

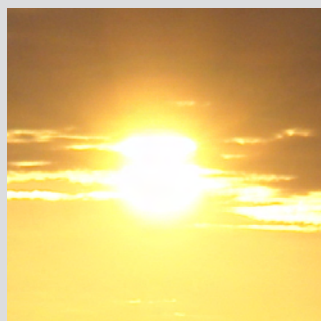
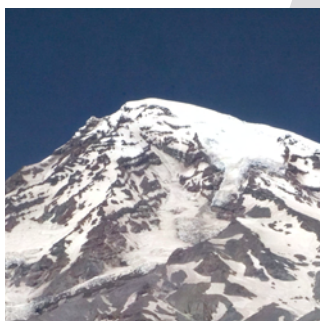
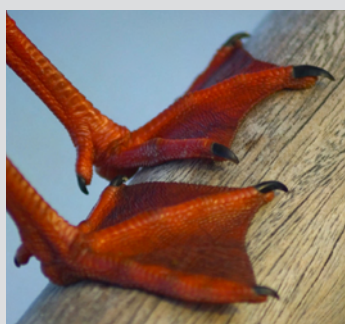
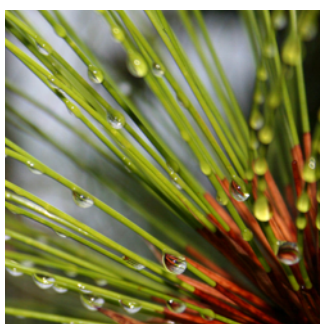
Directorate General Environment, Unit E.4. LIFE

# **Ex-Post Evaluation of Projects and Activities Financed under the LIFE Programme**

Country-by-country analysis

Sweden

July 2009



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**The views expressed are those of the Consultant and do not necessarily reflect those of the European Commission.**

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## 1 Executive summary

Sweden has been a part of the LIFE Programme since its accession to the EU in 1995. A total of 81 projects have been co-financed by LIFE since the beginning of 1995, 78 projects fall within the period covered by this evaluation (1996-2006). Of these, 11 are still ongoing in 2008.

LIFE projects in Sweden have in general been technically successful and have shown good results. The sustainability of the projects varied noticeably depending on theme and/or beneficiary. The Environment projects were diverse in all aspects, though approximately half of them lie within the water and natural resources and waste themes. The projects have addressed varied subjects ranging from a demonstration of ways to increase citizens' recreational benefit from urban woodlands to ammonia emission reduction in the agricultural sector. The LIFE Nature projects were, to a large extent, focused on habitat restoration, in many instances on semi-natural habitats such as grazed meadows, wood pastures, dry grasslands and hay meadows but also rivers, forests and quaking bogs are represented. The species projects were, to a large extent, concerned with species for which Sweden has a special responsibility.

## 2 Introduction

This country report on the implementation of the LIFE Programme in Sweden is part of the overall ex-post evaluation of the LIFE Programme. The evaluation was commissioned in July 2008 and covers all LIFE projects initiated in the period 1996-2006. The overall objective of the evaluation is to assess the relevance and impact of the activities and projects financed under the LIFE Programme. The evaluation comprises country studies in all Member States, except Bulgaria, which has never had any LIFE projects. This report documents the analysis carried out concerning the implementation of the LIFE Programme in Sweden. The ex-post evaluation focuses on assessing the effect of the LIFE Programme on Europe's nature and environment through looking at results and impacts of LIFE projects implemented under the Nature (NAT) and Environment (ENV) components. The results and impacts have further been assessed along three main evaluation criteria:

- Effectiveness, i.e. the extent to which planned objectives have been reached
- Sustainability, i.e. the extent to which positive impacts have continued or are likely to continue
- Utility, i.e. the extent to which impacts address key environmental needs and priorities in the EU and for the stakeholders concerned.

## 3 Environmental policy overview

Between 1996 and 2006, the overall priority of Swedish environmental policy was environmental sustainability.<sup>1</sup> Sweden's strategy for sustainable development was reflected in "*Sweden's National Strategy for Sustainable Development 2002*"<sup>2</sup>, which encompasses a number of cross-cutting issues corresponding to the four priority areas of EU's 6th Environmental Action Programme; climate change; biodiversity and the natural environment; environment and health and quality of life; and sustainable use

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<sup>1</sup> Chapter 1 Section 1 of the Swedish Environmental Code (SFS 1998:808) that is the central legal framework for environment-related issues declares: "The purpose of this Code is to promote sustainable development which will assure a healthy and sound environment for present and future generations".

and management of natural resources and waste. 16 national Environmental Quality Objectives<sup>3</sup> have been adopted by the Swedish Parliament in order to address these problems.<sup>4</sup>

*Box 1 Swedish environmental policy and achievements*

**Climate change.** The Swedish climate strategy, as adopted by the Swedish Parliament, contains the goal of reducing national emissions of greenhouse gases by at least 4 per cent, on average, below 1990 levels by 2008 - 2010. Besides this, the target is that Swedish emission of greenhouse gases should decline by up to 50 per cent from present levels by 2050.<sup>5</sup>

**Nature and Biodiversity.** In Sweden, nearly 4 000 areas have been selected for the Natura 2000 network, and around 60 per cent of these are already protected as nature reserves or national parks.

**Environment and health and quality of life.** New health hazards have recently arisen such as those associated with greater use in products of chemicals that can be disseminated into the environment. Accordingly, work on preventive measures and monitoring developments needs to continue.<sup>6</sup>

**Sustainable use and management of natural resources and waste.** The existing policy instruments have made Sweden's waste management more ecologically sustainable. They are inter alia the Environmental Code's "rules of consideration" (which include recycling and the conservation of resources), producer responsibility and the prohibition on landfilling combustible and organic wastes.<sup>7</sup>

## 4 Overview of LIFE projects in Sweden

During the period 1996 to 2006, the LIFE Programme co-financed 78 projects in Sweden including 28 Nature projects and 50 Environment projects. A full overview table of the projects is provided in Appendix 1. Appendices 2 and 3 provide additional summary tables.

*Table 4.1 Overview of LIFE projects 1996-2006 in Sweden*

	Number of projects	Total LIFE contribution (million EUR)	Main themes covered <sup>8</sup>	Average LIFE contribution per project (million EUR)	Average project duration (years)
Environment	50	39.3	Natural resources and waste (36%)	0.7	3.5

<sup>2</sup> <http://www.regeringen.se/content/1/c4/28/86/46c330fd.pdf>

<sup>3</sup> The 16 environmental objectives are Reduced Climate Impact, Clean Air, Natural Acidification Only, A Non-Toxic Environment, A Protective Ozone Layer, A Safe Radiation Environment, Zero Eutrophication, Flourishing Lakes and Streams, Good-Quality Groundwater, A Balanced Marine Environment, Flourishing Coastal Areas and Archipelagos, Thriving Wetlands Sustainable Forests, A Varied Agricultural Landscape, A Magnificent Mountain Landscape, A Good Built Environment, A Rich Diversity of Plant and Animal Life

<sup>4</sup> <http://www.regeringen.se/sb/d/5775>

<sup>5</sup> The current national average for emissions per Swedish resident is about eight tonnes per year.

<sup>6</sup> <http://www.regeringen.se/sb/d/2981>

<sup>7</sup> <http://www.sweden.gov.se/sb/d/10961>

<sup>8</sup> For the purpose of this evaluation, the LIFE projects were categorised according to the thematic structure of the LIFE+ Programme (ref. Regulation EC No. 614/2007, Annex II). The themes included for LIFE Nature: Habitat Directive, Birds Directive and Biodiversity. For LIFE Environment: Climate change, air, water, soil, forests, natural resources and waste, chemicals, urban environment, strategic approaches.

			Water (16%)		
Nature	28	29.9	Habitats (93%)	1.06	4.2

Source: Butler

The **LIFE Environment** projects co-financed by the LIFE Programme were related to technological developments beneficial to the environment. The projects were distributed over a number of themes, with natural resources and waste, water and chemicals as the most important. About half of the projects were implemented by public entities and the other half by private or public enterprises. NGOs and research institutions accounted for very few projects.

The **LIFE Nature** projects co-financed by the LIFE Programme during 1996-2006 comprised habitat restoration, mostly on semi-natural nature types such as grazed meadows, wood pastures, dry grasslands and hay meadows but also rivers, forests and quaking bogs are represented. The species projects were to a large extent concerned with species for which Sweden has a special responsibility i. e. has a large part of the total European population. Most of the species projects are in fact habitat projects with a special aim, i. e. to conserve or restore nature types that are key habitats of the species in focus. The majority of the projects were implemented by national or regional authorities.

## 5 Effects of projects implemented

### 5.1 Results and impacts for Nature projects

The majority of Swedish LIFE Nature projects focused on restoration of habitats, in many instances with the habitats themselves as the target. In other projects, the habitat restoration mainly served as a means for improving the conservation status of certain species (usually Birds Directive appendix I species and priority species on Habitats Directive). Many of the species targeted in Swedish projects are also species for which Sweden has a special responsibility as the country harbours a large part of the total European population. Examples of this are the annex I bird species *Botaurus stellaris* and *Pluvialis apricaria* and priority species such as *Margaritifera margaritifera* and *Osmoderma eremita* from annex II and IV of the Habitats Directive. For the latter, a species action plan was the result of a LIFE project concerned with the species. Interviews with project managers and national focal points suggest that LIFE funding was crucial for the majority of the projects. Few of the projects, if any, would have been implemented on the scale carried out, without the LIFE contribution and some, probably not at all. Furthermore, LIFE funding, in some cases, served as an impetus for obtaining extra contributions from budgets managed by local authorities, both during the project period and in following years. Also, access to agri-environmental funds was often facilitated by the projects.

Only a few species projects did not have habitat restoration as their main focus, notably the two projects on *Alopex lagopus* focusing on supplementary feeding and control of competing *Vulpes vulpes*. Re-introduction has been a minor component in one Swedish LIFE Nature project only (Freshwater Pearl Mussel and its habitats in Sweden). No Swedish LIFE Nature projects included captive breeding and release.

As Sweden has a total 530 SPAs and 3,971 SCIs only a small percentage of the country's Natura 2000 sites have been directly affected by LIFE projects. Nevertheless, it is the opinion of both project managers and the national focal point, that LIFE affects more sites than those directly within projects. LIFE projects contribute to the development of methods that have been copied to other Natura 2000

sites both within Sweden and in other member states (Finland, Estonia and Lithuania)<sup>9</sup>. Experience with LIFE affects the priorities of the beneficiary organisation (in Sweden almost exclusively a Länsstyrelse) to some extent, so that Natura 2000 issues carry more weight in the daily management of the organisation. The LIFE projects also created organisational development and capacity building within the beneficiary organisations. This was, according to the national focal point, a very important benefit resulting from LIFE projects.

## 5.2 Results and impacts for Environment projects

The environmental problems addressed by the 78 LIFE Environment projects in Sweden are diverse and it can be somewhat difficult to sum it up in one common assessment. The majority of Swedish LIFE Environment projects aimed at developing new technological solutions for waste handling, water quality improvement and reduction/replacement of dangerous substances. The solutions addressed relatively specific problems on a local scale. Most of these projects have succeeded in technical terms resulting in e.g. the building of an efficient test plant for agro-waste combustion<sup>10</sup> or the demonstration of the use of satellite images in forest management<sup>11</sup>. In-depth studies and monitoring reports suggest that technical projects in general were technically and economically viable and thus having a long-term positive impact on the environment. In a few cases, projects have not produced an impact. The scope of environmental impacts varies from project to project as the continuation of technical results depends on the particular production facility, the market development and sometimes the availability of further funding<sup>12</sup>. The scoring of projects by monitoring teams also suggests some variation in this regard. The monitoring team for Sweden have scored the innovativeness of Swedish LIFE Environment projects to be fair with an average of six out of nine<sup>13</sup>. However, the variation among projects is significant making it very difficult to assess general innovativeness. Demonstration effects are also difficult to estimate. However, the in-depth studies<sup>14</sup> have shown remarkable demonstration effects on a national level as well as awareness effects both nationally and internationally. In both projects the dissemination of results was extensive, as were the demonstration of the test facilities. This effort resulted in the introduction of similar technologies elsewhere.<sup>15</sup>

## 6 The effectiveness of projects

Effectiveness can be assessed at two levels: the project level, which compares achievements with project objectives, and at programme level, which compares achievements with LIFE Programme objectives<sup>16</sup>.

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<sup>9</sup> For instance machines suited for mowing on soft ground developed in "Improvement of habitats for wetland birds in Askö-Tidö" have been used in several other LIFE NAT projects in Sweden and in Estonia and Lithuania.

<sup>10</sup> LIFE06 ENV/S/000517 (BIOAGRO)

<sup>11</sup> LIFE00 ENV/S/000861 ('Demonstration of use of satellite images, estimations and www in forestry to protect nature and prevent environmental accidents')

<sup>12</sup> LIFE99 ENV/S/000625 ('Towards a sustainable milk production - reducing on-farm ammonia losses') had very good technical results but failed to deliver long term impacts as the test-farm was closed down as a consequence of lack of funding.

<sup>13</sup> The average only represents 15 out of 50 projects, because the rest have not been scored.

<sup>14</sup> LIFE06 ENV/S/000517 (BIOAGRO) and LIFE99 ENV/S/000625 ('Towards a sustainable milk production - reducing on-farm ammonia losses')

<sup>15</sup> LIFE99 ENV/S/000625 ('Towards a sustainable milk production - reducing on-farm ammonia losses')

<sup>16</sup> Specific objective for: LIFE Nature: To contribute to the implementation of Council Directive 79/409/EEC (Birds Directive) and Council Directive 92/43/EEC (Habitats Directive); LIFE Environment: To contribute to the development

Swedish **LIFE Environment** projects often addressed concrete environmental and technological problems in the production system of enterprises, which constitute half of the Swedish LIFE Environment beneficiaries. The Swedish LIFE Environment projects most often meet their objectives and thus yield good results with a beneficial effect to the environment. The project-level effectiveness of Swedish LIFE Environment projects is assessed to be medium to high. The majority of projects have made good results and been successful in attaining their objectives. On the programme-level, effectiveness is medium as a consequence of the results and impacts of the Swedish LIFE Environment projects, which have contributed to innovative and integrated techniques and methods. Nevertheless, they have not contributed to the development of Community environmental policy to an extent where this is distinguishable. Results have been disseminated to a wider EU audience but the extent to which the methods and techniques were applied on an EU-level is uncertain.

In the case of **LIFE Nature** the effectiveness of the projects is deemed to be high (score: 3.8) by national focal point and monitoring experts (score: 4), an assessment which is supported by the project studies and to some extent project summaries. Most projects delivered all planned results in areas such as area restored, number of nature reserves designated, number of management plans developed and implemented<sup>17</sup>. The species projects or species components in projects with both habitat and species component seem to have a slightly lower effectiveness than the habitat projects' components<sup>18</sup>. In the habitat projects the main negative factors hampering effectiveness have been failure to involve all stakeholders notably private landowners in the early stages of the projects (information from national focal point and project managers), lowering their sense of ownership, which in turn makes negotiations regarding compensations more difficult. In most cases such difficulties have, however, only caused delays not failure of project components. Another obstacle can be project components requiring permission according to other legislation<sup>19</sup>.

On the programme level, the national focal point regards LIFE as an important contributing factor towards achieving the goals set out in the two directives. The county organisations (Länsstyrelser) which apply for and receive LIFE funding are among those that already focus on nature conservation. This means that the projects are well prepared and executed and have a high level of effectiveness at project level. This, however, also means that those counties that may need the capacity building effects of carrying out a LIFE project often are less likely to achieve it.

## 7 The sustainability of projects

There is a significant difference between the sustainability of LIFE Environment and LIFE Nature. The difference between the LIFE Nature and LIFE Environment projects has to do with the beneficiaries, which - in the case of LIFE Nature - are mostly public entities. This difference influences the

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of innovative and integrated techniques and methods and to the further development of Community environmental policy.

<sup>17</sup> In some case such as in the "Kinnekulle plateau mountain - restoration and conservation" project more areas were designated as nature reserves, more agreements with landowners were signed and larger areas have been restored than foreseen in the project document.

<sup>18</sup> For instance did the "Preservation of the Arctic Fox, *Alopex lagopus*, in Sweden and Finland" project not achieve the goal of doubling the national population of the species within the project period (this was, however, achieved during the second LIFE project on the species "Saving the endangered Fennoscandian *Alopex lagopus* (SEFALO+)"). In the project "Restoration of the Wetland Area of Hejnum Kallgate" the project manager regarded it unlikely that the target of a 50 per cent increase in the population of *Euphydryas aurinia* will be met. In both cases, though, it should be noted that the projects did improve the conservation status for the species in question, just not by the targeted amount.

<sup>19</sup> One such case was seen in the project "Restoration of lake Östen: a wetland of international importance for migrating birds", where a planned raising of water level, had to be abandoned. Such cases, however, seem to be very few.



sustainability mainly because of the incentive-structures, which differ greatly between commercial entities and public interest organisations; e.g. LIFE Nature projects often acquire areas and natural habitats, which are then conserved over long periods and in relation to the implementation of EU-legislation. LIFE Environment projects, on the other hand, are often more dependent on market forces, national legislation and the readiness and commitment of stakeholders to invest and take on the project's profitability.

The sustainability of Swedish **LIFE Environment** projects has been given a lower score on average by the monitoring team compared to the EU average score (5.7 out of 9 against 6.2 out of 9 on the EU-level).<sup>20</sup> Despite the fact that the results of Swedish Environment projects have been significant, long-term and sustainable effects are often depending on the implementation of the technology/method on the production facility, the commercial priorities made and the general technological development on the field. An assessment on the basis of in-depth studies as well as monitoring files and monitor team scores and interviews suggest that the sustainability of Swedish LIFE Environment projects is low to medium and varying depending on the type of beneficiary. In the case of SMEs<sup>21</sup>, sustainability depends on the cost of the investment, the legislation regulating marketing of the product in relation to new technology as well as the innovation taking place on the market in general. In relation to research institutions, the projects do not, in general, lead to any profit or continuous money flow, which is often necessary in order to sustain results.<sup>22</sup>

The sustainability of Swedish **LIFE Nature** projects varied greatly according to the national focal point. Some projects, such as forest lands, have high sustainability. Restoration of open habitat types in areas with status as nature reserves also have high sustainability as they are well integrated into national and local nature management structures, but the sustainability probably hinges on continued access to agri-environmental or similar funds (killer assumption). For a few (species) projects, such as those on *Alopex lagopus*, the sustainability is considerably more uncertain. Interviews with project managers confirm the high sustainability of many habitat projects but also highlight the necessity of continued external funding for management (agri-environmental funds).

## 8 The utility of projects

The Swedish **Environment projects** are coherently linked to EU environmental priorities as stated in the 6th EAP. In most cases, projects find their legal basis in thematic strategies, EU-directives or regulations. As the coherence between EU-priorities and Swedish environmental priorities is very high, the Swedish Environment projects also address Swedish environmental priorities to a very large degree.

Similarly, in the case of **LIFE Nature**, the Swedish projects have a high contribution to EU priorities within nature conservation. Many projects focus on priority nature types or species or species where Sweden has a special responsibility within EU. In addition to the direct on-site contributions, the LIFE Nature projects also contribute indirectly towards addressing common European concerns within Sweden as they promote awareness raising about all aspects of Natura 2000 within administrative bodies, among local landowners and in the general public.

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<sup>20</sup>The monitoring team-score is imperfect as far as only 33,3 per cent of the Swedish projects have been scored. On the EU-level it is 26.6 per cent of projects that has been scored with an unequal distribution among countries as some countries' projects are not represented.

<sup>21</sup> Laquer example.

<sup>22</sup> LIFE99 ENV/S/000625 ('Towards a sustainable milk production - reducing on-farm ammonia losses')

As the beneficiaries are mainly county organisations and, given that the national focal point does not define the priorities, most projects are not set up to act as models from their start. Nevertheless, a great deal of experience is exchanged between projects both within Sweden and at annual platform meetings with Denmark.

LIFE Nature funding enables projects to be implemented on a scale and within a scope which, in most cases, would have been impossible if only national funding were available. Some projects might have been implemented on a lower scale and/or over a longer time frame. According to national focal point and project managers, some projects would not have existed at all without LIFE funding, severely hampering the achievement of Swedish Natura 2000 targets.

## Appendix 1 Comprehensive overview of LIFE Projects in Sweden

In connection with the ex-post evaluation, data was extracted from the BUTLER database of the LIFE Unit. Table 1 and Table 2 below provide an overview of the information available on each project as well as the LIFE+ theme attached by the evaluation team to the project. The budget figures for LIFE co-financing do not necessarily correspond to the actual payments made.

Table 2 Overview of LIFE Environment Projects in Sweden

<b>Id.</b>	<b>Title</b>	<b>LIFE generation</b>	<b>Funding year</b>	<b>Start year</b>	<b>End year</b>	<b>Total budget (EUR)</b>	<b>LIFE co-financing budget (EUR)</b>	<b>Beneficiary type</b>	<b>International partners (yes/no)</b>	<b>LIFE+ theme</b>
LIFE96 ENV/S/000339	The Tandlaå Project	LIFE II	1996	1997	2000	775,780	297,464	Local authority	No	Water
LIFE96 ENV/S/000346	Wetlands in agricultural areas - complementary remedies to reduce nutrient transport to inland and coastal waters.	LIFE II	1996	1996	2000	2,869,429	795,175	Local authority	No	Water
LIFE96 ENV/S/000367	Local Participation in Sustainable Forest Management based on Landscape Analysis	LIFE II	1996	1996	2000	2,511,709	981,697	National authority	Yes	Forests
LIFE96 ENV/S/000380	A New Approach to Combat Macro-algae Blooms - an Integrated Coastal Zone Management Demonstration Project	LIFE II	1996	1997	2001	1,561,324	714,311	Regional authority	Yes	Soil
LIFE97 ENV/S/000306	Increasing competitiveness for using waterborne, environmental friendly paint systems in the wood furniture industry	LIFE II	1997	1997	2000	2,158,068	594,553	SME	No	Chemicals
LIFE97 ENV/S/000308	Mineral Filled Polypropylene in Repeated Circuit Loops	LIFE II	1997	1997	2001	780,151	223,891		No	Natural resources and waste

<b>Id.</b>	<b>Title</b>	<b>LIFE generation</b>	<b>Funding year</b>	<b>Start year</b>	<b>End year</b>	<b>Total budget (EUR)</b>	<b>LIFE co-financing budget (EUR)</b>	<b>Beneficiary type</b>	<b>International partners (yes/no)</b>	<b>LIFE+ theme</b>
LIFE97 ENV/S/000311	Pilot plant test and development of the PyroArc process	LIFE II	1997	1997	1999	1,185,424	337,593	Development agency	No	Natural resources and waste
LIFE97 ENV/S/000312	Cost-effective cleaning with recycling and purification	LIFE II	1997	1997	2000	677,412	209,851	SME	No	Natural resources and waste
LIFE97 ENV/S/000317	Environmental Objectives and Indicators in Spatial Planning and SEA	LIFE II	1997	1997	2001	2,122,146	930,766	National authority	No	Strategic Approaches
LIFE98 ENV/S/000476	Shredder Waste Recycling	LIFE II	1998	1998	2001	1,275,863	375,016	Mixt enterprise	Yes	Natural resources and waste
LIFE98 ENV/S/000477	Isolation of mercury contaminated sediments in Lake Turingen	LIFE II	1998	1998	2004	4,725,864	890,422	Local authority	No	Water
LIFE98 ENV/S/000478	Demonstration of methods to monitor sustainable forestry	LIFE II	1998	1998	2002	1,950,071	968,338	National authority	Yes	Forests
LIFE98 ENV/S/000480	New technique for recycling of nutrients in sludge and ash	LIFE II	1998	1998	2003	1,850,549	719,456	Local authority	No	Natural resources and waste
LIFE98 ENV/S/000481	An integrated liming strategy with a whole-catchment approach	LIFE II	1998	1998	2001	865,717	429,871	National authority	No	Soil
LIFE98 ENV/S/000482	Extensive roof greening	LIFE II	1998	1998	2003	1,393,676	519,586	Public enterprise	No	Urban environment
LIFE99 ENV/S/000625	Towards a sustainable milk production - reducing on-farm ammonia losses	LIFE II	1999	1999	2004	1,128,805	542,668	Research institutions	No	Air
LIFE99 ENV/S/000626	Mercury Recovery by the MercOx process	LIFE II	1999	1999	2003	449,545	418,722	Mixt enterprise	No	Natural resources and waste

<b>Id.</b>	<b>Title</b>	<b>LIFE generation</b>	<b>Funding year</b>	<b>Start year</b>	<b>End year</b>	<b>Total budget (EUR)</b>	<b>LIFE co-financing budget (EUR)</b>	<b>Beneficiary type</b>	<b>International partners (yes/no)</b>	<b>LIFE+ theme</b>
LIFE99 ENV/S/000627	Re-use of components from the car recycling industry.	LIFE II	1999	1999	2002	2,757,199	779,978	Mixt enterprise	Yes	Natural resources and waste
LIFE99 ENV/S/000628	Demonstration of methods to identify and preserve the biocultural heritage in European Forests	LIFE II	1999	1999	2003	833,465	416,733	National authority	Yes	Forests
LIFE99 ENV/S/000631	Identification of Critical Environmental Impacts from Air Transportation over North Europe	LIFE II	1999	1999	2003	475,953	209,994	Research institutions	Yes	Air
LIFE99 ENV/S/000635	Sustainable concrete production in cold climates	LIFE II	1999	1999	2001	703,168	134,241	International enterprise	No	Natural resources and waste
LIFE00 ENV/S/000851	Low solvent lacquers based on new binder combinations	LIFE II	2000	2000	2004	473,422	456,845	SME	Yes	Chemicals
LIFE00 ENV/S/000852	European ecoBudget pilot project for local authorities steering to local sustainability	LIFE II	2000	2001	2004	2,330,660	1,022,765	Local authority	Yes	Strategic Approaches
LIFE00 ENV/S/000853	Recycling of Nitric Acid from Waste Pickling Acid by Electrodialysis	LIFE II	2000	2000	2002	1,933,484	367,158	International enterprise	No	Natural resources and waste
LIFE00 ENV/S/000854	Recycling of dairy residues and energy recovery	LIFE II	2000	2000	2005	703,275	281,310		No	Natural resources and waste
LIFE00 ENV/S/000861	Demonstration of use of satellite images, estimations and www in forestry to protect nature and prevent environmental accidents	LIFE II	2000	2001	2006	2,021,522	986,437		Yes	Soil
LIFE00 ENV/S/000864	The new coolant technologies for metalworking	LIFE II	2000	2001	2004	1,200,000	345,000	Development agency	No	Chemicals

<b>Id.</b>	<b>Title</b>	<b>LIFE generation</b>	<b>Funding year</b>	<b>Start year</b>	<b>End year</b>	<b>Total budget (EUR)</b>	<b>LIFE co-financing budget (EUR)</b>	<b>Beneficiary type</b>	<b>International partners (yes/no)</b>	<b>LIFE+ theme</b>
LIFE00 ENV/S/000867	Integrated reusable plastic crates and pallets, eliminating package waste, for sustainable distribution of everyday commodities in Europe.	LIFE II	2000	2001	2003	7,821,050	1,843,303	SME	No	Natural resources and waste
LIFE00 ENV/S/000868	Demonstration of ways to increase peoples recreational benefits from urban woodlands	LIFE II	2000	2001	2005	3,102,612	1,497,685	Regional authority	Yes	Urban environment
LIFE02 ENV/S/000344	Reduction of solvents in the european newspaper printing industry	LIFE III	2002	2002	2004	6,231,829	1,408,957	International enterprise	No	Air
LIFE02 ENV/S/000349	European Applied System for lake Monitoring using optical measurements	LIFE III	2002	2002	2006	1,045,969	502,499	NGO-Foundation	No	Water
LIFE02 ENV/S/000351	Eco-Efficiency evaluation of new and existing products (DANTES)	LIFE III	2002	2002	2005	1,642,029	1,642,029	International enterprise	No	Strategic Approaches
LIFE02 ENV/S/000355	Integrated Coastal Zone Management in Woodlands by the Baltic Sea	LIFE III	2002	2002	2007	2,431,954	1,205,570	Public enterprise	No	Soil
LIFE03 ENV/S/000589	Local recycling of wastewater and organic household waste	LIFE III	2003	2002	2007	3,611,530	1,805,765	Local authority	No	Water
LIFE03 ENV/S/000592	Cost-effective system for clean and noiseless waste collection	LIFE III	2003	2002	2006	3,768,988	1,121,117	SME	No	Natural resources and waste
LIFE03 ENV/S/000593	Clean Technology for Rest Product Treatment	LIFE III	2003	2002	2005	906,807	223,592	SME	No	Natural resources and waste
LIFE03 ENV/S/000594	Phasing Out Very Dangerous Substances from the Construction Industry	LIFE III	2003	2003	2006	1,488,333	741,416	International enterprise	No	Chemicals

<b>Id.</b>	<b>Title</b>	<b>LIFE generation</b>	<b>Funding year</b>	<b>Start year</b>	<b>End year</b>	<b>Total budget (EUR)</b>	<b>LIFE co-financing budget (EUR)</b>	<b>Beneficiary type</b>	<b>International partners (yes/no)</b>	<b>LIFE+ theme</b>
LIFE03 ENV/S/000595	Reduction of the nitrogen discharge from the leather industry	LIFE III	2003	2002	2006	5,118,739	913,999	International enterprise	No	Water
LIFE03 ENV/S/000596	Recovery of Used Oil filters generating recyclable metal and oil fractions	LIFE III	2003	2003	2005	2,041,869	441,906	SME	No	Natural resources and waste
LIFE03 ENV/S/000598	Regular Recycling of Wood Ash to Prevent Waste Production	LIFE III	2003	2003	2007	1,714,892	853,370	Regional authority	No	Natural resources and waste
LIFE03 ENV/S/000600	System for Thermal Seed Treatment - an Integrated Approach to Implementation and Management in the EU Seed Industry	LIFE III	2003	2004	2005	1,349,318	289,855	Public enterprise	No	Strategic Approaches
LIFE03 ENV/S/000601	Demonstration of opportunities on forest land to support the implementation of the Water Framework Directive	LIFE III	2003	2003	2007	3,000,012	1,499,556	National authority	No	Water
LIFE04 ENV/SE/000765	Multi-Stage Biological Reduction of EDTA in Pulp Industries	LIFE III	2004	2003	2006	6,519,341	1,489,056	International enterprise	No	Water
LIFE04 ENV/SE/000766	Processing sludge for recovery of energy and phosphorous with removal of heavy metals	LIFE III	2004	2004	2006	1,261,134	542,125	SME	No	Natural resources and waste
LIFE04 ENV/SE/000770	Converting Wastes into Secondary Raw Materials : an innovative method for material recycling of underground cable and condensates containing oil	LIFE III	2004	2004	2007	636,225	167,917	Development agency	No	Natural resources and waste

<b>Id.</b>	<b>Title</b>	<b>LIFE generation</b>	<b>Funding year</b>	<b>Start year</b>	<b>End year</b>	<b>Total budget (EUR)</b>	<b>LIFE co-financing budget (EUR)</b>	<b>Beneficiary type</b>	<b>International partners (yes/no)</b>	<b>LIFE+ theme</b>
LIFE04 ENV/SE/000774	Demonstration of a new concept for a safe, environmental advantageous, economical sustainable and energy effective system for handling animal by-products in Europe	LIFE III	2004	2004	2007	8,143,640	1,239,888	Development agency	No	Natural resources and waste
LIFE04 ENV/SE/000775	Rollsbo Enlightenment Project	LIFE III	2004	2004	2008	10,410,669	1,793,235	Development agency	No	Climate change
LIFE05 ENV/S/000401	Advanced Reactor Technology for Sustainable Production in the Chemical Industry	LIFE III Extension	2005	2005	2008	3,977,800	1,017,240	International enterprise	No	Chemicals
LIFE05 ENV/S/000405	Demonstration of DeMethyl Ether Vehicle for Sustainable Transport	LIFE III Extension	2005	2005	2007	1,814,605	907,302	International enterprise	No	Climate change
LIFE06 ENV/S/000517	Innovative method for reduction of emissions of green house gases and waste from the agriculture sector	LIFE III Extension	2006	2006	2009	5,226,500	1,211,625	SME	No	Climate change



Table 3 Overview of LIFE Nature Projects in Sweden

<b>Id.</b>	<b>Title</b>	<b>LIFE generation</b>	<b>Funding year</b>	<b>Start year</b>	<b>End year</b>	<b>Total budget (EUR)</b>	<b>LIFE co-financing (EUR)</b>	<b>Beneficiary type</b>	<b>International partners (yes/no)</b>	<b>Directive (Birds, Habitats) or biodiversity</b>
LIFE96 NAT/S/003182	Protection of Western Taiga in Sweden	LIFE II	1996	1996	1999	6,734,144	3,367,072	National authority	No	Habitats
LIFE96 NAT/S/003185	Protection and restoration of parts of Stora Alvaret	LIFE II	1996	1996	2000	1,763,818	881,909	Regional authority	No	Habitats
LIFE96 NAT/S/003186	Protection of western taiga in northern Norrland	LIFE II	1996	1996	1999	1,419,922	1		No	Habitats
LIFE96 NAT/S/003189	New nature reserves in the township of Gagnef	LIFE II	1996	1996	1999	1,369,769	684,885	NGO-Foundation	No	Habitats
LIFE97 NAT/S/004200	Protection of Western Taiga, Grossjöberget in Bollnäs	LIFE II	1997	1997	1999	1,180,703	590,351	Local authority	No	Habitats
LIFE97 NAT/S/004201	Protection of forests and mires in Sweden	LIFE II	1997	1997	2000	2,327,671	1,163,835	National authority	No	Habitats
LIFE97 NAT/S/004204	Preservation of the beetle, <i>Osmoderma eremita</i> in Sweden	LIFE II	1997	1997	2002	3,712,804	1,856,402	National authority	No	Habitats
LIFE98 NAT/S/005366	Protection of western taiga in Bergslagen	LIFE II	1998	1998	2002	5,074,411	2,537,205	National authority	No	Habitats
LIFE98 NAT/S/005367	Protection of western in Norrland	LIFE II	1998	1998	2002	1,053,926	526,963	National authority	No	Habitats
LIFE98 NAT/S/005369	Protection of western taiga in Svealand and Götaland	LIFE II	1998	1998	2002	4,007,960	2,003,980	National authority	No	Habitats
LIFE98 NAT/S/005370	Protection of deciduous forests in northern Götaland	LIFE II	1998	1998	2002	1,734,788	867,394	National authority	No	Habitats
LIFE98 NAT/S/005371	Preservation of the Arctic Fox, <i>Alopex lagopus</i> , in Sweden and Finland	LIFE II	1998	1998	2003	550,932	258,938	University	Yes	Habitats

<b>Id.</b>	<b>Title</b>	<b>LIFE generation</b>	<b>Funding year</b>	<b>Start year</b>	<b>End year</b>	<b>Total budget (EUR)</b>	<b>LIFE co-financing (EUR)</b>	<b>Beneficiary type</b>	<b>International partners (yes/no)</b>	<b>Directive (Birds, Habitats) or biodiversity</b>
LIFE99 NAT/S/006348	Forest and flora influenced by Jämtlands limestone bedrock	LIFE II	1999	1999	2003	3,484,908	1,742,454	Regional authority	No	Habitats
LIFE99 NAT/S/006351	Fegen - the lake and its surroundings, management and public awareness	LIFE II	1999	1999	2003	1,006,042	503,741		No	Habitats
LIFE99 NAT/S/006355	Restoration of lake Östen : a wetland of international importance for migrating birds	LIFE II	1999	1999	2003	2,234,205	1,117,102	Regional authority	No	Birds
LIFE99 NAT/S/006359	Protection of Aapa mires in the county of Norrbotten	LIFE II	1999	1999	2003	1,455,109	727,555	Regional authority	No	Habitats
LIFE00 NAT/S/007117	Coastal Meadows and Wetlands in the Agricultural Landscape of Öland	LIFE II	2000	2000	2005	3,362,119	1,660,887	Regional authority	No	Habitats
LIFE00 NAT/S/007118	Restoration of alvar-habitats at Stora Karlsö	LIFE II	2000	2001	2005	527,500	263,700	Regional authority	No	Habitats
LIFE02 NAT/S/008483	Restoration of deciduous forest in Söderåsen National Park	LIFE III	2002	2002	2007	1,761,086	762,461	Regional authority	No	Habitats
LIFE02 NAT/S/008484	Kinneulle plateau mountain - restoration and conservation	LIFE III	2002	2001	2008	5,727,749	2,863,875	Regional authority	No	Habitats
LIFE2002NAT/ST/S/000055	Upprättande av bevarandeplaner för utsjöområdet i Östersjön	LIFE III	2002	2002	2003	30,000	30,000		No	Habitats
LIFE03 NAT/S/000070	Natural pastures and hay meadows in Jämtland/Härjedalen	LIFE III	2003	2003	2009	1,564,158	782,079	Regional authority	No	Habitats

<b>Id.</b>	<b>Title</b>	<b>LIFE generation</b>	<b>Funding year</b>	<b>Start year</b>	<b>End year</b>	<b>Total budget (EUR)</b>	<b>LIFE co-financing (EUR)</b>	<b>Beneficiary type</b>	<b>International partners (yes/no)</b>	<b>Directive (Birds, Habitats) or biodiversity</b>
LIFE03 NAT/S/000073	Saving the endangered Fennoscandian Alopex lagopus (SEFALO+)	LIFE III	2003	2003	2008	2,511,016	1,252,997	University	No	Habitats
LIFE04 NAT/SE/000230	Improvement of habitats for wetland birds in Askö-Tidö	LIFE III	2004	2004	2008	1,093,780	546,890	Regional authority	No	Birds
LIFE04 NAT/SE/000231	Freshwater Pearl Mussel and its habitats in Sweden	LIFE III	2004	2004	2010	1,006,983	503,492	NGO-Foundation	No	Habitats
LIFE05 NAT/S/000108	Natural meadows and pastures of Östergötland - restoration and maintenance	LIFE III Extension	2005	2005	2010	2,158,933	1,079,467	Local authority	No	Habitats
LIFE05 NAT/S/000109	From source to sea, retoring river Moälven	LIFE III Extension	2005	2005	2009	1,958,733	986,016	Local authority	No	Habitats
LIFE06 NAT/S/000113	Restoration of the Wetland Area of Hejnum Kallgate	LIFE III Extension	2006	2006	2011	762,575	381,287	Regional authority	No	Habitats

## Appendix 2 Summary tables on LIFE Environment projects in Sweden

Table 4 Overview of LIFE ENV projects in Sweden by year, 1996-2006

Generation	Year	Number of projects	Total budget (EUR million)	Total LIFE co-financing budget (EUR million)	Average duration (years)	Average LIFE funding per project (EUR million)
LIFE II	1996	4	7.7	2.8	3.8	0.7
	1997	5	6.9	2.3	3.2	0.5
	1998	6	12.1	3.9	4.3	0.7
	1999	6	6.3	2.5	3.7	0.4
	<b>Total</b>	<b>21</b>	<b>33.1</b>	<b>11.5</b>	<b>3.8</b>	<b>0.5</b>
LIFE III	2000	8	19.6	6.8	3.5	0.9
	2002	4	11.4	4.8	3.5	1.2
	2003	9	23.0	7.9	3.3	0.9
	2004	5	27.0	5.2	3.0	1.0
	<b>Total</b>	<b>26</b>	<b>81</b>	<b>25</b>	<b>3.3</b>	<b>0.9</b>
LIFE III extension	2005	2	5.8	1.9	2.5	1.0
	2006	1	5.2	1.2	3.0	1.2
	<b>Total</b>	<b>3</b>	<b>11.0</b>	<b>3.1</b>	<b>2.7</b>	<b>1.0</b>
<b>Grand total</b>		<b>50</b>	<b>125.0</b>	<b>39.3</b>	<b>3.5</b>	<b>0.8</b>
Comparative figures for all ENV projects		1,076	1,947.7	615.9	3.3	0.6

*Table 5 Overview of LIFE ENV projects in Sweden 1996-2006 by theme*

<b>LIFE+ theme</b>	<b>No. of projects</b>	<b>In % of total</b>	<b>Total budget (EUR million)</b>	<b>In % of total</b>	<b>LIFE contribution (EUR million)</b>	<b>In % of total</b>
Climate change	3	6%	17.5	14%	3.9	10%
Air	3	6%	7.8	6%	2.2	5%
Water	8	16%	27.7	22%	8.2	21%
Soil	4	8%	6.9	6%	3.3	8%
Forests	3	6%	5.3	4%	2.4	6%
Natural resources and waste	18	36%	38.6	31%	10.3	26%
Chemicals	5	10%	9.3	7%	3.2	8%
Urban environment	2	4%	4.5	4%	2.0	5%
Strategic approaches	4	8%	7.4	6%	3.9	10%
<b>Total</b>	<b>50</b>	<b>100%</b>	<b>125.0</b>	<b>100%</b>	<b>39.3</b>	<b>100%</b>

Table 6 Sweden LIFE ENV projects 1996-2006 according to beneficiary type

Beneficiary type	No. of projects	In % of total	Total budget (EUR million)	In % of total	LIFE contribution (EUR million)	In % of total
<b>Public entities</b>						
National authority	6	12%	11.3	9%	5.2	13%
Regional authority	3	6%	6.4	5%	3.1	8%
Local authority	6	12%	16.2	13%	5.5	14%
Development agency	5	10%	21.6	17%	3.9	10%
Intergovernmental body	0	0%	0.0	0%	0.0	0%
Park-reserve authority	0	0%	0.0	0%	0.0	0%
<b>Sub-total</b>	<b>20</b>	<b>40%</b>	<b>55.4</b>	<b>44%</b>	<b>17.7</b>	<b>45%</b>
<b>Public and private enterprises</b>						
International enterprise	9	18%	29.4	24%	8.6	22%
Large enterprise	0	0%	0.0	0%	0.0	0%
SME Small and medium sized enterprise	3	6%	4.5	4%	1.6	4%
Mixed enterprise	3	6%	5.2	4%	2.0	5%
Public enterprise	9	18%	24.3	19%	6.6	17%
<b>Sub-total</b>	<b>24</b>	<b>48%</b>	<b>63.4</b>	<b>51%</b>	<b>18.9</b>	<b>48%</b>
<b>NGOs and research</b>						
NGO-Foundation	1	2%	1.0	1%	0.5	1%
Research institutions	2	4%	1.6	1%	0.8	2%
University	0	0%	0.0	0%	0.0	0%
Training centre	0	0%	0.0	0%	0.0	0%
<b>Sub-total</b>	<b>3</b>	<b>6%</b>	<b>2.7</b>	<b>2%</b>	<b>1.3</b>	<b>3%</b>
None indicated	3	6%	3.5	3%	1.5	4%
<b>Total</b>	<b>50</b>	<b>100%</b>	<b>125.0</b>	<b>100%</b>	<b>39.3</b>	<b>100%</b>

## Appendix 3 Summary tables on LIFE Nature projects in Sweden

Table 7 Overview of LIFE NAT projects in Sweden, 1996-2006

Generation	Year	Number of projects	Total budget (EUR million)	Total LIFE co-financing budget (EUR million)	Average duration (years)	Average LIFE funding per project (EUR million)
LIFE II	1996	4	11.3	4.9	3.3	1.2
	1997	3	7.2	3.6	3.3	1.2
	1998	5	12.4	6.2	4.2	1.2
	1999	4	8.2	4.1	4.0	1.0
	<b>Total</b>	<b>16</b>	<b>39.1</b>	<b>18.8</b>	<b>3.8</b>	<b>1.2</b>
LIFE III	2000	2	3.9	1.9	4.5	1.0
	2002	3	7.5	3.7	4.3	1.2
	2003	2	4.1	2.0	5.5	1.0
	2004	2	2.1	1.1	5.0	0.5
	<b>Total</b>	<b>9</b>	<b>18</b>	<b>9</b>	<b>4.8</b>	<b>1.0</b>
LIFE III extension	2005	2	4.1	2.1	4.5	1.0
	2006	1	0.8	0.4	5.0	0.4
	<b>Total</b>	<b>3</b>	<b>4.9</b>	<b>2.4</b>	<b>4.7</b>	<b>0.8</b>
<b>Grand total</b>		28	61.6	29.9	4.2	1.1
Comparative figures for all NAT projects		771	1,224.1	637.2	4.2	0.8

Table 8 Categories of LIFE NAT projects in Sweden, 1996-2006

LIFE NAT themes	No. of projects	In % of total	Total budget (EUR million)	In % of total	LIFE contribution (EUR million)	In % of total
Habitats Directive	26	93%	58.2	95%	28.3	94%
Birds Directive	2	7%	3.3	5%	1.7	6%
Biodiversity projects	0	0%	0.0	0%	0.0	0%
<b>Total</b>	<b>28</b>	<b>100%</b>	<b>61.6</b>	<b>100%</b>	<b>29.9</b>	<b>100%</b>

Table 9 Sweden LIFE NAT projects 1996-2006 according to beneficiary type

Beneficiary type	No. of projects	In % of total	Total budget (EUR million)	In % of total	LIFE contribution (EUR million)	In % of total
<b>Public entities</b>						
National authority	7	25%	24.6	40%	12.3	41%
Regional authority	11	39%	23.7	39%	11.7	39%
Local authority	3	11%	5.3	9%	2.7	9%
Development agency	0	0%	0.0	0%	0.0	0%
Intergovernmental body	0	0%	0.0	0%	0.0	0%
Park-reserve authority	0	0%	0.0	0%	0.0	0%
<b>Sub-total</b>	<b>21</b>	<b>75%</b>	<b>53.7</b>	<b>87%</b>	<b>26.7</b>	<b>89%</b>
<b>Public and private enterprises</b>						
International enterprise	0	0%	0.0	0%	0.0	0%
Large enterprise	0	0%	0.0	0%	0.0	0%
SME Small and medium sized enterprise	0	0%	0.0	0%	0.0	0%
Mixed enterprise	0	0%	0.0	0%	0.0	0%
Public enterprise	0	0%	0.0	0%	0.0	0%
<b>Sub-total</b>	<b>0</b>	<b>0%</b>	<b>0.0</b>	<b>0%</b>	<b>0.0</b>	<b>0%</b>
<b>NGOs and research</b>						
NGO-Foundation	2	7%	2.4	4%	1.2	4%
Research institutions	0	0%	0.0	0%	0.0	0%
University	2	7%	3.1	5%	1.5	5%
Training centre	0	0%	0.0	0%	0.0	0%
<b>Sub-total</b>	<b>4</b>	<b>14%</b>	<b>5.4</b>	<b>9%</b>	<b>2.7</b>	<b>9%</b>
None indicated	3	11%	2.5	4%	0.5	2%
<b>Total</b>	<b>28</b>	<b>100%</b>	<b>61.6</b>	<b>100%</b>	<b>29.9</b>	<b>100%</b>