: Database of LIFE projects (Butler) and database on the actions of the Annual Management Plan

Unit of measure: Interventions

Expenditure related outputs

Outputs	Budget line	Budget 2020	
		Number	EUR million
1. Action grants (projects)	07 02 02	58	204,0
	07 02 03	4	7,0
2. Public Procurement (contracts) *	07 02 02	22	16,8
Total		84	227,8
Outputs			

(1) Above 100.000 EUR

Outputs		Number of outputs foreseen (F) and produced (P)						
		2014	2015	2016	2017	2018	2019	2020
1. Action grants (projects)	F	0	64	65	70	75	80	58
	P	0	49 ⁽³⁾	87 ⁽⁴⁾	73	72	64 ⁽³⁾	
2. Financial instrument operations (projects) ⁽²⁾	F	0	1	1.5	2	0	0	0
	P	0	0	0	0.5	1,5	2,5	
3. Public Procurement (contracts) ⁽¹⁾	F	20	22	22	25	29	34	22
	P	19	5 ⁽³⁾	20	38 ⁽⁴⁾	28 ⁽⁴⁾	24 ⁽⁴⁾	

(1) Above 100.000 EUR

⁽²⁾ The financial instrument Natural Capital Financing Facility (NCFF) is funded half through 07 02 02 and half through 34 02 02. Half of the operations financed under the instrument are included here.

⁽³⁾ The project proposals received/contracts awarded were bigger than expected.

⁽⁴⁾ The project proposals received and the contracts launched were lower in size than expected.

The trend can be identified linked to the submission (and award) of bigger projects and the reduction of the number of contracts above 100 000 EUR. The expected number of operations for 2020 has been revised accordingly

Specific Objective 3: Support better environmental governance and information at all levels (Environmental Governance and Information priority area)

Performance

The indicators related to the third specific objective – Support better environmental governance and information at all levels – in 2018-2019 are evolving in line with the last year assessment.

Data on the number of stakeholders and citizens participating in awareness raising activities in the framework of LIFE interventions are not available as such. However, for example, the campaign aimed at reducing the impact of 10 Single Use Plastics (SUPs) frequently abandoned in European beaches and seas reached 150 million citizens and more than 1 thousand articles were published on the plastic strategy and the singles use plastics.

Data on the percentage of increase in the participation of NGOs in consultations on EU environmental policy are also not available because the consultations on EU environmental policy not always include data on the type of respondents/organisations. All NGO’s funded by operating grants are expected to increase their participation in consultations on EU environmental policy. All the NGO beneficiaries of operating grants interviewed during the mid-term evaluation declared that their participation increased but were not able to provide a percentage.

Indicator 1: Number of stakeholders and citizens participating in awareness raising activities in the framework of LIFE interventions

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0							1 000 000	1 000 000
	Actual results							

Comment: The data collected are not available in the form required by this indicator. The external study reported that almost 63 million individuals have visited the projects websites, with an average duration of the visits of about six minutes. A total of almost 271 thousand project documents and communication material has been downloaded by interested users. More than 48 thousand individuals, over 1,400 companies, and over 1,500 NGOs and 1,300 public bodies have been interviewed

Unit of measure: Stakeholders or citizens

Indicator 2: Number of interventions to support communication, management and dissemination of information in the field of environment and to facilitate knowledge sharing

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				420			800	800
	Actual results							
	101	294	362	494	748	833		

Comment: Although all interventions contain an information, dissemination and awareness-raising element, governance and information interventions, whether funded through grants or procurement, are specifically designed to address this objective and are therefore used as the reference indicator. Cumulative figures.

Source: Database of LIFE projects (Butler) and database on the actions of the Annual Management Plan

Unit of measure: Interventions

Indicator 3: Percentage of projects promoting and contributing to a more effective compliance with and enforcement of Union

environmental law								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0 %				5 %			≥ 5 %	≥ 5 %
	Actual results							
		39 %	42 %	49 %	57 %	63 %		

Comment: It is expected that information and governance projects focusing on enforcement and compliance promotion will significantly increase awareness of relevant public bodies and civil society, leading in some projects that progress towards or reach actual improvements. Percentage of governance and information projects progress towards improved compliance and enforcement of Union environmental law. Cumulative figures. It is extremely difficult to identify the reasons of this overachievement. It could be linked to an initial underestimation of the potential project results.

Source: Database of LIFE Key Performance Indicators (KPIs)

Unit of measure: % of ongoing governance and information projects progress towards/of finalised projects achieved improved compliance and enforcement of Union environmental law.

Indicator 4: Percentage of increase in the participation of NGOs in consultations on EU environmental policy								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0 %				12 %			≥ 12 % increase	≥ 12 % increase
	Actual results							

Comment: The consultations on EU environmental policy not always include data on the type of respondents/organisations. The collection of this kind of information would be extremely cumbersome and not cost effective, given the results could change significantly basing on the subject matter of the consultation. All NGO's funded by operating grants are expected to increase their participation in consultations on EU environmental policy. All the beneficiaries of NGO operating grants interviewed during the mid-term evaluation declared that their participation increased but were not able to provide a percentage. This indicator should be modified.

Expenditure related outputs

Outputs	Budget line	Budget 2020	
		Number	EUR million
1. Action grants (projects) ⁽¹⁾	07 02 03	12	7,4
2. Public Procurement (contracts) ⁽²⁾	07 02 03	40	26,8
3. Operating grants (work programmes of non-profit making entities/NGOs)	07 02 03	16	9,0
Total		68	43,2

⁽¹⁾ Excluding the action grants on nature included under the indicators for the specific objective 2.

⁽²⁾ Above 100.000 EUR

Outputs		Number of outputs foreseen (F) and produced (P)						
		2014	2015	2016	2017	2018	2019	2020
1. Action grants (projects) ⁽¹⁾	F	0	15	8	9	10	11	12
	P	0	14	6	10	11	10	
2. Public Procurement (contracts)	F	44	50	57	60	64	51	40
	P	44	43 ⁽²⁾	48 ⁽²⁾	55	59	58	
3. Operating grants (work programmes of non-profit making entities/NGOs)	F	0	16	16	16	16	16	16
	P	0	19 ⁽³⁾	19 ⁽³⁾	16	25	17	

⁽¹⁾ Excluding the action grants on nature included under the indicators for the specific objective 2.

⁽²⁾ The average contract value was bigger than the one initially foreseen and this resulted in a number of contracts slightly lower than initially planned.

⁽³⁾ Additional funds were made available to finance operating grants in 2015-2016.

Specific Objective 4: Reduction of EU greenhouse gas emissions and development and implementation of EU climate policy and legislation (Climate Change Mitigation priority area)

Performance

EU greenhouse gas emissions declined by 2 % in 2018 (compared to 2017) and reached their lowest level since 1990. Emissions were 23 % below the 1990 level, overachieving its 2020 target. However, implementation will have to be accelerated significantly first to reach the 2030 target of minus 40 % GHG emissions domestically and secondly for the EU to become climate-neutral by 2050.

The LIFE programme does provide the necessary resources to underpin its proposed policies by using a wide range of mathematical models, tools and methods to evaluate the potential economic, social and environmental consequences and prepare successful negotiations. Success stories contributing to the reduction of emission of greenhouse gases of the last decade are, to name a few, the conclusion of the Paris agreement, the 2030 climate and energy framework and the elaboration of a long-term strategy for a climate-neutral economy by the middle of the century. Moreover, the programme has contributed to the design and implementation of e.g. the Energy Union governance where Member States have to submit their final National Energy and Climate Plans (NECP) by the end of 2020 for implementation in the years to come.

The EU emissions trading system (EU ETS) is a cornerstone of the EU’s policy to combat climate change and its key tool for reducing greenhouse gas emissions cost-effectively. It is the world’s first major carbon market and remains the biggest one covering 45 % of the GHG emissions in the EU. LIFE finances the required continuous maintenance and new developments, such as linking the EU-ETS with the Swiss emissions trading system demonstrating the EU commitment to the creation of an international carbon market. The linking agreement is the first of its kind and demonstrates that setting rules for international carbon markets work and can form the basis for good cooperation between systems. Another example of sound use of LIFE money are the security measures against possible cyber-attacks of the single Union Registry that ensures the accurate accounting of allowances issued under EU ETS. In 2010/11 several successful cyber-attacks occurred against national registries and theft of allowances was reported. Despite the migration in June 2012 of the national registries to a single registry supervised by the Commission, and a considerable number of additional security measures in place, the latest risk assessment demonstrates clearly that the Union is still exposed to a reputational risk and legal/financial liabilities if new cyber-attacks would succeed.

At the end of 2014, the innovative financial instrument Private Finance for Energy Efficiency was established under LIFE, aimed at addressing the limited access to adequate and affordable commercial financing of energy efficiency investments. To date, the totality of the guarantee (EUR 72 M) under phase 1 is allocated in 10 Member States supporting a targeted total investment of up to EUR 699 million, a leverage of almost 10 times the EU money invested for this phase. The instrument was scaled up after its pilot phase, with additional funding amounting to EUR 25 million for the 2018-2020 period. The updated delegation agreement was signed in November 2019 and the new call for projects published immediately after.

LIFE is also supporting 63 projects on the ground in the field of climate change mitigation, many of them contributing directly or indirectly to GHG emissions reduction.

Indicator 1: Number and coverage of climate change mitigation strategies or action plans developed or implemented through LIFE								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target
2012	Milestones foreseen							2020
In 2012 less than 10 % of the climate mitigation project proposals submitted in LIFE+ concerned development of mitigation strategies and action plans. implementation of at least 1 climate change mitigation strategy or action plan per Member State				Support development and/or implementation of at least 1 climate change mitigation strategy or action plan in 13 different geographical regions	Support development and/or implementation of at least 1 climate change mitigation strategy or action plan in 13 different geographical regions	Support development and/or implementation of at least 1 climate change mitigation strategy or action plan in 13 different geographical regions	Support development and/or implementation of at least 1 climate change mitigation strategy or action plan per Member Stat	Support development and/or implementation of at least 1 climate change mitigation strategy or action plan per Member Stat
implementation of at least 1 climate change mitigation strategy or action plan per Member Stat	Actual results							
	7	13	20	26	33			

Source: Database of LIFE projects (Butler)

Indicator 2: Tons of greenhouse gases reduced by new technologies, systems, methods or instruments and/or other best practice approaches developed and taken up following LIFE examples								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target

		Milestones foreseen						2020
Reduction in tons of greenhouse gasses per project:				-20 %			-20 %	Relative reduction in tons of greenhouse gasses per project of at least 20 % compared to project baseline.
	Actual results							
		Milestones foreseen						2020
Percentage of project promoting innovative technologies and/or best practices:				80 %			80 %	80 %
	Actual results							
	43 %	53 %	63 %	68 %	72 %			

Source: Database of LIFE Key Performance Indicators (KPIs)

Units of measure: (1) Average percentage of reduction of tons of greenhouse gas emissions for climate mitigation projects. (2) Percentage of the projects funded in climate change mitigation priority area 2014-2018 that promote innovative technologies and/or other best practice solutions for the reduction of greenhouse gas emissions

Indicator 3: Number of interventions to improve the knowledge base for Union climate policy and legislation, and for assessing and monitoring factors, pressures and responses having an impact on the climate (cf. Article 14(b) Regulation 1293/2013)

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
Milestones foreseen								2020
Integrated projects: 0				80 %			100 %	100 %
	Actual results							
		100 %	100 %	100 %	100 %			
Milestones foreseen								2020
Traditional projects:				30 %			25 %	25 %
	Actual results							
		34 %	39 %	41 %	40 %			

Availability of Data: Baseline for Traditional Projects: no data available

Source: Database of LIFE projects (Butler)

Expenditure related outputs

Outputs	Budget line	Budget 2020	
		Number	EUR million
1. Action grants (projects)	34 02 01	40	65,1
2. Financial instrument operation (projects)	34 02 01	400	0,0
3. Public Procurement (contracts)	34 02 01	60	20,7
Total			85,8

Estimated to be 100 % of the interventions financed by the 34 02 01

For the financial instrument Private Finance for Energy Efficiency (PF4EE), the number identifies the interventions at final recipients' level.

Outputs		Number of outputs foreseen (F) and produced (P)						
		2014	2015	2016	2017	2018	2019	2020
1. Action grants (projects)	F	0	15	16	18	26	27	40
	P	0	13	17	14	20	19	
2. Financial instrument operation (projects)	F	0	50	350	400	400	400	100
	P	0	n.a.	n.a.	n.a.	138	279*	
3. Public Procurement (contracts)	F	22	18	16	18	22	35	60
	P	27	13	32	34	46	57**	

* 10 agreements with financial intermediaries were signed. Financial intermediaries are developing their own loan proposals towards final recipients. By the end of 2019, 279 Energy Efficiency loans have been concluded with 234 different final recipients.

** of which 33 with value above 100 000 EUR

Specific Objective 5: Increased resilience of the EU to climate change (Climate Change Adaptation priority area)

Performance

The LIFE programme supports in protecting people, planet and welfare against the impacts of climate change.

Over the last year, further progress has been achieved to implement the EU Adaptation Strategy, which prepares Member States for current and future climate impacts. Twenty-six Member States have now a national adaptation strategy in place, while the remaining are close to finalising their strategies.

In 2019, more than 1 900 cities and towns in Europe have committed through the Covenant of Mayors to enhance their climate resilience (increase of 900 subscribers since 2018). At the COP25 in Madrid, the European Commission and the Global Covenant of Mayors for Climate and Energy confirmed a joint commitment to the next phase of the Global Covenant.

The Commission will increase its current support, including a significant contribution from the LIFE programme, for this initiative in 2020, in its determination to tackle the climate crisis, to close the climate protection gap including insurance, damage and loss control across governance levels and sectors.

To date, LIFE is also supporting 67 projects on the ground in the field of climate change adaptation.

Indicator 1: Number and coverage of climate change adaptation strategies or action plans developed or implemented								
Baseline	2014	2015	2016	2017	2018	2019	2020	Target
2014	Milestones foreseen							2020
16				All MS have adopted a national adaptation strategy	All MS have adopted a national adaptation strategy	All MS have adopted a national adaptation strategy	All MS are effectively implementing their national adaptation strategies.	All MS
	Actual results							
			21	25	25	26		

Narrative: Target: All MS are effectively implementing their national adaptation strategies

Source: Annual activity report DG CLIMA – 2018

Unit of measure: Member States that have adopted an adaptation strategy

Comment: Latvia adopted an adaptation plan and Croatia has adopted an adaptation strategy in April 2020

Indicator 2: Attributable climate resilience, broken down by sector, due to the demonstrated new technologies, systems, instruments and/or other best practice approaches developed and taken up following LIFE examples

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
2012	Milestones foreseen							2020
Increasing climate resilience: Under the 2012 call of the LIFE+ regulation, only 15 % of climate project proposals submitted were on adaptation. The projects promoting innovative policy approaches: 80 %				80 %	80 %	80 %	80 %	80 % of funded projects promoting innovative policy approaches and/or other best practice solutions for more climate resilience.
	Actual results							
		73 %	69 %	70 %	69 %			

Unit of measure: Percentage of climate adaptation projects promoting innovative policy approaches and/or other best practice solutions for more climate resilience.

Indicator 3: Number of interventions to improve the knowledge base for Union climate policy and legislation, and for assessing and monitoring factors, pressures and responses having an impact on the climate resilience (cf. Article 15(b) Regulation 1293/2013)

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
IPs: 30 %				80 %	80 %	80 %	100 %	100 %
	Actual results							
		100 %	100 %	100 %	100 %			
	Milestones foreseen							2020
Traditional projects:				30 %	30 %	30 %	25 %	25 %
	Actual results							
		37 %	38 %	36 %	34 %			

Comment: Percentage of the traditional projects funded in climate change adaptation priority area 2014-2018.

Expenditure related outputs

Outputs	Budget line	Budget 2020	
		Number	EUR million
1. Action grants (projects)	34 02 02	16	39,6
2. Public Procurement (contracts)	34 02 02	15	7,9
Total			47,5

Estimated to be 100 % of the interventions financed by the 34 02 02.

Outputs		Number of outputs foreseen (F) and produced (P)						
		2014	2015	2016	2017	2018	2019	2020
1. Action grants (projects)	P	0	16	19	22	15	16	16
	F	0	11*	16*	14	25	15	
2. Financial instrument operation (projects) **	P	0	1	1,5	2	0	0	0
	F	0	0	0	0,5	1,5	2,5	
3. Public Procurement (contracts)	F	8	10	11	12	12	13	15
	P	8	8	8	12	4	6	

** The financial instrument Natural Capital Financing Facility (NCOFF) is funded half through 34 02 02 and half through 07 02 02. Half of the operations financed under the instrument are included here.

Specific Objective 6: Support better climate governance and information at all levels (Climate Governance and Information priority area)

Performance

The EU is committed to being a leader in global climate action. Beyond our borders, DG CLIMA continued its extensive outreach with international partners in different fora (i.e. the UN Climate Summit, the G7/G20, the COP25 in Madrid, etc.) to encourage other countries to raise their level of ambition and accelerate action to implement the Paris Agreement. Preparation and participation in these key events in the process of raising ambition of stakeholders globally is, i.e. funded through the LIFE programme.

Climate action communication activities focus on main political priorities. In 2019, for instance, actions focused on key policy developments such as outreach around the Commission’s strategic vision for a climate-neutral EU published in November 2018, the 2030 climate and energy framework, international climate action, and building awareness and understanding on climate change and EU climate action in the context of the increased prominence of climate issues and their integration into various policy areas.. Starting in 2020, LIFE will support financially the promotion and launching of the ‘Climate Pact’ to connect with the grassroots level in civil society aiming for behavioural change. This one of the top initiatives in climate action of the headline ambition ‘EU Green Deal’ of the new Commission.

So far, the LIFE programme has co-financed 24 governance and information projects. LIFE operating grants provide structural support to non-governmental organisations working in the field of climate change.

Indicator 1: Number of stakeholders and citizens participating in awareness raising activities in the framework of LIFE interventions

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0							1 000 000	1 000 000
	Actual results							

Comment: The data collected are not available in the form required by this indicator. The external study reported that almost 63 million individuals have visited the projects websites, with an average duration of the visits of about six minutes. A total of almost 271 thousand project documents and communication material has been downloaded by interested users. More than 48 thousand individuals, over 1,400 companies, and over 1,500 NGOs and 1,300 public bodies have been interviewed

Unit of measure: Stakeholders or citizens

Indicator 2: Number of interventions to support communication, management and dissemination of information in the field of climate change mitigation and adaptation and to facilitate knowledge sharing

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
2012	Milestones foreseen							2020
Percentage of projects targeted to specific governance: Less than 5 % of the traditional climate project proposals submitted related to climate awareness raising activities at local, regional, national or cross-border levels				10 %	10 %	10 %	All LIFE	All LIFE
	Actual results							
		13 %	16 %	16 %	16 %			
2012	Milestones foreseen							2020
Percentage of projects achieving knowledge sharing: All LIFE projects under the priority area climate governance and information achieve knowledge sharing.				All LIFE projects under the priority area	All LIFE projects under the priority area	All LIFE projects under the priority area	All LIFE projects under the priority area	All LIFE projects under the priority area climate governance and information achieve knowledge sharing.
	Actual results							
		All LIFE projects	All LIFE projects	All LIFE projects	All LIFE projects			

Comment: Although all interventions contain an information, dissemination and awareness raising element, governance and information interventions, whether funded through grants or procurement, are designed to address this objective and are therefore used as the reference indicator. 20 out of 126 climate projects are governance and information projects.

Unit of measure: Projects targeted to specific climate governance, awareness raising or information activities at local, regional, national or cross-border levels.

Indicator 3: Share of projects promoting and contributing to a more effective compliance with and enforcement of Union climate law

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
	Milestones foreseen							2020
0				5 %	5 %	5 %	More than 5 %	More than 5 %
	Actual results							
		11 %	13 %	11 %	13 %			

Comment: Percentage of governance and information projects progressing towards improved compliance and enforcement of Union climate law: No 2 projects out of 19 on governance and information projects.

Source: Percentage of governance and information projects progress towards improved compliance and enforcement of Union climate law.

Indicator 4: Number of interventions emanating from NGOs funded by LIFE with an impact on EU policy

Baseline	2014	2015	2016	2017	2018	2019	2020	Target
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2012	Milestones foreseen						2020
6				Stable level			Stable level.
	Actual results						Stable level.
		5	6	6	9	9	

Narrative: Baseline: Under the 2012 call of the LIFE + Regulation, the work programme of 6 specific climate NGO’s proposals plus a number of environmental NGO’s that also have a climate focus were co-funded.

Unit of measurement: Number of NGOs presenting a climate related work programme receiving an operating grant.

Expenditure related outputs

Outputs	Budget line	Budget 2020	
		Number	EUR million
1. Action grants (projects)	34 02 03	10	10,0
2. Public Procurement (contracts)	34 02 03	27	7,6
3. Operating grants (work programmes of non-profit making entities/NGOs)	34 02 03	9	3,0
Total			17,6

Estimated to be 100 % of the interventions financed by the 34 02 03

Outputs		Number of outputs foreseen (F) and produced (P)						
		2014	2015	2016	2017	2018	2019	2020
1. Action grants (projects)	F	0	4	5	6	7	7	10
	P	0	7*	6	7	5	8	
2. Public Procurement (contracts)	F	10	11	21	22	17	25	27
	P	8	9	26	33	43	31*	
3. Operating grants (work programmes of non-profit making entities/NGOs)	F	0	6	6	6	9	9	9
	P	0	5	6	6	9	9	

*of which 11 with value above 100 000 EUR

4. Contribution to Europe 2020 Strategy and mainstreaming of policies

Contribution to Europe 2020 headline targets

Table Contribution to Europe 2020 headline targets

The ‘20/20/20’ climate/energy targets should be met (including an increase to 30 % of emissions reduction if the conditions are right)

Narrative justification Contribution to Europe 2020 headline targets (if needed)

The LIFE programme contributes to the Europe 2020 priorities as follows:

- All the LIFE projects help to put the EU on a path to resource-efficiency and sustainable growth. These are projects aimed at halting and reversing the loss of biodiversity, improving resource efficiency, addressing environmental and health concerns, moving towards a low-carbon and resilient economy and preventing the consequences of floods, droughts, the rise of temperatures and sea levels ⁽³⁾.
- A contribution to innovation is expected from projects funded under all priority areas aimed at developing policy or management approaches, best practices and solutions. This includes the development of innovative technologies for environment/climate challenges.

The external study extracts from the indicator database that 61 % of the climate change adaptation projects and over 80 % of all the climate change mitigation projects aim to help develop innovative technologies, systems and/or instruments. The external monitors confirmed that this is the result of more emphasis on the business perspective of projects introduced in recent years.

- Ongoing projects to promote innovation and investments in energy efficiency and the PF4EE are designed to help reduce energy demand and thus to make the EU less energy dependent, which is one of the objectives of the Energy Union.

⁽³⁾ In connection with this, ‘The implementation of green recovery measures in the EU’, Cambridge Econometric et al (2011) assessed green measures focused on energy efficiency and climate change mitigation as part of recovery packages. It was found these measures contributed to economic recovery and provided a temporary boost to employment. The multiplier effects for green investment were similar to those from any other kind of investment and supported the general conclusion for LIFE projects that they support growth and jobs.

- Although employment is not the primary aim of the LIFE programme, the external study estimates the contribution of LIFE to job creation.

It has to be underlined that some extremely valuable policy achievements initiated under LIFE will shape the EU economy in the coming decades:

- The development and adoption of the Circular Economy Package. The package consists of a new legislative proposal on Waste, and an Action Plan⁽⁴⁾ with concrete actions. The revised legislative proposal on waste establishes a clear and ambitious long-term vision for waste management and recycling, while proposing concrete measures to address obstacles on the ground and taking into account the different situations across Member States. The action plan on the circular economy complements this proposal by setting out measures to ‘close the loop’ of the circular economy and tackle all phases in the lifecycle of a product: from production and consumption to waste management and the market for secondary raw materials.
- The COP 21 Summit, which led to the first-ever universal, legally binding global climate deal. The agreement set out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2 °C and aiming to 1.5 °C. The recent ratification of this agreement was welcomed as a great success⁽⁵⁾ and opens the way for the continuation of EU leadership in the global transition to a low-carbon future.
- The 2030 climate and energy framework which defines three key targets for the year 2030: at least 40 % cuts in greenhouse gas emissions (from 1990 levels), at least 32 % share for renewable energy, at least 32.5 % improvement in energy efficiency. The framework helps drive progress towards a low-carbon economy and build an energy system that ensures affordable energy for all consumers, increases the security of the EU’s energy supplies, reduces our dependence on energy imports and creates new opportunities for growth and jobs. It also brings environmental and health benefits – e.g. through reduced air pollution.
- With the European Climate Law, the Commission puts the objective of achieving climate-neutrality by 2050 into legislation. It ensures that there is both discipline and accountability in the actions to achieve this 2050 objective. It sets out further work towards setting a new 2030 target and lays out how we establish a ‘trajectory’ between 2030 and 2050. The importance of adaptation to climate change is underlined and thought is given to ensuring public participation in this fight changing patterns of behaviour.

Therefore, the contribution of the LIFE programme to the Europe 2020 priorities is 100 % of the budget lines 07 02 01; 07 02 02; 07 02 03; 34 02 01; 34 02 02 and 34 02 03.

Contribution to mainstreaming of climate action

Relevant objective/output

Relevant objective/output	Budget 2019	Budget 2020
Contributing to the reduction of greenhouse gas emissions	73,1	85,9
Contributing to increased resilience to climate change	38,0	47,5
Support better climate governance and information	15,4	17,6
Contribute to a greener and more resource-efficient economy and to the development and implementation of EU environmental policy and legislation	48,7	50,3
Halting and reversing the biodiversity loss, including the support of the Natura 2000 network and tackling the degradation of ecosystems	69,2	71,6
Total	244,4	272,9

Programming climate action

2014-2018					2019-2020 estimates		Total
2014	2015	2016	2017	2018	2019	2020	
186,0	199,7	213,5	229,0	247,2	244,4	272,9	1 592,7

(*The appropriations for the year 2014 have been reviewed to take account of the transfer to subsequent years of the allocations not used in 2014 (reprogramming exercise carried-out in 2015 in accordance with Article 19 of the Multiannual Financial Framework Regulation).

Justification

Explanation Table ‘Relevant objective/output’:

In the case of LIFE the contribution of the different activities to climate mainstreaming has been defined taking into account the expenditures under each budget article.

⁽⁴⁾ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0614>

⁽⁵⁾ European Commission President Jean-Claude Juncker said: ‘Today’s decision shows that the European Union delivers on promises made. It demonstrates that the Member States can find common ground when it is clear that acting together, as part of the European Union, their impact is bigger than the mere sum of its parts’.

Contributing to the reduction of greenhouse gas emissions: Estimated to be the total operational budget for the priority areas climate change mitigation (budget article 34 02 01);

Contributing to increased resilience to climate change: Estimated to be the total operational budget for the priority areas climate change adaptation (budget article 34 02 02);

Support better climate governance and information: Estimated to be the total operational budget for the priority area climate governance and information (budget article 34 02 03);

Contribute to a greener and more resource-efficient economy and to the development and implementation of EU environmental policy and legislation: Estimated to be 40 % of the projects financed under the priority area resource efficiency (budget article 07 02 01 total budget for 2019 is EUR 150,3 million, out of which EUR 121.8 million are devoted to projects and for 2020 the total budget is EUR 155,2 million, out of which EUR 125,7 million are devoted to projects);

Halting and reversing the biodiversity loss, including the support of the Natura 2000 network and tackling the degradation of ecosystems: Estimated to be 40 % of the projects financed under the priority area nature and biodiversity (budget article 07 02 02 – total budget for 2019 is 213,6 million EUR, out of which EUR 173,0 million are devoted to projects and, in 2020, the total amount is EUR 220,8 million with EUR 178,9 million devoted to projects).

Explanation Table ‘Programming Climate action’:

The appropriations for the year 2014 have been reviewed to take account of the transfer to subsequent years of the allocations not used in 2014 (reprogramming exercise carried-out in 2015 in accordance with Article 19 of the Multiannual Financial Framework Regulation).

The above data are up-dated on the basis of the most recent figures available. The tracking methodology remained stable, compared with previous year, being translated into the above-mentioned percentages of allocations by budget lines.

Some expenditure under the LIFE sub-programme for environment and the LIFE sub-programme for climate action contribute to both biodiversity and climate objectives, especially given the desired synergies between them. Thus each of the tracking exercises has to be seen separately, and the total funds tracked as being related to one of the objectives has to be seen independently and cannot be added to the funds related to the other objective.

Contribution to financing biodiversity

Relevant objective/output

Relevant objective/output	Budget 2019	Budget 2020
Contribute to a greener and more resource-efficient economy and to the development and implementation of EU environmental policy and legislation	48,7	50,3
Halting and reversing the biodiversity loss, including the support of the Natura 2000 network and tackling the degradation of ecosystems	213,6	220,8
Support better environmental governance and information at all levels	7,0	8,0
Contributing to increased resilience to climate change	14,9	18,6
Total	284,2	297,7

Programming biodiversity

2014-2018					2019-2020 estimates		Total
2014	2015	2016	2017	2018	2019	2020	
195,1	217,1	227,6	242,8	265,6	284,2	297,7	1 730,1

(*)The appropriations for the year 2014 have been reviewed to take account of the transfer to subsequent years of the allocations not used in 2014 (reprogramming exercise carried-out in 2015 in accordance with Article 19 of the Multiannual Financial Framework Regulation).

Justification

Explanation Table ‘Relevant objective/output’:

In the case of LIFE the contribution of the different activities to biodiversity has been defined taking into account the expenditures under each budget article.

Contribute to a greener and more resource-efficient economy and to the development and implementation of EU environmental policy and legislation: Estimated to be 40 % of the projects financed under the priority area resource efficiency (budget article 07 02 01 total budget for 2019 is EUR 150,3 million, out of which EUR 121.8 million are devoted to projects and for 2020 the total budget is EUR 155,2 million, out of which EUR 125,7 million are devoted to projects);

Halting and reversing the biodiversity loss, including the support of the Natura 2000 network and tackling the degradation of ecosystems: Estimated to be the 100 % total operational budget for the priority area nature and biodiversity (budget article 07 02 02);

Support better environmental governance and information at all levels: Estimated to be 100 % of the projects focused on nature and biodiversity financed under the priority area governance and information (budget article 07 02 03 – total budget for 2019 is EUR 48 million, out of which EUR 14 million are devoted to projects, out of which EUR 7 million are for projects focused on nature and biodiversity and, in 2020, the total amount is EUR 50,2 million, out of which EUR 16 million are devoted to projects, with EUR 8 million for nature and biodiversity);

Contributing to increased resilience to climate change: Estimated to be 40 % of the total operational budget for the priority areas climate change adaptation devoted to projects (budget article 34 02 02 – total budget for 2019 is EUR 41,5 million, out of which EUR 37,3 million are devoted to projects and total budget for 2020 is EUR 44,4 million, out of which EUR 39,6 million are devoted to projects).

Explanation Table ‘Programmation Biodiversity’:

(*) The appropriations for the year 2014 have been reviewed to take account of the transfer to subsequent years of the allocations not used in 2014 (reprogramming exercise carried-out in 2015 in accordance with Article 19 of the Multiannual Financial Framework Regulation).

Biodiversity related expenditure is tracked pursuant to Article 27 and Recital 40 of the LIFE Regulation (Regulation N.1293/2013). At present a system for tracking biodiversity related expenditure has been developed at project level. The tracking methodology remained stable compared with previous years and is largely based on an existing OECD methodology (‘Rio markers’), adapted to provide for quantified financial data. Expenditures have been thus marked in one of the three categories: biodiversity related only (100 %); significantly biodiversity related (40 %); and not biodiversity related (0 %). Some expenditure under the LIFE sub-programme for environment and the LIFE sub-programme for climate action, such as the expenditures for the NCFE, can contribute to both biodiversity and climate objectives, especially given the desired synergies between them. Thus, each of the tracking exercises has to be seen separately and the total funds tracked as being related to one of the objectives has to be seen independently and cannot be added to the funds related to the other objective.

Contribution to financing clean air

The table below provides a view of the expected contribution of the LIFE Programme to air quality in the period 2014-2018 and indicates the way in which it is calculated:

Action	Marker	LIFE Contribution (EUR)
LIFE projects focused on clean air	100 %	84 242 292.00
LIFE projects contributing to clean air as a secondary benefit	40 %	20 768 463.20
Total		105 010 755.20

The methodology for calculating air quality spending was defined at the beginning of 2020 based on Rio markers, with the intention to capture the contribution of the programme to ‘clean air’, thus encompassing actions towards increasing air quality and reducing air pollution).

The financing for air quality has to be assessed at project level as follows:

- LIFE spending for projects focused on clean air (100 %);
- LIFE expenditures for projects significantly contributing to clean air as secondary benefit (40 %) and
- other LIFE expenditures (0 %).

This is the first year that the contribution of the LIFE Programme to air quality is required: data are not available on all the on-going 2014-2018 projects.

In particular, data on projects focused on clean air are available on 2014-2018 projects and data on projects having clean air as secondary benefit (40 %) are not available for 2018 and cover only two projects in 2017.

As a consequence, the contribution of the LIFE programme to clean air which appears in the table is underestimated

Gender mainstreaming

A gender dimension has been developed at project level. The tracking methodology remained stable compared with previous years and is largely based on an existing OECD methodology (‘Rio markers’), adapted to provide for quantified financial data.

A gender dimension is taken into account in some specific areas of interventions of the LIFE Programme to identify how men and women relate to the environment in a different way, i.e. how the effects of hazardous chemicals and waste affect men and women.

However, the LIFE programme does not include any specific gender equality objective.

In terms of action, in line with the Stockholm, Basel and Rotterdam Conventions, a gender dimension is taken into account to identify and highlight the different impacts of hazardous chemicals and wastes on men and women and to promote the consideration of gender issues in hazardous chemicals and waste management at the national and regional levels.

The contribution of the LIFE programme to the gender equality is not significant, given the related activities are components of multidimensional projects.

5. Programme contribution to the Sustainable Development Goals

SDG 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture

The LIFE programme supports this **SDG 2** because it encourages an environmentally friendly agriculture, in view of the protection, preservation and improvement in the quality of water, air and soil and the protection of bio-diversity.

To improve resource efficiency in food production and reduce impact on water resources, LIFE is also promoting sustainable nutrients management in agriculture.

Moreover, the National Emission Ceilings Directive for air pollutants, the Member States' targets to reduce Greenhouse Gas emissions as well as the proposal to integrate the land use sector into the EU 2030 Climate and Energy Framework are aimed at incentivising Member States to take additional sustainable action in their agriculture sectors.

As an example, project LIFE AGRI ADAPT aims to increase the resilience of EU agriculture to climate change by demonstrating sustainable best-practice adaptation measures with an ecosystem-based approach at farm level. The overall objective of the AgriAdapt project is to demonstrate that three of the most important farming systems in the EU (livestock, arable and permanent crops) will become more climate-resilient through the implementation of feasible and sustainable adaptation measures which also have positive crosscutting environmental benefits. To this end, different measures will be tested in 120 pilot farms across the four main EU Climate Risk Regions and the conclusions obtained will be used to elaborate General proposals for key farming systems. The project will also promote sustainable adaptation measures among farmers, farmers associations, technical consultants, food standard organisations and agricultural assurance companies.

Furthermore, LIFE is acting in reducing food waste. For example, LIFE project FLAW4LIFE aims at raising the consumers' awareness on the food waste issue and providing support to the farmers at the same time. In particular, the project is targeting the acceptance of 'ugly fruit' within the community. Through its approach, the project expects an increase of involved farmer's productivity, with 157 farmers involved per year. As a result, total of 165 tons of waste were avoided during 2015, corresponding to 125.031 KgCO₂eq.

SDG 3 Ensure healthy lives and promote well-being for all at all ages

On **SDG 3**, taking into account that environmental stressors having significant impacts on health, LIFE complements Member States' action through legislation and other initiatives on environment related health problems, which are linked to air quality, industrial emissions, chemicals, waste and water.

Examples include the 7th Environment Action Programme, the EU Biodiversity Strategy to 2020, or the rules on the sustainable use of pesticides which underline the link with health policy aspects.

The EU Chemicals Policy also covers regulation on persistent organic pollutants; trade in hazardous chemicals; fluorinated gases; and hazardous waste. The so-called 'REACH' framework aims to improve the protection of human health and the environment from the risks that can be posed by chemicals, while enhancing the competitiveness of the EU chemicals industry.

LIFE is funding a number of projects working on improving air quality and specific air pollutants and to reduce the risks from chemicals.

For example, the Polish Integrated Project LIFE-IP MAŁOPOLSKA aims at the full implementation of the Małopolska Air Quality Plan (MAQP). The project estimates that through its actions it will reduce PM₁₀ and PM_{2.5} emissions by about 25 000 kg/day and 21 000 kg/day respectively. It is worth noting that the project has a transnational approach assisting cooperation within the hotspot (southern Poland, Slovakia and the Czech Republic) by joint activities as well as exchange of experiences in the area of air quality improvement. In addition to the IP budget itself, the project will facilitate the coordinated use of €798 million complementary funding from the European Agricultural Fund for Rural Development (EAFRD), the ERDF, National and Regional Fund for Environmental Protection and Water Management, and national and private fund, as applicable.

The project LIFE Fit for REACH is working on the reduction of emissions by substitution of hazardous chemicals and resource efficiency. The project offers Baltic SMEs a full 'chemicals management package', including proposals on how to implement substitution as a core action to reduce environmental impacts and support in communicating this good environmental performance to the society. Amongst other activities, LIFE Fit for REACH will test and implement a set of complex measures in six companies which shall substitute some of the identified hazardous substances or increase the efficiency of the resource use and lead to reduction of emissions of these substances. It will also implement 'low effort – low costs' measures to substitute hazardous substances or to introduce good chemicals management practices in additional 50-80 SMEs. The project is also helping Latvia's largest producer of household chemicals to get 'greener'.

SDG 6 Ensure availability and sustainable management of water and sanitation for all

The EU water policy is a cornerstone of the LIFE Programme and provides for a framework to address water protection and achieve good ecological status for inland surface waters, transitional waters, coastal waters and groundwater. It comprises

regulation including on drinking water, bathing water and urban wastewater, prevention of pollution caused by nitrates, industrial emissions, pesticides and persistent organic pollutants.

The transition to a circular economy should also lead to greater resource efficiency for example by improving the conditions for water re-use in several sectors.

LIFE projects are working on sustainable management of water bodies. In particular, LIFE projects are reducing the water bodies affected by water pressures and risks. This is done through a variety of actions, like reducing pollution of aquatic bodies from contaminated water/fluids, removal of barriers within rivers, implementation of River Basin Management Plans, etc.

As an example, LIFE ECORKWASTE will demonstrate the possible uses of a cork waste valorisation system. The cork will be used as absorbent material in wetlands, for the elimination of organic compounds in winery wastewater treatment systems or as substrate for energy valorisation in a gasification process. Through this improved wastewater treatment, the project aims to alleviate the pressure on 930 km² of wetlands in the Llobregat Basin (a decrease of approximately 3 % within the context of the project). The reduction in pressure includes removal of 90 % of both phenol and hydrogen-sulphide from the winery wastewater within the project duration (estimated at 50 mg/year and 82 mg/year, respectively).

The German Integrated project Living River Lahn aims at achieving a good ecological status/potential of surface waters in the catchment area of the Lahn river in Germany. Among other activities, this project will identify sources of pollution and improve the water quality of the Lahn and its tributaries; prepare and implement measures for linear ecological connectivity for barrages and weirs, investigate the options for the creation of retention areas along the river and improved ecosystem services; re-establish natural water regulation wherever possible; and elaborate integrated pilot strategies and implementation plans on how to organise and finance inland waterways in order to achieve 'good ecological status/potential'. The solutions identified by the project should be transferred to several other rivers in Germany, facing similar issues. In addition to the project budget itself, the project will facilitate the coordinated use of around €27 million of complementary funding from the European Agricultural Fund for Rural Development (EAFRD) and national funds.

SDG 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Through the circular economy package and the plastic strategy, LIFE addresses economic and environmental concerns by maximizing efficiency in the use of resources, and thus contributes to **SDG 8**.

Moreover, the 7th Environment Action Programme confirms that EU prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed in a sustainable way, and biodiversity is protected, valued and restored.

An example of how LIFE contributes to tackling marine litter pollution while promoting additional income for fishermen/women is the project LIFE LEMA. This project aimed to provide local administrations with a methodological guide and prediction tools for the efficient management of floating marine litter in the southeast waters of the Bay of Biscay. The project established statistical models to predict the movement and accumulation points of floating marine litter; developed a computer tool to integrate data on floating marine litter collection, detection and prediction methods; designed a management plan to prevent and reduce floating marine litter; and used innovative technologies to detect floating marine litter. Through its work, the project demonstrated marine litter collection actions that could provide fishermen/women with an additional source of income while reducing marine pollution. Quantitative, the project achieved the collection of more than 40 tons of floating marine litter and another 40 tons of floating wood.

In addition, LIFE PSLOOP is aiming at enabling the recycling of construction waste containing polystyrene. The project's process for producing recycled polystyrene material is much more energy and resource efficient than the production of polystyrene from virgin raw materials. The project will construct a recycling plant to demonstrate this process on an industrial scale, aiming at 3000 tons/year of recycled polystyrene. In addition, the project aims to create a relevant value chain with recycling and collection companies by demonstrating a standard collection and pre-treatment system.

SDG 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

The 2030 Climate and Energy Policy Framework strives for a competitive low-carbon and climate-resilient economy and the EU Strategy on Adaptation to Climate Change identifies resilient infrastructure as a priority action area under the strategic objective of mainstreaming adaptation measures.

The circular economy fosters eco-innovation and sustainability objectives.

LIFE is working on improving the climate resilience of infrastructures. In particular, 21 LIFE projects are working on increasing the number of infrastructures targeted for climate resilience. Such infrastructures may include public, private and industrial buildings or services situated in urban or rural environments. These could range from large power generation plants, to water services, households or agricultural farms.

As an example, the LIFE DERRIS project successfully tested an innovative model of public-private partnership between insurers, public administrations and SMEs to increase urban resilience to climate change, including through risk reduction tools for SMEs. Such tools included a Climate Risk Assessment and Management Tool to help enterprises to identify adaptation measures that they should implement to enhance resilience, as well as company climate adaptation action plans that outlined numerous specific steps the participating companies could take to cope with floods, drought, high temperatures, high winds and other extreme weather

events. During the project, 156 companies produced such plans and this number is expected to increase to 550 five years after the project-end.

SDG 11 Make cities and human settlements inclusive, safe, resilient and sustainable

The 7th Environment Action Programme has as a horizontal priority objective to make the Union's cities more sustainable.

Other environmental and climate policies and legislation are vital for sustainable urban development such as Noise Legislation, the EU's Biodiversity and Green Infrastructure Strategies, Drinking Water and Urban Wastewater Treatment, the framework on energy performance of building, the strengthen of the resilience of urban settings through climate related risks.

Urban energy consumption generates about three quarters of global carbon emissions. Therefore, cities play a crucial role in terms of energy and climate policy (the Clean Air Package, Air Quality, etc.). The EU Covenant of Mayors for Climate and Energy is a bottom-up local and regional action for tackling in an integrated manner climate change mitigation and adaptation, and access to secure, sustainable and affordable energy.

Moreover, the circular economy package contributes to this SDG under many aspects, such as by addressing sustainable waste sorting and recycling and by shifting energy consumption onto more sustainable pathways.

LIFE is funding projects with direct impact on this topic. For example, LIFE-SOUNDLESS is aiming at a sustainable and healthy future for urban areas through the demonstration of the effectiveness of innovative noise-reducing asphalt mixes using recycled waste materials, to mitigate noise pollution. The project will also encourage public bodies to integrate environmental factors into their calls for tender in street construction. By recycling and re-using waste from different industries, the project will also help implement waste management objectives. Concretely, the project is aiming at a reduction of at least 6 dB in noise level compared with the current situation in the demonstration road sections.

Another example is LIFE IMPETUS which is working on improving current barriers for controlling and removing pharmaceutical compounds (PhC) in urban wastewater treatment plants with conventional activated sludge treatment. The project examined PhC concentration, control methods in urban waste-water treatment plants, bacterial antibiotic resistance and PhC bioaccumulation in clams situated near the exit of the plants. In addition, the project tested at semi-industrial scale, a novel activated carbons material made of pine nuts for removal of PhC in waste-water plant processes. The project collected two years of data of PhC in 2 urban CAS-urban waste-water treatment plants (~ 9000 results) and isolated 7000 antibiotic-resistant colonies in raw and treated waste-water.

SDG 12 Ensure sustainable consumption and production patterns

In view of reaching **SDG 12**, resource efficiency and circular economy actions aim to decouple economic growth from resource use and environmental degradation. By covering the whole cycle from production and consumption to waste management, they are at the core of the LIFE actions under the priority areas Environment and Resource Efficiency.

Moreover, the 7th Environment Action programme has as a key objective to turn the Union into a resource-efficient, green, and competitive low-carbon economy. Another related key objective is to safeguard EU citizens from environment-related pressures and risks to health and wellbeing.

Several LIFE projects are working on improving Waste Management.

The LIFE M3P project, for example, aims to promote and develop industrial symbiosis by connecting SMEs to foster alternative uses of their waste streams. It aims to close the loop by identifying and characterising industrial waste, and turning it into a resource (secondary raw material) for another industry. This will be achieved through the use of a digital online platform – M3P (Material Match Making Platform) – at the European level. LIFE M3P will also demonstrate the feasibility of a more efficient use of raw materials, by the systematic application of eco-design techniques to facilitate the recovery and re-use of parts that would previously have become waste. Through the above activities the project aims at a waste reduction of about 60 000 tons (10 % reduction within the context of the project) during its implementation.

SDG 13 Take urgent action to combat climate change and its impacts

Climate change mitigation and climate change adaptation are two priority areas of the LIFE programme. The 2015 Paris Agreement is a historically significant landmark in the global fight against climate change; a success for the world and a confirmation of the EU's path to a low-carbon and climate resilient economy. With the support of LIFE, ambitious 2030 targets have been set up to reduce greenhouse gas emissions, improve energy efficiency and increase the share of renewable energy. Now, the Von Der Leyen Commission is proposing even more ambitious targets to be enshrined in the Climate Law Renewable energies and energy efficiency play an increasingly important role in tackling climate change.

The EU Emissions Trading System (ETS) is a key tool for cutting greenhouse gas emissions from large-scale facilities in the power and industry sectors, as well as the aviation sector.

The EU Strategy on Adaptation to Climate Change provides a framework and mechanisms to improve the preparedness of the EU for current and future impacts of climate change, thus contributing to a more climate-resilient society.

LIFE projects are aiming at reducing CO₂ emissions and promote renewable energy production.

As a practical example, LIFE METHAmorphosis demonstrated, at industrial-scale, two innovative waste treatment systems, one in an urban waste treatment plant, and the other in an agro-industrial waste treatment plants, to produce upgraded high quality bio-methane. The participating automotive sector tested the biofuel in passenger vehicles and heavy duty vehicles during thousands of kilometres driving. The car manufacturer SEAT aims to use the results for rolling out their bio-methane strategy which has the potential of saving millions of tons of CO₂ emissions in the transport sector. The project estimates that 5 years after its end the two prototypes could produce over 176 million kWh renewable biomass energy annually (translated to electricity, this value is close to the annual electricity consumption of 50 000 homes).

On a larger scale, the Belgian Integrated project BE-REEL! aims to create the conditions for the full implementation of the strategic housing renovation plans of Flanders and Wallonia regions in Belgium. The demonstration and pilot actions are estimated to lead to more than 8000 renovated dwellings. The direct GHG emission reductions due to all the project actions will amount to over 18 600 tonnes of CO₂ per year. In the long run, the goal of the strategies is to renovate all existing housing, achieving a reduction of 75-80 % of CO₂ emissions and energy use by 2050 and to influence the low-emission strategies of all cities and communities in Flanders and Wallonia, as well as the Brussels Capital Region.

SDG 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development

The 7th Environment Action Programme sets the objective to protect the Union's natural capital to, inter alia, reduce the impact of pressures on marine waters, in order to achieve or maintain good environmental status.

The Birds and Habitats legislation complement the Marine Strategy Framework by protecting 5 % of the EU sea area through a network of Marine Protected Areas part of 'Natura 2000'.

Moreover, to tackle marine litter and pollution, LIFE supports a wide set of instruments, including regulation on waste management and prevention, port reception facilities for ship generated waste and cargo residues.

LIFE is funding large Integrated Projects within the marine environment. One such example is the Spanish Integrated Project LIFE-IP INTEMARES working on an integrated, innovative and participatory management for Natura 2000 network in the Marine Environment. Its objective is to implement the Priority Action Framework for Natura 2000 in the Spanish marine Natura 2000 network and ensure its effective management. Through this approach, the project expects to ensure the maintenance or restoration of the favourable conservation status of priority habitats and species. To achieve this the project will improve critical knowledge for the management of the Natura 2000 network activities; improve monitoring of habitat types and species listed in the annexes of the Nature Directives for a better assessment of their conservation status; and provide information, training and adequate awareness to all stakeholders for achieving conservation targets in Natura 2000 sites. Furthermore, the project will promote sustainable tourism and employment related to the Natura 2000 network. It is worth noting that the project estimates that it will facilitate the coordinated use of €22 million complementary funding from EMFF, ESF and national funds.

Another example is the French Integrated Project LIFE IP – MarHa that aims to achieve or maintain a favourable conservation status for French marine habitats listed in Annex I of the Habitats Directive. To achieve this, the integrated project will ensure effective and transparent management of the sites; coordinated implementation of the Habitats Directive, Marine Strategy Framework Directive and Water Framework Directive, while incorporating the connection between land and sea; improved capacities and tools for implementing Natura 2000 policy; the integration of marine users and activities; and assessment of the conservation status of marine habitats on a biogeographical scale and monitoring devices for adaptive management. The project should also strive to achieve greater recognition by society of the marine Natura 2000 initiative as well as reinforcement of international cooperation.

SDG 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

The environmental *acquis* provides a high level of protection in areas such as water quality and nature conservation, though the development and implementation of the Birds and Habitats Directives and of the Natura 2000 network.

The EU Forest Strategy has as one of its key principles global forest responsibility, promoting sustainable production and consumption of forest products.

The circular economy offers an opportunity for modernising the economy, making it more green and competitive. It also contributes to lower carbon dioxide emission levels and energy savings as well as decreased air, soil and water pollution. It focuses on resource efficiency and minimising waste and has a strong potential in terms of new jobs and growth and for stimulating sustainable consumption and production patterns.

LIFE is funding a significant number of project aiming at improving ecosystem health and wildlife species.

All 12 types of ecosystem are being addressed by on-going projects.

For Wildlife species, on-going projects are expected to lead to an increase in the population of the species and/or to lead to increase in their site area or length.

As an example, LIFE for Safe Flight aims to reinforce the red-breasted goose (*Branta ruficollis*) population globally by mitigating threats, including legal acts against hunting/poaching and removing power lines; raising awareness about the species and the threats it faces; as well as establishing monitoring schemes to protect it. Based on the above, the project is expected to increase the

population of the red-breasted goose by about 15 000 individuals (27 % increase against the baseline situation at the project's start) and increase its area of habitat by about 7 000 ha (1 % increase).

6. Information about financial instrument(s) and trust fund(s) financed by the Programme

Two pilot financial instruments have been financed under LIFE to test innovative approaches:

- the Private Finance for Energy Efficiency (PF4EE) supports investments for the implementation of Member States' Energy Efficiency Action Plans through financial intermediaries;
- the Natural Capital Financing facility (NCFF) is designed to demonstrate that natural capital projects can generate revenues or save costs. It intends to establish a pipeline of replicable, bankable operations that will serve as a 'proof of concept' and that will demonstrate to potential investors the attractiveness of such operations directly addressing biodiversity and climate adaptation objectives.

Following an ex ante assessment analysing the potential demand and defining the best possible conditions for their financing, delegation agreements between the Commission and the European Investment Bank (EIB) were developed and signed.

PF4EE

Following the signature of the delegation agreement, the EIB has started to make agreements with financial intermediaries, which then have to develop their own portfolio to provide loans for energy efficiency investments. PF4EE is indeed contributing to creating a new financial product in the market targeting energy efficiency and consequently directly contributing to the decarbonisation of our economy, in line with the COP21 goals.

Phase I: At the outset of the PF4EE, support of total investment up to about EUR 540 million was expected, with an objective to sign operations in six to ten Member States. The deployment has been more challenging and slower than expected.

By the end of 2019, 11 agreements have been signed with intermediary banks for a total guaranteed sum of EUR 72 million utilised and an additional 1.5m reutilised of which EUR 17.2 million were posted on cash collateral accounts. Implementation of operations on the ground have started in seven countries. As at 31 December 2019, the total signed nominal amount of loan portfolios covered through collateral agreements reached EUR 97.9 million (loans to final recipients).

Phase II: The instrument was scaled up after its pilot phase, with additional funding amounting to EUR 25 million for the 2018-2020 period. It is expected that additional support of total investment will reach EUR 160 million under this phase. The updated delegation agreement was signed in November 2019 and the new call published immediately after.

In terms of energy efficiency, since the signature of the first collateral agreement, investments supported by the PF4EE have generated primary energy savings of 216.67 Gwh/year and have reduced the level of CO₂ emissions by 57 190 tons of CO₂. Reduction of CO₂ emissions as a result of investments supported by the PF4EE instrument reached 24 616 Tons of CO₂ / year in 2019.

NCFF

NCFF supports the financing of loans and equity for investments contributing to biodiversity and/or climate change adaptation objectives. This represents an innovation which, if successful, could drive the architecture of natural capital financing. Between 9 and 12 operations are expected to be financed until the end of 2021, as the duration has been extended. The support facility is being used for developing new projects.

Several operations have been scrutinized according to the criteria jointly defined by the Commission and the EIB in the delegation agreement. They have not been retained for funding (for more information see above 'Justification of changes to the financial programming and/or to the performance information' under specific objective 2).

Following the recommendations of the mid-term evaluation of the LIFE Programme, several adjustments have been introduced in the management of the NCFF in agreement with the EIB, including more flexibility on the provision of technical assistance, the prolongation of the implementation period without additional financing, the reduction of the minimum amount for an operation, the opening of a guarantee facility, some targeted promotional activities to stimulate the potential demand.

The first operation was signed in 2017. In 2018 and in 2019 respectively, three and two operations were signed. It appears that the market, although still limited, is waking up to biodiversity and climate as compared to when the NCFF was conceived.

Among them, we had the first NCFF operation integrating nature-based solutions in a city. A EUR 5 million NCFF loan will finance and support the integration of green components into the restoration of public squares and streets, create green corridors between different greened areas and contribute to the natural restoration of Athens second landmark hill after the Acropolis, Lycabettus hill. The objective of this operation is to support the implementation of the Athens Resilience 2030 Strategy and thus contribute to reducing urban heat islands, increase natural water infiltration and improve overall attractiveness of the project areas. This loan is attached to a EUR 55 million framework loan for resilient urban renewal and development to the Municipality of Athens.